

# Federal Standing Committee on Natural Resources

## **ISSUE: Energy Security in Canada (including an investigation of the deep shale gas industry by way of discussion and witnesses)**

The following is a pdf, word-searchable, compilation of the Natural Resources Committee's 2010 to 2011 meeting Minutes and Evidence documents from its website, concerning the issue of deep shale gas exploration and development. Meetings are held in Ottawa's Parliament centre.

October 19, 2010 – Initiating meeting on Energy Security

November 4, 2010

November 18, 2010

November 23, 2010

November 25, 2010

November 30, 2010

December 2, 2010

December 7, 2010

December 9, 2010

December 14, 2010

February 1, 2011

February 3, 2011

February 8, 2011

February 10, 2011

February 15, 2011

February 17, 2011

For information on listening to the Committee (audio link) and the Committee's website, hearing dates, and documents, are the following web links:

<http://parlvu.parl.gc.ca/parlvu> - A daily index to audio and video links in Parliament

<http://www2.parl.gc.ca/committeebusiness/CommitteeHome.aspx> - House of Commons Committees

<http://www2.parl.gc.ca/committeebusiness/CommitteeList.aspx?Language=E&Mode=1&Parl=40&Ses=3> – House of Commons Committees List

<http://www2.parl.gc.ca/CommitteeBusiness/CommitteeHome.aspx?Cmte=RNNR&Language=E&Mode=1&Parl=40&Ses=3> – Standing Committee on Natural Resources

<http://www2.parl.gc.ca/CommitteeBusiness/CommitteeMeetings.aspx?Language=E&Mode=1&Parl=40&Ses=3&Cmte=RNNR&Stac=3360783> – All Committee meetings on Energy Security (October – December, 2010)

## **LIST OF WITNESSES APPEARING BEFORE THE FEDERAL STANDING COMMITTEE ON NATURAL RESOURCES (November to December, 2010)**

### **THEME: ENERGY SECURITY IN CANADA**

#### **November 4, 2010 - Meeting No. 30**

Witnesses:

- ***Newfoundland and Labrador Oil and Gas Industries Association***: Robert Cadigan, President and Chief Executive Officer.
- ***Ecojustice Canada***: William Amos, Director, University of Ottawa - Ecojustice Environmental Law Clinic.
- ***Department of Natural Resources***:  
Mark Corey, Assistant Deputy Minister, Energy Sector;  
Jeff Labonté, Director General, Petroleum Resources Branch;  
Eric Landry, Director, Frontier Lands Management Division, Petroleum Resources Branch;  
Chantal Maheu, Director General, Energy Policy Branch.
- ***Fish, Food and Allied Workers***: Earle McCurdy, President.

#### **November 18, 2010 - Meeting No. 32**

Witnesses:

- ***Questerre Energy Corporation***: Michael Binnion, President and Chief Executive Officer

## November 23, 2010 - Meeting No. 33

Witnesses:

- ***Talisman Energy Inc.:***  
Reg Manhas, Vice-President, Corporate Affairs;  
James Fraser, Senior Vice-President, Shale Division, North American Operations.
- ***Canadian Society for Unconventional Gas:*** Kevin Heffernan, Vice-President.
- ***Encana Corporation:*** Richard Dunn, Vice-President, Canadian Division, Regulatory and Government Relations.
- ***Department of Natural Resources:***  
David Boerner, Acting Assistant Deputy Minister, Earth Sciences Sector;  
Marc D'Iorio, Director General, Director General's Office;  
Denis Lavoie, Research Geoscientist, Earth Sciences Sector - Georesources and Regional Geology.

## November 25, 2010 - Meeting No. 34

Witnesses:

- ***Suncor Energy Inc.:*** Gordon Lambert, Vice-President, Sustainable Development.
- ***Petrobank Energy and Resources Ltd.:*** John D. Wright, President and Chief Executive Officer.
- ***Canadian Association of Petroleum Producers:*** David Collyer, President.
- ***University of Calgary:*** David Keith, Professor, Institute for Sustainable Energy, Environment and Economy.
- ***Pembina Institute:*** Simon Dyer, Policy Director.
- ***Canadian Association of Energy and Pipeline Landowner Associations:***  
David Core, Chairman and Chief Executive Officer;  
John Goudy, Policy Advisor.

## November 30, 2010 - Meeting No. 35

Witnesses:

- ***Synchrude:*** Marcel R. Coutu, Chairman.
- ***Environmental Defence:*** Gillian McEachern, Program Manager, Climate and Energy.
- ***Alberta Federation of Labour:*** Gil McGowan, President.

## **December 2, 2010 - Meeting No. 36**

Witnesses:

- ***Government of Alberta:*** Ronald Liepert, Minister of Energy, Department of Energy.
- ***As an individual:*** Ben Parfitt.
- ***Montreal Economic Institute:***  
Jasmin Gu nette, Vice-President;  
Vincent Geloso, Economist.
- ***Conservation Council of New Brunswick Inc.:***  
David Coon, Executive Director;  
Stephanie Merrill, Freshwater Protection Program Coordinator.
- ***Atlantic Institute for Market Studies:*** Barbara Pike, Vice-President.

## **December 7, 2010 - Meeting No. 37**

Witnesses:

- ***Oil Sands Developers Group:*** Don Thompson, President.
- ***Athabasca Chipewyan First Nation:*** Lionel Lepine, Traditional Environmental Knowledge Coordinator, Industry Relations.
- ***As an individual:*** Ezra Levant.
- ***Alberta Innovates Technology Futures:*** Ian Potter, Chief Operating Officer.
- ***As an individual:*** Vivian Krause.
- ***HTC Pureenergy Inc.:*** Jessie Inman, Executive Director, Corporate Development.

## **December 9, 2010 - Meeting No. 38**

Witnesses:

- ***Northern Gateway Alliance:*** Colin Kinsley, Chairman.
- ***Coastal First Nations:*** Art Sterritt, Executive Director, Great Bear Initiative.
- ***United Fishermen and Allied Workers' Union - Canadian Auto Workers:*** Arnold Nagy, President, Local 31.
- ***Canadian Energy Pipeline Association:*** Brenda Kenny, President and Chief Executive Officer.
- ***International Ship-Owners Alliance of Canada Inc.:*** Kaity Arsoniadis-Stein, President and Secretary-General.

## **December 14, 2010 - Meeting No. 39**

Witnesses:

- ***BC Oil and Gas Commission***: Eric Alexander Ferguson, Commissioner and Chief Executive Officer.
- ***Alberta's Industrial Heartland Association***: Neil Shelly, Executive Director; Jana Tolmie-Thompson, Economic Development Officer.
- ***University of Ottawa***: Serge Coulombe, Professor, Department of Economics.
- ***Canadian Energy Research Institute***: Peter Howard, President and Chief Executive Officer.

## **February 1, 2011 - Meeting No. 40**

Witnesses:

- ***Fraser Institute***: Gerry Angevine, Senior Economist, Global Resource Centre.
- ***As an individual***: Anthony R. Ingraffea, Dwight C. Baum Professor of Engineering, Cornell University.
- ***Government of New Brunswick***: Bruce Northrup, Minister, Department of Natural Resources.

## **February 3, 2011 - Meeting No. 41**

Witnesses:

- ***Canadian Gas Association***: Timothy M. Egan, President and Chief Executive Officer.
- ***Association québécoise de lutte contre la pollution atmosphérique***: Patrick Bonin, Campaigner climate-energy; Thomas Welt, Co-lead Energy Committee, Nature Québec.
- ***British Columbia Tap Water Alliance***: Will Koop, Coordinator.
- ***Apache Canada Ltd.***: Timothy Wall, President; Natalie Poole-Moffatt, Manager, Public and Government Affairs.

## **February 8, 2011 - Meeting No. 42**

Witnesses:

- ***As an individual***: Elizabeth Dowdeswell, Former Chair, Oilsands Advisory Panel.
- ***ConocoPhillips Canada***: Joe Marushack, President.
- ***ARC Financial Corp.***: Peter Tertzakian, Chief Energy Economist and Managing Director.

## **February 10, 2011 - Meeting No. 43**

Witnesses:

- ***Équiterre***: Steven Guilbeault, Co-founder and Deputy Executive Director.
- ***Laricina Energy Ltd.***: Glen C. Schmidt, President and Chief Executive Officer.
- ***Indigenous Environmental Network***: Clayton Thomas-Muller, Tar Sands Campaigner.

## **February 15, 2011 - Meeting No. 44**

Witnesses:

- ***Athabasca Chipewyan First Nation Business Group***: Garry Flett, Vice-President and Chief Operating Officer
- ***Spectra Energy Transmission West***: Douglas P. Bloom, President
- ***Cenovus Energy Inc.***: Jim Campbell, Vice-President, Government Affairs and Corporate Responsibility; Jon Mitchell, Team Lead, Environment Policy and Strategy

## **February 17, 2011 - Meeting No. 45**

Witnesses:

- ***Alberta Innovates - Energy and Environment Solutions***: Eddy Isaacs, Chief Executive Officer
- ***Mackenzie Valley Aboriginal Pipeline LP***: Robert Reid, President
- ***Alberta Chamber of Resources***: Brad Anderson, Executive Director; Larry Staples, Project Manager; Task Force on Resource Development and the Economy
- ***Town of Bay Bulls***: Harold Mallowney, Mayor; Ted Lomond, Executive Director, Newfoundland and Labrador Regional Economic Development Association

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## MINUTES OF PROCEEDINGS

Meeting No. 26

Tuesday, October 19, 2010

The Standing Committee on Natural Resources met at 11:02 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Megan Anissa Leslie for Nathan Cullen.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee commenced its study of Energy Security in Canada.

On motion of Denis Coderre, it was agreed, — That, in relation to the study of energy security in Canada, the proposed budget in the amount of \$104,937 for the Committee's travel to Edmonton, Fort McMurray and Fort Nelson in November 2010 be adopted; and that the Chair present the said budget to the Liaison Committee.

At 11:07 a.m., the sitting was suspended.

At 11:10 a.m., the Committee proceeded to sit *in camera*.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Tuesday, March 16, 2010, the Committee resumed its study of the Status of the NRU Reactor and the Supply of Medical Isotopes.

The Committee resumed consideration of a draft report.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of Energy Security in Canada.

It was agreed, — That an extension be granted in order to allow members to submit their prioritized lists of witnesses for the study of energy security in Canada to the Clerk of the Committee, by 12:00 p.m., on Monday, October 25, 2010.

At 12:52 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/10/20 4:07 p.m.

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**40th PARLIAMENT, 3rd SESSION**  
**Standing Committee on Natural Resources**

**EVIDENCE**

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**Tuesday, October 19, 2010**

**1105**



*The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*



*Ms. Paule Brunelle (Trois-Rivières, BQ)*



*The Chair*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 026

1

3rd SESSION

1

40th PARLIAMENT

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**EVIDENCE****Tuesday, October 19, 2010***[Recorded by Electronic Apparatus]*

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(1105)

*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone.

Good to see everybody on time here this morning. That's great. I know you have to get used to travelling a little farther to some of the committee rooms now.

We're starting this meeting in public to discuss the budget for the travel to the oil sands, both the mining and the in situ near Fort McMurray, and to Fort Nelson, British Columbia, to the shale gas operations. You each have a copy of the budget before you. The total would be roughly \$105,000. That would be the full committee travel, along with the seven staff listed there.

The one thing that I think is important to mention is that if the committee is going to travel, everyone who's committed to go has to go, pretty much, or it'll just be cancelled; you know what the issue is with having an equal number of government and opposition members going. If you do commit to go, and we expect we'll have a balanced group going, we can carry on with the travel, or all the cost of organizing and all the effort--and it takes a lot of effort to organize something like this--will be wasted.

Any discussion on the budget? I'm open for any comments.

Is it agreed, then, to take this...? Oh, there is some discussion.

Go ahead, Madame Brunelle.

*[Translation]***Ms. Paule Brunelle (Trois-Rivières, BQ):**

Mr. Chair, the whip's office told me that there had been discussions on the matter and that using our points for travel was not recommended. So there were agreements between the committees.

If I understand this budget correctly, members would travel on their points. Yet we are told that the committees have budgets for that. We refuse to use our points for travel.

*[English]***The Chair:**

No, Madame Brunelle, it says here that it's without points, so the travel will be paid for by the committee. We're proposing to have everyone fly in Thursday night. For example, you can take an eight o'clock flight from Ottawa that gets you in by about a quarter after ten, usually, and then to come back, we're trying to get back into Edmonton by about four o'clock in the afternoon, so you can get a flight back Friday afternoon and be in your constituencies, hopefully, most of us anyway, for Saturday, getting back Friday night. That's the proposal, and it is paid for by the committee. That is part of the budget, \$105,000.

Mr. Coderre has moved the budget. Any further discussion?

The dates are November 18 and 19, which is the week right after the Remembrance Day constituency

work week.

It has been moved. Is the budget carried?

**Some hon. members:** Agreed.



**The Chair:**

Thank you very much. I will take it to the liaison committee immediately following this committee meeting.

Now we will have to suspend for about three minutes while we go in camera. Then we'll come back and the clerk will be distributing some documents regarding the analysts' grouping of the recommendations that were sent from all parties. It's not a grouping we have to go with, but it's a starting point and is usually very helpful.

We will suspend for three minutes and come back with a discussion of the recommendations for the committee report on medical isotopes.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 30

Thursday, November 4, 2010

The Standing Committee on Natural Resources met by videoconference at 11:06 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau and Alan Tonks.

*Acting Members present:* Dean Allison for Devinder Shory.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Newfoundland and Labrador Oil and Gas Industries Association:* Robert Cadigan, President and Chief Executive Officer. *Ecojustice Canada:* William Amos, Director, University of Ottawa - Ecojustice Environmental Law Clinic. *Department of Natural Resources:* Mark Corey, Assistant Deputy Minister, Energy Sector; Jeff Labonté, Director General, Petroleum Resources Branch; Eric Landry, Director, Frontier Lands Management Division, Petroleum Resources Branch; Chantal Maheu, Director General, Energy Policy Branch. *Fish, Food and Allied Workers:* Earle McCurdy, President.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Robert Cadigan, by videoconference from St. John's, Newfoundland and Labrador, and William Amos made statements and answered questions.

At 12:05 p.m., the sitting was suspended.

At 12:09 p.m., the sitting resumed.

Marc Corey and Earle McCurdy made statements and, with Jeff Labonté and Eric Landry, answered questions.

At 12:57 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/11/08 1:20 p.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources




EVIDENCE

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**Thursday, November 4, 2010****1105**

-  *The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*
-  *Mr. Robert Cadigan (President and Chief Executive Officer, Newfoundland and Labrador Oil and Gas Industries Association)*
-  *The Chair*
-  *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Mr. Nathan Cullen*
-  *The Chair*











**1110**

-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Robert Cadigan*






**1115****1120**

-  *The Chair*
-  *Mr. Robert Cadigan*
-  *The Chair*
-  *Mr. William Amos (Director, University of Ottawa-Ecojustice Environmental Law Clinic, Ecojustice Canada)*

**1125****1130**

-  *The Chair*
-  *Mr. William Amos*
-  *The Chair*
-  *Mr. William Amos*
-  *The Chair*
-  *Hon. Denis Coderre (Bourassa, Lib.)*
-  *Mr. Robert Cadigan*
-  *Hon. Denis Coderre*
-  *Mr. Robert Cadigan*
-  *Hon. Denis Coderre*



**1135**

-  *Mr. William Amos*
-  *Hon. Denis Coderre*
-  *The Chair*
-  *Mr. Scott Andrews (Avalon, Lib.)*
-  *Mr. Robert Cadigan*





**1140**

-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*
-  *Mr. Robert Cadigan*
-  *Ms. Paule Brunelle*
-  *Mr. Robert Cadigan*

**1145**

-  *Ms. Paule Brunelle*
-  *Mr. William Amos*





**1150**

-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Robert Cadigan*











-  *Mr. Nathan Cullen*
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-  *Mr. Robert Cadigan*
-  *Mr. Nathan Cullen*
-  *Mr. William Amos*




**1155**

-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. William Amos*
-  *The Chair*
-  *Mr. Mike Allen (Tobique—Mactaquac, CPC)*
-  *Mr. Robert Cadigan*

**1200**

-  *Mr. Mike Allen*
-  *Mr. Robert Cadigan*
-  *Mr. Mike Allen*
-  *Mr. Robert Cadigan*
-  *Mr. Mike Allen*
-  *The Chair*
-  *Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC)*
-  *Mr. Robert Cadigan*

**1205**

-  *Mrs. Cheryl Gallant*
-  *The Chair*
-  *The Chair*






**1210**

-  *Mr. Mark Corey (Assistant Deputy Minister, Energy Sector, Department of Natural Resources)*

**1215**

-  *The Chair*
-  *Mr. Earle McCurdy (President, Fish, Food and Allied Workers)*

**1220****1225**

-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
-  *The Chair*
-  *Mr. Mark Corey*
-  *Mr. Jeff Labonté (Director General, Petroleum Resources Branch, Department of Natural Resources)*







**1230**

-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Scott Andrews*
-  *Mr. Earle McCurdy*
-  *Mr. Scott Andrews*
-  *Mr. Earle McCurdy*
-  *Mr. Scott Andrews*
-  *Mr. Earle McCurdy*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*

**1235**

-  *Mr. Mark Corey*
-  *Mr. Eric Landry (Director, Frontier Lands Management Division, Petroleum Resources Branch, Department of Natural Resources)*
-  *Mr. Roger Pomerleau*
-  *Mr. Eric Landry*
-  *Mr. Roger Pomerleau*
-  *Mr. Eric Landry*
-  *Mr. Roger Pomerleau*
-  *Mr. Mark Corey*
-  *Mr. Roger Pomerleau*
-  *Mr. Mark Corey*
-  *The Chair*
-  *Mr. Jeff Labonté*
-  *Mr. Roger Pomerleau*

**1240**






-  *The Chair*
-  *Mr. Earle McCurdy*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Mr. Mark Corey*
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-  *The Chair*
-  *Mr. Jeff Labonté*
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-  *Mr. Nathan Cullen*

**1245**

-  *Mr. Jeff Labonté*
-  *Mr. Nathan Cullen*
-  *Mr. Mark Corey*
-  *Mr. Nathan Cullen*
-  *Mr. Mark Corey*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Mr. Mark Corey*
-  *Mr. Nathan Cullen*
-  *Mr. Earle McCurdy*
-  *The Chair*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*

**1250**

-  *Mr. Jeff Labonté*
-  *Mr. Richard Harris*
-  *Mr. Jeff Labonté*
-  *Mr. Richard Harris*
-  *Mr. Mark Corey*



*Mr. Richard Harris*



*Mr. Jeff Labonté*



*Mr. Richard Harris*

**1255**



*Mr. Mark Corey*



*Mr. Richard Harris*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 030

1

3rd SESSION

1

40th PARLIAMENT


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## EVIDENCE

Thursday, November 4, 2010

[Recorded by Electronic Apparatus]

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 (1105)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

I call the meeting to order.

Good morning, everyone. We're here today to continue our study on energy security. We're looking at the federal role in unconventional oil and gas development, such as deepwater offshore drilling--

**A voice:** Hi, this is St. John's. We're just wondering if we're ready to begin or if you began and we're not hearing you.

**The Chair:** Okay, that is good to know. We will try to correct it. Good morning. Hello, can you hear me?

**A voice:** There you are. The committee should hear you now.



**Mr. Robert Cadigan (President and Chief Executive Officer, Newfoundland and Labrador Oil and Gas Industries Association):**

Good morning.



**The Chair:**

Now you can hear us. That's great. Okay.

We had started. I really appreciate your pointing out that you couldn't hear us.

Mr. Cullen has a point of order. Start with that, Mr. Cullen. Go ahead.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

I'll be very brief, just before we get into this. The first point is on logistics. I don't know, but I've never seen a committee move around quite so much in terms of meeting rooms. I don't know if we'll eventually secure one or if the state of affairs for the committee will be that we don't necessarily have a room. That's the first point.

Second, through you to the researchers, we're going to be getting into shale gas and some of these other technologies that I would suspect most committee members don't know a great deal about. I know you folks are busy, but it might be helpful if we had some more depth in terms of the preparatory notes about some of the industries we're about to go into. I think it's going to help committee members a lot as we get the witnesses in front of us.

We had this when we were doing the offshore part, but the notes that we received for today speculated some questions. Could there be something a bit more substantive about some of the technical aspects of industry and the state of development right now, shale gas being a good example? Some of the things these hearings are going into will be quite technical in nature, and we're going to have technical witnesses. Sometimes committee members fly blind if they don't have some backup information.

David, I don't know if I'm missing something that was given out to committee members earlier.



**The Chair:**

Go ahead, Mr. Anderson.

**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

To try to spare the analysts some work, I'll check with Natural Resources to see what they have that's available. I would think there would be some material on these different things. We'll do that, and then if there is material, we'll try to get it to the committee.

**Mr. Nathan Cullen:**

Chair, the nature of our study is unconventional oil and gas. While committee members may have had some experience with conventional oil and gas industries, this by its nature is going into some uncharted waters. Whatever we can get, whether it's from Natural Resources or our researchers, will help us direct our questions a lot better to the witnesses who come forward.

**The Chair:**

Thank you, Mr. Cullen.

The analysts do have information on all of the areas we're going to be looking at, so they will circulate some of that. It's difficult for them to know exactly what to circulate at what time. Certainly you could approach them, but we'll chat about that a little bit later and try to make sure the information is there in a timely fashion, and Mr. Anderson has generously offered some other information.

By the way, I appreciate that the witnesses who have agreed to come today did so on short notice. In terms of booking witnesses, five witnesses were approached. There were two requested by the NDP, one by the Liberals, and two by the Conservatives, who just couldn't or wouldn't come on such short notice, and that's understandable. From now on there will be more notice. It's really important for the committee to remember, as we're booking these things, to make decisions that allow booking further in advance. It's difficult to do sometimes. I understand that.

**Mr. Nathan Cullen:**

Chair, what we have for the next two months is some pretty good forewarning.

**The Chair:**

We pretty much do. Yes, we do.

We will get now to the witnesses. Again, just to repeat, I thank both of you for agreeing to come on short notice. It's very much appreciated indeed. I will have you make your presentations, which can be up to seven minutes—I think there are only two of you—in the order that you appear on the agenda.

We will start with Mr. Robert Cadigan, president and chief executive officer of the Newfoundland and Labrador Oil and Gas Industries Association, who is appearing by video conference from St. John's, Newfoundland and Labrador.

Go ahead, please, for up to seven minutes.

**Mr. Robert Cadigan:**

Good morning.

I'd like to thank you for the opportunity to speak about energy security and to speak to your committee. Certainly this is of primary importance to the membership of the Newfoundland and Labrador Oil and Gas Industries Association, the association I'm representing here today.

We have about 500 members in Canada and around the world, and NOIA is Canada's largest offshore

petroleum association. As a little bit of background, our mission is to promote the development of east coast Canada's offshore hydrocarbon resources and to facilitate our membership's participation in the oil and gas industries.

While I'm addressing you as a representative of NOIA, the issues I outline do have an impact on Canada's energy security overall. For the most part I'll be speaking about the oil and gas industry in Newfoundland and Labrador because that's the area I work in and that I'm most familiar with.

We do believe, first and foremost, that we must develop our offshore resources safely, and certainly stewardship of our natural resources and protection of the environment remains an unwavering commitment from all of us who work and live on Canada's east coast.

I'd like to give a brief background on the surprisingly long history of oil and gas in Newfoundland and Labrador.

It started with an 1812 discovery of an oil seep in Parson's Pond, which is on the northern peninsula on the west coast of Newfoundland. We had sporadic production in that area in the late 1800s and into the early 1900s from shallow wells. As you probably know, the first offshore well in Canada was drilled by Mobil on an artificial island off Prince Edward Island in the early 1940s. In 1979 we had the Hibernia discovery in Newfoundland and Labrador, with the first oil in 1997. It was the first project undertaken in ice-infested waters, and when you think of this, we have only been accessing our offshore oil and gas resources for about 10 years, but we do have reserve potential, and at the current time we're not seeing enough activity in terms of exploration.

Newfoundland and Labrador is the largest offshore energy producer in Canada. In Atlantic Canada our industry employs over 4,500 people directly and well in excess of 10,000 when you factor in indirect and induced jobs. Certainly in a world where global demand for energy is expected to more than double by 2050, as the economies in both the developed and emerging worlds continue to grow and as the standard of living improves for the developing world, the Atlantic Canada oil and gas industry has the potential to impact and enhance Canada's security in numerous ways, certainly on the supply side and also economically in terms of the benefits that accrue to our region. As the world moves to develop a culture of conservatism by maximizing renewable energy potential and developing energy alternatives to carbon-based fuels, the potential of our offshore industry helps position Canada for an orderly transition toward a renewable future.

I'll give you some background on oil production. The production from Newfoundland and Labrador is responsible for about 40% of Canada's light conventional crude. The production comes from three fields: Hibernia, Terra Nova, and White Rose. While we have just short of three billion barrels of oil discovered in Newfoundland and Labrador, there remains the potential of about six billion barrels of oil to be discovered, and in Nova Scotia waters potentially about 2.6 billion barrels of oil remain, according to the Canada-Nova Scotia Offshore Petroleum Board. To date, over \$16 billion has been invested in development, with Hebron, the Newfoundland and Labrador offshore project, set to contribute an additional \$4 billion to \$6 billion during its construction phase. We have another development called Hibernia South, and that will contribute, again, about another \$2 billion in investment in our offshore industry. Operating expenditures contribute over \$1.5 billion in spending, with the majority of that spending occurring in Atlantic Canada.

In terms of our natural gas resources, I'm dealing with the offshore resources. I've heard you folks talk about shale, but I'll be focusing on the offshore aspect.



In addition to Newfoundland and Labrador's proven natural gas reserves of about 10 Tcf--that's trillion cubic feet--another 60 Tcf are estimated to be available to be discovered. Nova Scotia's offshore has an estimate of about 29 Tcf of potential in terms of natural gas.

Our natural gas resources on the east coast, particularly Newfoundland, await favourable market conditions. Certainly the price of natural gas is at a historic low. From an environmental perspective, our natural gas produces about six times less carbon emissions than coal. This resource can certainly help replace coal-fired electricity generation, reducing Canada's and North America's carbon footprint overall if it's fully exploited.

I'd like to bring your attention to a slide called "Production Profile - March 2010" in your package. If you look at that slide, you can see that Newfoundland and Labrador offshore production actually peaked in 2007-2008. You can see the original Hibernia fields in navy blue, and the Hebron fields, which will begin



production in about 2017, in the darker green. While we've had great success in terms of production, and great benefits from the industry, we do need exploration to keep this production profile flat and to have these benefits continue to accrue far into the future.

Despite the unprecedented high prices and rapidly increasing long-term demand that drives intense exploration in other basins around the world, exploration activity in offshore Atlantic Canada hasn't seen that same significant increase. In order to unlock this Canadian energy potential, NOIA believes the Government of Canada can help stimulate activity.

We only have to look at a comparison of the Newfoundland and Labrador offshore area and the North Sea to get a sense of the light levels of exploration we've seen. Our offshore area in Newfoundland and Labrador is about four times the size of the North Sea, yet to date we've only seen about 140 exploration wells; in the North Sea, they've seen over 4,000 exploration wells since inception.

Why is that? Certainly this is partially due to our environment. The east coast of Canada is a harsh environment. We have high sea states, fog, sea ice, and icebergs, and drilling wells off the east coast is extremely costly. International oil companies require certainty, and they try to minimize financial risk. We see that in the attraction of capital to the oil sands, which is largely based on a known quantifiable resource. The variables of the costs of development and production are relatively easily factored in, the price of oil a little less so.

To explore offshore is extremely expensive. In the area of the Grand Banks, where there is generally less than 100 metres of water, a well will cost anywhere from \$30 million to \$50 million to drill. When we move to the deeper frontier basins, the price tag for an offshore well can be in excess of \$200 million. When you consider find rates are typically 10% or less, placing this sort of a bet to make a discovery is a risky business.

  (1120)

#### **The Chair:**

Excuse me, Mr. Cadigan; you've gone over the time allocated for the presentation. Could you wrap it up very quickly, please?

#### **Mr. Robert Cadigan:**

Sure.

A quick look at the exploration chart that I've provided shows that in Atlantic Canada, and in Newfoundland in particular, the number of exploration wells was significantly high in the 1970s and into the 1980s, with a drop-off in the early 1990s and relatively sporadic activity since then. In the last 20 years, we've averaged probably about two wells a year or less.

What can the Government of Canada do to help improve on this exploration record? Certainly one thing is funding of the GSC to improve resource assessment and create basin atlases is a very important step. You can question me on that if you wish.

There are other regulatory impediments under the Coasting Trade Act and the Transport Canada regulations that create difficulty in bring seismic vessels into early exploration work. That's another important area.

We also have issues around land tenure policy. Basically, in Canada a significant discovery is held in perpetuity, so in terms of incentive to develop, it's really up to the oil companies to decide when to develop a particular resource discovery.

The other issue is in terms of our access to infrastructure, which is important. Small finds will remain undeveloped unless there is a regime to give other companies access to infrastructure to produce from small fields.

To sum up, exploration is a rate-determining step for the oil and gas industry. Without exploration there'll be no new discoveries, no new developments, and no contribution of major capital projects in the region. No new production can come on stream to replace depleting reserves, and in order to provide a

sustained opportunity and to maximize the return to the Government of Canada and to the Province of Newfoundland and Labrador in terms of royalties and revenues, we need more exploration. Certainly that's one area the Government of Canada can really assist with, and this will have an impact on our energy security in the long term.



**The Chair:**

Thank you, Mr. Cadigan, for your presentation. It was much appreciated.

We now have with us in the room William Amos, director of the University of Ottawa-Ecojustice Environmental Law Clinic. He is with Ecojustice Canada.

Please go ahead with your presentation. You have up to seven minutes.



**Mr. William Amos (Director, University of Ottawa-Ecojustice Environmental Law Clinic, Ecojustice Canada):**

Thank you, Chair.

Thanks to the members for having us. It's a real privilege to be speaking on behalf of Ecojustice. Certainly the topic you have embarked upon is one of primary importance to Canadians, as it is this committee, despite the fact that there is a steep learning curve right now.

I'll say just a couple of words to introduce you to Ecojustice. Ecojustice is Canada's premier public-interest environmental law organization. In shorthand, we're the environmental movement's lawyers. We do pro bono work. We don't accept funds from the Canadian government or any other government. We have a very tight corporate funding screen. Effectively we are a charitable organization that chooses cases and law reform projects on the basis of the strategic importance to the protection of Canadians' environment. We get a lot of requests for representation and for assistance and engagement on federal and provincial-territorial law reform projects. We're very picky. This is a file that's of primary importance to us; offshore oil has been identified as something that's very relevant to the environmental movement, and we will be investing in that regard.

To achieve that objective, we will be representing environmental groups in the context of the National Energy Board's Arctic offshore hearing. Our presence will be felt there, but we think the discussion of energy security extends beyond the Arctic offshore. As the previous witness indicated, this issue of energy security extends to the Atlantic, goes into the Gulf of St. Lawrence, and, despite the de facto moratorium, is still a major issue on the west coast. This is an issue that is really multi-faceted, and it's difficult to present all the most important facets in seven minutes.

I will start off with the big-picture comment, though. From Ecojustice's perspective--and I think it's safe to say from the environmental movement's perspective--any notion that energy security is to be defined in terms of ensuring an adequate supply alone, without ensuring that conservation goals are set or that cultural, social, and environmental security risks are addressed, would be inadequate.

I don't use those words lightly. Cultural security is of primary importance in the context of the National Energy Board's Arctic offshore review. If there is a BP-like spill in the Arctic, there will be cultural loss, and that is a fact. As well, if there is a catastrophic spill off the east coast--or in the gulf, for that matter--there will be cultural loss. Communities that have been based for many years on tourism and fisheries industries could be decimated.

So the context of energy security is a broad one, and I urge this committee to take on that mantle and to look at these issues as broadly as possible.

First off, I'd like to say that the federal government's primary response in the post-BP era to the issue of energy security has been the National Energy Board's Arctic offshore review. When questions are raised in the House of Commons, the response is typically that the National Energy Board is looking into these issues.

There is certainly merit in having the National Energy Board examine issues related to Arctic offshore safety and environmental requirements. There is nothing wrong with that. However, as has been articulated on many occasions by civil society groups and by first nations groups, there is a need to look more broadly at this issue, and I'm thinking particularly of the offshore issue. I'm focusing primarily on the offshore

aspect, not on other unconventional sources, although those are also important to Ecojustice. We are certainly doing lots of work in the area of tar sands, or oil sands, as the individual chooses to define it.

  (1125)

I'd like to raise a few cautionary flags. First, I think it's fair to say that many Canadians are becoming more and more familiar with this issue of offshore energy and more and more concerned about the levels of transparency regarding the federal government's policy responses post-BP. It's only now becoming clear that there are discussions between the Government of Quebec, the Government of New Brunswick, the Government of P.E.I., and the federal government over shared jurisdiction. As these are matters of fundamental national importance, they ought to be debated publicly, but we don't feel that this debate is happening right now.

While the response seems to have been that there's a National Energy Board hearing, there certainly are issues that have been raised about the appropriateness of the current regulatory regime that have not been addressed publicly. The National Energy Board hearing is not mandated to look into the entire regulatory structure for the offshore. What they are mandated to look at is far more restricted. What we need right now is a full-blown examination of the offshore regulatory regime in this country--and not just for the Arctic, but for the east coast as well. The jurisdictional issues complicate this situation, but there are many good reasons for looking at it more broadly than the National Energy Board hearing is doing.

Much has certainly been done in the U.S. as regards a gap analysis, identifying the potential regulatory weaknesses that exist and comparing those weaknesses and strengths with those of other countries. I'm not certain that's being done here in Canada, and that's a matter of major concern.

To conclude, I want to highlight two key issues that I think go to how—

  (1130)

**The Chair:**

Mr. Amos, you're over the time allocated. Could you do it in 30 seconds?

**Mr. William Amos:**

I can do that.

**The Chair:**

Just provide highlights and count on members' questions to get the other information out.

**Mr. William Amos:**

Sure, I can do that.

To conclude, there's a lot of action happening in the United States, a lot of response to BP, and that's understandable. Why isn't there the same level of response here in Canada? The U.S. Secretary of the Interior, Ken Salazar, proposed yesterday the establishment of an ocean energy safety institute to facilitate research and development, training, and implementation of safety and environmental standards. Where is the proposal for that kind of initiative here in Canada?

Finally, the Canadian Polar Commission has no board of directors appointed right now. One of its mandates is to engage in research related to the Arctic, including scientific research. We need this done, but our institutions either don't exist or are not capable.

We have some serious issues that need addressing.

I appreciate your time.

**The Chair:**

Thank you very much for your presentation.

We go now to questions, starting with Monsieur Coderre. You have up to seven minutes.

Go ahead, Monsieur Coderre.



**Hon. Denis Coderre (Bourassa, Lib.):**

I'm going to split my time with my colleague, Scott Andrews, who has a few questions.

As a start, Mr. Cadigan, every time we talk about offshore drilling, we're of course thinking about BP. Yes, we can talk about energy security and energy demands and all that, but what's your perception of the actual status regarding emergency response? You can have a lot of collateral damage, especially with deep drilling; how do you work with other stakeholders to make sure you cover those questions at the same time?

Also, tell me what you think about the regulatory system. Are you satisfied with it?



**Mr. Robert Cadigan:**

Certainly, Monsieur Coderre, the purpose today, as I understood it, was energy security. The environmental protection side of things is not my area of expertise. Having said that, our regulator of the offshore area of Newfoundland and Labrador and the board in Nova Scotia have strong reputations. Internationally and in other areas, they're known to other regulators for being competent in what they do.

In terms of the regulatory regime, the bulk of production and activity in Canada's offshore has been off Newfoundland and Labrador. In my view, therefore, Canadian experience in managing these issues is certainly strong, and the experience is there with the Canada-Newfoundland and Labrador Offshore Petroleum Board.



**Hon. Denis Coderre:**

Do you feel you have had to adjust since the BP spill?



**Mr. Robert Cadigan:**

Certainly. The reaction of the offshore petroleum board, the regulator in Newfoundland and Labrador, was to put in some additional oversight procedures. We did have a deepwater well being drilled shortly after the Macondo incident, and those oversight procedures included having staff on board stop work as they approached a hydrocarbon-bearing zone and do a cycle of testing of equipment and procedures before they actually entered the hydrocarbon-bearing zone.

In our view, they took a fairly conservative and very careful approach to ensure that we didn't have similar events here.



**Hon. Denis Coderre:**

Mr. Amos, I believe, like you, that it's not an à la carte menu. You need a balanced approach. You have to cover the needs of Canadian people regarding their energy safety and security, but safety is also an issue, and you don't want to have collateral damage.

On a technical basis, how do you reconcile the fact that the NEB has a regulatory power with the need to be respectful of the jurisdiction because it is owned by the provinces and the territory, except at the Arctic level? How can you believe that the NEB can be efficient as a watchdog in the case of what I mentioned earlier regarding emergencies and all that?

 (1135)



**Mr. William Amos:**

If your question is directed to spill response in particular, I think it's a challenging question. I think the

NEB recognizes it's a challenging question, and that's why it's front and centre in the Arctic offshore hearing.

Specifically, the NEB has indicated that in the scope of its review it will be examining the issue of responding effectively when things go wrong, such as the effectiveness and availability of spill containment and cleanup options under Arctic conditions, financing spill cleanup, restoration and compensation for loss or damage, and the state of knowledge about long-term impacts of a spill on the environment.

When I read between the lines of that scope of inquiry, my understanding is there are a lot of uncertainties with regard to what happens if there's a spill in the Arctic? Is there capacity? I think the short answer can be seen when you look at the length of time it took to bring the Macondo well under control and the number of vessels that were brought in. Over 700 vessels were brought in. There's no way 700 vessels are going to get to the Arctic.

Every spill is a different situation. There are small spills and large spills, and obviously the BP incident was a large one. It points to the fact that the NEB wants civil society, industry, first nations, and citizens' input into these what-if questions. It has jurisdiction to deal with the regulatory regime for drilling in the north. However, it's fair to say there are others, such as the coast guard, who would be engaged. There are a whole suite of other players who would be engaged, including territorial governments. First nations governments would be involved as well, because the Inuvialuit have a land claim settlement up north. It would be complicated.

The challenge in Canada is that this is just the Arctic. Then you have to look at what happens out east, because there's a whole different set of arrangements. We have the two different offshore petroleum boards that have different lines of accountability for spill response.

I don't think Canadians are comfortable with the idea that they don't understand how things work. The reality is that highly intelligent people--and I presume the vast majority of us around this table consider ourselves highly intelligent people--don't fully grasp how it would work and what would happen if there was a spill. I don't think that's acceptable.



**Hon. Denis Coderre:**

I'm going to let my colleague ask the last question.



**The Chair:**

You have 30 seconds.



**Mr. Scott Andrews (Avalon, Lib.):**

I'll throw the question out quite quickly to Mr. Cadigan. Near the end of your presentation you talked about seismic vessels and some of the impediments to doing exploration. We see your graph here, and there was a lot of exploration through the 1980s and into the 1990s. By 2000 exploration has dropped off.

Obviously seismic testing is one of the first things you do. You mentioned there were some impediments to vessels in doing seismic work. Could you elaborate on that?



**Mr. Robert Cadigan:**

Sure. In terms of vessels entering Canada, most of the international seismic contractors are foreign. What happens basically is that an oil company will look at a seismic program in an area. They have to go out and find the most competent contractor to do the work. They define the technical requirements of the vessels and the technology to be used.

Regulations under the Coasting Trade Act were designed to regulate the transportation of goods on Canadian vessels in particular and to provide business security for Canadian shipowners and shipbuilders. What has happened is that inadvertently these regulations impact seismic vessels as well.

The basic problem is that after an oil company decides on a piece of work, finds the best contractor internationally, and goes to the Canadian Transportation Agency to get an exemption to bring that vessel into Canada and do the work, under the CTA regulations any Canadian shipowner can protest. That basically causes somewhat of a delay. We've seen examples of protests that could only be described as

frivolous causing significant delays in the approval of programs.

We had a recent example this past summer with a seismic program that was to take place in Labrador and off the southwest coast of Newfoundland. A Canadian company has a vessel laid up in Louisiana, "laid up" being a term used by classification societies to indicate that the vessel needs remedial work before it can take to sea. The Canadian company doesn't have a sea-ready vessel and is unable to meet the technology requirements of the particular oil company in this case, but yet can frustrate the process by virtue of this ability to protest under the CTA.

In 2009 the Canadian Transportation Agency had a consultation. NOIA and a number of other organizations did ask for an exemption or for other ways to reduce this problem. The review was completed, and there was no solution found. Our concern--

  (1140)



**The Chair:**

Thank you, Mr. Cadigan. I have to cut in there. We have three more questioners and we have very little time.

We have Madame Brunelle. You have up to seven minutes. Go ahead, please.

[*Translation*]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Good morning, Mr. Cadigan. It is a pleasure to have you with us.

You represent the oil and gas industry. In your presentation, you said that we have to develop our resources in a safe manner, environmentally speaking. The oil spill in the Gulf of Mexico has really shaken people all over the world.

What specific changes are you going to bring to your drilling techniques? What lessons has your industry learned from this event?

[*English*]



**Mr. Robert Cadigan:**

We at NOIA represent the supply and service sector, the contractors who do most of the work for the oil companies in terms of exploration and production.

Basically any industrial activity has risks. We've seen that issue recently in the collapse of a dam in Hungary, for example. There will always be risk associated with any kind of industrial activity.

I think the important part is that we do things carefully. We do have a sound regulatory regime, in our view, in the two jurisdictions in Atlantic Canada. In terms of the response of the Canada-Newfoundland Offshore Petroleum Board after the Macondo spill, we've seen additional steps and additional care being taken.

I think that at the end of the day lessons are going to be learned from Macondo. When all of the reports are released, I think what we need to do then is compare what's happened--the failures, in that case--with our own regulatory regime and adjust accordingly, but we have full confidence in our regulator.

[*Translation*]



**Ms. Paule Brunelle:**

You say that you intend to take additional steps but what are they? I would like you to give me a more specific answer. Is the problem that you do not know the answers and do not have the final reports about

what happened in the US?

[English]



**Mr. Robert Cadigan:**

As I said at the start, our area of expertise is the supply and service sector. Certainly we're not experts in terms of oil spill response or in the environmental issues. That's more the purview of the oil companies and the Government of Canada and other parties, but we have a regulator that has 20-odd years of experience. We've had the largest amount of activity in Canada in terms of exploration and production, and we have experience in terms of our regulator and their people. We can only look at the history and look at how things have worked over time.

I can't offer you any concrete new steps, but I think the additional oversight the Canada-Newfoundland Offshore Petroleum Board put in place, which includes a testing of equipment before entering hydrocarbon-bearing zones, is extremely prudent. It'll be interesting to see how the U.S. regulatory process in the gulf worked and how effective that oversight was.



[Translation]



**Ms. Paule Brunelle:**

Thank you.

Good morning, Mr. Amos.

You stated that offshore drilling is a major environmental issue and I readily agree with you. Let us talk about "Old Harry". You probably know that Quebec has imposed a moratorium until 2012 on any exploration work in the Gulf of St. Lawrence, to allow for strategic environmental studies to be done. Those are very fragile ecosystems, as you certainly know. The fishing industry is worried.

What do you think about this moratorium? Should the government of Newfoundland and Labrador do the same?



**Mr. William Amos:**

This is a highly political question, obviously. It is made more complex by the fact that, so far, the jurisdiction over the Gulf of St. Lawrence is not quite clear. We are all waiting for information from the federal and Quebec governments about negotiations and requirements relating to the potential development of those resources. Our organization does not have any official position on the steps taken so far, but a moratorium in the Gulf of St. Lawrence does seem absolutely necessary. It is clear that we do not have enough scientific information about the potential impacts of drilling and spills, large or small. The affected communities have not all been consulted as they should have been. We should proceed slowly and democratically, and we should make sure that the regulation regime is well established and well understood by Canadians and Quebecers.

I would like to answer in part the question you put earlier to Mr. Cadigan. Whether as a Canadian or as an environmental legal advisor, his answer did not allay my concerns. As a Canadian, I need to know that concrete steps will be taken. The fact is that no serious concrete steps have yet been taken. Politicians and regulators keep telling us to wait for the reports, either from the National Energy Board or from the Canada-Newfoundland Offshore Petroleum Board. They say that we should wait for those reports to be received and analyzed, and to wait for the results of the National Energy Board review. They also say that we should wait for the results of the US presidential commission, and that it is only after having received all that that we should start discussing what should be done.

This does not indicate any great sense of caution. We are led to believe that everything is fine, that we should trust everyone, that things are moving forward and that the small problems will be resolved later. I do not think that is acceptable for Canadians and Quebecers. As a Quebec resident, I do not find that acceptable.

  (1150)

[English]

**The Chair:**

Thank you, Mr. Amos.

*Merci, Madame Brunelle.*

We'll go now to Mr. Cullen for up to seven minutes. Go ahead, please.

**Mr. Nathan Cullen:**

Thank you, Mr. Chair, and thank you to the witnesses.

We've talked about energy security very much around the safety component, but this study is also meant to talk about this as an economic component. We're looking at the energy security strategy for Canada right now. We know other energy-exporting countries develop an energy security strategy of some kind at a national level, preferably favouring the domestic economy in terms of investment and jobs created and whatnot.

Mr. Cadigan, do you know of any energy security strategy for Canada right now?

**The Chair:**

Go ahead, Mr. Cadigan.

**Mr. Robert Cadigan:**

That's not my area of expertise, but I think Canada's energy security is certainly enhanced when we have a clear picture of our reserves and our energy potential. How the Government of Canada matches that up with security is really up to the elected officials.

**Mr. Nathan Cullen:**

If we had a strategy in place that said we want to determine the reserves that exist on the east coast or wherever, would that add a level of certainty to the oil and gas industry?

**Mr. Robert Cadigan:**

Yes, it would add certainty in terms of the duration of the industry, in terms of the economic benefits and how long those are going to accrue, and in terms of the volume of production.

**Mr. Nathan Cullen:**

I know you folks do a lot of the supply to the oil and gas sector. Are any of the companies in your association also involved in blowout prevention components, the safety pieces that seal the well in the moment of a blowout?

**Mr. Robert Cadigan:**

Yes. In Atlantic Canada most of the contractors and suppliers of that kind of equipment are members of NOIA.

**Mr. Nathan Cullen:**

The reason I ask is that I was curious. We had the Newfoundland board in front of us a couple of days ago. In the weeks that followed the incident in the gulf and up until today, there has not yet been a report as to what specifically went wrong. We know there was probably some human error or some mechanical



error, but the Newfoundland board was confident to continue the Chevron well, which was much deeper and under different pressures, without knowing if there was a part that was used there that was also being used here and that may be faulty at depth or have some other problems.

Canada is a very small player to this point in the offshore oil and gas industry, as you pointed out. Since we don't know why the gulf happened the way it did, was there not at least some discussion among some of your industry members that for safety reasons on the rigs and for environmental reasons, a pause might be in order for that particular well until the U.S. could figure that out?



**Mr. Robert Cadigan:**

From an overall perspective, in the Gulf of Mexico over 4,000 wells have been drilled in deep water. In the case of Newfoundland and Labrador, we did have a well planned and ready to proceed around the time of the Macondo incident. Some of the steps that our offshore petroleum board--our regulator--took in terms of the testing of equipment and the testing of procedures immediately before entering the hydrocarbon bearing zone, I think, were very effective ways to ensure that the equipment was working properly before the time of greatest risk.



**Mr. Nathan Cullen:**

So from your members' perspective, there hadn't been a discussion of a pause.

I want to turn to Mr. Amos for a second. You'll be interested to hear that we had the head of the NEB in front of us the other day, and I think he confirmed what you said this morning about the review going on in the Arctic not being what the House of Commons passed unanimously as a motion to review unconventional sources, despite what the government says in question period and other places.

Why would it matter to Canada's overall economic, environmental, and cultural health if the government did initiate such a broad and full review of these unconventional sources--and within "unconventional", I also include Arctic drilling--which has not necessarily been done yet in Canada's experience? How would that aid us, and why must it be done now? Do other countries do it? Are we unique in this? Is it something we stand out on?



**Mr. William Amos:**

There is certainly a major difference between what was suggested with that unanimous motion in terms of a review of unconventional oil sources and the current National Energy Board's review, which is much less comprehensive. If you're asking me to answer the question of what would be the ideal review for Canada, which I think is where you're heading with that question, I don't think the NEB review is ideal. I think it has scope issues. It's not dealing with the east coast, it's not dealing with the gulf, and it's not dealing with issues of leasing, which are within the purview of Indian and Northern Affairs.

It's not for me to say whether it would be appropriate to have a broad increase in scope that would include all sources of unconventional energy, because then you're getting into a lot of different energy forms, including shale and tar sands, or oil sands. That kind of review would be very broad in scope.

I think that what ought to be considered--and I take a cue here from Professor Ratushny of the University of Ottawa, who's an expert in commissions of inquiry--is a commission of inquiry that deals with offshore oil exploration and licensing across the country, whether in the Atlantic, the gulf, the Arctic, or the west coast.



**Mr. Nathan Cullen:**

The leasing component is interesting, because north of 60 it is INAC issuing the leases and south of 60 it's Natural Resources Canada. In the Arctic in particular, we're trying to compare the leasing regimes between the U.S. and Canada and how vastly different they are. The government claims to have the toughest regime in the world, but even our immediate neighbours in the Arctic go through a very different process before any licences or leases are issued at all. If Canada issues the leases, do they not bind the company to drill as part of the contract? Is there not some sort of obligatory "we will drill" commitment

prior to any of the environmental assessments?

I point out in particular that the Prime Minister announced a beluga refuge some time ago in the Arctic, not pointing out the fact that it's actually surrounded by oil and gas leases and that there are actually leases inside the refuge as well. It seems to the public.... How are you going to have a whale refuge in the midst of a bunch of oil platforms and wells with the potential to leak without having a recovery plan in place?

The leasing regime seems to be upside down in Canada. We commit to drill before we've actually done a comprehensive environmental assessment. Is that a component of a review that must be taken into account?

You said that the NEB is not reviewing the leasing in question right now in the Arctic. Is it correct that it's not within their scope of reference?



**The Chair:**

You're going to have to give a 20-second answer. Mr. Cullen is well over his time.

Go ahead.



**Mr. William Amos:**

Certainly.

In 20 seconds or less, the issue of leasing is critical to the issue of energy security in this country, and it's critical to the issue of offshore regulation. It's unfortunate that the National Energy Board hearing cannot and will not go into that issue, and it's unfortunate that there is no examination of offshore licensing in the gulf--or in the Atlantic, for that matter. What we have right now is a vacuum of public and governmental engagement on this issue. We need a broader review, and I think there is reason to believe that a joint commission of inquiry with provinces, offshore regulators, and the federal government involved would be a better approach.



**The Chair:**

Thank you, Mr. Amos.

We'll go now to Mr. Allen for about five minutes, and then to Ms. Gallant for the last two minutes.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Chair.

Thank you to our witnesses for being here.

I have three questions. For the first one I want to pick up on the last comment.

Mr. Cadigan, Mr. Amos talked about a vacuum in the legislation and the oversight. Do you see the same thing?



**Mr. Robert Cadigan:**

In terms of Newfoundland-Labrador, as an example, there was a strategic environmental review held in terms of the last licensing round for the offshore area of Labrador. That comprehensive review included community consultations, consultations with the Nunatsiavut government in northern Labrador, and consultations with many of the people in many communities in Labrador.

I think Mr. Amos probably needs to have a complete inventory of exactly what the procedures are with each of the regulators, and to have some of the history, but certainly in the case of that licensing round in Labrador, a comprehensive strategic environmental review was done in advance of any of the work. There was some seismic exploration work done this summer, and there will possibly be some more next summer. Whether there will drilling can't be determined at this point.

  (1200)

**Mr. Mike Allen:**

You talked about the coastal trading act and a little bit about the seismic vessels. I want to pick up where Mr. Andrews left off. You were talking about how, given the existing act, there were opportunities for frivolous complaints that might lead to delays in testing.

Could you briefly talk about any delays that have been experienced? As well, from your perspective, what specific suggestions would you make to change the act to regain balance?

**Mr. Robert Cadigan:**

With regard to the coastal trading act--it's on the website as well--all of the approvals are given with rationale. The complainants are identified, and so on.

There was an example I used from this past summer. I'll give part two. Part one was that the primary operator in terms of the exploration program, which happened to be off the coast of Labrador, had received approval from the CTA. A second smaller and more junior company, which had an adjacent parcel of land and an adjacent licence, wanted to add onto that program, because this vessel would basically transit this other licence area. This particular company wanted to have this vessel do some seismic work on their adjacent parcel. Even though the original approval was given and rationales were given, there was a protest on that second parcel as well.

In general, most of the protests are made by one Canadian company, and generally they lose. Pretty well every time there's a seismic application offshore, they protest.

The solution, I believe, is a simple one, as we proposed earlier in the consultation round; it's to exempt seismic vessels from the act. Essentially that means that any foreign-flagged seismic vessel could come into Canadian waters to do work, and the issues would be around the business case and not around some of these, in our view, frivolous complaints.

**Mr. Mike Allen:**

Thank you.

Just before I turn it over to Ms. Gallant, you talked about 4,500 people directly employed, and that's based on what's happening today. You talked about 60 trillion cubic feet of available resources. What do you believe that has contributed to the economic, social, and cultural well-being of the rural communities where these people live?

**Mr. Robert Cadigan:**

In terms of Newfoundland and Labrador, about 30% of provincial revenue is derived from oil and gas royalties. We have a province that's really geographically dispersed; there are over 10,000 square kilometres in the island of Newfoundland alone. Supporting that population with health care and with infrastructure, such as roads and so on, is a very expensive proposition. That 30% of revenue is absolutely critical to the Newfoundland and Labrador business community, and I think to the population as a whole.

**Mr. Mike Allen:**

Thank you.

I'll now turn over the rest of the time to Cheryl.

**The Chair:**

Go ahead, Ms. Gallant.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Thank you, Mr. Chairman.

Through you to Mr. Cadigan, it was mentioned that approximately 700 ships assisted in the BP oil spill cleanup. The issue of the CTA refusing to allow seismic vessels into Canadian waters was raised here today. If a spill were to occur in Canadian waters, could foreign ships sent to assist in the containment be denied entry under existing laws as well?



**Mr. Robert Cadigan:**

I'm not an expert on marine law, but certainly if any foreign-flagged vessel has to pass through an approval process, then I don't see what would be different in an event such as the one you've spoken about. Obviously there would be ways to expedite that, but certainly the regulatory regime is in place, and it does require a review.



**Mrs. Cheryl Gallant:**

Thank you.



**The Chair:**

Thank you very much, Mr. Allen and Ms. Gallant.

Thank you again to both of the witnesses for being here today. Your input is very much appreciated and very helpful.

I will suspend the meeting while we change witnesses. If the witnesses present in the room could back away from the table as quickly as possible so that the other witnesses could move up, that would give more time for questions after the comments in the next section.

Thanks again. The meeting is suspended.



**The Chair:**

We'll resume the meeting now with our second group of witnesses.

In our second pane we have, from the Department of Natural Resources, Mark Corey, assistant deputy minister, energy sector; Chantal Maheu, director general, energy policy branch; Eric Landry, director of the frontier lands management division, petroleum resources branch; and Jeff Labonté, director general, petroleum resources branch. Thank you all for being here.

We also have Earle McCurdy, president of the Fish, Food and Allied Workers. Welcome here.

Each group will have about seven minutes for a presentation. We'll start with Natural Resources Canada.

Go ahead, please, for up to seven minutes.



**Mr. Mark Corey (Assistant Deputy Minister, Energy Sector, Department of Natural Resources):**

Thank you, Mr. Chair.

This is actually our second appearance before the committee. We were here last spring as well, talking about the offshore. We also appeared before the Senate committee.

It's obviously an area of considerable interest to members of Parliament. It's an area that's changing a lot right now, and it's a very important area for Canada's energy future.

[*Translation*]

We will make a very brief presentation during our 7 minutes. Our purpose is to give you an overview of the Canadian energy system, to review projections of oil and gas supply, to discuss federal responsibilities and to provide the current status of offshore oil and gas production in Canada. There are three different regions with different states of development.

Page 3 shows that Canada has abundant and varied energy sources, such as oil and gas, hydroelectricity, nuclear energy, natural gas and renewables. As a matter of fact, Canada is fifth in the world in total energy production, third in gas production, and seventh in oil production.

Canada's situation is unique in the world since we are the only OECD country with a growing oil production. We are also a net exporter of energy, as well as a major consumer.

[*English*]

The next couple of slides are projections of where energy production is going to be going.

The first one is from the International Energy Agency. It indicates that oil and gas will continue at the world level as a dominant energy resource for many years to come, so one of our basic planning assumptions is that it will remain a principal source of energy.

A number of recent findings in the International Energy Agency's global outlook from 2009 are worth noting. First, they project that global energy will increase at about 1.5% per year until 2030, which would be an overall increase of about 40%. Oil, gas, and coal are projected to remain the dominant source of primary energy worldwide, and unconventional oil will play a growing role in the world oil supply through to about 2035. Those are projections from the International Energy Agency.

Page 5 shows projections in Canada from the National Energy Board. They did the 2009 reference case. Their projection is that unconventional oil and gas are to become more important in our economy. Energy demand growth is expected to slow by 2020. Conventional production of oil is projected to continue its historic decline, but in their view this decline will be more than compensated for by an increase in non-conventional production, which is this committee's main interest in this particular review you're doing.

In eastern Canada the three major producing fields in offshore Newfoundland and Labrador are currently declining, but this decline will be moderated shortly by the addition of several satellite fields and by the addition of the larger Hebron field in 2017.

Slide 6 indicates the offshore industry is governed by a few key acts, notably two. The Canada Petroleum Resources Act provides federal authority to issue interests in crown frontier lands. It governs the leasing of federally owned oil and gas rights and allows for the protection of the environment. Subsurface rights in unexplored areas are issued in calls for bids, and the act governs the payment of royalties.

On the regulatory side, the Canada Oil and Gas Operations Act governs exploration for oil and gas and provides for safety, protection of the environment, conservation of oil and gas resources, joint production arrangements, and economically efficient infrastructure.

The content of slide 7 you know well, because you had the heads of the three boards before you earlier in the week. In Atlantic Canada we have taken an approach of shared management to the resource. Under the Canada-Newfoundland Atlantic Accord Implementation Act of 1987 and the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act of 1988, we have a system of co-management with the provinces in those areas. The offshore boards are independent, arm's-length groups that are responsible for land tenure management functions, environmental protection, safety, and inspections. Natural Resources Canada is responsible for collecting, managing, and administering the royalties.

The National Energy Board is an independent federal regulatory agency, as you know, that administers the COGOA and regulates oil and gas activity in non-accord areas, including, for example, Canada's Arctic offshore.

Finally, Natural Resources Canada and INAC are responsible for collecting, managing, and administering royalties and land tenure management functions in Canada.

I won't spend a lot of time on slide 8. When we last appeared we were here with the Coast Guard and Environment Canada. I remember we had Indian and Northern Affairs Canada as well. We talked a lot about the various federal responsibilities. This slide is just a summary of what the various departments are responsible for.

On slide 9 we start to talk about the three specific areas in Canada.

In British Columbia there is a moratorium on offshore oil and gas exploration. This moratorium has been in effect for some decades now, and remains in effect.

In the north there are currently no authorizations for oil and gas drilling in the Beaufort Sea or elsewhere in Canada's Arctic waters. As you know, the NEB is undertaking a comprehensive review of Arctic safety and environmental offshore drilling requirements. On June 10 it undertook a preliminary scoping exercise and on September 20 released details on the offshore drilling review, which will address safety while protecting the environment, responding when things go wrong, what they've learned, and what their filing requirements will be. The review will be conducted in three phases, and we expect it will probably be completed sometime next year.

The last area is Atlantic Canada. There has been offshore activity since the early 1980s. As you can see, it has brought important economic benefits to the region. For example, in 2009-2010, transfer payments alone to Newfoundland and Labrador were \$1.2 billion, while \$109 million went to Nova Scotia. This creates a lot of jobs, and there are a lot of other economic spinoffs and benefits to both the region and to Canada as well.

Several regulatory actions were taken recently, as you know, which included measures additional to the regulatory oversight requirements already in place for Chevron's drilling project in the Orphan Basin, which was safely completed in August of 2010.

 (1215)

As you know, an independent assessment of offshore oil spill prevention and response for offshore Newfoundland and Labrador is currently being conducted. The moratorium on oil and gas activities in Georges Bank was extended to December 31, 2015. That happened recently, and recently there's been interest in oil and gas potential in the Gulf of St. Lawrence, both from Quebec and from Newfoundland and Labrador.

In summary, to lay out the basics of the offshore situation, Canada's oil needs are met by a diverse energy mix. Specifically oil and gas will continue to dominate energy supply, and unconventional oil and gas will increase in importance over the next few decades. Canada's offshore oil and gas activity is governed by federal legislation and regulations, which are co-managed with the provinces in accord areas. Currently, there's no offshore drilling in B.C., the north, or in the Gulf of St. Lawrence, and there has been offshore activity in both Newfoundland and Labrador and Nova Scotia since the 1980s.



**The Chair:**

Thank you very much for a very concise overview, Mr. Corey, and you were on time, which I appreciate. Thank you.

We go now to Mr. Earle McCurdy, president of the Fish, Food and Allied Workers union.

Welcome to the committee. Please go ahead with your presentation. You have up to seven minutes.



**Mr. Earle McCurdy (President, Fish, Food and Allied Workers):**

Thank you. I'm pleased to have the opportunity to be here.

It's great to be from a "have" province where some of us are still trying to figure out what exactly it is that we have. In the metropolitan area of St. John's, I think that's probably fairly obvious. The economy there is doing well, and obviously the oil and gas activity is the driving force behind that.

When you get into the rural areas of the province, where most of our members are located, it's not so

obvious that we're doing well. In fact, the economy is in tough shape.

Nobody really told me, so I was trying to figure out what I would have to offer this particular committee. I assumed it would relate to the impacts on the fishing industry, so that's the area I've chosen to focus on.

Oil and gas means a lot of things to a lot of people. To people in the real estate business, or suppliers, or a whole host of people, it means major economic opportunity and growth. For people in the fishery, it primarily means risk. They're the ones in the line of fire.

If you look at the *Exxon Valdez* disaster in Alaska, the *Prestige* disaster in Spain, and most recently the Gulf of Mexico catastrophe, people who make their living from the fishery were the ones in the line of fire and who felt the most immediate impact.

As the mayor of a small town in southern Louisiana put it to us a few days ago, "April 20 changed our lives". It's very serious to people.

In Norway there's been a conscious policy that some of the proceeds of oil and gas development, which is a non-renewable resource, would be used to strengthen and stabilize traditional renewable industries. If there is such a policy in Canada, I'm not aware of it. I think there should be.

We recognize the impact of oil and gas on our economy, and we have done our best to work with the oil and gas sector in terms of trying to coexist, to the point that we formed a liaison organization with them called One Ocean, which meets periodically. It has a board of directors consisting of equal representation of oil industry and fishing industry representatives, including me.

Two weeks ago we had a delegation from One Ocean, including me, go to the gulf states for a week to meet people who could speak with some knowledge and experience on the impacts of the disaster there. I can give you a quick sketch of what transpired.

There were three people from our union, two from the oil industry, and a staff person from One Ocean. We met with fishermen, fish processors, marketing organizations, mayors, parish council members, the Governor's director of coastal management, the response contractor who was brought in to coordinate vessels of opportunity, and oil and gas industry associations. We had a half day at the end at the BP command centre to hear their views of what transpired and how they responded.

We had a pretty hectic schedule while we were there, but there are a few main take-aways we got from that, if I could touch on them.

People in the communities and people involved in the fishery thought there was something in place to deal with these kinds of eventualities. They were just as surprised and horrified as our members were that there didn't seem to be a capability to handle the problem that arose.

Dispersant use was a very contentious issue--and contagious, too, I think. Market tainting--i.e., the perception of a problem--became a problem in itself. Probably the most tested seafood in the world is down in the gulf. I ate the stuff without any hesitation, but tell it to the judge. I think a University of Minnesota survey showed that 44% of the American population wouldn't eat gulf seafood because they were fearful of the consequences. That's a major consideration.

The other thing that came back to us over and over again was the importance of having a plan in advance. We talked to a man who lives in Seattle. He works for a Finnish firm, and he had experience as the coordinator of the vessels of opportunity response to the *Exxon Valdez* in Alaska. He was brought into the Gulf of Mexico to do the same job.

 (1220)

He said he started with a blank sheet of paper. He didn't know who the fishermen were, he didn't know who owned vessels that could be used, he didn't know the characteristics, and he didn't have a plan. He had to start from absolute scratch. He said it would be so much better to have this done ahead, in what he called "peacetime", when there was less stress and more ability to have a plan for these things. A lack of such a plan, in his view, made his job much tougher.

Bland assurances really don't do a whole lot for us. I think they had those kinds of bland assurances down there. When you stop to think about it, once this blowout occurred, what they had to do to fix it was

to accurately hit an eight and a half inch hole three and a half miles down in the ocean. When I was a kid, at the regatta—that's our kind of garden party—they had an annual fair where there was a game with a bucket of water and a little cup in the bucket, and if you flicked your quarter and made it land in the cup, you got a dollar back. I tried it only enough times to realize it was a sucker's game and that you weren't going to get your money back, so I used my quarter on cotton candy or something else. So that was a challenging job they had to get at that hole.

One thing that was very clear to us down there, which we got from the people we visited, was that since the *Exxon Valdez* disaster, which I believe was in 1978, they've had virtually no R and D done on boom technology, skimming technology, and so on. All of the R and D went into drilling and development, and not into that kind of remedial action. I think that's clearly an area that needs attention.

As a final note, though I'm not very knowledgeable about energy security, I would certainly hope that our environmental security would not be sacrificed on the altar of energy security. We have renewable industries that depend on that ocean, and I think there's a responsibility on the part of legislators and regulators to do everything that's reasonably possible to protect those industries in the first place and to have a contingency plan in place in the event that something goes awry.

Thank you.

  (1225)

#### **The Chair:**

Thank you very much, Mr. McCurdy.

We'll now go directly to questions, starting with Mr. Tonks, and if there's time left, we'll go to Mr. Andrews.

Go ahead, please, Mr. Tonks, for up to seven minutes.

#### **Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you, Mr. Chairman.

Thank you to all of our witnesses.

I would like to continue the questioning with respect to what we heard from the last witness depositions on the state of the National Energy Board's review with respect to legislation and emergency response. I'm particularly compelled to do that, as Mr. McCurdy has referred to that culture of complacency and has talked about the integration of the environment as everyone's concern. He also said that there should be a plan in advance.

My question is related to the testimony that we heard from the National Energy Board. Mr. Caron said this:

A critical requirement for offshore drilling, which is set out in section 6 of the Canada oil and gas drilling and production regulations, is the need for companies to provide an emergency response plan, which is reviewed in detail by the NEB before any drilling authorization may be issued. If there are gaps

—and I stress this—

in the plan, the company would have to address these gaps before the board would consider permitting the drilling to occur.

Then he went on to say:

The new U.S. regulations also call for industry to develop an integrated safety and environmental management system. Canada's regulations already require operators to have safety and environmental management systems. In other words, the United States is moving towards where Canada has been.

We heard testimony from the last witness, Mr. Amos from Ecojustice, that they were doing a gap analysis in the United States. According to the testimony of the NEB, they're quite satisfied that they have already done the gap analysis in terms of response.

My question is perhaps to you, Mr. Corey. Are you satisfied with the position taken by the National



Energy Board? Are officials from Natural Resources monitoring the review that's taking place in terms of where those gaps are, as indicated by witness testimony, and is the legislation being adjusted accordingly? Are we monitoring those hearings and are we going to have follow-up in terms of this committee's role, or any committee's role, in closing the accountability loop?



**The Chair:**

Go ahead, Mr. Corey.



**Mr. Mark Corey:**

Thank you, Mr. Chair.

I'll start off and then I will pass it over to Jeff Labonté, who is the director general of the petroleum resources branch, who can talk to it in more detail.

The answer is yes. We are actually participating in the NEB review, and we're going to be watching it very closely. We'll be working with them. In Mr. Caron's testimony to you earlier, he made it clear that they will make recommendations on regulations that need to be changed. Then it's the department's role to work with them and to advise the minister, because eventually it's the minister who makes recommendations for the order in council that would change the regulations.

So the answer is yes, we will be working with them and watching closely, but we always underline that they are an independent arm's-length regulator, and we are just one participant with them.

Jeff, did you want to add a bit to that?



**Mr. Jeff Labonté (Director General, Petroleum Resources Branch, Department of Natural Resources):**

Yes. Thank you very much for the question.

As Mark has indicated, NRCan is a participant in the NEB review, and of course we're watching actively as it gets under way.

In terms of the comment about safety measures that exist for emergency preparedness and offshore drilling, in Canada at this point each of the arm's-length regulators has a requirement that obligates operators to put in place a number of measures in advance of moving forward. Those measures have to be put in place and approved by the regulator before operators can receive an authorization to move forward with any drilling activity.

Those measures include a safety plan, an environmental protection plan, an emergency response plan, and a contingency plan. Each of those aspects is documented in great detail and to the satisfaction of the regulator before they can go forward.

Canada's structure around the safety measures is an important foundation for the work the regulators do, and it is done in advance of providing authorizations to companies.



**Mr. Alan Tonks:**

My hope was that it wouldn't be just the United States with respect to gaps that occurred, and that we would be looking much further than that. I was a little concerned with respect to the inference that was drawn, the inference that we're way ahead of that. I think we should be very careful on that.

I'll pass it over, if there's any time.



**The Chair:**

You have about two minutes, Mr. Andrews.

**Mr. Scott Andrews:**

Thank you very much, Mr. Chair.

I have two questions for you, Mr. McCurdy.

First, when it comes to seismic testing and the impact on the fishery--the groundfish stocks and the shellfish--has any research been done that impact? Is seismic testing on the ocean floor a concern of yours or of your organization?

Second, has your organization ever objected to any offshore oil and development testing or drilling in the last few years?

**Mr. Earle McCurdy:**

On the seismic issue, I think the unknown with that issue is the long-term impact. I'm not an expert in the area by a long shot, but intuitively, I don't think it's a great thing for the species that live there.

It's a bit like having a jackhammer in your kitchen when you're trying to cook supper. It really is intrusive, and who knows what impact that might have on reproduction? I don't know--

**Mr. Scott Andrews:**

So there has been no research done that you know of?

**Mr. Earle McCurdy:**

I can't say there's been no research done. I'm not an expert on any research that has been done. Some degree of immediate dispersal of fish has been shown, but then over a relatively short period of time that impact seems to have diminished.

I'm not aware of any research that has looked at the long-term implications in terms of the impact on reproduction, migration, spawning behaviour, and that kind of thing. It has been a source of concern for some time.

On the issue of input on various developments, we haven't opposed offshore oil development taking place because, first of all, we feel it wouldn't be very productive in the sense that it wouldn't have any outcome to it, and it is an important industry for our economy. However, we're not satisfied it's being done in a manner that fully mitigates the impacts on the fishery or anticipates them and deals with them to the extent it should.

We've also been successful in having some adjustment to things such as the timing of particular activities--for example, seismic work--in relation to the timing of the fishing season or spawning behaviour. We have made representations and have had seismic activity delayed to avoid adverse impacts to the extent possible.

**Mr. Scott Andrews:**

So you've had a cooperative relationship?

**Mr. Earle McCurdy:**

We try to work with the oil industry on the basis that we understand they're there trying to make a living in the same ocean, but we expect them to understand we've been there for a long time and that their activities shouldn't undermine our industry.

**The Chair:**

Thank you, Mr. Andrews. Your time is up.

We go now to the Bloc Québécois. Monsieur Pomerleau, you have up to seven minutes.

[ Translation ]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you very much, Mr. Chair.

I want to thank the witnesses for being here.

As you may have seen from our questions to the previous witnesses--and this has been raised many times in the past--people are generally not reassured by the present situation. It may be why Americans refuse to eat fish from the Gulf of Mexico. We really need a better and transparent regulation regime. People have to be informed about the regulations, which they do not seem to be at this time. At the very least, people do not feel that they have enough information.

I would like to have your opinion about this. I would like you to tell us what is being done, at this time, for people to feel safer.



(1235)



**Mr. Mark Corey:**

Mr. Chair, I will start answering the question and then ask Eric Landry, our director for this area, to complete my answer.

This is one of our concerns, especially since the events of last April in the Gulf. It is something that we are reviewing. If I remember correctly, another minister who was part of the Committee of the whole said that we would draw lessons from what happened in the Gulf. I can assure you that we are looking very closely at the reports on these events to see what can be learned from that.

Do you want to add something, Mr. Landry?



**Mr. Eric Landry (Director, Frontier Lands Management Division, Petroleum Resources Branch, Department of Natural Resources):**

I would like to clarify a few things. Authorizing the various activities is the responsibility of the offshore Boards or of the NEB. Environmental assessments have to be carried out before work can proceed. They also have to be done by the private sector. Typically, they include public consultations.

In the case of the Boards, they publish documents so that people can participate and submit their comments about the various projects that have been proposed.



**Mr. Roger Pomerleau:**

I have the feeling that it is what is being done at this time but that does not make people feel any safer. That is my point.

What does the NEB intend to do about the changes made to the regulations? Is it going to monitor what is going to happen, so that people feel the problem has been resolved? We all know that there will always be some risk but it has to be minimized as much as possible. People want to know that all the steps have been taken to solve this problem.



**Mr. Eric Landry:**

As Mr. Corey mentioned, we are closely monitoring the review. My people will be involved in the Arctic review. My group is also following the various studies and reviews currently undertaken in the US in order to see what can be learned to improve the regulations and, later, to provide advice to our officials and to the Minister about...



**Mr. Roger Pomerleau:**

When will the reports be published in the US?



**Mr. Eric Landry:**

The various reports have different timetables but are not expected before the end of the year. The report of the commission...



**Mr. Roger Pomerleau:**

You mean the end of 2010?



**Mr. Mark Corey:**

Yes.



**Mr. Roger Pomerleau:**

I have another question.

Someone mentioned earlier, quite accurately, that emergency plans should be prepared in peacetime. Someone else had indicated previously that it would appear that no competent people are looking at the issue of Arctic drilling at this time. We are in peacetime and there is no drilling going on, so that would be the right time to plan for emergencies. However, it seems that nobody is doing so.

Is that true? What do you intend to do about it?



**Mr. Mark Corey:**

I will answer part of the question. That is really the purpose of the National Energy Board review. We need more information about safety and environmental issues. We all know that the Arctic environment is very fragile, or at least more so than in other parts of Canada. That is a good question. It is something that we are currently looking at. We have lots of information but we need more.

Do you want to add something, Mr. Labonté?

[English]



**The Chair:**

Go ahead, Monsieur Labonté.



**Mr. Jeff Labonté:**

Thank you.

Certainly there's an expectation that the findings in the NEB hearings, as well as a number of the persons and groups seeking status, will address that issue. As you probably heard from Gaétan Caron earlier in the week, there are four areas. One of those is how to respond when things go wrong. That would present a number of different approaches and methods and levels of understanding of the competence for how a response might occur should something go wrong.

At this point in time I think it's fair to say this is an active area of discussion, debate, and interest, and I'm looking forward to some of those findings and information.

[Translation]



**Mr. Roger Pomerleau:**

Do I have enough time for another question, Mr. Benoit?

**The Chair:** Yes.

**Mr. Roger Pomerleau:** All right. My question is for you, Mr. McCurdy. I really appreciated your presentation, especially the way you expressed your thinking. At the end-- and this was a good summary of your position, which I share-- you stated that environmental safety should not be sacrificed on the altar of energy security. I believe this is an excellent summary of the issue and of the way we should look for a solution.

You know that the government of Quebec has imposed a multiyear moratorium on "Old Harry" to make sure that the possible impacts of drilling in that area be fully studied, since this is not an offshore area. It is a completely different environment. For example, we know that in case of a spill, oil would not be dispersed as easily as in the ocean and that it would stay there for quite some time. We also know that the marine wildlife is not the same as in the ocean. It may be more concentrated and more complex. I believe the government acted wisely in imposing a moratorium to have enough time to study closely the potential impacts, especially for the people of the Magdalen Islands.

What do you think of this moratorium? Do you think it is wise to take a bit more time to study the potential impacts?

  (1240)

[English]

**The Chair:**

Could I get a fairly brief response, please?

**Mr. Earle McCurdy:**

It's hard to fix it once the problem has happened. If there's a lesson out of the gulf.... The CEO of Exxon told the congressional committee they weren't prepared for that event, and if you're not prepared for an event, the development shouldn't take place beforehand. To wait and to be reasonably assured of what the consequences will be seems prudent to me.

**The Chair:**

Thank you very much. *Merci*, Monsieur Pomerleau.

We go now to Mr. Cullen. You have up to seven minutes, please.

**Mr. Nathan Cullen:**

Thank you, everyone, for being here.

Mr. Corey, under the government's definition of energy security, are renewables considered part of that package?

**Mr. Mark Corey:**

Mr. Chair, that is an important part of our overall energy strategy. When you look at the approach the government has had to energy development, energy supply, and energy policy, renewables play an important role. I don't have the numbers here, but the government has put billions of dollars into the renewables sector over the past number of years in all areas--wind, solar....

**Mr. Nathan Cullen:**

I have a quick question on that. Do you consider carbon capture a renewable? Does the government classify it as renewable?

**Mr. Mark Corey:**

Technically, I'd have to look into that--



**Mr. Nathan Cullen:**

Do you mind? I've been curious about it for some time.



**Mr. Mark Corey:**

Okay.



**Mr. Nathan Cullen:**

With regard to the NEB review that's going on right now, are you familiar with the motion that was passed in the House of Commons this past spring?



**Mr. Mark Corey:**

Yes.



**Mr. Nathan Cullen:**

It was for the government to conduct

...a thorough review and revision of all relevant federal laws, regulations and policies regarding the development of unconventional sources of oil and gas....

And it goes on. You're familiar with this. Is the NEB doing that review right now?



**Mr. Mark Corey:**

Mr. Chair, I'll ask Mr. Labonté to answer that.



**The Chair:**

Go ahead, please, Mr. Labonté.



**Mr. Jeff Labonté:**

Thank you for the question.

I think it's fair to say that NRCan is committed to responsible, safe, and sustainable development of natural resources.

The context for the policy environment around this particular motion and element certainly has a lot of different considerations and circumstances. It's a fairly complicated area, with quite a few different aspects, and it certainly needs to take into account regional issues; issues about the environment issues of the north, the east coast, and the west coast; and certainly recognition of, and respect for, provincial jurisdiction with respect to the development of natural resources.



**Mr. Nathan Cullen:**

Am I to take it from your answer that you're doing that review?



**Mr. Jeff Labonté:**

I think it's fair to say a number of different elements and aspects of different reviews going on around the country address a number of important points. The NEB is looking at the review of the Arctic offshore drilling. You heard earlier that Newfoundland and Labrador are doing a response and a review of offshore drilling on the east coast--



**Mr. Nathan Cullen:**

Mr. Labonté, it was a very direct question, a very simple one. Is the NEB doing that review right now? I know about these other reviews. The committee is familiar with them.

Are you doing that review?

**Mr. Jeff Labonté:**

Mr. Chair, to return to the point, it's a fairly complicated area. There are a number of different aspects to the policy environment, and certainly there are a number of different reviews under way throughout the country, all interested in the same aspect, which is to ensure that we have a robust regulatory regime that can provide safe, responsible, and sustainable development of natural resources.

**Mr. Nathan Cullen:**

When questioned about this in the House, the minister said that in response to the motion passed unanimously by the House of Commons, the NEB is doing this review. I've asked you three times now if the NEB is doing this review. The answer from the NEB is no. We asked them very explicitly.

It's just yes or no. I understand there are other reviews going on. Is Natural Resources Canada doing a broad review? You can say yes or no--it's okay--but don't tell me about all the other reviews. I just want to know if you guys are doing it. That's all I'm asking. It's very simple.

 (1245)

**Mr. Jeff Labonté:**

I think if you look at all the policy aspects related to the motion, there are quite a few different elements and areas related to this. They involve a lot of complexity. They involve a lot of federal-provincial jurisdiction. They involve regional variations, environmental circumstances, and circumstances that are different in a very diverse country.

Looking at a number of the different elements, they certainly address, in terms of a number of reviews.... There are, I think, over about 10 or 12 going on throughout the country.

**Mr. Nathan Cullen:**

Just to be clear, the Minister of Natural Resources, when asked about this specific question in the House of Commons, said that the NEB is doing it. The NEB is not doing it.

I can't get an explicit answer from Natural Resources officials today, which is disappointing. It's perfectly fine to say no. We're just trying to find this out.

I have a question for you, Mr. Corey, about leases in the Arctic. As part of the lease, is the company committed to drill? Is it not part of their contract to make a commitment to actually perform some exploratory drilling when they acquire a lease?

**Mr. Mark Corey:**

The answer is yes.

**Mr. Nathan Cullen:**

Okay. That's great. Thank you. That's so relieving.

There's no drilling going on right now, but we expect drilling in the next few years, according to the leases that have already been commissioned by the government.

**Mr. Mark Corey:**

That's correct, and it's INAC that is responsible for the leases. They're the ones who administer it in the

north.



**Mr. Nathan Cullen:**

You mentioned a moratorium on the west coast. For a number of years, different parties have tried to actually see how that moratorium is written. Do you have a copy of it? Does it exist?

I apologize. I don't know what's causing that feedback noise, Chair.



**The Chair:**

It's your magnetic personality.



**Mr. Nathan Cullen:**

Is that what it is? I'm hot and bothered, that's why.

**Voices:** Oh, oh!

**Mr. Nathan Cullen:** I've got the mikes fired up.



**The Chair:**

Anyway, please continue.



**Mr. Nathan Cullen:**

Oh, it's the government tap coming in. I'm sorry; we're getting feedback.



**The Chair:**

Please continue, Mr. Cullen.



**Mr. Nathan Cullen:**

Specifically, is there a moratorium written down anywhere? We know the government issued a verbal statement about it back in the 1970s, but we have not been able to actually see a written document anywhere. The provincial government in B.C. actually says that there isn't one, which has created a bit of confusion, as you can well understand.



**Mr. Mark Corey:**

Mr. Chair, the answer to that is that there is a moratorium in place. The moratorium continues to be maintained through government policy. No activity can occur until the government decides otherwise. It is in place, and there is a policy that says that it shall not occur.



**Mr. Nathan Cullen:**

Mr. McCurdy, you commented about environmental security being sacrificed on the altar of energy security. There are actually many countries, Norway being one of them, that include environmental security inside energy security. It should be one and the same. One shouldn't be versus the other. I took your point very well.

On the west coast the place that I represent, which might be quite similar to yours, has a \$140 million wild salmon industry. There have been proposals to lift the moratorium on the west coast, as Mr. Corey knows, but the risk is being incurred by the fishing community entirely, with virtually no benefit to them-- unless there's a spill; then their boats get hired out, I suppose.

Does it sometimes feel in your situation that oil and gas are the big kid on the block politically and economically, and that you folks have been pushed down to the side and virtually off the table in trying to get the interests of the fishing community put forward in these decisions?



**Mr. Earle McCurdy:**

Let me put it this way. I don't think that the extent of the risk taken on by the people who work in the fishing industry as a result of the arrival of the oil and gas industry has been recognized or dealt with, and there is a great deal of risk.

In our province, our fishery is roughly a billion-dollar export industry annually. That is small potatoes compared to the oil and gas industry, but it's sure big potatoes in terms of rural Newfoundland--a province of a half million people--for the rural population and for the ability to maintain rural communities.

We are concerned about the impacts it has and we don't believe there has been adequate.... We're not satisfied with the extent to which that's been recognized and dealt with. Normally when you ask somebody to take a risk, you say that in return for that risk, you're going to provide them with some kind of quid pro quo. That's what has been lacking.

**The Chair:**

Thank you, Mr. Cullen. Your time is up.

We go now to Mr. Harris. You have up to seven minutes. Go ahead, please.

**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chairman.

Mr. Labonté, I'm aware that a number of different reviews are going on at the present time. They have been going on probably even more vigorously since the gulf spill. We're all looking for the same things. I'm not sure of the number of reviews, but I know that it's more than one. There are probably three or four different ones.

Is it fair to say that by virtue of the scope of the responsibility and oversight that the NEB has, no matter who is doing these reviews in Canada, you guys are automatically involved? With the sharing and receiving of information, you certainly have a.... There must be an extension there because of your oversight, a passing of information as a result of the findings and things like that.

Is that a fair comment?

 (1250)

**Mr. Jeff Labonté:**

I think it's a completely fair comment. Natural Resources Canada works closely with, and sets the regulatory framework for, the NEB and the offshore boards, in partnership with Newfoundland and Labrador and the Province of Nova Scotia. Certainly aspects of the motion are covered in the NEB review, but there are a number of other reviews under way. There is the Newfoundland review.

We're certainly monitoring all the reviews, including the ones that are happening outside of Canada. In the United States, there are two or three different reviews under way. The United Kingdom is doing a review. Australia is doing a review. There are a whole number of different aspects being looked at, whether they're focused on the technological aspects, the regulatory aspects, or the safety response.

The sum of all of these reviews is an important factor that helps us monitor and understand what gaps exist or what opportunities there might be for Canada to look at its regime.

**Mr. Richard Harris:**

Yes, I would suggest that given the scope of the NEB's responsibility, you're pretty much automatically drawn into, in some way, every review that goes on within the area of your responsibility.



**Mr. Jeff Labonté:**

Indeed.

**Mr. Richard Harris:**

We're all laymen at this table, with the exception of you guys, and we're learning about oil spills from the witnesses and from reading what we can about them.

I need to ask a couple of basic questions. Has there ever been an offshore spill in Canada, and if so, when was the last one that resulted from a blowout or an equipment failure?

**Mr. Mark Corey:**

The answer is yes. I think that was about the first question we answered when we were before the committee last spring. There were two, both involving gas off the east coast of Atlantic Canada.

Jeff, do you have the details?

**Mr. Richard Harris:**

When was that?

**Mr. Jeff Labonté:**

There was one in the early 1980s on the east coast of Canada, in Nova Scotia, and there was a second one in the same period, more or less, both of which were contained.

**Mr. Richard Harris:**

All right.

In the area of preventing a spill or a leakage or blowout, I'm hearing the following three things from the witnesses we've heard.

First, the way to prevent a spill is by increasing the scientific and technical knowledge about how you drill and about what's down there and about how you safely go through the different zones. That would be number one.

The second way is to eliminate the chance of human error, to the highest possible extent, through increased training and safety methods.

The third is to research and develop newer and safer equipment to eliminate the incidence or chance of equipment failure to the highest extent possible.

That's what I am getting on the side of preventing a possible blowout.

What I'm getting in the event of a spill is again the importance of increasing scientific knowledge. You need to be able to deal with the oil in the water and know how to disperse it, and you need to know the technical aspects of how to gather it up and contain it. As well, you need an advance containment remediation plan. Third, you need to have the logistics and the infrastructure to carry out the physical part of cleaning up an accident.

Those things appear to me to be ongoing work. We're always looking to increase our scientific and technical knowledge to find safer ways of doing things and to decrease the chance of human error and equipment failure. Then there's the clean-up side.

Is it fair to say that we have reasons to have all of those as ongoing areas in trying to improve or minimize the chances of a spill?

That's a long question. I'm sorry.



**Mr. Mark Corey:**

Mr. Chair, I think that's a fairly good summary of a lot of the problems we've seen.

One of the things that we have seen so far coming out of the situation in the Gulf of Mexico is the first report that BP has issued. The department actually had folks from BP come to the department and brief us. In their report--and again, it's BP's view--they list eight things that happened, and a lot of them pertain to things that you were talking about. There was equipment failure. There were people who did not understand what was happening and what the various readings meant. There were instances in which they just missed things. There was a sequence, in their view, of eight things that happened that would be addressed by a number of the things you've mentioned.

What we're really waiting for is the presidential commission report that will be coming, I believe, in the next month or two months, possibly in January. A number of other reports are ongoing, and you can be certain that all three boards and the Government of Canada will be watching those very closely to see what lessons we can learn.

The other thing I would mention is that we're not alone in this. There's the International Regulators' Forum. The three boards that you had before you earlier belong to this larger international community. They spend a lot of time talking about new trends and regulations, how to regulate better, and how to address a number of the points you've raised. I think it's fair to say that a lot will be happening in that forum as the regulators take stock of what we've learned about how to prevent things like this in the future.

**Mr. Richard Harris:**

Right. Thank you very much.

Do I have any time left?

**The Chair:**

You do not, Mr. Harris.

Thank you very much.

We thank all of the witnesses very much for coming and helping with this study.

I want to wish all of the members of the committee a good constituency work week. In particular, our Remembrance Day ceremonies are very important to everyone. I wish you all the best.

We will see you on Tuesday, November 16.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 32

Thursday, November 18, 2010

The Standing Committee on Natural Resources met at 11:03 a.m. this day, in Room 308, West Block, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Hon. Marlene Jennings for Scott Andrews.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Questerre Energy Corporation:* Michael Binnion, President and Chief Executive Officer.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

The witnesses made statements and answered questions.

At 12:12 p.m., the sitting was suspended.

At 12:15 p.m., the Committee proceeded to sit *in camera*.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Tuesday, March 16, 2010, the Committee resumed its study of the status of the NRU reactor and the supply of medical isotopes.

It was agreed, — That the motions adopted on Tuesday, November 2, 2010, concerning the draft report on the status of the NRU reactor and the supply of medical isotopes be rescinded and that the order for the presentation of the report to the House by the Chair be discharged.

The Committee resumed consideration of a draft report.

It was agreed, — That the draft report, as amended, be adopted.

It was agreed, — That the report be entitled: “The National Research Universal Reactor Shutdown and the Future of Medical Isotope Production and Research in Canada”.

It was agreed, — That the Chair, Clerk and analysts be authorized to make such grammatical and editorial changes as may be necessary without changing the substance of the report.

It was agreed, — That, pursuant to Standing Order 109, the Committee request that the Government table a comprehensive response to the report.

It was agreed, — That the Committee append to its report a dissenting opinion from the Conservative Party of Canada provided that it is no more than two pages in length and submitted electronically to the Clerk of the Committee, no later than 5:00 p.m., on Friday, November 19, 2010.

ORDERED, — That the Chair present the report to the House.

The Committee proceeded to the consideration of matters related to Committee business.

It was agreed, — That members submit their additional prioritized lists of witnesses for the study on energy security in Canada to the Clerk of the Committee, by 11:00 a.m., Tuesday, November 23, 2010.

At 12:45 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/11/19 11:42 a.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources

EVIDENCE

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*Hon. Denis Coderre*



*Mr. Michael Binnion*

#### 1120



*The Chair*



*Ms. Paule Brunelle (Trois-Rivières, BQ)*



*Mr. Michael Binnion*



*Ms. Paule Brunelle*



*Mr. Michael Binnion*

#### 1125



*Ms. Paule Brunelle*



*Mr. Michael Binnion*



*The Chair*



*Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*



*Mr. Michael Binnion*

#### 1130



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*

#### 1135



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*Mr. Nathan Cullen*



*Mr. Michael Binnion*



*The Chair*



*Mr. Mike Allen (Tobique—Mactaquac, CPC)*



*Mr. Michael Binnion*



*Mr. Mike Allen*









#### 1140

-  *Mr. Michael Binnion*
-  *Mr. Mike Allen*
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-  *Mr. Mike Allen*

**1145**

-  *Mr. Michael Binnion*
-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
-  *Mr. Michael Binnion*
-  *Mr. Alan Tonks*
-  *Mr. Michael Binnion*

**1150**

-  *Mr. Alan Tonks*
-  *Mr. Michael Binnion*
-  *Mr. Alan Tonks*
-  *Mr. Michael Binnion*
-  *Mr. Alan Tonks*
-  *Mr. Michael Binnion*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*

**1155**

-  *Mr. Michael Binnion*
-  *Mr. David Anderson*
-  *Mr. Michael Binnion*
-  *Mr. David Anderson*
-  *Mr. Michael Binnion*
-  *Mr. David Anderson*
-  *Mr. Michael Binnion*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*

**1200**





*Mr. Michael Binnion*

**1205**



*The Chair*



*Mr. Richard Harris (Cariboo—Prince George, CPC)*



*Mr. Michael Binnion*



*Mr. Richard Harris*



*Mr. Michael Binnion*

**1210**



*Mr. Richard Harris*



*Mr. Michael Binnion*



*Mr. Richard Harris*



*Mr. Michael Binnion*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 032

1

3rd SESSION

1

40th PARLIAMENT

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**EVIDENCE****Thursday, November 18, 2010***[Recorded by Electronic Apparatus]*

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 (1105)*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone. It's good to be back again.

We have, in the first hour, a witness on our study. In the second hour we will deal with future business of the committee. Some discussion on that started at the last meeting, and we'll continue that.

We have with us today Michael Binnion, who is president of Questerre Energy Corporation. Thank you very much for coming. We had a long list of witnesses who were asked and just couldn't accommodate us right at this time. Many are coming later. So we really do appreciate your being here today.

If you could start with your presentation for up to 10 minutes, we'll then go to questions and comments from the members. I know you've given us a brief, but the presentation is in one language and the other information in another. We have to get them translated before we can circulate them. So they will be circulated later, through the clerk.

Go ahead, please, Mr. Binnion, for up to 10 minutes.

*[Translation]***Mr. Michael Binnion (President and Chief Executive Officer, Questerre Energy Corporation):**

My name is Michael Binnion and I am the President of Questerre Energy Corporation. I would like to thank you, Mr. Chair and all members of the committee, for inviting me to speak to you today.

Questerre's main focus is our Utica Shale Gas discovery in the St. Lawrence Lowlands of Quebec where we have been working since 1998.

There are various public estimates of the Utica shale gas discovery that suggest that the entire discovery is in the range of 25 to 50 trillion cubic feet of gas, which would put it in the top 10 natural gas discoveries in North America.

*[English]*

For the past 20-plus years I've been an entrepreneur involved in start-up and turnaround ventures in Canada and internationally, primarily in the energy sector. I have the perspective of someone who's been on a rig, at the control panel for a frac operation, at a compressor site, and a meter station, someone who knows the practical application of engineering, geophysics, and geology, and who risks his own money on the outcomes.

Formerly I was president and founder of the first western company in the Republic of Georgia after the civil war, working on their first hydrocarbon legislation, and with the international finance corporation. Now I'm immersed in the politics of shale gas in Quebec.

Today I hope to combine these perspectives to discuss the impact of shale gas on energy security, on the potential for regional economic benefits, and where there is room for the federal government to play a role.

The gas age has begun. The impact of shale gas on world markets has been enormous. In 2008 North

America was running out of natural gas, and the price was well over \$10 per thousand cubic feet, or \$60 per barrel on an energy equivalent basis, and predicted to be much higher.

North America was expected to be competing on world markets to obtain significant quantities of liquid natural gas, or LNG. Several projects were at late stages of approval for LNG import terminals, three in Canada--Rabaska, Cacouna, and Kitimat. European headlines were about Russia's stranglehold on Europe's gas market and the political impacts it might have. China was signing long-term contracts to tie up world LNG supplies.

Only two years later the price of gas is under \$4 per Mcf, or less than \$25 per barrel on an energy equivalent basis. All LNG import terminal projects have been cancelled. Kitimat has converted to an export terminal for Asian markets. European headlines are about how Russia is worried about maintaining market share. In Europe, China is still tying up world supplies of LNG.

Today shale gas provides close to 10 billion cubic feet per day of North American demand. As a result, North America competes for a minimal amount of LNG on international markets. Prices in Europe and Asia are starting to become linked, due to their competition for the same supplies of LNG. The price in Britain is now about \$7 per Mcf, with Asia being somewhat higher.

The inference is the benefit to consumers of shale gas in North America is not only security of supply but also a price at least \$3 per Mcf lower than international markets. However, there's an even bigger advantage in international markets, although more difficult to quantify. We can only speculate what the international price would be if North America was competing for as much as 10 Bcf per day of LNG imports, when current total worldwide capacity is only 27 Bcf per day.

While the world was preoccupied with the financial crisis, the natural gas business was creating a new paradigm in world energy. I believe the technological innovations that allow us to extract natural gas from source rock are having as big an impact as that of Rockefeller learning how to refine oil at the turn of the last century.

That change created an oil glut, ironically almost bankrupting Standard Oil at the time. But it led to a century of growth based on a cleaner and more affordable energy, just as coal had done a century before. Shale gas can do the same this century, fueling over a billion people's aspirations to join a western standard of living, without threatening energy security in North America.

What are the opportunities and threats to the emergence of a natural gas age?

In terms of opportunities, one, with its abundant unconventional gas resources, Canada could become a world leader in a natural gas-fuelled economy. There are opportunities to expand natural gas use, such as a trans-Canada green highway, starting with Quebec to Windsor--city fleet and public transportation vehicles fuelled by natural gas; fuel switching for heating, industrial uses, and power generation from higher emission sources; and LNG export terminals to supply world needs for affordable and cleaner fuel. Given that natural gas currently trades at about one-third the price of oil, the capital required can be repaid from energy savings; it's a subsidy-free energy solution.

Two, emerging shale gas developments in eastern Canada bring the possibility for a locally based onshore service sector. The oil and gas service sector is currently concentrated in western Canada and is the main delivery point for technological advances, employment, and widely distributed economic benefits associated with the oil and gas industry. Having a service sector based in eastern Canada could deliver these same types of benefits.

We have provided you a briefing paper focusing on economic benefits that this industry could bring to Quebec.

In terms of threats, one, there is a general lack of public awareness about shale gas development, particularly in provinces without a long history of development of hydrocarbons. The techniques and processes, including hydraulic fracturing, are currently used in essentially all natural gas wells drilled in North America. However, it is still new for some of the regions where we've recently discovered shale gas. Social acceptability hinges on the education of the public at large about the real risks and benefits.

 (1110)

Second, it is our observation that the debate about shale gas has been framed thus far by political lobbies associated with competing fuels--such as coal and subsidized energy--that view natural gas as a

direct threat. With new media, a U.S. political debate has permeated the Canadian one. In material respects, we do not believe this has served the interest of familiarizing the public with the natural gas industry.

Third, there is a first-mover disadvantage to funding the cost of new infrastructure required for natural gas. As common carrier pipelines and facilities, they will need to be regulated to allow many parties to use them. But first movers are disproportionately burdened with the costs and risks, and this delays necessary investment to promote adoption of this cleaner fuel.

These are our recommendations for the federal government.

Since the federal government does not have a jurisdiction over provincial resources, there is a role to be played as an honest broker to research and inform the public about technical risks and procedures involved in the shale extraction process. A successful example of this was the participation by Natural Resources Canada at the Munk Centre conference on the impact of shale gas on water resources.

Another recommendation with respect to the federal government's role in interprovincial and international commerce is to support the construction of natural gas infrastructure. It is unlikely the private sector will be able to advance major projects for public infrastructure on its own.

Finally, we encourage the federal government to take advantage of recent events in the United States and abandon the idea of cap and trade. As seen in Europe, this system will result in political decisions about emissions credits and inevitably favour entrenched industries, which in a North American context means coal. The market has done a good job of delivering consumers the energy they demand, but to the extent that public policy imperatives require it, a carbon tax will be less distorting and more effective in encouraging consumer choices that reduce emissions.

Once again, I thank you for the opportunity to present these ideas. I hope they have been of use to your committee, and I welcome any questions.



**The Chair:**

Thank you very much for an excellent presentation, which gave a good outline I think for us to start from when it comes to dealing with shale gas.

We will go directly to questions.

Monsieur Coderre, for up to seven minutes. Go ahead, please.

[*Translation*]



**Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chair.

Mr. Binnion, thank you for taking part in this exercise. You must have certainly attended some of the meetings on the shale gas issue in Quebec. One thing is certain: we are trying to understand and we want to respect the areas of jurisdiction. I would like to thank you for providing us with some solutions. We will talk about them more later.

Could you first tell me whether you are fairly familiar with the British Columbia model?

[*English*]



**Mr. Michael Binnion:**

The British model for regulations or royalties...?



**Hon. Denis Coderre:**

British Columbia.

**Mr. Michael Binnion:**

British Columbia, yes. We have a project in northeast British Columbia, so we operate under the British Columbia model.

[Translation]

**Hon. Denis Coderre:**

All right. I imagine those people did their homework on the legislation. Are there similarities between Quebec legislation and legislation in British Columbia? In Quebec, this issue falls under the Mining Act. There is no legislation on hydrocarbons. Is there any in British Columbia?

[English]

**Mr. Michael Binnion:**

Yes. I am going to turn that into two questions, if I might.

The first is that in Quebec, while the law affecting hydrocarbons is part of the Mining Act, there are separate clauses in the legislation and something like 30 pages of regulations specific just to oil and gas.

The model in Quebec has been designed for exploration because there really hasn't been any production of any note. So it's a system designed just for exploration. It's been extremely effective in Quebec for that purpose, and the proof is that we have been exploring for 30-some years in Quebec and people didn't even know we were there.

In British Columbia, that industry is much more developed. The system there, the Oil and Gas Commission of British Columbia, was first incorporated sometime around 1980. So they've had quite some time to develop, and it is a more advanced model, because, of course, it's designed for exploration and production. I would agree that it would be a good model for Quebec to follow.



[Translation]

**Hon. Denis Coderre:**

I am a federal MP. If I was a provincial MLA, you and I would probably not be using the same tone this morning. But I will be respectful of provincial policy. Unfortunately, I think that the discussions between the industry and the people were an abysmal failure. Disgraceful actions have been taken. I am not talking about you, but about some drilling companies in particular. We can speculate about international prices, but I don't think we should speculate about people's quality of life, even if there is compensation. But that's a different story.

I would like us to look at the Canadian government's role in more detail. I don't want to talk about funding. Quebec made a social choice and we shouldn't go there. There are already other issues like that. I would rather talk about the role of the National Energy Board.

I did not hear you talk about environmental assessments, which are now part of the board's responsibilities. To your knowledge, have there been environmental assessments on the impact of shale gas in Quebec specifically?

In New Brunswick, the situation is currently the same.

[English]



**Mr. Michael Binnion:**

I know that at the Munk Centre the representative of Natural Resources Canada mentioned that they had done internal studies on the full life-cycle impact of natural gas on CO<sub>2</sub> emissions, as an example. In terms of my personal awareness, that would be the only thing.

[Translation]

**Hon. Denis Coderre:**

Last Sunday, I watched the show *Découverte*, which was rather disturbing. We still have the Pennsylvania example and Talisman's situation, among others.

You need a huge amount of water to collect the gas. How can you reassure us that the extraction of shale gas, particularly in Quebec, will not cause damage to our water table and contaminate the water? There is some sort of impact. People need to be reassured, but they especially need to understand what is going on.

[English]

**Mr. Michael Binnion:**

Our company has published a fact sheet on water use in shale gas in Quebec. It is on our web page at Questerre.com.

Just to give you a quick summary, we believe that in full-field development at approximately 400 wells per year, which is about the higher end of the range that has been predicted for Quebec, we would be quite a light industrial user of water, using approximately three billion litres of water per year, which would be less than car washes in Quebec, which would be maybe 20% of the water that the city of Quebec loses just through its leaky pipes. It is less than 1% of what agriculture uses. It is less than 1% of what pulp and paper uses.

I understand that when we are talking to people and say we are using 12 million litres of water, people imagine it to be a huge number. It is hard to grasp what the number really is. But in an industrial context, it is actually a small amount of water and will be barely noticed, if at all, on the Quebec water table. MDDEP has already put in regulations restricting us such that if there are local areas of shortage of water, we would be restricted in how much we take. I don't expect that in the lowlands that would ever be a problem.

In addition, to put it into another context, we have calculated the amount of water it takes for one well and compared it with how many homes the gas from that well would be able to heat or service in one year, if you are on natural gas service. The amount would be less than one litre of water per year per home in Quebec, compared with the current usage in Quebec of 360 litres per home.

[Translation]

**Hon. Denis Coderre:**

You have to recycle the water and treat it. There are two possibilities: you can reach an agreement with those in charge of the treatment wells... As to the existing municipal infrastructures, that's another story, and I am not sure that's the right thing to do.

There is no need to panic. We are talking about exploration and not extraction. Does your company intend to put in place its own water treatment infrastructure? Are you planning on doing that?

[English]

**Mr. Michael Binnion:**

We expect that in full-field development we would recycle an amount approaching 100% of the water in

Quebec. Just to help put that into some context, every shale has a different mineralogy and every shale therefore has a flowback water that will have a different mineral and chemical content. When you read, in North American contexts, about the flowback water, it is important to understand that it is local to the shale you are talking about.

I have seen that in northeast B.C. people are looking at treatment facilities, because of the amount of solids that come back in that water. I am not personally familiar with it; I have just read about it.

In Quebec, I am personally familiar with the tests of the flowback water. One of those tests was submitted in the Quebec Oil and Gas Association memoir to the BAPE, as an example. All of them are submitted to treatment facilities and to MDDEP, but the flowback water in Quebec, because of the mineralogy of the Utica shale, is very clean. It would actually meet the standards for storm water, if it weren't that it is too high in salt. This makes it a very easy water to recycle, because the salt is actually a positive contributor to not damaging the shale formations.

We fully expect that we'll be very successful in recycling, but I would mention that right now, because we are just in the exploration phase, we are only drilling one well at a time. You can't recycle the water to the next well, because we are only drilling one. That would apply when we are drilling more than one well at a time.

  (1120)



#### **The Chair:**

*Merci, monsieur Coderre.*

We'll go to Madame Brunelle for up to seven minutes.

Go ahead, please.

[Translation]



#### **Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chair. Good morning, gentlemen.

Where are the headquarters of Questerre Energy Corporation?

[English]



#### **Mr. Michael Binnion:**

It's in Calgary.

[Translation]



#### **Ms. Paule Brunelle:**

I checked where you operate in Quebec. I believe your largest exploration site is in Saint-Jean, with 181,000 acres close to the U.S. border. In addition, you are partners with Gastem Inc. and your share is about 56%. You are also in the Yamaska region and elsewhere together with Talisman Energy. We can see that you believe in it. In any case, you have a presence in many places.

You surely must know that a great many Quebeckers are opposed to this. The regions that you are in and that I just mentioned are densely populated. It is farmland for the most part and there is not that much in Quebec. If I am not mistaken, it makes up 2% of the land area.

You are telling us that this will create jobs, but it seems to us that they will be low skilled jobs and the highly skilled jobs will go elsewhere in Canada. You are aware that the demand for gas is quite low and that people would much rather use green energy, such as hydroelectricity and wind energy.



We have also just talked about the use of water. We believe that this will cause damage to the environment.

My question stems from the fact that the price of natural gas is low. We are told that stocks are high in North America. They are 8% higher than the average in the past few years. What is your industry's real interest in positioning yourself to extract this gas? At first glance, it seems that you are looking at exporting it.

[English]



**Mr. Michael Binnion:**

I drilled my first well in Quebec in 1989. We were not successful then, and that's when I went to the Republic of Georgia, as I mentioned. I came back in 1998 to try again, with the idea that we could find unconventional resources. So we've been at this now in Quebec for 12 years. We've been through a number of different economic and energy cycles in that time.

The real dream was to be able to find a big discovery of gas in Quebec and do something that would have an impact on energy independence for Quebec.

I would mention that Quebec is Canada's second biggest market for natural gas. It is a very large market, second only to Ontario. The local market is more than a big enough prize for our shareholders, although of course my shareholders are always asking me to do more, so export would be a possibility. I don't think export could happen for at least 10 years, and I think it's going to take us quite a number of years just to satisfy the size of the local market.

Concerning farming, one of the great things about the oil and gas sector in western Canada is just how well it mixes with farming, because we have a very small land print. People continue to farm. It's not as though we turn their farms into a factory and then they have to lose their farm; in fact, just the opposite. There are many examples of people on family farms having been allowed to stay on a family farm and keep farming because an oil and gas operation has come and has supplemented their income.

I think it has been extraordinarily successful as an industry in mixing well with farming, but also in spreading the economic benefits, not just in Calgary but also throughout the regions. That's why we think that in the lowlands it's going to be a very complementary mix to the current use of land there.

I admit that our education of people as to the potential benefits and how well we mix has not been as good as it could be. But I can tell you that when you examine the dozens and dozens of different types of jobs that are involved in oil and gas, there will be people in Quebec who can do those jobs today. We've been in communication with the CEGEP at Thetford Mines about training people. There are many jobs that in a very short period of time local people will be able to do as well.

I can tell you that to be profitable, because shale is a very high capital cost operation, we have to have local service and local employment, because it just won't be competitive to be flying people in from Calgary every two weeks.



[Translation]



**Ms. Paule Brunelle:**

Quebec is definitely seeking energy security, just like everywhere else in the world. That is what we're looking for. But we don't want to be careless about the way we do things and we don't want to move too fast. When we talk about farmland, we talk about water. You said you use a small amount of water, but we must not forget that all sorts of chemicals are used to break up the shale. The people are worried. What is going to happen to our water? We see that there are many water treatment plants in Quebec that are not able to treat the waste water from the industry.

In light of this problem, are you planning on funding water treatment plants in the future or on giving significant compensation to the communities?

[English]



**Mr. Michael Binnion:**

I agree that the biggest challenge we have in Quebec on the public relations front right now is this idea of water contamination. I have been spending a lot of time on the south shore. My objective has been to meet with every mayor on the whole south shore, and I have met probably about 50% of them at this stage.

The conversation in the last six months has changed a lot. The issue of frac chemicals is something that we have published. It has been transparent. All the journalists in Quebec have investigated it and found that we use a very small number of chemicals in shale gas, much less than the number of chemicals we use in conventional fracking. We have 300, 400, or 500 different chemicals that might go into a conventional frac. One thing that makes shale gas inexpensive and competitive is that we use so few chemicals, which is the irony, because people are more worried about it than about conventional fracking. Those kinds of issues don't seem to be top of mind anymore in Quebec. It is the water contamination from drilling and the potential surface spills that people are concerned about.

The other thing in terms of the water treatment issue--given that we have all the testing, given that we have already treated water at several treatment plants in Quebec--is that in my impression, it is more an issue of municipal-provincial jurisdiction. By not recycling the water, the municipalities are given some local control. That issue of jurisdiction between municipalities and provinces is not necessarily an argument we want to get into too much, but we think the issue of treatment in the lowlands is more about that than it is about the flowback water itself.

[Translation]



**The Chair:**

Thank you, Ms. Brunelle.

[English]

Mr. Cullen, you have seven minutes. Go ahead, please.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thanks for being here.

The committee is engaged in a conversation around energy security. We are first of all trying to understand what that means. I think the term is thrown around a lot without necessarily lots of understanding.

As briefly as you can, could you first tell us how critical you think energy security is for Canada, and second, how you would define it?



**Mr. Michael Binnion:**

I wish I were asking the questions.

I think that in a Canadian context we are part of a North American, or even world, energy security solution, because I just don't see how Canada has an energy security problem with abundant hydro resources, abundant oil, and abundant natural gas. It's hard to see how we have an energy security problem.

 (1130)



**Mr. Nathan Cullen:**

So we don't have concerns over it, but since we have so much and since the U.S. needs so much, we're

a supplier, obviously, and that's our role in an energy security conversation, from your point of view.



**Mr. Michael Binnion:**

I think North America has an energy security issue, which is really to say that America does, and I think Canada has a role to play as a solution.



**Mr. Nathan Cullen:**

Because we have talked about it in your answers so far, do considerations of environmental security come into it as well?

The word "liabilities" keeps coming to mind. You as a company deal with liability all the time, and you carry insurance for certain liabilities. The concerns that have been raised in relation to unconventional sources of oil and gas, particularly in the Quebec case, are around liabilities that are held not by the company but by the public. When you stake a claim and you withdraw a resource and then sell it on the market, what's left behind is often not....

For example, when you set up an operation and do a series of wells, are you bonded in that operation? Do you have to set up a bond in case your company falls on hard times and is unable to complete the process of cleanup?



**Mr. Michael Binnion:**

On the bigger question of environmental security, I think that is true now for every industry. Some days I feel as though it's specific only to oil and gas, but it's true of every industry. If we're going to have a sustainable economy and sustainable development, we need industries that are going to mitigate their impacts, and no industry has no impact. I think that's true. When we're looking at oil, gas, and energy, we need to look at what are reasonable impacts and what's reasonable to mitigate them.

With specific reference to corporate liability for environmental issues, first of all, there's no jurisdiction that I know of in Canada that limits any company's liabilities. We have full liability, corporately, for any potential issues, whether it's loss of well control, environmental spills, or so on and so forth. We carry insurance, and regulations generally require us to carry insurance.



**Mr. Nathan Cullen:**

Specifically in relation to the bonding, I'm trying to compare you a bit to the mining industry. We've learned through past experience that companies may start off with the best of intentions and all the rest of it, but things happen, so when a mine starts up now, we require bonds for most major mining operations in the country in order to carry off unforeseen.... They can be quite significant, but I don't think oil and gas operations have that--



**Mr. Michael Binnion:**

But we are required to carry insurance, and we also post drilling deposits. We post drilling deposits and we are also required to carry insurance. Saskatchewan, Alberta, and B.C. have also developed an orphan well program, which is funded by industry. In effect, it's an industry-funded blanket insurance program. If some company is not financially able to meet its obligations, then there's an orphan well program to do so.



**Mr. Nathan Cullen:**

That's helpful.

Around the question of fracking, you talked about conventional methane gas drilling that uses somewhere north of 500 or 560 chemicals in the fracking fluid itself--



**Mr. Michael Binnion:**

Those are available chemicals. They are not necessarily all being used, but they are available to be used.

**Mr. Nathan Cullen:**

Some of them are quite bad chemicals. You certainly wouldn't want to have them in your drinking water. They're carcinogenic. They have all sorts of things. You said you use a considerably smaller number of them.

The question has two parts. First, what is the number of chemicals you use in your fracking fluid right now? Are any of them carcinogenic, and do you make them public? Do you put the list out into the public?

This has been a challenge, because some companies have simply not been releasing the names of the chemicals being used, thereby causing public concern.

**Mr. Michael Binnion:**

The number of chemicals we generally use is about 12. They're published on our website. Other companies have published them publicly as well. They're disclosed on our regulations sheets to MNRF in Quebec, for example. They are disclosed to the regulators. If you look at the Ground Water Protection Council's report, they have published them from state records, so these chemicals are not....

While some companies may not want to publish them to the general public for trade secret reasons, they are known to regulators, and some companies, like ourselves, don't even think it's a trade secret, so we've published them.

As for carcinogens, I don't know about being carcinogenic. I know some people talked about acrylamide, although we actually use polyacrylamide. All of them are in things in your household, though, whether they're cleaners, disinfectants....

I'm not trying to say that doesn't mean they're not toxic--we handle things like disinfectants carefully in our homes to make sure children don't get at them, and so on and so forth--but what I am saying is that they are chemicals that the general public is capable of dealing with safely in their own homes.

**Mr. Nathan Cullen:**

I would say yes and no. The question and the concern around fracking fluids is that in the process you don't recover anywhere near 100% of the fluid that goes down the well. It's impossible.

**Mr. Michael Binnion:**

Well, it's 50%, let's say.

**Mr. Nathan Cullen:**

Yes. So half of it remains down the well, and it can be a significant amount of chemicals. I think it's an unfair comparison to say that they're in your home and they're in your disinfectant, simply because we don't take those chemicals under the sink and pour them into our drinking water. The concern that people have is that 50% of the chemicals are left underground, and sometimes in sources of drinking water. The concern around contamination is real, and I think you acknowledge it.

Is it not fair to say that contamination of drinking water is a concern for the industry? It's certainly a focal point of the public conversation.

**Mr. Michael Binnion:**

But not in the way you say it. I'd actually say it's quite the opposite of what you just said on this narrow issue. I'm happy to talk about where there are risks, but you're talking about an area in which there really aren't any risks.

First of all, we're fracking one or two kilometres under the ground. We're taking gas that's been there

for a few hundred million years without being able to get out because of the impermeable rock layers above it. Yes, that water is down, and yes, it stays there, but it's staying in a place that has been able to contain natural gas, a far more buoyant thing than water. I think the Ground Water Protection Council has published a report saying that the potential for that kind of water to reach the surface is less than one in 200,000,000, or something along those lines.



**Mr. Nathan Cullen:**

But casings break. Not all of the chemicals make it all the way down. Some of them break along the way and accidents happen.



**Mr. Michael Binnion:**

Just to finish the point, though, in terms of the chemicals in your home, you actually do literally pour them down the drain into the water supply. So in terms of a comparison, we're putting it somewhere where it doesn't get out, while people in their homes are putting it down drains into the water treatment facilities.

With respect to where the risks really are, the risks are really in terms of surface spills. Typically, when it comes back up to the surface, the risks are that ponds or tanks in different jurisdictions have leaks. The other risk is in the handling and transportation of the water, either the water coming or the water going. There have been issues in terms of potential groundwater contamination through the spilling of this frac water.

In terms of the system itself, when you're fracking down the pipe, if the pipe is not holding the pressure you stop fracking. It's tested before you frac, and it's a self-checking system, because if the pipe is in a contained system under high pressure when you're pumping down, then when you're coming up at much lower pressure, you know you're not leaking anything through the pipe itself.



**The Chair:**

Thank you, Mr. Cullen. Your time is up.

Mr. Allen, you have up to seven minutes.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Mr. Chair.

Thank you, Mr. Binnion, for being here today and for your presentation.

Just picking up on a little bit of where Nathan was going with this, are there any regulations in place, or any rules of thumb, in terms of separation from where you're drilling and fracking, as opposed to the proximity to any aquifers?



**Mr. Michael Binnion:**

Yes. In Alberta, regulations were put in place after an incident in Rosebud, Alberta. It was believed that some shallow fracs in coal bed methane had interfered with groundwater. Since then there have been limitations on how shallow you can carry out fracs in that jurisdiction.

In terms of good oil field practice, there are also a lot of different calculations around the planning of the frac inside good engineering practices to make sure it's contained where you want it to be.



**Mr. Mike Allen:**

Over the last number of years, when you look at the fracking process and the technology and the use of chemicals, how has that changed? It seems to me there have been quite a number of changes over the last number of years in the use of chemicals. In your view, how has the technology improved? Have you seen a reduction in the amount of chemicals used for vertical and horizontal fracking?



**Mr. Michael Binnion:**

The first thing that happened in the Barnett Shale, which was the very first successful commercial shale play, was that Mitchell Oil tried and experimented for years and years with different types of fracking technology, trying to find something that would work. The amazing thing was that in the end the successful answer was basically just water and essentially no additives. That coincidentally means it's also less expensive and makes it more competitive.

When we say no chemicals, we still put in the prime chemicals—and we've listed them all on our web page again. We use something to break the surface tension of the water so that the water will slick, and then something—it's actually a food additive, a gel—to help hold the sand. Those are the two prime things that we use. On top of that, there will be small amounts of iron control, and biocides to make sure that we don't get bacteria growth--those types of things.

**Mr. Mike Allen:**

Okay.

**Mr. Michael Binnion:**

The rest of your question was about what has changed on the other side. We are carrying out larger and larger fracs. It has been a steady progression. Ten or twenty years ago we might have been doing 30-tonne fracs. Now we're doing 100-tonne and 200-tonne fracs. So we've increased the size of individual fracs.

Then we've put more than one frac into one well in these horizontal wells. Those have been the advancements.

**Mr. Mike Allen:**

Okay.

You talked a little bit about the service sector being mainly in the west. In New Brunswick, we're just starting to go down this road as well, and there are some companies that are exploring—and I see a couple of ridges in the document the Library of Parliament gave us here.

If the shale gas was exploited to its full capability, is there a rule of thumb with respect to the impact from a well on the GDP of the provinces or the revenue of the provinces, for example, Quebec and Atlantic Canada?

**Mr. Michael Binnion:**

I would have to say no. We have done an impact study in Quebec, by SECOR. The main problem with that study, though, because there's no economic data in Quebec, was that it really didn't take into account the impact of development of a local service sector. In my view, this means that it more or less missed the whole point, because that's where most of the capital is spent--through the service sector in the oil and gas business, with all the people in Calgary being the tip of an iceberg, having outsourced in almost the entire business.

**Mr. Mike Allen:**

Is there a ratio of the number of employees in the service sector to the well? Is there any data of that kind on what the employment would mean?

Further to that question, what would be the most common technological expertise that would be required?

**Mr. Michael Binnion:**

There must be a ratio, but I don't know it. I know there are many more people employed in the service sector on an employment basis than in the exploration and production companies, but I'd have to defer to someone who knows that exact number.

In terms of types of jobs, there are just so many. There's construction, because we construct well sites; there's all kinds of labour around the rig itself; there are so many different services that show up there, from cementing to logging to monitoring of your drilling to the rig itself. There are so many different specialty services on a rig site. There are typically 50 to 100 people working on a rig at one time. There are all kinds of different qualifications, from labour all the way to people who are highly trained.

It's a bit tough to bring that down, but you're on to the point that is my current challenge in Quebec: to bring that point exactly down for people on the south shore.



**Mr. Mike Allen:**

You talked about 50 to 100 people on the well. Then, in response to one of the questions, you also said it has been advantageous to the agricultural community in the west because your footprint is quite small.

What is the size of the footprint?



**Mr. Michael Binnion:**

That footprint would probably be somewhere around a 100 by 100-metre lease while operations are going on. Lease sizes have grown a little bit now, as we're now putting many wells on one platform or one pad, which means we have far fewer pads, but the one pad you have is slightly larger. They're going to as high as 120 by 120, maybe even 150 by 120. The key thing is that once the operation is finished, the well in shale gas produces for 10 to 50 years or so, and those 100 people and all that machinery all go away. This is very easy for farmers to deal with, and they continue to be paid their lease payments for the life of the well.



**Mr. Mike Allen:**

When you look at the regulatory framework and how it has evolved over time with respect to shale gas, what is there within the regulatory framework that you think has worked and has stimulated shale development?



**Mr. Michael Binnion:**

When Campbell in British Columbia started to deregulate, the B.C. oil and gas business, which had been somewhat languishing, suddenly took off. That was certainly one thing that was successful. We've seen the impacts of the royalty review on the business in Alberta; there is something that did the opposite of stimulating activity.

I have to say, when I look at jurisdictions, and I've worked in several jurisdictions around the world, including the United States and Canada, but also overseas, that Canada—centred, really, in Alberta, where there's a lot of expertise that B.C. and Saskatchewan draw on as well—has one of the best, if not the best, regulatory systems in the world. This is not to say to the people back home that it doesn't have room for improvement.



**The Chair:**

Thank you, Mr. Allen.

We go now to the second round. We can go until 12:05, so we should be able to go with five minutes each.

We'll start with Mr. Tonks.



**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you very much, Mr. Chairman.

Thank you, Mr. Binnion, for being here. It's always instructive for the committee to have someone who

is actually on the ground and has experience of the kind you've had.

My questions are in relation to the strategic argument that you've used vis-à-vis the relationship that China and Europe have played with respect to the fluctuations and the monopoly, if you will, that led to extreme pricing changes and probably influenced investment strategies and so on.

My question is, first, what is presently happening with respect to Chinese investment? In fact, are the Chinese engaged to the same extent as you've outlined for our interest in the North American context? Are they interested and are they engaged in either investment strategies or technology and development strategies that would impact on pricing and supply/demand?



**Mr. Michael Binnion:**

I'll give you some anecdotal answers. I know that there is large investment going into natural gas infrastructure on mainland China. Just close to home, there are two large investments that have been made—I know that CNOOC definitely made one and may have made both of them—into the Horn River shale. The real headline was that Encana, our top gas producer, had made a deal to obtain capital from a Chinese oil company in shale gas in Canada, associated with tying up long-term supplies of natural gas that had the potential to be exported to Asia.

I think the answer to your question is yes, but those are a couple of anecdotes that would support it.



**Mr. Alan Tonks:**

All right.

The second question is somewhat related to that. Concerning shale gas development, you've made the statement that cap and trade is not the direction to go; it is the carbon tax.

How would that influence investment decisions? Could you walk us through that a bit?

What would be the difference in the application of a cap and trade system with respect to the shale gas, as it would be reflected in investment and in research and so on, as compared with a carbon tax?



**Mr. Michael Binnion:**

The objection I have to cap and trade systems is that they depend on carbon certificates and they depend on those carbon certificates being limited. The experience in Europe is that political imperatives will then change the number of certificates. This means trusting that we're not going to just print more certificates when a political imperative comes up.

All the discussion in America around the coal-fired industry, which is 50% of electricity in the United States, saying that they have to be given certificates for this whole thing to work, to me just defeats the whole idea of it in the first place. The carbon tax, as I said, is a far more neutral, less distorting way to do it, because it allows consumers, based on price decisions, to make decisions about emissions rather than allowing people to make them based on who's going to get the certificates.

 (1150)



**Mr. Alan Tonks:**

Right.



**Mr. Michael Binnion:**

So in terms of investment, I think a carbon tax system would be a more predictable environment for business to invest in than a cap and trade system based on government's controlling and limiting the number of certificates it issues.



**Mr. Alan Tonks:**



Are you involved in the present hearings that are going on in Quebec?



**Mr. Michael Binnion:**

I am through our Quebec Oil and Gas Association. I am in that our company has also put in its own separate memoir. But the association itself has members who are presenting at the BAPE right now.



**Mr. Alan Tonks:**

I see.

In terms of hydraulic fracturing—and questions have been raised by Mr. Cullen and others—does the research satisfy the industry, and can you satisfy, through an environmental assessment, that the risks can be contained? You've said that the problems are with surface spills, ponds, tank leaks, and so on. But you rather diverted away from the actual fracturing process.



**Mr. Michael Binnion:**

Opponents of natural gas, which are organizations like ProPublica and groups like that in particular, are all funded by political action committees and foundations associated with the Democratic Party, which is also strongly associated with the coal lobby.

The public relations coup that our opponents managed was to link problems associated with conventional drilling, which have existed for 100 years--and we continuously get better at that--to hydraulic fracturing. By making that link in the public's mind, they've been able to point to problems caused by conventional drilling and say, "Oh, you see? This hydraulic fracturing is dangerous." But we are starting to win back on that issue. We now have a growing number of independent studies and reports showing that the idea that a few trucks pumping water on surface will break through one or two kilometres of solid rock is, if you really think about it, almost ridiculous on the face of it, yet in the public's mind it's a concern.

Within safe depths, the potential for us to fracture to surface or into aquifers is negligible--immaterial--and that's backed up by studies by MIT and the Ground Water Protection Council. Worldwatch has done a review, and Frac Attack has done a review. Most recently the department of environment and energy in New York State has put out a comprehensive report, which I think is going to be a 1,220- or 1,300-page study, and they have concluded that the risks are negligible. Finally, the 2004 EPA study, which was a study of fracking in coal bed methane, which is far closer to surface, also concluded that the risks were negligible.

I think that's one issue on which we're on really solid ground, but it has highlighted that conventional drilling can occasionally disturb aquifers and that human errors in procedures on surface can occasionally create the potential for groundwater contamination, and that's the issue we need to address.



**The Chair:**

Thank you, Mr. Tonks.

Go ahead, Mr. Anderson, for five minutes.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Thank you, Mr. Chair, and thank you, Mr. Binnion, for being here today.

Decades ago one of our premiers made that comment that we were going to leave the oil in the ground for Saskatchewan residents. I think that was possibly the worst decision that was ever made in our province, because by the time things were done, we were left decades behind our neighbour province, which had decided to make that development.

I'm a bit concerned, because I think I'm hearing some of the same arguments or some of that same discussion today. It just about destroyed us--well, it did destroy us--in terms of population growth. We were leading the population in the west at the time, and when it was done, our population was a third of what Alberta's is. Our economic development lagged by many years. We spent decades taking equalization

from the federal government before we were finally able to get away from that.

We've had good development recently, particularly in my area in southeast Saskatchewan. It's made a huge difference to the local economy. This morning you were talking about some of the things that it's impacted. Our young people are able to stay in the communities and stay around. I think that's a concern for all of us who have any rural areas in our ridings.

You mentioned the construction jobs. We have lots of folks around with backhoes and trackhoes and that kind of thing, and it makes it easier for those of us who live there to get services as well. I mentioned employment for our young people, and it's certainly boosted the economy, both locally and in terms of export.

We were talking a little earlier about the impact in Quebec in particular, and I see that the document that was prepared for us by the analysts states that the most noteworthy shale formations in Canada include the Horn River shale in northeast British Columbia and the Utica shale natural gas field in Quebec, which is what we're talking about.

Can you tell me a little bit about the contributions that shale gas in the Utica field can make to the Quebec economy?

  (1155)



**Mr. Michael Binnion:**

I have to say that what you said about the experience of Saskatchewan is just so obvious to people like us who live in western Canada.

I think I said, walking in, that I was coming from a part of the country where they teach about oil and gas in elementary school and ending up where people really don't know the very basics of oil and gas. Then, in addition, they haven't grown up with the types of impacts you're talking about in a place where it just becomes second nature. It's really hard to convince people of what we know is right in front of our faces in western Canada.

The benefits you talked about are exactly it. It's going to be extraordinarily positive for people on the south shore, who I think are reasonably entrepreneurial. I'm sure they will jump on these opportunities once they understand what they are and once they become real.

I don't know what more to say about that. Part of our communications effort right now on the south shore is to try to show people what it is and why they can have it.



**Mr. David Anderson:**

I actually think if those of us who have experienced that could communicate it, that would probably help out as well. But it has transformed my part of the world from being an area where it was strictly agricultural, where the small towns were dying. We have young people who are staying around. We have the service industry—you talked about that this morning. We have good employment. We have good-paying jobs, typically in the oil and gas sector, even the ones that you wouldn't call skilled occupations. I encourage people to take a look at those kinds of things when they're thinking about whether or not to encourage this kind of development.



**Mr. Michael Binnion:**

We do have a diaspora in Alberta from Quebec of people who sought jobs in Alberta, and I know a number of people who are from Drummondville, or somewhere in the regions in Quebec, who are saying, if we could ever have the chance to actually go home and operate in our own experience, our own expertise, this would be....

I had a couple of them at our last conference, actually—with booths at the oil and gas conference in Montreal—trying to promote to people the idea that if they wanted to start up a mud business, or this kind of business, and if they wanted to start it up in Drummondville, or in Trois-Rivières, or some place like that....



**Mr. David Anderson:**

I guess there are misconceptions, too, about the impact. You talked about surface impact and size, but typically now it's a very small installation left on the property. At home, most everything is done through pipelines. It's oil there mainly, but through pipelines and that kind of thing, so there's very little above ground, very little disturbance, and people have been very happy with the fact that they have that development there.

**Mr. Michael Binnion:**

We had a golf tournament in Fairlight in Saskatchewan. We have an oil field there in the Antler area, and we have a golf tournament for all the local landowners. They were all asking: When are you drilling more wells? When are you coming back?

**Mr. David Anderson:**

They've just moved in with oil in our area, and I know that people are looking for the opportunity to have those wells on their property. They're three miles from where I live right now, so I'd love to have a few of them.

I wanted to just follow up a bit. You had mentioned later infrastructure needs and said that the federal government could have some responsibility there. What sorts of infrastructure development are needed for shale gas? It's probably different in different parts of the country.

**Mr. Michael Binnion:**

I was really referring more to some of the consumer-oriented infrastructure. If we're going to have, for example, long-haul trucking on natural gas, which is something that has been successful in other places—and in other countries it has certainly been more pervasive than it is here—we need an infrastructure: how does that truck obtain natural gas between Quebec City and Windsor, for example, or ultimately longer distances? That public infrastructure to deliver the gas at the consumer end is a major public infrastructure effort, but it would allow diesel trucks to be natural gas trucks. That's the type of example. It also, by definition, is going to be an interprovincial pipeline, which means it will be, by definition, regulated by the federal government.

**The Chair:**

We go now to Monsieur Pomerleau for up to five minutes.

[*Translation*]

**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you very much, Mr. Chair.

I would also like to thank you, Mr. Binnion. I am from Drummondville and I know that you, or someone from your company, came to meet with a number of mayors. Thank you for doing that. Like everyone in Quebec, the people in Drummondville are quite suspicious of this situation.

I will continue along the same lines as Mr. Anderson's argument. Quebec is not Saskatchewan. Quebec will decide what it wants to do. We have multiple sources of energy and it is up to us to decide whether we want to use electricity instead of natural gas, regular gas or wind energy. That will be decided in Quebec. It is up to us to decide whether our cars will run on natural gas or on electricity in 40 years. We have all the types of energy we need to do that. So, the problems in Quebec are very different.

You must know what the situation is like in Quebec, since you participate in the BAPE hearings. Before I ask one or two quick and rather technical questions, I would just like to point out—since it will be read by other people eventually—what draws companies to Quebec. There are major reserves, as shown by the Utica example, and future markets in Quebec or in Ontario. There is no shale gas in Ontario. There are also the emerging markets, including China and India, which will be consuming a lot of energy in 15 or 20 years. We have a great capacity to connect our discoveries to the Metro gas pipeline, which covers precisely the area where Utica is. There is also a lot of water for drilling needs. We have very clean gas.

That's what we are told at least. As a result, the refining costs are probably much lower.

The subsurface does not belong to people. It is really surprising. I have just found that out. Whatever is under my land is not mine. If the subsurface does not belong to the people, that benefits the companies that only have one client, meaning the Quebec government. The industry has great connections or contacts with the government. At the moment, a number of people are leaving the government to work for the industry. It is rather extraordinary.

That's what draws businesses to Quebec. That's quite fine. On the one hand, these are very objective things. On the other hand, there is something subjective that is significantly harmful to what is to come. That's what the public is getting from all that. We know that the Quebec government is currently losing steam in terms of credibility. Every day, something new undermines its credibility. People are wondering if this government is still very solid. I always say that it is as solid as the Berlin Wall, five minutes before it fell. We've reached that point.

As soon as the government takes the industry's side, it ends up harming it because of its lack of credibility. That's what we are dealing with at the moment. I feel that Quebeckers will choose to wait a year or two, in order to first get the results of the studies to be done in the United States, which will be completely neutral in terms of what is happening here. If Quebeckers decide to get on board, they will be at the back of the bus.

In this context, I would like us to clarify a situation that the government made very confusing. Is it true that, in the United States, the subsurface belongs to the landowners, unlike here? Is it true that a prospector in the United States can pay up to \$28,000 per hectare to drill a well? If the well produces, is it true that the people can claim 12% to 20% in royalties for what comes out of that well?

  (1200)

[English]

**Mr. Michael Binnion:**

Just to your last question, the ownership of the underground, as you say, is separate from the surface, and that's true everywhere: America, Canada, and Quebec as well. In some places, the same person can own it, and in some cases, different people own it. The majority of Alberta is owned by the Province of Alberta on behalf of the citizens of Alberta. In Quebec, 100% of it is owned by the Province of Quebec on behalf of the Quebecois. In America, a greater percentage of the land is owned by individuals, who also own the subsurface or the underground. But in many cases, somebody can sell it. This has been true in Saskatchewan. This is true in America: I sold my underground, but I kept my surface. So you still could have different owners. A lot of America is federal land, owned by the federal government. So it's not a situation where it's one way or another way. In Quebec, it is one way: 100% of the subsurface is owned by the Province of Quebec for the citizens of Quebec.

I would like to say that in Alberta, and in fact in every jurisdiction I've worked, where the subsurface is owned by the government, we still have to have a very good working relationship with the people on the surface, because of course we cannot access what's under the ground without accessing the surface. So we are required to have a relationship both with the people on the surface and with the owners of the underground. In Quebec, that means both the Ministry of Natural Resources and the people who own the surface land. That's why, when I talk about an industry that works well with farmers, we are obligated to work well with farmers or we will lose our social acceptability.

I appreciate that you heard that we had been in the MRC of Drummondville, because we have been making an effort to get to all of the MRCs on the south shore that are interested in meeting with us. In terms of Quebec politics, right now the single most important people we need to support us are the regions. That's really where we've been focusing our efforts. I agree that the owner of the resource in Quebec is important, but so are the owners of the surface land on the south shore. They are also very important to our success.

  (1205)

**The Chair:**

*Merci, M. Pomerleau.*

We go finally to Mr. Harris for up to five minutes.

**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chair.

Mr. Binnion, I want to thank you for coming here today.

I have to admit I knew very little about the shale gas industry, but this has been an experience. I appreciate the direct and complete way that you've responded to questions from all of the parties. What I'm gathering is that we have a pretty good news story here, from the point of view of energy security, of cutting greenhouse gases, and also from the economic benefits.

I guess I'm not surprised to see how fast our colleagues from the NDP and the Bloc appear to be trying to run away from this good news story. It's really a shame, because this is going to have a monumental impact on our energy supplies for decades to come. So I thank you for the way you've responded to those questions and particularly to their concerns.

I just have a couple of questions. We have for many decades been getting conventional natural gas from conventional sources. When we go from that to extracting it from shale, are we going to see a dramatic decrease in the conventional sources of natural gas? Is one going to replace the other, or is there enough demand that both will stay around? One, of course—shale gas—will likely be a bigger item than conventional natural gas.

**Mr. Michael Binnion:**

I think that gets to the point, and this is a really important point to understand in Quebec as well. Where does natural gas come from? Right now, more than 50% of new gas comes from shale gas, and that's expected to continue. It's 10 Bcf a day now. I don't remember the number exactly, but by 2015 it will be something like 25 Bcf a day.

The real choice for Quebeckers is, do you want to burn shale gas in Quebec? The decision in Quebec has already been made. Already, 200 Bcf per year is being used in Quebec. I agree with you, Quebeckers are the ones who will make the choice, but they have made the choice; they already burn it. That's why they were making the Rabaska Terminal, so that they could be supplied with gas in Quebec.

Now the choice for Quebec is, do you want shale gas from western Canada or do you want shale gas from Quebec, because there is no other conventional source of gas to supply the market?

**Mr. Richard Harris:**

Thank you.

You mentioned a price that I didn't quite hear: was it \$3 per cubic...?

**Mr. Michael Binnion:**

Gas is sold by thousands of cubic feet. So 1,000 cubic feet currently in North America is trading somewhat below \$4, and the price in Britain is currently trading somewhat above \$7. Using my napkin math, we can infer that this difference of \$3 is a direct saving to people in North America from having the shale gas situated in North America.

 (1210)

**Mr. Richard Harris:**

Would that be directly evident as a benefit to the consumers?



**Mr. Michael Binnion:**

Getting to your overarching point, I think it's really important for us to respect that we're in new areas that haven't seen our industry, that don't understand the impacts, and are now having choices to make about their local economy and their local energy supplies that they've never had to make before. I think we must have a lot of respect for that.

But when we started to look for natural gas in Quebec, I was reminded of Jim Buckee when he took over Bow Valley Energy, saying that Bow Valley Energy was so poorly run they were even exploring for gas in Quebec. People were literally laughing at our company for the idea that we could find commercially viable gas in Quebec. Having discovered it, we thought some people might be happy.

But I do realize we have to be respectful that having discovered it, people now are asking what does it mean, and let's make sure we understand what it means before we go forward. We do respect that, but I'm with you in being a little surprised that there hasn't...

At the BAPE, I was surprised there were a lot more positive memoirs in support of us than I had expected. So there are constituencies in Quebec who see the benefits.

**Mr. Richard Harris:**

Well, I can imagine that, Mr. Binnion, and thank you for it. You will be a big spokesman for the industry, and I appreciate the way you deliver your message.

Thank you, and all the best.

**Mr. Michael Binnion:**

Thank you.

**The Chair:**

Thank you, Mr. Harris.

Again, thank you very much, Mr. Binnion, for coming today and getting us off to a great start on the shale gas portion of our study. We very much appreciate it. We will get your information circulated, once it's translated, and we hope to see you again.

We will suspend the meeting now for a couple of minutes to move in camera to discuss future business of this committee.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 33

Tuesday, November 23, 2010

The Standing Committee on Natural Resources met by videoconference at 11:04 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Gerard Kennedy for Scott Andrews.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Talisman Energy Inc.:* Reg Manhas, Vice-President, Corporate Affairs; James Fraser, Senior Vice-President, Shale Division, North American Operations. *Canadian Society for Unconventional Gas:* Kevin Heffernan, Vice-President. *Encana Corporation:* Richard Dunn, Vice-President, Canadian Division, Regulatory and Government Relations. *Department of Natural Resources:* David Boerner, Acting Assistant Deputy Minister, Earth Sciences Sector; Marc D'Iorio, Director General, Director General's Office; Denis Lavoie, Research Geoscientist, Earth Sciences Sector - Georesources and Regional Geology.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Reg Manhas, James Fraser and Kevin Heffernan made statements and answered questions.

At 12:07 p.m., the sitting was suspended.

At 12:11 p.m., the sitting resumed.

Richard Dunn, by videoconference from Calgary, Alberta, and Marc D'Iorio made statements and, with David Boerner and Denis Lavoie, answered questions.

The Committee proceeded to the consideration of matters related to Committee business.

Nathan Cullen moved, — That the Committee hold at least one meeting to examine: the proposed shipment of 1600 tonnes of radioactive steam generators by Bruce Power, the broader policy framework governing import and export of radioactive waste from Canadian territory, transport of radioactive waste through the Great Lakes, and "recycling" of radioactive metal for free release into the marketplace; that the Committee invite to testify: Canadian Nuclear Safety Commission (CNSC) President Michael Binder, representatives of Bruce Power, Mayor Gaëtan Ruest of Amqui Quebec, David Ullrich of the Great Lakes and St. Lawrence Cities Initiative, Grand Council Chief Patrick Madahbe, Union of Ontario Indians, and Gordon Edwards of the Canadian Coalition for Nuclear Responsibility; and that the Committee report its findings to the House of Commons.

Debate arose thereon.

It was agreed, — That the debate be now adjourned.

At 1:08 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/11/29 8:59 a.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources

EVIDENCE





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**Tuesday, November 23, 2010****1105***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))**Mr. Reg Manhas (Vice-President, Corporate Affairs, Talisman Energy Inc.)**Mr. James Fraser (Senior Vice-President, Shale Division, North American Operations (NAO), Talisman Energy Inc.)***1110***The Chair**Mr. Kevin Heffernan (Vice-President, Canadian Society for Unconventional Gas)***1115****1120***The Chair**Mr. Alan Tonks (York South—Weston, Lib.)**Mr. James Fraser**Mr. Alan Tonks**Mr. James Fraser*

**1125**

-  *Mr. Alan Tonks*
-  *Mr. James Fraser*
-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Alan Tonks*
-  *Mr. Kevin Heffernan*
-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*

**1130**

-  *The Chair*
-  *Mr. James Fraser*
-  *Ms. Paule Brunelle*
-  *Mr. James Fraser*

**1135**

-  *Ms. Paule Brunelle*
-  *The Chair*
-  *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*
-  *The Chair*
-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. Kevin Heffernan*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Kevin Heffernan*
-  *Mr. Nathan Cullen*
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**1140**

-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. Kevin Heffernan*
-  *Mr. Nathan Cullen*
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-  *Mr. Nathan Cullen*
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-  *Mr. Nathan Cullen*
-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. James Fraser*
-  *Mr. Nathan Cullen*
-  *Mr. Kevin Heffernan*
-  *The Chair*
-  *Mr. Devinder Shory (Calgary Northeast, CPC)*
-  *The Chair*
-  *Mr. James Fraser*
-  *Mr. Devinder Shory*
-  *Mr. James Fraser*



















**1145**

-  *Mr. Devinder Shory*
-  *Mr. James Fraser*
-  *Mr. Devinder Shory*
-  *Mr. James Fraser*
-  *Mr. Devinder Shory*
-  *Mr. James Fraser*
-  *Mr. Devinder Shory*
-  *Mr. Kevin Heffernan*












**1150**

-  *The Chair*
-  *Hon. Denis Coderre (Bourassa, Lib.)*
-  *The Chair*
-  *Mr. James Fraser*
-  *Hon. Denis Coderre*
-  *Mr. James Fraser*
-  *Hon. Denis Coderre*


**1155**




-  *The Chair*
-  *Mr. James Fraser*
-  *Hon. Denis Coderre*
-  *Mr. James Fraser*
-  *The Chair*
-  *Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC)*
-  *Mr. Kevin Heffernan*
-  *Mrs. Cheryl Gallant*
-  *Mr. Kevin Heffernan*
-  *Mrs. Cheryl Gallant*
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-  *Mr. Kevin Heffernan*
-  *Mrs. Cheryl Gallant*
-  *Mr. Kevin Heffernan*
-  *Mrs. Cheryl Gallant*
-  *The Chair*

**1200**


-  *Mr. Roger Pomerleau (Drummond, BQ)*
-  *Mr. James Fraser*
-  *Mr. Roger Pomerleau*
-  *Mr. James Fraser*
-  *Mr. Roger Pomerleau*
-  *Mr. James Fraser*
-  *Mr. Roger Pomerleau*
-  *Mr. James Fraser*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Mr. Mike Allen (Tobique—Mactaquac, CPC)*

**1205**



-  *Mr. James Fraser*

-  *Mr. Mike Allen*
-  *Mr. Kevin Heffernan*
-  *Mr. Mike Allen*
-  *The Chair*


**1210**

-  *The Chair*
-  *Mr. Richard Dunn (Vice-President, Canadian Division, Regulatory and Government Relations, Encana Corporation)*









**1215****1220**

-  *The Chair*
-  *Mr. Marc D'Iorio (Director General, Director General's Office, Department of Natural Resources)*


**1225****1230**

-  *The Chair*
-  *Mr. Denis Lavoie (Research Geoscientist, Earth Sciences Sector - Georesources and Regional Geology, Department of Natural Resources)*
-  *The Chair*
-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*
-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*
-  *Hon. Denis Coderre*
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-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*
-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*

**1235**

-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*
-  *Hon. Denis Coderre*
-  *Mr. Marc D'Iorio*
-  *Hon. Denis Coderre*
-  *Mr. Gerard Kennedy (Parkdale—High Park, Lib.)*
-  *The Chair*
-  *Dr. David Boerner (Acting Assistant Deputy Minister, Earth Sciences Sector, Department of*


















*Natural Resources)*


-  *Mr. Gerard Kennedy*
-  *Dr. David Boerner*
-  *Mr. Gerard Kennedy*
-  *Dr. David Boerner*
-  *Mr. Gerard Kennedy*
-  *Mr. Denis Lavoie*

**1240**


-  *Mr. Gerard Kennedy*
-  *The Chair*
-  *Ms. Paule Brunelle*
-  *Mr. Denis Lavoie*
-  *Ms. Paule Brunelle*
-  *Mr. Denis Lavoie*
-  *Ms. Paule Brunelle*


**1245**

-  *Mr. Marc D'Iorio*
-  *Ms. Paule Brunelle*
-  *Mr. Marc D'Iorio*
-  *Ms. Paule Brunelle*
-  *Mr. Marc D'Iorio*
-  *Ms. Paule Brunelle*
-  *The Chair*
-  *Ms. Paule Brunelle*
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-  *Mr. Marc D'Iorio*
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-  *The Chair*
-  *Mr. Nathan Cullen*
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-  *Mr. Richard Dunn*


 *Mr. Nathan Cullen*


## 1250


 *Dr. David Boerner*


 *Mr. Nathan Cullen*


 *Dr. David Boerner*

 *Mr. Nathan Cullen*


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 *Mr. Nathan Cullen*


 *Dr. David Boerner*


 *Mr. Nathan Cullen*


 *Mr. Richard Dunn*


 *Mr. Nathan Cullen*


## 1255


 *Mr. Richard Dunn*


 *The Chair*


 *Mr. Richard Harris (Cariboo—Prince George, CPC)*

 *Mr. Richard Dunn*


 *Mr. Richard Harris*

 *Mr. Richard Dunn*


 *Mr. Richard Harris*


 *Mr. Richard Dunn*

## 1300


 *Mr. Richard Harris*


 *The Chair*


 *Mr. Marc D'Iorio*

 *Mr. Richard Harris*

 *The Chair*

 *Mr. Richard Harris*

 *Mr. Marc D'Iorio*

 *Mr. Richard Harris*



*The Chair*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Nathan Cullen*



*Mr. Nathan Cullen*

**1305**



*The Chair*



*Mr. Nathan Cullen*



*The Chair*



*Mrs. Cheryl Gallant*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Nathan Cullen*



*The Chair*





CANADA

## Standing Committee on Natural Resources

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NUMBER 033

1

3rd SESSION

1

40th PARLIAMENT


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## EVIDENCE

Tuesday, November 23, 2010

*[Recorded by Electronic Apparatus]*

\* \* \*

 (1105)*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone. Welcome to our meeting once again, where we continue, under Standing Order 108(2), a study of energy security in Canada.

We have two panels of witnesses today. Normally I take the witnesses in the order they are on the agenda, but today we're trying to sort out some technical things, so we will start with a presentation of up to seven minutes from Talisman Energy. We have James Fraser, senior vice-president, shale division, North American operations; and Reg Manhas, vice-president, corporate affairs.

Welcome.

If you could go ahead with the presentation, then we'll go to Mr. Heffernan. Hopefully, the technical things will be sorted out by then.

Go ahead, please.

**Mr. Reg Manhas (Vice-President, Corporate Affairs, Talisman Energy Inc.):**

Great. Thank you, Mr. Chairman.

Thank you to you and all committee members for this kind invitation and the opportunity to speak with you today. We very much welcome the chance to share the Talisman Energy success story and answer your questions on the energy sector in general.

My name is Reg Manhas. I'm vice-president of corporate affairs for Talisman Energy. I'm based in Calgary, Canada. My colleague today, Jim Fraser, is the senior vice-president for North American shale.

Before we go any further, I just want to let you know I won't be going through the advisories on our presentation this morning, so that's for all your reading pleasure at a later point.

Before I turn it over to Jim to address the specifics of shale gas, I'd like to just say a couple of things about Talisman's global footprint and our commitment to corporate social responsibility. Talisman Energy is a Canadian company headquartered in Calgary, with exploration activities in North America, Latin America, Asia, the Middle East, and Europe. We take great pride in being a Canadian company operating on the global stage.

Talisman is committed to the highest levels of corporate, ethical, and social responsibility. We have been recognized as a national and global leader in the area of corporate social responsibility. I personally was very proud to serve on the national advisory group during the Government of Canada round tables on corporate social responsibility a couple of years ago.

Talisman is a developer of oil and gas around the world, but I note that we are not involved in the oil sands projects. In fact, over the past few years, Talisman has made a strategic decision to focus its North American business on natural gas.

I'm now going to turn it over to Jim Fraser to speak specifically to our shale operations in Canada. Thank you.



**Mr. James Fraser (Senior Vice-President, Shale Division, North American Operations (NAO), Talisman Energy Inc.):**

Thanks, Reg.

Once again, it's my pleasure to be here as well.

I would refer you to the global map on the second page of your handout. As we've mentioned before, Talisman is a worldwide independent oil and gas producer. We have operations in the North Sea, Southeast Asia, and North America. That's where the focus of the rest of my prepared comments will be, on our North America portfolio.

In the last several years, we have transitioned from a conventional gas and oil player to a predominantly shale gas player due to its significant long-term growth potential and low-cost structure. We have four shale plays in North America, each at different stages in their evolution. I'll talk about those specifically in a moment.

The fourth part of our portfolio is our exploration that handles exploration worldwide.

Referring to the next page, Talisman has approximately 1.8 million net acres of leases of shale gas portfolio in North America that consists of the four plays. Within that acreage position, we have original gas in place of 238 trillion cubic feet of gas. Referring to the pie diagram on the right part of the page, our contingent resource is estimated at 57 trillion cubic feet of gas. To put that in context, Canada consumes about 3.5 tcf, or trillion cubic feet, of gas every year, so this contingent resource from Talisman alone has the potential to fuel the country for 16 years.

As I mentioned earlier, we have four plays. The first and most mature is the Marcellus shale in Pennsylvania. We've grown that resource from basically zero production to over 270 million cubic feet of gas production in the last two years. It is one of the best returning shale plays in North America.

Second most mature is in northeast British Columbia, the Montney shale. This is a play that's distinguished by the thickness of the shale. It's up to 1,400 feet of gas-charged shale, as compared with 250 feet in the Marcellus. The project in B.C. is about 12 to 18 months behind the Marcellus, but results to date have been encouraging. To date, we've only drilled about 35 wells, and that's the major key in unlocking this play. It's to getting our costs down.

Our most recent entry is the Eagle Ford play in south Texas, because of the liquids content of the shale.

The fourth part of our portfolio is in the Utica formation in Quebec, where we have a very large acreage position of about 760,000 net acres. But I must stress, it's very early days in Quebec exploration, as there has only been a handful of wells drilled in Quebec.

You might ask, why shale gas?

The next slide actually has seven points I'd like to address.

First, shale gas provides a sustainable, long-life resource base to North America. These wells will have lives as long as 50 years.

Second, it's scalable. These are very large accumulations, some as large as 100 miles in length. Total shale production in North America in the year 2000 was essentially zero. It has ramped up to 10 billion cubic feet per day in 2010, or 15% of North America natural gas production. Analysts expect that shale gas will grow to over 25 bcf per day by 2015 and will supply as much as 50% of the total North America production by the year 2020.

Third, shale gas is developed using proven technologies of horizontal drilling and advanced fracture stimulation.

Fourth, these resources are very predictable. There is little variance in well-to-well performance.

Fifth, shale gas has a reduced carbon footprint relative to competing fuels. It emits 40% less greenhouse gases than coal, 30% less than fuel oil, and 22% less than conventional gas resources.

Sixth, it is low cost relative to other opportunities. This is because there is less geologic risk in drilling the wells, and the drilling and completion process is repeated potentially thousands of times, resulting in operational efficiencies.

The last point is the liquids potential. Recent successes in liquids-rich areas have resulted in a shift to developing liquids-rich areas to take advantage of higher commodity prices.

My last slide illustrates some of Talisman's best practices that we utilize in the development of this resource.



First is what we call our good neighbour program. This is where we proactively address impacts of shale development and set clear behaviours for our staff and contractors.

Second is our secondary containment and our environmental protection. We recycle 100% of the water we use in developed plays like the Marcellus. We proactively list on our website all the chemicals we use in fracture stimulation.

The last bullet point is actually probably the most important. We focus on safe operations. It's a cornerstone of our company philosophy.

In conclusion, there is a tremendous opportunity for Canada to develop its natural resources in a sustainable, responsible manner, which furthers our energy security and returns dividends to Canadians.



#### **The Chair:**

Thank you very much, Mr. Fraser and Mr. Manhas.

We'll go now to Mr. Heffernan for a presentation of up to seven minutes. I see you have a slide show presentation on the screen there. Go ahead, please.



#### **Mr. Kevin Heffernan (Vice-President, Canadian Society for Unconventional Gas):**

Thank you, ladies and gentlemen. I appreciate the opportunity to be here today.

The Canadian Society for Unconventional Gas is a not-for-profit association, formed in 2002, with a focus on broadening the understanding of unconventional natural resources and the technology to develop those resources among industry, governments, regulators, and the public.

Canada is blessed with a vast natural gas resource. During the past decade our resource base has grown from 390 trillion cubic feet, or tcf—about 70 years of supply—to more than 700 trillion cubic feet.

These natural gas resources include gas in conventional reservoirs, primarily in western Canada; gas in Canada's far north and in the offshore; as well as in unconventional reservoirs: coal seams, tight sandstones, and shales. The primary change during the past 10 years has been the emergence of unconventional gas resources as a major part of Canada's natural gas resource portfolio.

While Canada's conventional natural gas resources are in decline and becoming increasingly costly to find and develop, technology has evolved and been adapted to unconventional reservoirs in response to declining conventional opportunities. With a resource base of 128 tcf to 343 tcf, Canada's shale resource will have an important role in our future natural gas supply mix.

While most currently identified shale gas resources are in western Canada, important and potentially very significant resources are being investigated in Ontario, Quebec, and the Maritimes. In addition, shale gas geological trends in many parts of Canada are currently poorly defined or understood, and we expect to see growth in the resource base in many parts of the country.

Technology has unlocked unconventional gas potential. We have experienced a dramatic evolution of horizontal drilling capability with the development of custom drilling rigs and supporting technologies, resulting in significant reductions in drilling costs. Multiple wells drilled from a single surface location can reduce cumulative surface disturbance by two-thirds or more compared to single well drilling approaches.

Hydraulic fracturing of reservoirs has been practised for 60 years. The evolution of those techniques to enable multi-stage fracturing in both vertical and horizontal wells has resulted in greatly enhanced production performance.

In addition, micro-seismic monitoring and other techniques have enabled an improved understanding of

where fractures go and how they behave.

At this time, all shale gas evaluation and development activity is provincially regulated. There is no activity in areas of federal jurisdiction. Although regulations can vary somewhat from one province to another, the primary functions of health, safety, and environmental protection are always addressed.

In some places water management is a particular concern to many people. It is important to recognize that through various government departments in all jurisdictions, the use and disposal of water in natural gas development is regulated, including for shale gas development.

Standard practices for well construction are designed to protect groundwater. At shallow depths, where drinking water is found in aquifers, the first stage of well construction includes the installation of steel casing and pumping cement between that steel casing and the rock to isolate the aquifers before drilling deeper. Once the well has been drilled into the shale, a second steel liner or casing is installed, and again cement is pumped between the liner and the rock, this time isolating the producing shale from all overlying formations or rock units. This approach, isolating both aquifers and the producing zone, is a standard production practice in wells around the world.

When this construction stage is complete, hydraulic fracturing operations commence. It's important to recognize that the fracturing operation is not permitted to compromise the integrity of the well construction.

Hydraulic fracturing is a process of inducing fractures in reservoirs by pumping a fluid, often containing sand or a similar proppant, down a well and into a rock formation at a predetermined location. The fluid creates cracks or fractures, or opens existing fractures, and the proppant holds the fractures open. With multi-stage fracturing, the process is repeated a number of times in a single well. For horizontal shale wells, the process is repeated at various locations in the horizontal part of the well.



Many kinds of fluids can be used. Although some use no water, water-based fracs are common. For shales today we refer to these as slick-water fracs.

There is a widespread recognition within industry that the hydraulic fracturing process is water intensive, and producers and the service sector are working aggressively to reduce water use, employing strategies such as recycling and the use of non-potable or non-drinkable water.

Because hydraulic fracturing requires moving water and sand at high pressure, kilometres underground and into the shale, some compounds are often added to increase the capacity of the fluid to carry sand, to reduce the interaction of water with clay minerals, to improve flow characteristics, and to eliminate bacteria. These additives are regulated, primarily through federal programs and regulations, including worker training and certification requirements. We have identified several of those acts and programs and regulations for you.

There is no question that shale gas activity and development activities create concern, especially in areas that have little or no prior experience with oil and gas development. This is understandable. Shale gas evaluation and development, like any industrial activity, can be disruptive. Activity levels are high during drilling and fracturing operations but much lower once production is under way.

Shale gas development also brings economic activity and growth. In a July 2009 report, the Canadian Energy Research Institute estimated that every dollar of oil and gas expenditure generated \$3 of impact on Canadian GDP. Most of that impact occurs in the jurisdiction of activity. Through economic development, employment, property sales, and income taxes, all levels of government benefit, from municipalities to the federal government.

In closing, shale gas will be an important part of Canada's future supply mix, and there are opportunities for development of the resource in many parts of the country. Shale gas development occurs within a comprehensive regulatory environment. Health, safety, and the environment, including the protection of surface and groundwater, are primary concerns. Although development can require large volumes of water, industry is working aggressively to address this concern.

Lastly, it's important to recognize that the benefits of shale gas development, including regional economic development and employment, will accrue to all levels of government.

Thank you.

  (1120)

**The Chair:**

Thank you, Mr. Heffernan, for your presentation.

We will go now to questions. I'd like to ask members of the committee to make sure they indicate whether they would like to ask questions. It will be much easier for the chair and the clerk if you do this so we don't have to chase you down.

We'll start with Mr. Tonks for up to seven minutes.

**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you, Mr. Chairman. And thank you, gentlemen, for being here.

Generally, the concerns that have been raised have been around the safe fracturing technologies. You've mentioned the impact on aquifers and water tables. You mentioned that when the industry goes into a community, in the initial geological surveying and community contact, the concerns raised are often inordinately higher than those directed at other technologies having to do with liquid natural gas, natural gas, and so on.

Could you outline what that level of activity is and the concerns that communities have expressed? I'm sure you give them the overview you've given us, which explains your research on the safety of fracturing. How have communities responded?

**Mr. James Fraser:**

The question is, how do communities respond to the impact we have when we bring industry into their area? First off, we recognize that this is an impact on the everyday lives of the citizens in an area. So what we try to do, and have done many times, is visit with the communities and tell them exactly what is going to happen. This is an industrial process. We bring in, via heavy trucks, drilling rigs and other industrial equipment.

We sit down and have community town halls, and we address any concerns the citizens have. In some cases, we've had tours in which we show them what an actual drilling rig works like, taking some of the mystery out of the process.

The oil and gas business has been drilling wells in North America for 150 years. Yes, it is an industrial process, and yes, there are risks. But through that long history, we feel we have identified those risks and mitigated them with best practices. What we share with the communities is exactly what we do, why we do it, and how we do it.

**Mr. Alan Tonks:**

Thank you for that answer.

In one of the profiles you used you showed the steel and cement casing process as the horizontal fracturing takes place. It occurred to me that the whole process of drilling for shale gas must be very expensive. How do costs for the total exploration, the drilling or processing, and the end result, where you've extracted the gas, compare to those for natural gas and liquid natural gas?

**Mr. James Fraser:**

It's an entirely different process than for liquefied natural gas. To give you some specifics, when we first go into an area we drill what we call exploration wells. They are typically multi-million-dollar events of \$8 million to \$10 million. Part of that is for the drilling process itself, and the other part is for the completion process. With shale gas, the ability for the gas to flow is very low, so we have to create a natural pathway for it to get to the surface. We use the fracture stimulation technique my colleague mentioned. The actual

cost of that stimulation is the most expensive part of the process. A typical exploration well could cost as much as \$10 million to drill and complete.

Once we learn more about the specific project we're in, those costs on shale plays always come down. Our history shows us that those costs will typically be cut in half or a third over the next couple of years.

A good example that our company uses is in the Marcellus shale play. We started our first well there in November 2008, exactly two years ago, and our first well cost \$8 million. We typically drill and complete wells now for about \$4 million, so we've cut our costs in half. At the same time, the reserves or the gas production from that well have increased with time. That's also a characteristic of the shale plays. The costs go down as we drill more, learn more, and create more efficiencies. The reserves that are produced from the wells get better and better as we learn the proper recipe for how to drill and complete the wells more effectively.

  (1125)

**Mr. Alan Tonks:**

So your conclusion is that with the technology and research looking at mitigating the difficulties with respect to the danger and the effect on the aquifer and the environment, shale gas will be a competitive replacement price-wise for dwindling natural gas deposits, and so on.

**Mr. James Fraser:**

That's exactly right. In the last few years there has been a real transformation in North America in going to the shale gases versus conventional gases. That's determined from what we call the finding and development cost, which is the cost per unit of production. With the conventional assets, which are dwindling, as you mentioned, it's typically twice as expensive from a finding and development cost than what we've shown in the shale gas assets in the last number of years. So they're very competitive, sir.

**Mr. Alan Tonks:**

Thank you.

Do I have time for one more question?

**The Chair:**

You have one minute, Mr. Tonks, so go ahead.

**Mr. Alan Tonks:**

The production of methane gas has been cited as problematic with respect to another environmental pollution carbon imprint. How is the industry accommodating that particular environmental issue, the technology issue?

**Mr. Kevin Heffernan:**

I think it's important to realize that shale gas is like any other natural gas resource. In some areas the emissions associated with development are higher than our traditional average conventional supply. In other places, the emissions and the CO<sub>2</sub> content of the gas stream are lower than in our traditional average gas supply. In that sense, shale gas is like any other natural gas supply source.

Yes, the process of producing gas is more intensive, but we also need to remember that an average shale well might produce 10 to 20 times more gas than a traditional conventional western Canadian gas well. While the emissions at the beginning of the process may be higher, associated with the completion process in particular, the amount of gas the well recovers is an order of magnitude greater than the gas that a conventional well would produce.

**The Chair:**

Thank you, Mr. Tonks.

Madam Brunelle, please go ahead with your questions for up to seven minutes.

[*Translation*]

**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chairman.

Good morning gentlemen.

Mr. Fraser, Talisman Energy is a company that is very involved in Quebec. Obviously through the current BAPE hearings we have witnessed broad opposition on the part of the Quebec public to shale gas extraction. Correct me if I am mistaken, but contrary to British Columbia, in Quebec this extraction takes place in densely populated areas and in agricultural areas, and our fear is that this will create few specialized jobs. Shale gas extraction is not necessarily a priority for Quebecers because they prefer greener sources of energy and their needs are less pressing.

Obviously water use and environmental harm are particularly problematic for us. In fact, Talisman Energy violated the rules at the end of October because this summer the company used four million litres of water in order to hydraulically fracture its well at Gentilly. Out of those four million litres of water, three million were not treated and ended up in open reservoirs. That was of great concern to the public. We're told that there are about 30 wells, but imagine if there were 1,000, 10,000 or 15,000. That would be of great concern.

Is it your intention to do any research? Do you intend to improve the treatment of this waste water after fracturing? Do you intend to reduce the amounts of water? What do you want to do in order to reassure the public?



[*English*]

**The Chair:**

Mr. Fraser, do you want to answer that?

**Mr. James Fraser:**

Absolutely, Mr. Chairman.

First, Ms. Brunelle, you're correct that there is a process now, the BAP process, which is ongoing. As a matter of fact, Talisman specifically has been very engaged in that process over the last month or so, and we understand it won't conclude until early February. Some of the issues you've brought up are being discussed in that format.

Specifically on water, everything we do is tightly regulated by the ministries of natural resources and environment in Quebec. So everything we do requires a permit. For example, we used surface water to fracture stimulate that well. We had permits to extract the amount of water we did. Conversely, we have permits from the MDDEP to take that water to a municipal treatment plant for disposal.

In the long term and on a large scale, if we hope to develop that resource, that is not what we would do with our water. There are two reasons for that. First, we try to reuse as much of that water as we can. In the example you cite, we will use that water again the next time we fracture stimulate a well, which won't be until next year. So we are keeping it, as you correctly cited, in an above-ground containment so that none of the water hits the ground. Our intent is to use that water the next time we fracture a well next spring. So reuse is a big part of our strategy.

The sewage treatment plants are not the solution for long-term treatment of water in Quebec. In other jurisdictions where there aren't very robust shale businesses, that isn't what happens. There are other



technologies that exist today, such as reverse osmosis and evaporation, where this water is treated at scale. There have been two wells fracture stimulated in Quebec this year, so we are not at the scale yet to use those longer-term solutions. That's why we've used the sewage treatment plant.

But I'd like to be clear that everything we do is regulated by the MDDEP. We have permits from the MDDEP when we take that water to the disposal site. The sewage treatment plant also has to approve the treating of that water in their facility. So nothing that we've done is outside of current regulations. We really support a robust regulatory environment in Quebec, as well as any place else we operate.

[Translation]



**Ms. Paule Brunelle:**

I'll thank you on one point, among other things, and I agree with you that this is a matter of provincial jurisdiction. I'm in the wrong seat to speak to you about this today but now that the committee is debating this, I have questions and I'm concerned about the health of my constituents.

Your answers indicate that the Government of Quebec is not ready. The Mining Act should be reviewed, etc. We are suggesting a moratorium to provide time to examine all environmental data.

I know that you do not support a moratorium. Can you tell us why?

[English]



**Mr. James Fraser:**

Thank you, Mr. Chairman.

Yes, Madam, I will explain that.

You're correct. My company does not support a moratorium. Why we don't is because we think Quebec has a great opportunity right now to understand the resource of the province. Quebec uses natural gas today. About 10% of the energy consumption in Quebec is fuelled by natural gas that comes from western Canada, specifically Alberta. So here's an opportunity for Quebec not to have those imports of gas. The largest single use of energy in Quebec is from fuel oils. We think Quebec has an opportunity, if this gas was proved as a resource, to replace that fuel oil, which has a much dirtier carbon footprint than clean-burning natural gas.

Back to your safety question, this is a well-known process. The impacts on the environment are well known. We think it has been studied through North America and other jurisdictions for many years, and we feel that the technologies and the mitigation procedures exist today where we don't have to go through an extended period of study. We think those studies already exist in other places.



[Translation]



**Ms. Paule Brunelle:**

Thank you.

[English]



**The Chair:**

We go now to Mr. Cullen for up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thank you, gentlemen, for being here.

I have a question with respect to landowner and property rights. You work in Alberta and British Columbia. If a landowner refuses or doesn't want a well, do they have the right to stop the well from being drilled?



**The Chair:**

Mr. Fraser, do you want to answer that?



**Mr. James Fraser:**

Yes, I'll answer that.

Are you speaking specifically in British Columbia?



**Mr. Nathan Cullen:**

Or Alberta.



**Mr. James Fraser:**

The law is that the crown owns the minerals and the surface owner does not have any right to the minerals.



**Mr. Nathan Cullen:**

One question that came up was this. I was in southern Alberta a while ago dealing with folks who were impacted by what's called coal bed methane, and I know there are different terms used for different extraction processes.

Are you required, as a company, to do a baseline study of the water quality prior to any drilling operations?



**Mr. Kevin Heffernan:**

In Alberta, in particular, and with respect to coal bed methane development, the Energy Resources Conservation Board, the oil and gas regulator, does require water well testing. There are specific geographic constraints--a lateral distance from the proposed well where water wells must be tested in advance of drilling and fracturing of the coal bed methane.



**Mr. Nathan Cullen:**

Maybe I'll stay with you just for a second, sir.

Are you aware of any comprehensive national study of unconventional oil and gas energy going on right now in Canada?



**The Chair:**

Mr. Heffernan, do you have an answer for that?



**Mr. Kevin Heffernan:**

No.



**Mr. Nathan Cullen:**

Mr. Chair, if I could just be specific, is the National Energy Board conducting such a study right now?



**Mr. Kevin Heffernan:**

The National Energy Board, to the best of my knowledge, reviews Canada's unconventional resources from time to time.

I'd like to give some perspective. We prepared, in spring 2010, an assessment of Canada's unconventional gas resources, and that report is available on our website.

**Mr. Nathan Cullen:**

Specifically, I want to be short. We only have a few minutes.

You're in the unconventional and gas sector. Is the NEB doing a national study right now on unconventional sources?

**Mr. Kevin Heffernan:**

I don't know.

**Mr. Nathan Cullen:**

Okay. I would imagine you would if they were.

This is a question with respect to the fracturing chemicals that are put down. Is your company obligated under Canadian law, provincial law, to disclose the chemicals that are used in the fracturing process?

**Mr. James Fraser:**

Mr. Chairman, I'd like to address that.

No, by law we are not. However, our company, as I cited earlier, has taken the stance to be proactive and actually put those chemicals out on our website.

**Mr. Nathan Cullen:**

So a change in the law that would require all companies to do what your company is doing wouldn't be offensive to you?

**Mr. James Fraser:**

Mr. Chairman, no. We actually support public disclosure of frac fluids.

**Mr. Nathan Cullen:**

The question of water is prevalent. It's mischaracterizing the public concern, particularly in Quebec, that it's just an unfamiliarity with your industry. It's legitimate to say people have legitimate concerns and maybe are familiar with your industry, at least through research.

On the water question, we've heard testimony that approximately 50% of the water that's injected into a well is not recovered. It does down and stays down. Is that correct?

**Mr. James Fraser:**

Yes, that is correct.

**Mr. Nathan Cullen:**

If that water is mixed and interlaced with chemicals, some of which we all admit we wouldn't want to drink if we didn't have to, the public's concern would be whether those chemicals then return back to the water supply. The volumes are quite extraordinary. I mean, 12 million to 32 million litres per well is a lot of water. If there's some number of tonnes of chemicals going down, some of them carcinogenic, and 50% of that, we assume, doesn't come back up, it's now in an aquifer supply that people are going to rely on for

their drinking water and for basic living.

  (1140)

**Mr. James Fraser:**

Mr. Chairman, if I could address that, that water we inject is over a mile below where aquifers are, where fresh waters are taken that people use as their drinking source. Once we put it in the ground a mile deep, some of that water, as you mentioned, does not come back. It will stay there, and it will not be part of the aquifer.

**Mr. Nathan Cullen:**

Have we not had experiences, though, particularly in Pennsylvania, of water supplies becoming contaminated? Is the Pennsylvania and U.S. government not supplying water to residents right now who've had their water contaminated?

**Mr. James Fraser:**

Mr. Chairman, there are two different issues there. There's been not one documented case in North America of frac water getting into an aquifer.

**Mr. Nathan Cullen:**

So it's actually once the well is in production.

Is the methane getting into the drinking water and contaminating water supplies a concern?

**Mr. Kevin Heffernan:**

That is a concern, but I think two things. In Pennsylvania, the issue has been gas migration. This is gas that has migrated from shallow sources in the cement or between the cement and the casing or between the cement and the rock up into aquifers. It has nothing to do with hydraulic fracturing and fracture fluids.

**Mr. Nathan Cullen:**

It's the actual process. If those wells hadn't been drilled and producing, one would imagine that the concrete casings and all that wouldn't be in the ground and the contamination of water wouldn't have happened, I assume.

**Mr. Kevin Heffernan:**

That's correct, but realize also that we've drilled thousands, millions in fact, of wells—

**Mr. Nathan Cullen:**

Sure.

**Mr. Kevin Heffernan:**

—in North America over the last 50 years, and this has not been a widespread issue.

I don't know the regulatory regime in Pennsylvania, but I can assure you that if you look at western Canada, at Alberta and British Columbia in particular, that's not a commonplace concern.

**Mr. Nathan Cullen:**

Has Talisman ever been fined for infractions?

**Mr. James Fraser:**

We have been fined in Pennsylvania three times in the last three years a total of \$21,000. None of it was for contaminating surface water.

**Mr. Nathan Cullen:**

Has it been fined at any time in Canada?

**Mr. James Fraser:**

You know, I don't have the answer to that, sir.

**Mr. Nathan Cullen:**

Just so we understand this, when methane gets into a drinking water supply, the water is completely undrinkable. We now have a volatile substance that can be burned right out of folks' tap water.

**Mr. Kevin Heffernan:**

It depends on the methane concentrations in the aquifer. In fact, there's readily available technology that allows the methane to be separated from the water. It's used in western Canada and probably even in Ontario and Quebec and the Maritimes. Basically, it's a separator that separates the gas from the water.

**The Chair:**

Thank you, Mr. Cullen. Your time is up.

We go now to Devinder Shory for up to seven minutes.

**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair.

And thank you to the witnesses for coming out this morning.

First of all, Mr. Chair, I'm very happy to see one thing, which is that the witnesses in this matter of our study, previous witnesses and today's witnesses, are very consistent on the issue of the contamination. They're basically consistently answering in the same manner as we heard before.

This summer, I was in Fort Mac and Dawson Creek on a visit, and I heard about the oil sands mining. I heard someone saying that it costs approximately \$700 million to bring out the first drop of oil.

Anyone can answer my questions.

First, how long does it take to drill and actually produce shale gas? I heard that it costs \$8 million or \$20 million. Also, how does the cost of bringing shale gas to the market impact the price?

**The Chair:**

Who would like to start?

We'll have Mr. Fraser, and then we'll have Mr. Heffernan, if you'd like to add.

You can go ahead.

**Mr. James Fraser:**

Thank you, Mr. Chair and Mr. Shory.

I believe the question is what the cost is and how it compares with other processes.



**Mr. Devinder Shory:**

I would say, how long does it take?

**Mr. James Fraser:**

To drill one of these wells typically takes 30 to 60 days, depending on how deep it is. In some areas in which we operate, it's as little as 20 days; in other areas, such as British Columbia, it takes about 45 days to drill a well. Then we complete the well, whereby we fracture stimulate it. That typically can take another two weeks.

Part of the process, though, is that we use what we call pad drilling, whereby we drill multiple wells from the same surface location, and that reduces the disturbance on the surface. If we do multiple wells, then of course it's additive. It's 30 days to 45 days per well to drill a well.

We could typically be drilling wells for 90 to 120 days and then fracture stimulate for another month or so. Then that equipment moves off and that well goes to the production phase, in which it will produce with a simple wellhead, which looks like a Christmas tree, for as long as 50 years. The surface disturbance is very minimal after the initial drilling and completion phase.

**Mr. Devinder Shory:**

Do you think the cost of bringing shale gas to market impacts the price as well?

**Mr. James Fraser:**

Absolutely. Shale gas production in North America is a supply-demand phenomenon. That's why the price of gas is down; it's the supply, due to the success of the shale plays in North America. The consumer benefits from the lower costs. But yes, the price is impacted by the cost to develop the resource, or vice versa.

**Mr. Devinder Shory:**

I also heard, Mr. Fraser, in your presentation that shale gas is cleaner than other competing fuels; for example, coal oil or heating oil. It seems that shale gas is not an environmentally challenging issue; it seems as though it is an opportunity.

In your opinion, what is needed to increase the levels of production?

**Mr. James Fraser:**

Mr. Chairman, a couple of things can increase production. First, you're right that the chemistry of shale gas is typically very high in methane, CH<sub>4</sub>, and that means it's a pure source of energy. Therefore, because it contains very little CO<sub>2</sub>, typically it is much cleaner burning than other fuel sources, such as coal, for example, and fuel oils.

As to what's required, we think a robust regulatory environment is required. In every area in which we operate, we have to be very open and transparent in the process we take. We think that is a big component of it.

Then we just let the free market operate. Our business is driven by supply and demand, and our goal is to have a fuel source that we can bring to the North American continent at a very competitive price. As a company, our goal is to get our operating costs down to the point where it's economic to do so.

**Mr. Devinder Shory:**

You just talked about the regulations. We all understand that in Canada our provinces have jurisdiction too in regard to exploiting all natural resources, basically. Of course, admittedly, shale gas is a relatively new resource.

In your opinion, do you find that any one province is a model that other provinces should follow in issuing the licences or permits accordingly?



**Mr. James Fraser:**

Mr. Chairman, right now the regulatory environment in British Columbia is quite robust. That is the place where shale gas is the most evolved in Canada.

Alberta would be a close second. They have a long-standing oil and gas extraction industry. They have long-standing regulation of very robust regulatory environments.

So British Columbia would be the first example I would use and Alberta the second, mainly because British Columbia is more mature in the development of shale gas than Alberta is at this point in time.



**Mr. Devinder Shory:**

We were talking about contamination in the water. Approximately how much water do you use to trace shale gas?



**Mr. Kevin Heffernan:**

The amount of water used varies a great deal from one place to another. Some shale gas developments use no water. Others—and Horn River is an example that people are probably familiar with—use a great deal of water. It's a function of the mineralogy, the geology, the depth, the length of the well, and the number of fracture stages that are being completed in each well. So there probably is no answer. We say that typically shale gas development requires something between 3,000 cubic metres and 60,000 cubic metres per well. That's simply a function of the geological variability and the depth requirement.



(1150)



**The Chair:**

Thank you, Mr. Shory.

We go to the second round, for three minutes each, starting with Mr. Coderre.

Go ahead, please, Mr. Coderre.

[*Translation*]



**Hon. Denis Coderre (Bourassa, Lib.):**

Good morning gentlemen. I apologize for being late; I may ask questions that you have already heard. On the other hand, I think sometimes it's important to repeat some questions, just to see if we get the same answer.

**Some members:** Oh, oh!

[*English*]

**Hon. Denis Coderre:** No, I'm just saying that.

Of course, there's an issue in Quebec; there is clearly a problem vis-à-vis our communication or perception, because it's a new issue. What I would suggest, because clearly the way that—and I'm not saying Talisman or any other—the industry tried to sell at the beginning, with Mr. Caillé and all the others, was a disaster, wasn't it?

You don't have to answer that, but it was a disaster. You're blushing; it's a good sign.

My concern is quality of life. I'm sure it's yours too. To ensure it, we need an independent way of monitoring. Of course, it is an issue of provincial jurisdiction, but we have a role to play. This is a serious

study that we're doing, and I think we can all be part of the solution.

My concern is the science. We saw in *Découverte* on Sunday the issue with sodium, the issue of the use of water, the problem you had in Pennsylvania. So of course people are looking through some other examples. B.C. seems to be a model; we have some issues in other places.

How do you manage the issue of science? At the end of the day we can talk about the money, but if we talk about the wealth of people, I think the science and the monitoring process are the most important things. We need also to reassure people, because it's about their lives.

Regarding the possible contamination of water, vis-à-vis the way you use the water and when you bring it back, do you have any scientific study showing that what you're doing right now is great? And to help you, would it be a good thing—through NEB, through some expertise or environmental evaluation—to have in Canada an independent monitoring process whereby we can make a science study, with all the expertise from outside, and then put up a process to reassure everybody?



**The Chair:**

Who would like to start?

Mr. Fraser, go ahead, please.



**Mr. James Fraser:**

Mr. Chairman, there are a lot of questions there.

First I'll start with the Quebec issue. As you realize, we have been very active in the BAPE process, which is ongoing right now. A lot of the answer to your question is that we very much support a robust regulatory environment. You're right that it's a little immature in Quebec right now; it operates under the mining law. We know that government agencies are working to update those studies so that we can operate at scale.

As far as the studies you asked about are concerned, oil and gas extraction in North America has been in existence for 150 years. The processes we use—specifically, horizontal drilling and fracture stimulation—have been in operation for decades. The first frac job was in 1947. So those studies do exist, and as part of the BAPE process we provided a lot of the data, a lot of the studies you mentioned, to the BAPE commission.



**Hon. Denis Coderre:**

[*Inaudible--Editor*]...or independent studies? The issue is toxicity, is it not?



**Mr. James Fraser:**

Mr. Chairman, they were not our studies; they were independent, third-party studies. The EPA in the U.S. was the primary author of them. They studied fracture stimulation as early as 1994. In 2004 they put out a study, in 2007 they put out a study, and they're currently undertaking another study whose results will come out in another couple of years.

So those studies exist. Many of the regulatory agencies in other parts of North America, specifically Colorado, have also put out studies, as has the regulatory agency in Pennsylvania.



**Hon. Denis Coderre:**

Mr. Fraser, one of the issues will be how to bring back the water in a viable way at the drinkable end. In Pennsylvania, it seems that the state said you need your own infrastructure, that you cannot use municipal infrastructure.

What is your situation? Of course, it's just exploration—you're not exploiting it right now in Quebec—but how do you manage to work with municipalities? Or do you have a provision in your program that you'll have to build your own infrastructure for the water issue?



  (1155)

**The Chair:**

This was answered earlier.

Mr. Fraser, could you give us a very short answer, please?

**Mr. James Fraser:**

The first answer is that in Pennsylvania we reuse all of our water. We reuse 100% of the water we get back, so that obviously takes that part out of the equation.

The other part of the question I answered was that in Quebec it's very early days; there are only a few wells that have been fracture stimulated. In other parts of North America, where this activity has gone on for longer and it is larger scale, there are known scientific ways to treat this water, such as reverse osmosis, deep injection, and evaporation. The municipal sewage facilities are not used whatsoever.

That would be the long-term solution in Quebec. With only three wells that are fracture stimulated in Quebec this year, it's not at a scale where we can bring those industries in today.

Hopefully in Quebec, if the resource gets developed...and at the end of the day that's for the citizens of Quebec--

**Hon. Denis Coderre:**

If a company were to dig a hole about a hundred metres from your house, it's not your issue in Quebec.

**Mr. James Fraser:**

No, sir.

**The Chair:**

Monsieur Coderre, your time is up. Thank you.

We go now to Ms. Gallant for up to three minutes.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Thank you.

The questions I have are more basic. Mr. Heffernan, you provided a very good outline about the process.

But I guess I'm not alone, so you'd better explain it for everyone. You've got your well casing that goes down. The concrete goes between the formation and the casing.

That's correct?

**Mr. Kevin Heffernan:**

That's correct.

**Mrs. Cheryl Gallant:**

So the pipe goes down and then goes horizontal. Are there holes at some point that spew out the proppant, or the sand?

**Mr. Kevin Heffernan:**

Yes, that's correct. We use a process called perforating. A tool is put in the well, and at specific intervals that tool fires small charges that perforate the steel casing and the cement, and it basically gives the fluids, and therefore the proppant, an avenue into the shale formation.



**Mrs. Cheryl Gallant:**

What about these glass beads? Do they come out of the same holes?



**Mr. Kevin Heffernan:**

Yes. It's sand.



**Mrs. Cheryl Gallant:**

Okay. How do you get the gas out? Is it just dynamics?



**Mr. Kevin Heffernan:**

It flows. Essentially it seeks a lower pressure environment than the shale, and that lower pressure environment is the surface. The fracturing process creates a pathway from the shale into the well, and the well creates the pathway from the shale to surface. It basically flows because there's a pressure difference between the surface and the reservoir in the shale.



**Mrs. Cheryl Gallant:**

Is it hot water that's going through there or just--



**Mr. Kevin Heffernan:**

No. It's just...let's call it normal water, which in the summertime would be a little warmer than in the fall. In some parts of Canada where fracturing operations are done in the wintertime, which is generally not the preference, the water supply needs to be heated.



**Mrs. Cheryl Gallant:**

And that would create more pressure underneath to get the gas out.



**Mr. Kevin Heffernan:**

No, I don't think so.

Jim may have a better answer, but I don't think so. I don't think the temperature of the water makes any difference. It's just so that it doesn't freeze into a block in a tank or a bit someplace.



**Mrs. Cheryl Gallant:**

And you capture it when it comes to the surface. Very good.

Is it so far below the water table, the water and the sand that's going through these perforations, that there is no chance that it's ever going to reach back up to the water table?



**Mr. Kevin Heffernan:**

It will not. It will stay in the shale. That portion that isn't returned to surface stays in the shale.



**Mrs. Cheryl Gallant:**

Is there any chance, through pressure and normal movement of the earth's crust, that there would be any sinkholes that form as a consequence of the gas coming out?



**Mr. Kevin Heffernan:**

No, the nature of gas storage in shale is nothing like that. The fractures that are created are the thickness of a sheet of paper.

**Mrs. Cheryl Gallant:**

Thank you.

**The Chair:**

Thank you, Ms. Gallant.

And thank you for your answers.

If you were to see a sample of the rock this gas is coming from, you'd see that it's a solid material with very, very small areas of porosity, I guess. It's fascinating to see. I hope later on that our committee will travel to some operations to actually see these things.

I go next to Monsieur Pomerleau for up to three minutes.



[Translation]

**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you Mr. Chairman.

Thank you for having come to meet with us today.

Mr. Fraser, in your brief you seem to imply that you are one of those who provide full disclosure of all additives used in fracturing liquids. What we read in the papers does not reflect that. They say that companies keep this information secret, that these are trade secrets.

Do you mean that you do not make that information public but you do share with two or three individuals who then decide whether or not to give you environmental rights? Is that made public?

[English]

**Mr. James Fraser:**

I can only speak for our company, Talisman Energy Inc. We put on our website, the Talisman U.S.A. website, the exact components of that fracturing fluid.

[Translation]

**Mr. Roger Pomerleau:**

Fine, that was my question.

You claim that you comply with all the regulations, all your rights and that you have all the necessary permits to dig and to store water. You claim that you have all the necessary permits in order to carry out your work.

What is it exactly that you are in violation of currently, if you are complying with all the rights and regulations? That is what is being reported in the papers.

[English]



**Mr. James Fraser:**

Are you speaking of Quebec specifically, sir?



**Mr. Roger Pomerleau:**

Yes.



**Mr. James Fraser:**

Yes, sir, we did get two infractions a couple of weeks ago. Those infractions were administrative errors when we were moving water. We had a permit to store the water on one site, and because we thought it would be more efficient to move some of that water from one site to the other, we didn't have the exact administrative paperwork to move it.

I want to emphasize that we did not put any water in the ground; we just moved it from one location to the other without the exact proper permit.

[Translation]



**Mr. Roger Pomerleau:**

The third question I have is, for me, the most important. You seem to say—as do other companies, and rightfully so—that social acceptance in Quebec, since this is what we are talking about, will be vitally important if and when you decide to restart your work in the spring.

My personal feeling is that the social acceptance, which is already quite low, will continue to be eroded for various reasons. As my colleague mentioned earlier, the way things were presented got you off to a bad start. The sales pitch was bad; the communications were bad, etc. And the government that is currently overseeing the file is losing more and more of its credibility, so much so that fewer and fewer people are placing their trust in it. That is why I think that social acceptance will be eroded even further.

What will happen if Quebecers' social acceptance of shale gas research does not meet your expected level?

[English]



**Mr. James Fraser:**

You're exactly right. The ultimate decision for the development of this resource is going to be placed with the citizens of Quebec. They will make that decision and we will respect that decision, whatever one they come up with.

I would like to note that part of our process when we go into a specific area is that we meet with all the stakeholders of the area. At the recently conducted BAPE hearings we went through quite a detailed description of a 14-step process that we used on a specific well, where we met with the landowner, the municipality, and all the unions, and we had nine different approvals before we actually drilled that well. It took over a year and a quarter from when we had our first meeting until we actually started drilling that well. We're very respectful of all the stakeholders in the areas, and we use that process wherever we operate.

We do not go in without notice; we do not go in without permission. As I said, at the end of the day, the citizens of Quebec will make that determination of whether that resource is developed or not.

[Translation]



**Mr. Roger Pomerleau:**

Thank you.

[English]

**The Chair:**

Mr. Allen, for up to three minutes.

**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Mr. Chair.

I just have a couple of quick questions. One is picking up on one of Mr. Shory's questions with respect to the difference when you actually develop, fracturing the well, as opposed to when you actually go into operation for the fifth-year time horizon. What is the employment difference when you go in and set the original footprint on the ground? What kind of employment does that generate as opposed to what is the long-term employment for these wells when they start producing?

**Mr. James Fraser:**

The first part of the process, the drilling and completion, is quite employment intensive. But even though that wellhead or those wells exist for many years, the employment continues for long-term job creation.

There have been economic studies cited in several jurisdictions in North America, such as the Haynesville project in Louisiana, where 50,000 jobs were created in one year and \$6 billion of wealth has been created, and in the Barnett shale, which is the most active of the shale projects in North America, 130,000 jobs were created over a multi-year timeframe.

These aren't assumptions; these are actual studies that have been done by economists. The third one that I can refer you to is Marcellus shale in Pennsylvania, where over 57,000 jobs have been created in that state in the last couple of years with the shale development. These are long-term jobs.

**Mr. Mike Allen:**

Mr. Heffernan, when you say the majority of these wells use water but some use no water, what is the process when they're not using water, and what are some of the challenges they run into when they're not using water?

**Mr. Kevin Heffernan:**

The approach that's being used—it's been tested in Quebec and also in New Brunswick—tends to be liquefied petroleum gas, basically a propane frac. That method offers a number of advantages in terms of management of the flow-back of the fluid, the fluid in this case being propane. It can either be recovered or, depending on the quantity that's coming back, left in the gas stream for recovery at gas plants.

Safety is probably one of the key issues around using propane, although it's being used in many places. It has been used in Alberta for a number of years, and the procedures are well understood. But unlike water, propane has some additional risks.

**Mr. Mike Allen:**

Thank you, Chair.

**The Chair:**

Thank you very much, Mr. Allen.

Thank you all for your presentations. They are very helpful to our study. We thank you for answering our questions. We appreciate it very much.

We'll suspend now for a couple of minutes, as we move some new witnesses in and get the video

conferencing hooked up. We will then resume.



**The Chair:**

We now resume our meeting with our second panel. I would like to say, before I introduce the panel members who are here, either by video conference or in person, that Timothy Egan, president and chief executive officer of the Canadian Gas Association, cancelled out at the last minute due to some family issues. We may be able to get him at a later date. We'll certainly try for that.

We have by video conference from Calgary, from Encana Corporation, Richard Dunn, who is vice-president of the Canadian division, regulatory and government relations.

Welcome, Mr. Dunn.

We have, from the Department of Natural Resources, Marc D'Iorio, director general, director general's office; Denis Lavoie, research geoscientist, earth science sector, georesources and regional geology; and David Boerner, acting assistant deputy minister, Natural Resources Canada. Welcome to you.

We will start with Mr. Dunn by video conference.

Go ahead for up to seven minutes please, Mr. Dunn.



**Mr. Richard Dunn (Vice-President, Canadian Division, Regulatory and Government Relations, Encana Corporation):**

Thank you, Mr. Chair.

Let me say right from the get-go, I appreciate the opportunity to present by video conference. It is probably a lot nicer in Ottawa: I think it was minus 28 degrees this morning in Calgary.

As mentioned, I'm Richard Dunn, vice-president of government and regulatory relations for Encana Corporation. Just a quick blurb about Encana: we are the second-largest producer of natural gas in North America, with production of some 3.3 bcf a day, that's 3.3 billion cubic feet a day. That represents about 5% of North America's total production. We are 100% North American, with 40% of our production in Canada and some 60% in the United States, with a market capitalization of about \$25 billion Canadian.

The natural gas industry in North America is undergoing a technological renaissance that will go down as one of the biggest game-changers in the history of Canadian energy. Technology has unlocked vast new supplies of natural gas, providing an abundance the like of which none of us has seen in our careers. As a result of the new and fast-advancing horizontal drilling and stimulation techniques, North American natural gas resources are now estimated to be in the range of 100 years to 150 years of supply at current production levels. This technology has unlocked world-class places such as the Horn River and Montney Basins in northeast B.C. It offers significant promise in new producing regions across the country, including Quebec and New Brunswick.

I can create a picture of what this technology in action looks like. I am talking about multiple horizontal wells from a single pad location, which is roughly 200 metres by 200 metres on the surface. This taps into some 13 square kilometres of reservoir buried thousands of metres deep and accesses tens of billions of cubic feet of natural gas. You can have several high-tech operations under way at the same time. In one well, a high-tech well log is being run; another well is being completed, with as many as 24 separate stimulations in the horizontal well bore; and still another well is being prepared for production.

We look forward to showing the committee a truly high-tech operation sometime in the near future.

Canada is at the forefront of this energy renaissance. It's also at the forefront of environmental and

economic stewardship. Communities do not have to choose between the vast economic opportunities that natural gas offers and the protection of their environment. What allows us to achieve this balance? First, we make use of best practices in quality engineering design across the breadth of our operations. Second, we observe solid regulations, which oversee all aspects of our development. These regulations pertain to diverse areas such as drilling, water management, air emissions, wildlife impact, and worker health and safety. Protection of groundwater is highly regulated throughout all phases of our operations. Regulations are in place to deal with the storage of saline water, setbacks of producing wells from local water wells, and protection of aquifers. From a design perspective, we've heard that engineering steelcase systems, which are fully cemented externally, provide multiple barriers to the migration of fluids from well bores to groundwater aquifers.

In Canada, we support the disclosure of increased information regarding the composition of the frac fluids we use in hydraulic fracturing. However, we go further. We are working to ensure that, wherever possible, we use the most environmentally responsible hydraulic fracturing fluid formations and fluid management practices. The industry as a whole is pressing forward with reducing our environmental footprint by drilling many wells—up to 16 in the Horn River from a single pad—from the same location, recycling water where practicable, and searching for new sources of water that would not otherwise be used. As an example, together with our partner Apache, Encana recently invested more than \$50 million in a plant that provides a water supply from deep saline aquifers. This otherwise unusable water, as salty as sea water, is a substitute for fresh surface water that would otherwise have been used for fracturing.

I'd like to turn to the economic impact of the industry and spend a few minutes on the huge economic benefits that our industry provides across the country, including jobs.

According to figures from the American Natural Gas Alliance, in 2008 natural gas supported more than 600,000 jobs across Canada and contributed more than \$100 billion to Canada's GDP. The studies show that every Canadian province has natural-gas-related jobs, and spending in the west brings significant benefits to the rest of Canada. Approximately 15% of the economic benefits from the investment in natural gas in western Canada goes to other provinces, much of that to Ontario and Quebec. Encana's spend includes millions of dollars directed toward Ontario- and Quebec-based suppliers, from high-tech suppliers to consultants to manufacturers, including such companies as Hoerbiger, Quadra Chemicals, and Tenaris Steel. As well, the industry brings significant benefits to local service sectors where we operate. In B.C., for instance, even though the service sector is relatively immature, more than 50% of our spend is directed toward local service providers, including a significant amount with aboriginal-owned businesses.



(1215)

However, with the marked increase in shale gas production in North America, the price of natural gas has dropped, responding to basic supply and demand. As well, it's expected that the natural gas commodity prices will be low for the foreseeable future. Canadian shale gas plays are facing great challenges to compete in the northeast U.S. markets that we once supplied handily. The simple fact is that with the development in North American shales, the U.S. does not need our product to the extent that it did. While we have tremendous resources, we also face some inherent disadvantages, such as increased costs from operating in a northern climate and long distances to transport our gas to market. Large shale gas supplies are being tapped in Pennsylvania and Michigan, near our traditional and core markets. In large part due to these competitive challenges, since 2008, Canadian production has decreased some 20%, while over the same period the United States production has increased some 20%.

What can we do about these competitive challenges? In the short term, industry continues to improve its efficiencies. Provincial governments as well have done an excellent job in creating a competitive environment. One important thing the federal government can do is to adopt the CAPP federal budget proposal that will temporarily level the playing field by proposing an equivalent tax treatment to that afforded in the U.S. to natural gas developers. This tax treatment is roughly equivalent to the current tax treatment afforded to manufacturers and processors in Canada.

In the longer term, the health of the industry will be dependent upon creating markets both domestically and abroad, expanding natural gas use as a means of addressing the pressing demands to reduce carbon emissions. Natural gas is the cleanest burning fossil fuel, and greenhouse gas benefits through natural gas displacing hydrocarbon fuels in industries such as transportation and power generation are significant, providing between a 20% to 50% reduction in greenhouse emissions per unit of energy. Increased use of natural gas will create jobs and more government revenue through taxation and royalties.

Additionally, to turn to foreign markets, in transitioning to a middle-class society, Asia represents the

other major market opportunity for natural gas. China, for instance, is expected to quadruple its natural gas consumption by 2020. Asia is injecting billions of dollars into growing our natural gas industry to meet its own energy needs. As part of this, LNG facilities on the west coast and supporting pipeline infrastructure will be required to access this market opportunity.

In conclusion, the Canadian natural gas industry is a responsible, sustainable, well-regulated industry that is a major contributor to the Canadian economy, yet this industry is facing significant competitive challenges. To maintain and grow markets domestically and internationally, it requires access to foreign investment and export markets, support for strategic infrastructure programs, and bridging fiscal policies so we'll continue to ensure this industry does not become further marginalized.

Thank you.

  (1220)



#### **The Chair:**

Thank you, Mr. Dunn.

Now we go to our last group of witnesses. Who will be making the presentation today?

Mr. D'Iorio, please go ahead with your presentation for up to seven minutes.

[*Translation*]



#### **Mr. Marc D'Iorio (Director General, Director General's Office, Department of Natural Resources):**

Thank you, Mr. Chairman.

The goal of our presentation today is to provide you with a background, as you requested, on shale gas exploration and production in North America. We would like to give you an outline of the geoscience knowledge used to identify oil and gas potential, as well as a preliminary assessment of shale gas resources in Canada.

[*English*]

As you've probably heard abundantly over the last sessions here, shale gas has changed the North American energy market. You can look at the top diagram on page 3 at the NEB reference case as of July 2009, which now starts to include shale gas as part of their forecast and their scenarios going forward, which is new as of 2007--they were not including shale gas in these. As well, perhaps more strikingly, when you look at the North American natural gas supply, you can see that it peaked in 2000, after which the supply from the Gulf of Mexico had started declining, and from 2005 forward, it started moving up again due to the shale gas production in the U.S. In Canada, shale gas production is expected to have the same impact on the gas supply.

[*Translation*]

Production of shale gas in North America began in the United States some twenty years ago, in the Barnett shale.

Since 1990, nearly 12,000 wells have been drilled, and ultimate recoverable reserves are estimated at 30 tcf, or trillion cubic feet.

The most promising field in the U.S.A. is the Marcellus shale. It is very promising because the organic layer in that shale is very rich. Production there began in 2000, or 10 years ago, and 2000 wells have been drilled, with ultimate recoverable reserves in the Marcellus shale estimated at 49 tcf. To put that into context, North American demand for natural gas is approximately 25 tcf per year.

[*English*]

I'll turn to slide 5, the Canadian context. You've heard of the Horn River. Since 2006, this is the area that's being explored and is going into production. In terms of the potential resource that could be



available, the Canadian Society for Unconventional Gas is estimating that approximately 500 tcf might be available from the Horn River Basin. As well, the Utica and Lorraine basins are now being looked at in Quebec and have a potential of 181 tcf. Shale gas potential exists in many other parts of the country as well, not just in these areas shown on the map--in Ontario, for example.

Again, putting these potential resources in context, the Canadian gas demand on a yearly basis as of 2008 was about 2.5 tcf.



[*Translation*]

Our role is to assess the geological context. The work done by the Geological Survey of Canada and Natural Resources Canada is published and funded by taxpayers. All the work conducted by the Geological Survey of Canada is published in scientific journals or publications produced by Natural Resources Canada.

The data and publications are used by the private sector, in the development of new exploration sites, and by the public sector, by regulatory officials and the provinces that own the resources.

Most shales currently being explored have been mapped or studied by the Geological Survey of Canada, which was founded in 1842.

Shales can be very different in terms of mineralogy. For example, the organic matter that actually determines its potential can vary, but there are also differences in silica and carbonate content that affect our ability to fracture the rock, in the case of natural gas production.

[*English*]

The key elements on this in the work that the Geological Survey does really have to do with the petroleum system and how you generate resources. To have a working petroleum system, you need sedimentary rock and you need several kilometres, typically, of sediment. You need a layer that's going to be very rich in organic material. That's the source rock, and it's typically clay and it becomes shale. So shales are the source rock for petroleum systems most of the time. Then you need to bury the system and expose it to some heat--we call it cooking--and you create petroleum from that. Eventually, you keep cooking it and you produce natural gas. If you keep cooking, well then everything is gone and it dissipates.

Eventually the oil and gas will migrate into a reservoir that is a structural trap. The structural traps are your conventional reservoirs. With the technology now, putting together the ability to fracture and to horizontally drill, you're able to go back to the source rock, which is the shale.

Slide 7 looks at the extent of the preliminary assessment of shale gas resources. The Geological Survey looked at what's available at the surface and also at the rocks, the drilling, and all the data that's available publicly, as well as the seismic records. In the typical cross-section, what you would look for is that source rock, which you see in red in the diagram on the left. That is the shale natural gas, and typically there's an impermeable layer on top that has trapped...left the natural gas where it is. These are obtained partly by the seismic profile, but then with analysis of the rocks and geochemical analysis to understand the system, its evolution with time, and then the potential of the rock itself.

In the second diagram--I think it's a diagram that's been shown already today--is your typical type of drilling, where you start vertically and then you go horizontally. Typically, in Canada the areas that are currently producing natural gas or where they're exploring for natural gas out of shales are several kilometres below the surface. Again, the context for groundwater is that groundwater is typically in the first few hundred metres, near the surface.

[*Translation*]

Slide 8 deals with the roles and responsibilities of the various governments and regulatory agencies. Regulation of onshore oil and gas drilling and production, including shale gas, falls primarily under provincial jurisdiction, as well as of the Yukon Territory. The federal regulatory role is limited to territories onshore and offshore, through the offshore boards, and, in the Northwestern Territories and Nunavut, through the National Energy Board.

The department of Natural Resources Canada, through the Geological Survey of Canada, plays a key role in understanding natural resource potential through its geoscience and geomapping programs.

  (1230)

[English]

Slide 9 is the last slide.

In the roles of responsibility of the federal government, other federal departments can be involved in the shale gas development, principally, Environment Canada, through their administration and enforcement of certain provisions of the Species at Risk Act or the Migratory Birds Convention Act; Environment and Health Canada, through the Canadian Environmental Protection Act and the chemicals management plan; Fisheries and Oceans, under the Fisheries Act, for the protection of fish and fish habitat; and finally, Indian and Northern Affairs Canada, through their responsibilities relating to oil and gas and their issuance of rights in the territories but not onshore Yukon.

Thank you, Mr. Chair.

**The Chair:**

Thank you very much.

Just before we go to questions, in the presentations with the earlier panel and in this presentation, you talk about "tight gas". Could you just explain in one minute to the committee what "tight gas" is. You have conventional, tight, and then this CBM, shale, and frontier.

Monsieur Lavoie.

**Mr. Denis Lavoie (Research Geoscientist, Earth Sciences Sector - Georesources and Regional Geology, Department of Natural Resources):**

Thanks for your question.

"Tight gas" is some kind of a conventional reservoir that is characterized by very low permeability and porosity. So you need to fracture that conventional reservoir, because the reservoir is different from the source.... That's how we distinguish conventional from unconventional. So it's still a conventional reservoir, but with very low permeability, so in order to produce a gas out of it, you need to fracture that conventional reservoir, and it is called "tight gas".

**The Chair:**

Thank you, and you did it in a minute.

Perhaps we could go now to questioning, starting with Monsieur Coderre for up to seven minutes.

Go ahead, please.

**Hon. Denis Coderre:**

So from tight gas to tight questions.

[Translation]

Mr. Chair, I will be sharing my time with my colleague, Mr. Kennedy, who is our party's environment critic.

Natural Resources Canada is a wonderful umbrella organization, with much expertise, etc. My question concerns the latest budget, which removed environmental assessments from the hands of the National Energy Board. You did not speak about that.

Would it not be possible to also engage in environmental assessments? Obviously, one of the problems with shale gas is that its production requires a lot of water. Many studies have been quoted here and there. Mr. D'Iorio, you yourself are the expert resource person at National Resources Canada. Could your department not consider the fact that, because of the water situation... The water table ends up by reaching the river. There must be a way the department can play a role. I would like for you to explain whether

Natural Resources Canada could indeed play such a role.



**Mr. Marc D'Iorio:**

I do not want to hypothesize on the kinds of roles we could play. What I can say is that the information that is produced is publicly available for both regulatory agencies and the provinces that have responsibility over the resources.

As well, experts from the Geological Survey of Canada contribute their expertise in over 60 environmental assessments a year. So the department already plays a role: we provide scientific information.



**Hon. Denis Coderre:**

Has there been or is there currently an environmental assessment conducted into shale gas exploration in Quebec? Things are now happening in that sector. You see how people are reacting. We on this side get the impression that the minister is saying that everything is okay, that no problems have been identified, but without wanting to place you in a difficult situation, I would like to know whether the public service has already conducted an environmental assessment in Quebec?



**Mr. Marc D'Iorio:**

To my knowledge, no assessment has been undertaken in accordance with the Canadian Environmental Assessment Act.



**Hon. Denis Coderre:**

Is that because you are told not to conduct one or because that is not your role anyway?



**Mr. Marc D'Iorio:**

The act sets out specific conditions that trigger an environmental assessment. Those conditions have not yet been met.



**Hon. Denis Coderre:**

What are those conditions?



**Mr. Marc D'Iorio:**

I am not an expert in the matter.

Perhaps David can answer the question.



**Hon. Denis Coderre:**

David does not want to answer. Go ahead.

[*English*]



**Mr. Marc D'Iorio:**

I'll drag you in, in a second here.

[*Translation*]

For example, in the Fisheries Act, protecting marine habitats is a condition that could trigger an environmental assessment.



**Hon. Denis Coderre:**

Very well. There is also the emission of chemical products, which is a matter for Health Canada. Would such an assessment be conducted by the National Energy Board?

**Mr. Marc D'Iorio:**

No, not in Quebec.

**Hon. Denis Coderre:**

But what about at the federal level?

**Mr. Marc D'Iorio:**

No. That falls under the responsibility of the Canadian Environmental Assessment Agency.

**Hon. Denis Coderre:**

Very well.

Mr. Kennedy.

**Mr. Gerard Kennedy (Parkdale—High Park, Lib.):**

Thank you.

Thank you for your help, colleague.

[English]

I have similar questions. We were told earlier that this fracturing—we know the fracturing technology, and actually Canada has done a fair bit with it in oil—has now been in use for some time. What do our government agencies know, and the industries as well, over a period of time, of these new technologies? We're hearing how the new technologies are now making a lot more available. I think the initial reaction of lay people is that these are kind of violent things that happen underneath the ground. Do we really have the studies to tell, over time, what the impact is of the induction of new chemicals and the use of water? If so, where are those studies?

We heard earlier reference to the EPA. First studies were in 1994; that sounds pretty recent. So I'm looking at the experienced studies we have, such as from the Canadian government, because the energy board does have a role in approvals of new projects. I'm not sure where that goes with gas, but certainly it has to do with the oil sands. But on these particular things, do we have the studies conducted? And if so, where can you point us?

**The Chair:**

Mr. Boerner, go ahead.

**Dr. David Boerner (Acting Assistant Deputy Minister, Earth Sciences Sector, Department of Natural Resources):**

Thank you, Mr. Chair.

We're the scientific arm of Natural Resources Canada, so we restrict ourselves to trying to provide the facts and make sure they're publicly available.

**Mr. Gerard Kennedy:**

That's what we want.

**Dr. David Boerner:**

The way to try to answer your question is to talk about some of the geological knowledge we have.

I'll turn to Monsieur Lavoie in a second to talk about how we know that reservoirs are under impermeable layers. The geology has acted to trap highly mobile materials over time. So that's part of the knowledge that we have, that there is a geological understanding of how long fluids and gases have been trapped in the subsurface, and they're trapped quite effectively. So geologically there's a—

**Mr. Gerard Kennedy:**

But if I could, before that's handed over.... It's not an abstract question. It's applied science here. So in other words, when that fracturing takes place, what contribution does that make to the assumptions you can have about the geological formations? If I hear you correctly, you're saying that what you know of the science, the geology would say that the liquids will stay contained even following this. So with the chemicals—the 20% or 40% that are left in the ground and so on—we have good reason to believe they're going to stay there.

But I'm asking if there are specific studies that show this happens, that this actually is confirmed when the fracturing process and the other processes involved in the recovery of shale gas take place. Do those studies exist, first of all, and what do they say?

**Dr. David Boerner:**

We're not the exact experts to answer that with a clear answer, but I can tell you that there are regulations and requirements for the industry to monitor their fracturing process. For example, they have to have sensors close by to the hole to monitor how large a motion in the ground is created by the fracturing of the rock, and they can tell how far the fractures extend. So we have—not us, but the companies and the regulators actually have this—direct evidence from them of how much ground movement is taking place.

As one of the witnesses said earlier, I think the fractures end up being the thickness of a piece of paper and they can extend over maybe 100 metres. We're talking about things that are under two kilometres of rock, which is a considerable amount of weight and pressure and everything else.

I'm probably answering the question for him.

**Mr. Gerard Kennedy:**

I'd be happy to hear Monsieur Lavoie.

Yes, please go ahead.

**Mr. Denis Lavoie:**

There are two aspects to your question. The first one is the intensity of that fracturing event--how destructive it can be and how big it can be.

As Dr. Boerner was saying, the industry is putting seismographs in adjacent wells to record the earth movement at the time of fracturing. They are recording those values and expressing them in terms of the Richter scale, as for any other type of earthquake.

You may not know that on the Richter scale there are negative values; at the time they defined the Richter scale, the smallest earthquake they could register was given a zero value, but with more modern instruments we can go into negative values for smaller earthquakes. The intensities of those fracturing events are between -2 and -3 on the Richter scale, so these are very small seismic events that are recorded.

With reference to the permeability or the preservation of the water or the gas in the rock, in most of the shale gas rocks in Canada the gas was generated hundreds of millions of years ago, and it's still trapped in those rocks. That means that the geological system was fairly impermeable.

We have some other examples in Quebec, for example. There is an old gas field that has been exploited near Quebec City. It's called the Saint-Flavien gas field. That gas was generated by the Utica shale and has been trapped in that conventional reservoir, overlaid by the Utica and the Lorraine shale. The gas has been there for 450 million years. Those geological systems are very impermeable systems.

  (1240)



**Mr. Gerard Kennedy:**

I take from this--



**The Chair:**

Thank you, Mr. Kennedy. Your time is up, and then some.

We'll go to Madame Brunelle. You have up to seven minutes. Please go ahead.

[*Translation*]



**Ms. Paule Brunelle:**

Good afternoon. My question is for the officials from Natural Resources Canada.

The Geological Survey of Canada has conducted a study. Mr. D'Iorio, you said that we could obtain the results, but I have not been able to access them. I would particularly like to know which issues were addressed. Are we talking about the scope of the resource, its location and potential? That appears to have been documented, since we have received maps. Or did the study rather deal with environmental issues, such as the amount of clean water that is used—which is of concern to people—chemicals in the water, or threats to the environment? What was the role of the Geological Survey of Canada?

[*English*]



**Mr. Denis Lavoie:**

The Geological Survey of Canada is...

[*Translation*]

I apologize. The Geological Survey of Canada...



**Ms. Paule Brunelle:**

I was wondering, given your name...



**Mr. Denis Lavoie:**

I really do apologize. I was visualizing the question.

Since the founding of the Geological Survey of Canada in 1842, this scientific body has produced basic geological data which is fundamental to understanding sedimentary basins in Canada. One of the research topics included in this fundamental geological data is an evaluation of hydrocarbon potential. That work included several studies on conventional systems. Bear in mind that the interest in shale gas is recent. For many years, the Geological Survey worked on hydrocarbons and conventional systems. The systems include parent rock, the rock from which hydrocarbons are produced. Today, we are looking at shale for shale gas. Shale produces hydrocarbons. We have taken a very close look at its characteristics: the thickness, the geographic distribution, the amount of organic material, the degree of thermal maturity, of heat exposure, to determine if the organic shale produced oil or gas. So a host of scientific data is available in the various publications by the Geological Survey of Canada, on the geological aspects of conventional hydrocarbons.

With shale gas, the parent rock, the rock which is the source of hydrocarbons, is also the reservoir. So we try to produce from this source rock. The data relating to this kind of work is the same as that which is used to evaluate conventional systems. We try to determine the amount of organic material, and the quantity of gas present in the rock. There has not been a specific study on shale gas rock, since we had already studied it as parent rock in conventional systems.

The Geological Survey synthesized the material and produced a preliminary assessment of shale potential in Canada in 2006. Tony Hamblin from the Geological Survey of Canada is the author of the report which is available to the public. I don't remember which issue it is, but I could send it to you. In recent years, this report has been one of the Geological Survey's leading publications, the one which has been most successful in bookstores, we are told. It has been downloaded many, many times. It covers current knowledge of shale gas in Canada.



**Ms. Paule Brunelle:**

Does the Geological Survey of Canada go as far as making suggestions, for example to the provincial government, which has jurisdiction, and to industry, on ways of preserving the resource and ensuring everything is done in an environmentally friendly way? Is that part of your mandate or not at all?



**Mr. Marc D'Iorio:**

Once again, the information we produce is made public. Beyond that, at the start of October Mr. Lavoie appeared before the BAPE. We provide our expertise in various ways, both through reports which are made public and by providing expertise at the request of various provinces or jurisdictions.



**Ms. Paule Brunelle:**

I have some questions about your role at the Department of Natural Resources Canada. Do you provide the government with advice? Gas and oil is fine, but there are other kinds of energy, including ones that are greener. Are you consulted to determine whether we should try to develop wind energy, hydroelectricity or another type of energy? Do you play a role in that?



**Mr. Marc D'Iorio:**

I am the director general of the Office of Energy Research and Development. Investments in oil and gas make up only a part of our portfolio. We also invest in demonstrations of renewable energy and conduct more in depth research on the regulatory environment or security.



**Ms. Paule Brunelle:**

Do political decisions dictate what research will be done in which field?



**Mr. Marc D'Iorio:**

The Program of Energy Research and Development was implemented in 1974, that is right after the 1973 oil crisis. This is a federal program whose direction is mandated by various federal government departments. No fewer than 12 government departments work on this program and do research in all manner of energy-related fields.

As for policy decisions, the government proceeds through the budgetary process and the public service implements these decisions. So the answer is yes, some programs are mandated by the government, whether they be green plans or clean energy programs.



**Ms. Paule Brunelle:**

Do I still have a little bit of time, Mr. Chair?



**The Chair:**

One minute.

**Ms. Paule Brunelle:**

I still have an issue with federal versus provincial jurisdiction. We know that the Bloc Québécois vigorously defends provincial jurisdiction.

You said that the drilling and pumping of onshore oil and gas is mainly regulated by the provinces. What do you mean by mainly?

**Mr. Marc D'Iorio:**

"Mainly" means that for chemical products or under certain circumstances, for example on crown lands managed by INAC, there are some cases where a federal department might have a role to play.

**Ms. Paule Brunelle:**

And that's where you come in.

**Mr. Marc D'Iorio:**

That's right.

**Ms. Paule Brunelle:**

Thank you.

**The Chair:**

Thank you Ms. Brunelle.

[*English*]

We'll go now to Mr. Cullen for up to seven minutes.

Go ahead, please.

**Mr. Nathan Cullen:**

Thank you, Chair.

And thank you, gentlemen, for your testimony.

Mr. Dunn, to bring you back to another conversation, we had one of your competitors up earlier committing publicly to disclose the chemicals used in the fracturing process.

Is that something Encana is doing right now or is willing to do in the future?

**Mr. Richard Dunn:**

Yes, we're doing it now.

**Mr. Nathan Cullen:**

You're doing it right now.

Again, just to be clear, because this committee has to write a report and recommendations to government to change the regulations to require companies—all of your competitors and Encana—to release information on all of the chemicals used in the fracturing process, I assume you would have no problem with that because it encourages greater public confidence in your operations?





**Mr. Richard Dunn:**

Yes, absolutely, I agree with your comments on increasing public confidence and full disclosure.

As well, I note that the recently developed regulations in British Columbia—the Oil and Gas Activities Act just implemented within the last few months—in fact require this disclosure. So we support doing that, and we support the regulations that require it.



**Mr. Nathan Cullen:**

Encana claims that it conducted the world's biggest frac at what's called the 63-K pad. Is that correct?



**Mr. Richard Dunn:**

I believe it was our partners, Apache. They made that claim a while back, yes.



**Mr. Nathan Cullen:**

Sorry, so it's your partners. You're obviously a principal in this project as well.



**Mr. Richard Dunn:**

Yes, it's a fifty-fifty joint venture to develop properties up in the Horn River Basin, north of Fort Nelson.



**Mr. Nathan Cullen:**

You might not have this with you today, but can you submit to the committee later on how much water and how many chemicals were used in this fracturing?



**Mr. Richard Dunn:**

Yes.



**Mr. Nathan Cullen:**

Okay. Thank you very much for that.

To our friends at Natural Resources Canada, the aquifer research project that's been going on for the last little while has the priority of looking at a total of 30 aquifers across the country. Are these priorities overlapped with where these natural gas plays are happening, or are they independent?



**Dr. David Boerner:**

They overlap in some cases, but there are other places where they're independent.



**Mr. Nathan Cullen:**

Yes, and to ask more specifically, this study was not initiated or conducted with any foresight of the potential of this unconventional natural gas exploration going on at the same time, was it?



**Dr. David Boerner:**

No, there was a joint federal-provincial exercise a few years ago to try to come up with the key aquifers and then to attach a priority to the sequence of them. We have changed that priority a little bit. For example, we're not dealing with one that's close to the oil sands, because of concerns about whether there's an interaction between them.

**Mr. Nathan Cullen:**

So what we know so far—and I assume you saw the report out of the University of Toronto, Munk School, which raised some concerns—is that there are 30 priority aquifers and 12 have been completed so far. Are those numbers still current?

**Dr. David Boerner:**

Yes.

We're still working on others, but 12 have been completed.

**Mr. Nathan Cullen:**

Do you have funding secured to complete the full 30?

**Dr. David Boerner:**

Yes.

**Mr. Nathan Cullen:**

Okay.

A confusing point for me in trying to understand what the effect of a new industry is—and aquifers are at play in this question—is how we're doing the studies at the same time or after having drilled, in some places, many hundreds, if not thousands, of wells into those same areas as aquifers. Do you follow my concern?

One of the concerns of the public is that without baseline research, without a baseline understanding of what was there before an industrial project, it's impossible to consider what the effects of the project have been, because the company can say, "Well those conditions were pre-existing", or "That contamination was naturally occurring". We've seen this in the tar sands already, where they say, "The river already had those pollutants in it. It's not the operations of the oil companies."

Do you see where the public might be confused why the federal government is doing this after all these plays have already been done?

**Dr. David Boerner:**

Yes, I can certainly understand how the logic follows from that. From a scientific perspective, though, I would say there's a slightly different view.

We know that things like gas contamination of an aquifer occurs in places, and the cause of that can actually be determined scientifically. For example, we know that the degradation of organic material like bacteria produces methane, and when that happens near the surface, it actually has a signature in isotopes, carbon-14. If you have ever heard of carbon dating, that's how it works. If the methane contains carbon-14, it had to have been created near the surface. It couldn't possibly have been generated by a deep burial, and you can actually determine—

**Mr. Nathan Cullen:**

Okay, so you feel confident proving it after the fact, that this methane contamination over there was from drilling, but this other methane over here was naturally occurring, just by the source of the methane?

**Dr. David Boerner:**

I'm talking about the logic of it. We can't possibly know what's happened, because we had to have studied everything in advance. I'm saying there is actually a way of telling where methane came from, and some of the things that have been talked about, in terms of potential contamination near oil and gas

developments, have actually been shown to be biologically determined or to have created methane from the near surface.



**Mr. Nathan Cullen:**

It's so-called naturally existing methane.



**Dr. David Boerner:**

Right, not things from reservoirs.



**Mr. Nathan Cullen:**

But we're also, as a government, open to the idea that contamination from the industrial process can happen as well, I assume. I know there are the two.



**Dr. David Boerner:**

Right.



**Mr. Nathan Cullen:**

Just to go to Mr. Dunn for a moment regarding one of the concerns with Encana's projects right now, is there any requirement under the law to have a cumulative impact assessment? When an impact assessment is done for a single well, is there the potential of having many wells done around an aquifer or in a watershed without the cumulative effect being understood by the regulator?



**Mr. Richard Dunn:**

No, the wells at this point are looked at on an individual well or pad basis together. Where the cumulative effects assessments are done, for example, up in the Horn River, is in the land use planning exercises. So rather than an individual permit, you'd look at bearing the accountability for a cumulative impact assessment through land use planning.



**Mr. Nathan Cullen:**

Is that sufficient? I've been involved in some of those land use planning efforts. They don't have anywhere near the scientific effort that an environmental assessment has.

Would it be outside the realm of common thinking to look at individual wells when trying to understand the environmental impacts on, say, the amount of water taken out of a system or the amount of chemicals introduced into a watershed?

Would it not make logical sense to the public, and to you as an industry, to say that we have to take the assessment of the full 100 wells? If we place and lease another 100 wells on top, and another 100 wells on top of that, they're not existing individually. That's insane. They're existing together, and the impact is together.

Is that not true?



**Mr. Richard Dunn:**

That's a very fair comment. I'd take back one point, sir, that I'd initially think about, and that is the need for competitiveness to keep the industry viable. It would not make sense to do a cumulative effects assessment.

It would be efficient to do it on a well-by-well basis, but what we do support—be it through a land use planning exercise or some sort of an area cumulative effects assessment—is working with the government

to understand the industry plans and looking at what those plans will have on a cumulative impact assessment.

One area that I'd like to bring forward is the work that we're doing up in the Horn River shale basin, where we're looking at a five- to ten-year development plan and working with the provincial government on how those plans could be integrated with concerns around species at risk. The cumulative effects of those plans can be integrated into mitigating those effects on species at risk, including the caribou in the area.

That's a very effective way of not burdening individual projects but still getting to the need to assess cumulative effects assessments.



**The Chair:**

Thank you, Mr. Dunn and Mr. Cullen.

We go now to Mr. Harris for up to seven minutes.



**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chair. Welcome, gentlemen.

My first question would be to Mr. Dunn. I'm curious about the market and the competitiveness of our Canadian shale gas versus the U.S. supply. You mentioned things like price and distribution. What areas of competition with U.S.-produced shale gas would concern you in regard to, say, the tax treatment in the U.S. that you brought up versus anything the federal government has to offer? What would you be looking for?

You talked about a robust regulatory regime for you to operate in. Are there things we can do in Canada to ensure the competitiveness of our Canadian resources?



**Mr. Richard Dunn:**

Thank you. I appreciate the question.

With regard to the details on the tax, in the United States the developers are given an immediate writeoff of their expenses against their taxes--



**Mr. Richard Harris:**

Is that their capital cost allowance, equipment and stuff?



**Mr. Richard Dunn:**

That's correct. It's effectively a capital cost allowance. They're enabled with a 100% writeoff in the first year against taxable income.

In Canada, historically, for development expenses, it's been a 30% declining balance, so it can take somewhere between five to seven years to get that same level of writeoff against the taxes. In an industry where cashflow is critical at this point in time, this 100% writeoff provides a significant advantage to the competitiveness of the U.S. shale plays.

What we are advocating through the Canadian Association of Petroleum Producers is effectively the same. At this point in time, when the industry is so competitively challenged, we're advocating the same tax treatment that's been afforded to the manufacturers in Canada over the last five years, which is effectively a two-year straight-line writeoff, 50% a year. So it's not quite what the U.S. gives, but again, it would provide a significant advantage over what Canadian tax regulations currently provide.



**Mr. Richard Harris:**

When your company embarked upon the recovery of shale gas, was the competitive environment different at that time, or was the success of what you're doing contingent on the federal government

coming on with tax incentives, etc.?



**Mr. Richard Dunn:**

That's an excellent question. With the emergence of shale gas in the last few years, the price of natural gas has dropped by approximately 50% to 60%. When we embarked on work in the Horn River Basin, for example, gas would have been valued at somewhere between \$7 and \$8 per 1,000 cubic feet, mcf, if you will. Today that same gas sells for \$3.50 to \$4 per mcf, a 50% drop in the commodity price. This drop in commodity price has really put the Canadian industry under severe competitive challenges. As the commodity price goes down, every nickel becomes that much more important. The inherent disadvantages that we have in terms of operating in a cold weather environment, as well as the increased distance to transport gas to market, and the increased costs associated with that, really make it critical that we all pull together and do whatever we can to keep the industry viable at this point in time. Certainly this CAPP tax proposal is a very important bridging opportunity to keep the industry viable in these tough competitive times.

 (1300)



**Mr. Richard Harris:**

Thank you very much, Mr. Dunn. I appreciate your comments.

Mr. D'Iorio, I'm a little confused about slide 8 in your deck. The first point, on the regulation of onshore oil and gas and so on, falls primarily under the provincial jurisdiction. I understand that statement, but then you go on to name a number of different federal government departments that would play a role in this, and it looks as though the word "primarily" is perhaps not used properly there. Just how big a role do those federal government departments that you named play in a primarily provincial jurisdiction situation?



**The Chair:**

Mr. D'Iorio, could we have a brief answer, please?



**Mr. Marc D'Iorio:**

Yes.

Thank you for the question. Rapidly, primarily, you have to look at the balance of the number of cases in which the provision of these acts would actually be triggered, and there are very few of them. Typically, for example, under the Fisheries Act or the Canadian Environmental Protection Act, there are very specific conditions that would trigger these things, so they're not triggered very often. For example, environmental assessments can be triggered by the Fisheries Act and then the Species at Risk Act and the Migratory Birds Convention Act can be brought into play.



**Mr. Richard Harris:**

Okay. Let me ask you a quick specific question, if I may.



**The Chair:**

Be very brief, Mr. Harris, please.



**Mr. Richard Harris:**

Say in a province that had a moratorium on oil and gas drilling there was an initiative by a first nations group that wanted to proceed with oil and natural gas exploration notwithstanding the moratorium. Would the federal government likely be involved in protecting any rights of that group to do that?



**Mr. Marc D'Iorio:**

I'm really not an expert in this area. I do not know the answer to that, but we could find the answer to

that if you want.



**Mr. Richard Harris:**

All right. Thank you.



**The Chair:**

Thank you.

Thank you, Mr. Harris.

The witnesses are free to leave. I just want to thank Mr. Dunn very much for being here by video conference, and I thank the members from the department, Mr. Lavoie, Mr. Boerner, and Mr. D'Iorio.

Mr. Cullen has an issue. He said it would take two minutes, and I promised him that two minutes.

Go ahead, please, Mr. Cullen.



**Mr. Nathan Cullen:**

Sure. Does this need to be in camera? I'm unsure.



**The Chair:**

Is this going to take two minutes? It will take longer than that to go in camera.



**Mr. Nathan Cullen:**

Okay. Committee members have the motion in front of them. This is with regard to the export of steam generated by Bruce Power. We submitted this within the appropriate timeline. Here's the question.

There's a timeline consideration for committee, and this is why we move this motion. The CNSC has held, I believe, two public hearings--Cheryl will know this--on the transport of waste out of Bruce Power?

**A voice:** It was one in two days.



**Mr. Nathan Cullen:**

It was one hearing in two days. Excuse me.

Their decision is actually now coming up, and this committee hasn't reviewed this at all. The reason we're putting this forward is there isn't a policy framework regarding the shipment. Canada has never done this before. The waste needs to be shipped past places where many millions of people live--down the Great Lakes and out through the St. Lawrence.

I think it bears witness...and I think CNSC will be interested in coming before us, as well as some of the other folks we mentioned here, because one hearing over two days probably isn't sufficient when there is no policy framework for Canada at all. If the government has developed one or is developing one, this would be helpful, but I think it would also be helpful to hear from people who are feeling the impact of this.

So I put this forward to the committee to take a look at. December 8 is the date on which the CNSC is expected--unless they delay again--to issue a statement about whether the policy framework that exists or doesn't exist is sufficient for protecting Canadians' health.

 (1305)



**The Chair:**

I understand that you just want to get a quick feel for what the committee wants to do.

**Mr. Nathan Cullen:**

Yes, if the committee wants to do this, then to assist the clerk to have enough time to call the people in our usual....

**The Chair:**

We are beyond the end of the committee meeting, so we'll just get a quick view.

Go ahead, Ms. Gallant.

**Mrs. Cheryl Gallant:**

I just want to confirm. You're willing to wait until the CNSC gives their decision to call them in here.

**Mr. Nathan Cullen:**

The reason we're trying to get them before the CNSC decision is that once the CNSC decision is made, the shipments, presumably, could go down the lakes and out the river. That's the concern. It is that the CNSC has done this with what we'd have to admit is very little public consultation. I think the groups have written all committee members here with concerns about there being insufficient public input into something that's pretty important.

**The Chair:**

Mr. Cullen, do you want to bring this back at maybe the next committee meeting, briefly?

**Mr. Nathan Cullen:**

The only reason we wanted to get it done today is that if the committee has an interest in looking into this, and I'd be surprised if we didn't, it would assist the clerk to know that this is the intention of the committee, and he can go ahead and begin to contact potential witnesses. Our problem is that if we wait, witnesses can't come, it is delayed past the decision from the CNSC again, and the relevance dramatically changes.

**The Chair:**

Okay. Could it wait until Thursday, though, and we'll deal with it on Thursday morning? We're past the committee end. I know I promised you a couple of minutes. I thought it would go more quickly than this.

**Mr. Nathan Cullen:**

Just for process, then, Chair, the confusion we have is that we delivered this well before the 48 hours so as to have this as committee business. I guess what would be helpful is to have this on the agenda, clearly.

It feels as if we've wedged something in, but we followed all the guidance you've given us on delivering new business.

**The Chair:**

I understand that, Mr. Cullen, but often members will bring a motion before a committee and won't bring it up for weeks or months. It is up to the member who presents the motion to the committee to decide to do that.

**Mr. Nathan Cullen:**

Just to be clear, and I know that people have to go to other things, Chair, to be fair, I came to you halfway through this meeting and gave you notice that I'd like to talk about this. We went overtime. I'm not sure what my options were in being respectful of committee members' time. I did everything I could. I

submitted the motion. I notified you that I was going to talk about it. And now I'm not being heard.

Of course we'll do it Thursday, but I'd just like some clarity on process, because we're trying to be very respectful of committee members' time. We did everything we were told to do, and we're not hearing this discussion. It's unfortunate.



**The Chair:**

We will deal with it on Thursday. It's a good point, Mr. Cullen.



**Mr. Nathan Cullen:**

Thank you.



**The Chair:**

You said a couple of minutes. I thought that's what it would take. Obviously, it will take longer, so we'll bring it up Thursday.

Thank you, everybody, for your involvement in the committee and another great meeting.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 34

Thursday, November 25, 2010

The Standing Committee on Natural Resources met by videoconference at 11:03 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Suncor Energy Inc.:* Gordon Lambert, Vice-President, Sustainable Development. *Petrobank Energy and Resources Ltd.:* John D. Wright, President and Chief Executive Officer. *Canadian Association of Petroleum Producers:* David Collyer, President. *University of Calgary:* David Keith, Professor, Institute for Sustainable Energy, Environment and Economy. *Pembina Institute:* Simon Dyer, Policy Director. *Canadian Association of Energy and Pipeline Landowner Associations:* David Core, Chairman and Chief Executive Officer; John Goudy, Policy Advisor.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Gordon Lambert, John D. Wright and David Collyer made statements and answered questions.

At 12:06 p.m., the sitting was suspended.

At 12:10 p.m., the sitting resumed.

David Keith, by videoconference from Calgary, Alberta, Simon Dyer and David Core made statements and answered questions.

At 12:57 p.m., the sitting was suspended.

At 12:58 p.m., the Committee proceeded to sit *in camera*.

The Committee proceeded to the consideration of matters related to Committee business.

At 1:04 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/11/26 4:06 p.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources








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




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*The Chair*



*Dr. David Keith (Professor, Institute for Sustainable Energy, Environment and Economy, University of Calgary)*

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*Mr. Simon Dyer (Policy Director, Pembina Institute)*

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*Mr. David Core (Chairman and Chief Executive Officer, Canadian Association of Energy and Pipeline Landowner Associations)*

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*The Chair*



*Mr. Nathan Cullen*



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*Mr. Alan Tonks (York South—Weston, Lib.)*

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*Mr. Alan Tonks*



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*The Chair*



*Mr. Roger Pomerleau (Drummond, BQ)*

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*Dr. David Keith*



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*The Chair*



*Mr. Simon Dyer*

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*Mr. Nathan Cullen*



*Mr. Simon Dyer*



*Mr. Nathan Cullen*



*Mr. David Core*



*Mr. Nathan Cullen*

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-  *The Chair*
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CANADA

## Standing Committee on Natural Resources

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NUMBER 034

1

3rd SESSION

1


40th PARLIAMENT

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**EVIDENCE****Thursday, November 25, 2010***[Recorded by Electronic Apparatus]*

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 (1105)*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

I call the meeting to order. Good morning, everyone.

We originally had scheduled for 11 o'clock to maybe 11:15 for Mr. Cullen to bring his motion, but he isn't here, and apparently he won't be here for a while, so we are going to change the agenda and get right to our witnesses. I know we all want to spend as much time as we can with them.

We have three witnesses on the first panel, and then three on the second panel as well.

We have with us on the first panel from Suncor Energy Inc., Gordon Lambert, vice-president, Sustainable Development; from Petrobank Energy and Resources Ltd., John D. Wright, president and chief executive officer; and from the Canadian Association of Petroleum Producers, David Collyer, president.

Thank you all very much, gentlemen, for being here today. I know you're very busy and I do appreciate your taking the time to come.

We will start with presentations in the order that you are listed on the agenda. Presentations are between five to seven minutes each.

We will start with from Suncor Energy, Gordon Lambert, vice-president, Sustainable Development. Go ahead, please, with your presentation.

**Mr. Gordon Lambert (Vice-President, Sustainable Development, Suncor Energy Inc.):**

Thank you very much, Mr. Chair.

Thank you to the committee for providing this opportunity for Suncor Energy to share some thoughts on this very important topic of energy security. Of course I am very pleased to be here, as well, with Dave Collyer and John Wright this morning. We are going to discuss, during the course of my comments, the important challenges and the contribution that the oil sands make to Canada.

I've come here this morning to talk about the oil sands in the context of energy security. I'll share some brief introductory remarks on some major themes relevant to your study, including the economic benefits of oil sands to Canada; the need for continuously improving our environmental performance; increased global demand for energy; and the need for energy strategies and new technologies, which we believe are necessary to ensure the responsible development of oil sands as a secure energy supply for Canada and for markets outside our borders.

Let me start with a simple statement: development of the oil sands is all about science and technology. It always has been. In the first 40 years of development of the resource, the research was directed toward the challenge of achieving commercial viability, and the perseverance and the magnitude of the innovation effort that occurred during that timeframe should be a source of pride and courage for all Canadians as we pursue our future energy challenges.

While improving the economics of the business is still a major priority, this is increasingly being achieved through an enhanced focus on technology to reduce the resource intensity and the associated environmental footprint of the industry. Let me be clear that these two goals are compatible. If we use less water, energy, and land, the environmental impacts are reduced and costs are lowered.

What it really comes down to is that we need to develop this Canadian resource in a way that harnesses both Canadian and global intellectual capital and is consistent with Canadian values, with benefits to all Canadians. It is about Canada, not just Alberta. To name just some of the benefits to Canadians, the industry is Canada's largest private sector investor, with \$1.7 trillion in GDP impact expected over the next 25 years and nearly half a trillion in new government revenues over the same period, mostly federal. It is the livelihood of half a million Canadians, with about half from outside Alberta. Lastly I'd point out that Suncor has spent more than \$1 billion on aboriginal business contracts in the past decade, a point that we are particularly proud of.

That said, I think we could do a better job of explaining our importance to the Canadian economy and our progress to Canadians on the environmental front and with regard to new technology. Let me give you examples of improvements related to air, land, and water.

Suncor has reduced our greenhouse gas emission intensity by 53% since 1990. The industry has cut greenhouse gas emissions by 40% on an intensity basis during that same timeframe. This puts this industry at the forefront of all Canadian industry in terms of intensity reduction.

Current research shows CO<sub>2</sub> emissions from an oil sands barrel are now about the same as, maybe less than, some crudes from places like Nigeria and Venezuela or California.

Total water use at Suncor's oil sands operations has been cut by about a third since 2004, and that's in absolute terms. At our Edmonton refining operations, we're using high-tech filter systems to allow us to use municipal grey water.

On land impacts, Suncor recently celebrated the surface reclamation of pond 1. It becomes the first oil sands tailings pond to have been reclaimed in the oil sands, and there will be many more to come.

Getting to these kinds of improvements doesn't usually happen in a single technological leap. It's mostly been a journey with a lot of small steps. It's not especially sexy, and it's probably why it doesn't have much profile. But it's practical, and it is delivering real results.

We also have a few game changers. Suncor is moving on one major leap right now. Recently we rolled out our new tailings technology, which will reduce the need for ponds to store tailings in the future. And the pace of reclamation to natural habitat will be reduced from 30 years to approximately 10 years.

The fine clays in the tailings take very many decades to settle. This new technology can dewater tails in a matter of weeks versus decades. We plan to spend more than \$1.2 billion on implementation of this technology over the next two years. We expect that investment to pay both environmental and financial dividends over the long term. We have made progress and we know there is much more to do.

For now, let me take these two themes, the major economic impact of oil sands development and continuous improvement in environmental performance through technology, and add a third.

The world will continue to need oil for the foreseeable future. Demand is expected to grow from 85 million barrels per day to more than 100 million barrels per day over the next 20 years. That's largely driven by India and China, but Canada will have a piece of that demand with our growing population.

Together these three themes say to me that we are better off if our needs are met by Canadian oil, oil that is produced in a democratic society in a strong and transparent regulatory regime, with a focus on improved technology that broadly benefits Canadians. Few, if any, of these attributes are found where 80% of the world's oil reserves are.

I really want to underline this point. The development of the oil sands and the work under way to continuously improve its environmental performance is the product of two key freedoms.

First is the political freedom of citizens and stakeholders to engage with governments and industries to drive toward solutions, because directly or indirectly we are all accountable to the Canadian people.

The second freedom, equally important, is regulated but free markets. It's no coincidence that the major technology advances that have shaped our world have sprung from free market economies. Innovation and entrepreneurial instincts are the critical drivers to achieving practical solutions to our challenges.

Frankly, Canadian oil should be differentiated on these positive qualities in the international arena. Our choice is not oil sands, yes or no; it's where do we want the oil to come from, and what it means to

Canada and the rest of the world.

I focused on the oil sands because that's Suncor's main business today, but we should recognize that most oil companies are actually energy companies.

Suncor is one of Canada's biggest players in biofuels and we are also one of the biggest investors in wind power. We got into these businesses in part because we know we need to take a broader look at energy. As a company, we want to help create a constructive dialogue in this country on energy.

That includes the role of Canada's oil sands in our energy mix as both a secure source of supply to our economy and a bridge and an enabling resource to the new energy technologies for the future.

We think it's important to get Canadians engaged in a realistic, fact-based dialogue about our collective energy future.

We think the time has come for a dialogue on a national sustainable energy strategy, one that respects provincial jurisdiction but allows for a broad, integrative perspective on energy, the environment, and the economy.

A sustainable energy strategy must go well beyond the issue of basic energy production. We need to look at how we use energy, including the cars we make, how we plan and build cities, the role of mass transit, and a stronger conservation ethic from businesses and consumers.

We need to assess our likely energy requirements 10, 20, and even 50 years down the road. We need to determine the mix of proven and potential energy sources that can best meet those needs on an economically and socially sustainable basis. We must find ways to build the required infrastructure to deliver energy where it's needed and when it's needed.

We need to understand that the future is about increasing energy choice, not restricting it, and that targets for reducing greenhouse gas emissions must be part of our vision.

Governments will need to promote investment in technology. This includes direct funding as well as economic cooperation to stimulate a higher level of capital investment in new technologies.

For its part, industry needs to build more research and development into their business models, and the level of investment and deployment of new technologies should be a key measure of our success.

 (1110)

As a leader in Canadian energy, we are more than willing to contribute to this dialogue that enables a secure and prosperous energy future for all Canadians.

Thank you.



**The Chair:**

Thank you very much for your presentation.

We now go to John Wright, president and chief executive officer, Petrobank Energy and Resources Ltd.

Go ahead, please, for up to seven minutes.



**Mr. John D. Wright (President and Chief Executive Officer, Petrobank Energy and Resources Ltd.):**

Thank you very much, Mr. Chair.

Ladies and gentlemen, it is a pleasure to be here today representing our industry as well as Petrobank Energy and Resources and all our shareholders.

I've provided a brief slide deck for you to step through this with me.

Petrobank is a Canadian-born and -bred company. We are a pure upstream player, which means we have no interest in pipelines, refineries, or end-use marketing. Over the past ten years, we've grown into a

group of three companies currently operating in the oil sands area through our Whitesands division, internationally primarily in Latin America through Petrominerales, and in the Canadian conventional oil and gas business through Petrobakken.

I would emphasize that while we'll talk about oil sands and technology here today, we would be happy to answer any questions regarding either the international outlook on the oil and gas industry or the use of multi-stage horizontal fracturing in developing Canada's resource plays in western Canada, which Petrobakken is the leader in.

Moving on to slide number four, which is a brief outline of the oil sands assets and opportunities in western Canada, we talk in big numbers in our industry. We talk about trillions, billions, and millions of barrels. To put things in perspective, 1.7 trillion barrels of heavy oil and bitumen resources have been identified in Canada. That's out of a potential worldwide total of nine trillion barrels that have been identified to date.

A surprising thing is that current technologies available to our industry can recover approximately 10% of this. But even a 10% recovery factor on Alberta's oil sands and heavy oil assets makes Canada the second-largest reserve holder in the world. This is a huge part of Canada's wealth. But the potential to increase that recovery factor, even by another 10%, would have a significant impact on the long-term worth of the Canadian economy and the long-term benefits that would be available to all Canadians.

Petrobank is an applied technology company and we're looking to implement technologies that will be the next step, or the disruptive step, to take those recovery levels to a new level.

If I can draw your attention to slide five, we outline there the THAI technology. The whole concept of Petrobank as an applied technology company is to take existing resources and find new and better ways to extract more value out of them. As one example, Petrobank is the owner and the developer of this made-in-Canada technology, but increasing the resource recovery on the substantial resource accumulations in Alberta and Saskatchewan has a significant impact on the wealth of our nation. With the ability to achieve higher recovery rates and potentially double existing technologies' recovery rates, we have the ability to create a large, sustainable, long-term growth opportunity in our industry.

The technology we're applying, which we hope will be the next step for the world to apply, invokes lower capital cost, it involves much lower operating costs, and it generates a much higher net back on every barrel. It does this through a process that I'll explain through a little diagram here. It's important to understand this technology uses no water, it consumes no natural gas, and it has a very small surface footprint, so it also has a very minimal impact on the surface.

The other aspects of it on the environmental front also allow us to reduce the overall carbon footprint of a barrel of oil, because an upgraded barrel requires less processing at the refining end. We already have reduced our greenhouse gas emissions by about 50% compared to other technologies. And in the event there's a viable CO<sub>2</sub> carbon capture technology in place, we are carbon capture ready.

I'll draw your attention to the diagram of the THAI process and quickly explain how this works. More importantly, I want the committee to understand that we already have two demonstration plants of this technology in action today, one in Alberta and one in Saskatchewan. Our first commercial operation is under construction in Saskatchewan as we speak. And we have two more operations awaiting regulatory approval.

The process itself is quite simple. As diagrammed here, it involves drilling horizontal wells to the base of a heavy oil reservoir. Instead of injecting steam and generating steam on the surface, we inject air into the reservoir. The air creates a combustion reaction. The combustion reaction is not unlike the reaction you would have with a charcoal briquette in your barbecue--the harder you blow on it, the hotter it glows, and the more heat it generates.

 (1115)

This heat is high enough to melt the oil in place. It actually cracks some of the lighter hydrocarbons in the oil, leaves behind some of the heavier hydrocarbon as coke deposited in the reservoir, and the production that comes up to the surface is partially upgraded.

The next slide gives you an idea of what a commercial operation would look like. This is our Kerrobert facility in Saskatchewan. I draw your attention to the fact that there are no huge steam generators. There

are no tailings ponds. There is no water use of any significance in this process. Obviously, it's an operation we can integrate with the existing farming operations in place on the land there today.

Finally, on our slide that shows the international potential for heavy oil, it's important to note that heavy oil is a global resource. Outside of Canada few of these resources can match us from a regulatory, environmental protection, political transparency, human rights, or democratic freedom perspective.

It's very important for Canada to be a leader in the development of heavy oil technology, both for application at home across our vast resource, but also as a leader in showing the world how best to accomplish efficient resource extraction and wealth creation.

In conclusion, while resource development is typically a provincial responsibility, there are three initiatives at the federal level that we would strongly encourage.

First, we would hope you could provide a streamlined, transparent, and practical regulatory environment to allow our industry to grow and prosper, for all Canadians.

Secondly, it would be our deepest hope that you will protect Canadian intellectual property, both at home and abroad, and to promote the application of Canadian technology on a global basis.

Finally, it's our deepest hope that you can project an image of the Canadian energy industry, both in Canada and around the world, as the best-regulated, safest, most ethical, most transparent, democratic, and environmentally respectful industry in the world.

Thank you very much.



#### **The Chair:**

Thank you very much for your presentation.

We will now go to David Collyer, the president of the Canadian Association of Petroleum Producers.

Go ahead, please, with your presentation, for up to seven minutes.



#### **Mr. David Collyer (President, Canadian Association of Petroleum Producers):**

Good morning, Mr. Chairman, and members of the committee. Thank you for the opportunity to present the views of the Canadian Association of Petroleum Producers on what I think is a very important and timely study you're doing on energy security in Canada.

I believe you have a copy of our submission, so I'm just going to try to hit the highlights. I'll try not to repeat points that have already been made by the other witnesses.

I think any discussion of Canada's future energy system, including the role of oil sands, has to be put in a global context, and it has to be grounded in a few realities.

First, as Mr. Lambert has suggested, global energy demand is growing at a rapid pace. Many forecasts suggest an increase of up to 50% by 2030 to 2035.

Second, our view, very strongly, is that we're going to need all forms of energy, developed responsibly, to meet that growth in energy demand. I think it is clear that renewables will play an increasing role in the energy supply mix. I think it's also abundantly clear that fossil fuels, including oil and gas, are going to play a dominant role in the energy supply picture for some time to come.

Third, as conventional sources of oil and gas decline, unconventional sources, including oil sands and shale gas, are clearly going to play a more important role in meeting that growing energy demand globally.

In that broader context, taking those points, I think Canada is uniquely positioned to develop very abundant natural resources, as Mr. Wright has pointed out to you, including crude oil and natural gas, in a manner that provides economic growth and jobs, contributes to global energy security and reliability, and delivers what we consider to be responsible environmental and social outcomes.

I know that the focus of this discussion this morning is on oil sands, but I just want to make three very quick points about natural gas.

First, we are very confident that shale gas is a game changer and that we're looking at a very different supply outlook, a much more robust and abundant supply outlook, going forward.

Second, we firmly believe that the environmental concerns associated with shale gas can and will be addressed.

Third, we believe that there are opportunities to broaden the use of natural gas, specifically in transportation, and, importantly, in power generation across North America. If you put those together, we firmly believe that natural gas should be a foundational element of a cleaner energy future for North America going forward.

Let me turn now to oil sands. In terms of energy security, there is no question about the resource potential from oil sands. The current reported reserves are based on current technology and economics. As Mr. Wright has said, there is considerable potential for upside in those numbers. Over 80% of Canada's oil sands reserves are amenable to in situ recovery, versus mining. Both will be important for some time to come, but in situ will become increasingly important.

I think a very important point is that Canada has approximately half the global crude reserves that are accessible to private sector investment. That is, they are fully available to the private sector. That's a very important point, and I think it highlights the importance of Canada's role in meeting the future of global energy demand requirements. It also highlights why there is so much interest globally in oil sands in terms of investment.

Second, in terms of economic growth, I think there is also no question that the development and operation of oil sands is critically important to Canada. It benefits shareholders. It benefits investors. It benefits companies across the country. Most importantly, it impacts and benefits people who are directly or indirectly employed across the country, not just in Alberta, in oil sands activities.

Finally, our industry, I firmly believe, clearly understands that we need to maintain our social licence to operate. That is dependent on our environmental performance and our social performance and how we communicate about both. It is critically important that we deliver in both areas. I believe we are doing so. We'll continue to do so. That is not to say that there is not an opportunity for improvement. We recognize that, and I think there is an ongoing focus on that area.

We have a very good track record of significantly improving performance across a broad spectrum of measures, such as operational performance, environmental performance, and social performance. We clearly have an expectation around continuous improvement. We believe this is what Canadians expect of our industry. Our polling suggests that about 74% of Canadians support oil sands development if there are measures to improve environmental and social performance. That doesn't vary a great deal by jurisdiction, and frankly, from our polling results at least, it doesn't vary a great deal by political affiliation.

I think it is also important to note that Canadians don't expect a silver bullet in terms of environmental and social performance. What they do expect is a commitment by industry and by government to continuous improvement.

 (1125)

I think it's incumbent on us as industry to continue to improve performance. It's incumbent also, I think, on governments in Canada to ensure that we have a policy environment that enables responsible development.

Let me just make a few points in both respects, and then I'll wrap up.

From industry's perspective, we need to continue to invest aggressively in technology development, because that is the key lever to improvement in both cost and environmental performance.

We need to collaborate more effectively among ourselves, with governments, and with academia in terms of technology development. We need to work with governments to make sure we have state-of-the-art measurement and reporting systems.

I think we need to be as transparent as we can possibly be with respect to our performance around oil

sands, and make sure that our reporting systems are open to credible new sources of information. I think we have a role, as Mr. Lambert said, to contribute constructively to the discussion around energy strategy in Canada going forward.

Governments, I think, also have a role to play in realizing the future oil sands opportunity. Some key elements that I would highlight for you include the following.

I think we need policy that is right for Canada, recognizing our particular energy circumstances.

We need policy that concurrently advances economic interests, environmental performance, and energy security and reliability. This is a three-dimensional challenge, which is in part what makes it so difficult.

We need policy that maintains open borders to trade and market access, both with the United States and potentially offshore.

We need policy that stimulates investments and the use of technology and innovation. As I said, I believe that is key to improving performance.

We need policy that's founded on ensuring that we have a competitive regulatory and policy environment in Canada, to attract investment and intellectual capital.

I think we need policies in energy that look across the energy system. We need solutions that impact both the upstream and the transmission system in Canada and, most importantly, the downstream consumption.

I would say we need policy that's founded on honest conversation, if I can characterize it this way, about energy and the environment. We need to be transparent about impacts, both costs and benefits, and how various energy choices impact throughout the energy system in Canada.

Finally, I'd say that a balanced approach to policy is only effective if we have a world-class regulatory system in Canada—and I believe in most respects we do in fact have that.

Mr. Chairman, members of the committee, thank you for your time. I look forward to your questions.



#### **The Chair:**

Thank you very much, all of you, for your presentations.

This is just fascinating. I grew up with the oil and gas industry around me in the late sixties and early seventies, and I want to say that there have been remarkable changes in terms of the technology used and the environmental considerations. Thanks for bringing a little bit of that to us today.

From the official opposition, let's start with Monsieur Coderre, for up to seven minutes, please.



[Translation]



#### **Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chairman.

Good day, gentlemen.

Just to be sure we are not strictly talking about perception, I would add that for my part, I had the pleasure of meeting with members from a number of your organizations several weeks ago in Alberta. I also had an opportunity to visit the Suncor facilities. We had extremely frank and honest discussions with CAPP representatives. We also met environmentalists and first nations leaders.

Mr. Lambert, there is one thing I find quite interesting about your approach.

[English]

We need, frankly, a well-framed dialogue. If we believe, and rightly so, that the oil sands are a strategic

resource, this shouldn't also be at the cost of our quality of life and our environment. I think we need a balanced approach, which is what I felt from what you said.

You have a famous name in Alberta, that being Dr. Schindler. He is coming out with some figures and some numbers, including on toxicity rates and all of that. You spoke about political freedom. I understand also that there might be some problem between the federal government and the Alberta government, because you don't have the feeling...who's doing what; there seems to be a problem there.

My first question—I would ask it of all three of our witnesses—is about our need for transparency if we want to make sure that everything will be okay. Transparency means having scientific figures. We have issues with the water; we have issues with the toxicity of the air; we have issues with the tailing ponds. I understand that we now have new technology.

What would be in the best interests of the Canadian people? I'm thinking of a monitoring process that would be acceptable and that would really show two things: first, that you're for real, and second, that we're addressing.... I'm talking about perception here. That would provide, probably from coast to coast to coast, a better perspective, or would address some of the perceptions that people might have against the oil sands.

Maybe, Gordon, you could start.



**The Chair:**

Mr. Lambert, do you want to start, please?



**Mr. Gordon Lambert:**

Certainly. Thanks.

I will say at the outset that the protection of the Athabasca River and the assurance of the quality of that Athabasca River basin is a common interest across all participants in the dialogue--the federal government, Alberta government, and industry.

I do think it's important that we get a fact-based discussion under way on that topic. I think the creation of this panel that the Government of Alberta has sponsored, which will have Dr. Schindler sitting down with fellow scientists to really determine what the data tells them, is an important first step.

I also believe that the dialogue under way on establishing a world-class monitoring program for the Athabasca River is a worthwhile discussion as well. Because this is a world-scale resource, we need to set the bar very high on the approaches we take to the integrity of the science and the assurance for the public that environmental protection is occurring at a proper level.

I think the actions under way are appropriate. We are hopeful, though, that at the end of the day the two panels, the Alberta panel and the federal panel, could come to some agreement on common findings. That's something we're encouraging strongly. We don't want to have battling views on the science going forward, that's for certain.

Thank you.



**The Chair:**

That's fair enough.

Mr. Collyer.



**Mr. David Collyer:**

Thank you. There are a couple of comments I would make.

First, industry does believe it has a robust monitoring system in place. Having said that, we must be open to, and we should be open to, improvement in that. What we've said very clearly is that with the third-party review process that is under way—we would have preferred that it be one review rather than two, but we have the two different panels in operation—if they advise us and highlight that there are



opportunities to improve that, then clearly industry needs to take that on board.

I think we do need to be open and transparent about data. There's no question about that. I think the whole notion of third-party review and validation by independent scientists makes a lot of sense, in any monitoring program. We should not be debating the basic data. We should have confidence, I think collectively, that we have good data that gives us confidence we are in fact measuring the right things, measuring them consistently and appropriately, and that we're very transparent about the results.

  (1135)

**Hon. Denis Coderre:**

One of the questions we had concerns the relationships with first nations. Of course we're talking about the fact that you're providing a lot of jobs. You can provide some figures saying you're hiring. But it seems that in their minds, because it came from them, the leadership feels they are not part of it. It's not inclusive. It's one thing to be hired by the companies, but it's another to have a piece of it.

What would you tell them? What kind of relationship...or in what kind of deal--let's put it this way--in an inclusive way could you put first nations with the industry?

**The Chair:**

Mr. Collyer, go ahead, please.

**Mr. David Collyer:**

There are a few comments I would make.

First of all, industry does go to some lengths to try to ensure there is effective consultation and engagement with aboriginal groups.

I personally believe, having worked at Shell for a long time and having been engaged with the Fort McKay First Nation, that the engagement with that group goes well beyond simply jobs. There's been a lot of work put into capacity-building, helping the Fort McKay First Nation develop businesses where they have an equity interest and they are more directly involved in the business of oil sands.

Having said that, there is only so far that industry can go. There are other issues pertaining to the relationship with governments and so on that are also relevant to that discussion. The capacity of industry to deal with that breadth of issues is obviously, and I think should be, limited.

We need to work with some of the other first nations in the Fort McMurray area, I think, to build the same kinds of relationships we have with Fort McKay, which I look at as a model of how this should work. We also have to be realistic—Mr. Lambert might have a comment on this—about the timeframe in which that can happen. Fort McKay has been involved in oil sands for a long period of time, and both the capacity and capability in the Fort McKay First Nation have evolved over an extensive period of time. So we have to be realistic, I think, about how quickly that can happen with some of the other first nations in the Fort McMurray region.

**Hon. Denis Coderre:**

Mr. Lambert, perhaps I can add and highlight some comments.

You spoke a lot about political freedom, and I think the federal government has a role to play. There is, of course, a convention where it's up to the province to take care of the resource. Would it be a role of the federal government regarding that issue of first nations? We spoke about monitoring. What should be the role of the federal government?

**Mr. Gordon Lambert:**

Certainly a key role of the federal government relates to the education system for first nations communities and the importance, at that fundamental level, of encouraging a higher graduation rate of

students from schools in those communities. That's a more difficult place to intervene, but it is at the foundational level for what's needed to take advantage of the opportunities within the sector.

Fort MacKay was used as an example by Dave Collyer. It was an intervention at the school level, initially, that helped to get them to where they are today.

We have an important pilot program under way currently, in the community of Janvier, that is directed at students. It's involving collaboration between the federal government, the provincial government, and industry to help encourage that graduation rate from elementary right through to the secondary level.

It could be replicated elsewhere. Early signs are encouraging. But the communities also need to have an inherent desire to receive this assistance, too. It's a partnership in the true sense of the term.



**The Chair:**

Thank you, Monsieur Coderre.

We will go now to Madame Brunelle, for up to seven minutes.

[*Translation*]



**Ms. Paule Brunelle (Trois-Rivières, BO):**

Good day, gentlemen.

In September 2009, G20 leaders acknowledged the following:

Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources, and undermine efforts to deal with the threat of climate change.

Following that, Canada committed to completely eliminating tax deductions for oil sands projects. Three hundred million dollars per year was the figure that was quoted. Apparently, according to research by the International Institute for Sustainable Development in Geneva, these tax deductions amounted to \$1.3 billion per year, in fact. You are therefore aware that Canada should further commit to reducing these deductions.

On this point, Mr. Wright, you referred to the new THAI technology, saying that your operating costs are lower. Is this good news in that you could do without these tax benefits from the Government of Canada?



[*English*]



**Mr. John D. Wright:**

Well, to begin, I'm unfamiliar with what tax advantage the Canadian oil industry has over other industries. Certainly I think there are different deductible rates for investments that we make in our industry versus the life expectancy of assets and so forth. Beyond that, quite frankly I can't tell you what advantage our industry might see.

I can tell you from working internationally that the tax regime in Canada is very similar to what we experience in Latin America, for example. I can go further than that and say that I think the single biggest reward that the Canadian government can get for any type of encouragement in investment is a long-term flow of taxable income. Obviously that's the goal of any public company, because that in fact is the ability for us to deliver returns to our shareholders, but also, my hope is that our technology will generate substantial tax revenues for the government.

[*Translation*]



**Ms. Paule Brunelle:**

Some measures were designated, including 100% tax deductions for operating costs or 30% for development costs. There is also some mention of flow-through shares and amortization rates. So there are hosts of measures, but we cannot lose sight of the fact that in responding to G20 pressures, the Canadian government will have to...

When we are looking at \$1.3 billion per year in deductions to encourage companies while we are in the process of signing economic agreements with Europe, I think it is a matter of fairness, we will have to address these issues.

Mr. Collyer, would you like to respond?

[English]



**The Chair:**

Go ahead, Mr. Collyer.



**Mr. David Collyer:**

Thanks for the opportunity to comment on that point.

We're familiar with the study that's been put out. Our observation of that study is that it has been written from a particular perspective that does not represent a balanced view. There are some very fundamental errors in the study, frankly, in terms of highlighting tax deductions that are represented as being unique to the oil and gas industry but that are, in fact, applicable to other industries. The deduction of things like operating expenses is standard tax practice that applies to any industry.

So we fundamentally disagree with the conclusion of that study. I would refer you to some of the more recent work by the IEA on behalf of the G-20 that I think takes, frankly, a much more balanced view of the question and represents the oil sands in a light quite different from that of the IISD study.

[Translation]



**Ms. Paule Brunelle:**

Very well.

Mr. Wright, you are saying that the government now needs a streamlined regulatory environment.

What do you mean by that?

[English]



**The Chair:**

Go ahead on a point of order, Mr. Allen.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Mr. Collyer was pointing out the IEA study. Could the clerk get us a copy of that study? I think it would be very helpful for our report.



**The Chair:**

Thank you very much, Mr. Allen. We will do that. I think everybody should have a copy of that study.

Carry on please, Madame Brunelle.

[Translation]

**Ms. Paule Brunelle:**

Mr. Wright said in his presentation that the government should ensure a streamlined regulatory environment. I would like to know what he means by that.

[English]

**Mr. John D. Wright:**

Thank you.

I think it's important to recognize that the regulatory system we have in Canada is the best in the world. The application of that regulatory system and the approval system in order to get projects over the goal line and into production is a very important part of how business makes a decision to operate in a particular jurisdiction.

Our hope would be that at the federal and provincial levels there would be a common mindset toward making sure regulations are followed and making sure approvals are reached in an acceptable manner, but with no duplication of paper, with no duplication of authority, and with a very simple end goal of making sure that we are approving the best-engineered and best-thought-out projects and making sure that they meet all the requirements of all levels of government in a very simple manner.



[Translation]

**Ms. Paule Brunelle:**

With respect to duplication, we are obviously in agreement with you. That is a provincial area of jurisdiction and the federal government should stay out of these matters as much as possible.

Environmental questions are of great concern to us. As you know, there is a lot of pressure on your industry. You have really focused on carbon capture and storage projects, but according to some, this technology has not been proven.

What you have to say about this? Would this really be the solution to pollution problems generated, unfortunately, by your industry's activities?

[English]

**The Chair:**

Who would like to start?

Would you like to add, Mr. Lambert?

Go ahead, Mr. Collyer.

**Mr. David Collyer:**

Maybe I could start, and Mr. Lambert and Mr. Wright can add.

I believe there are three opportunities to reduce greenhouse emissions from the oil sands. Mr. Lambert already referred to the 40% reduction in greenhouse gas emissions per barrel since 1990. That's significant. Frankly, it's far greater than what's been achieved on the downstream use over that same period of time.

Looking forward, I think carbon capture and sequestration will play a role. I think we'd all acknowledge that there is a gap in terms of the economic viability of those projects at this point in time, but I think they

will have application.

A project in Weyburn that's operational today is recovering incremental crude oil from recovery and transport of carbon dioxide to that field. That is an opportunity, but I think it's fair to say it will have focused applications.

The second one is improving the efficiency of our service operations. That's where a lot of the benefits have come from up to this point.

Third, and I think probably most importantly, in terms of the mix of future production from oil sands and the increasing importance of in situ, I think there are tremendous opportunities to, in effect, improve the efficiency of the extraction process. Mr. Wright talked about one of those; many others are being looked at. I think we understate the potential improvement opportunity from the in situ part of the oil sands business that will come from more efficient extraction. Whether that comes from use of solvents, lower temperatures, steam, or innovative recovery processes such as Petrobank is applying, I think there is tremendous opportunity there, and we should not understate its potential going forward.



**The Chair:**

Mr. Lambert, could you give a very short response? We're over time here a little bit for Madame Brunelle.

Go ahead, please.



**Mr. Gordon Lambert:**

I certainly agree with the notion that there aren't any silver bullets here, but carbon capture and storage does represent an important option. It's at an early stage of technology development, so it's costly today, but I would highlight the creation of an entity known as Carbon Management Canada. It's housed at the University of Calgary, but is federally funded through the centres of excellence program. It is bringing 22 universities and those researchers together to try to drive the costs of CCS down, plus put more options on the table.

In addition to that, there's innovation under way, as Mr. Collyer suggests, that has some promise as well. One field test we'll be doing next summer is on an oxygen-fired SAGD boiler. It uses oxygen instead of atmospheric air as the combustion air for natural gas. It produces a relatively pure carbon dioxide stream and eliminates any NOx emissions as well.

So we have many irons in the fire. More options are better.

Thank you.



**The Chair:**

Thank you.

*Merci, madame Brunelle.*

I want to say, Mr. Cullen, it was much easier dealing with your motion with you not here.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

I'm sure it was.

**Voices:** Oh, oh!



**The Chair:**

Go ahead please, Mr. Cullen.



**Mr. Nathan Cullen:**

He's a tricky chair, this one.

Thanks, gentlemen, for presenting.

Mr. Lambert, I don't know how popular Suncor has been around the energy producers for its comments on the need for some sort of national dialogue, but I take note, again, that you folks repeat that a dialogue on a sustainable energy strategy is required in this country.

Elements of that, I think, are what are most important to this committee's study of energy security, trying to understand if there is a national energy security strategy or a national sustainable.... I mean, we could use some words interchangeably; I use energy security and sustainable energy that way.

Would elements that include dealing with foreign ownership, for example, be of some question--elements of exportation of raw materials? I'm trying to understand....

It's very hard to define energy security, actually. We know this. But in that dialogue, would those be some of the elements of conversation that you folks at Suncor would imagine?

**The Chair:**

Mr. Lambert, go ahead.

**Mr. Gordon Lambert:**

For absolute certain, the outcomes a strategy should encompass should take into account economic outcomes, environmental outcomes, and social outcomes that are important to Canadians. There's a need for a broad view because of how energy touches so many parts of our economy and our society.

**Mr. Nathan Cullen:**

If those are the three pillars or elements that you see--I couldn't disagree with those ones--the notion of environmental liabilities is a question that comes up with the tar sands all the time. If there's a long recovery process or a cost that's going to be deferred to the public in general, that's of concern to the public. I'm sure your company understands that. Is that fair?

**Mr. Gordon Lambert:**

Yes.

**Mr. Nathan Cullen:**

Okay.

On the question around reclamation specifically, you noted today that Suncor has made some investments. Should there be an industry standard?

What is the industry standard right now for reclamation of a tailings pond? When does it have to be returned to its natural state under the law right now in Canada?

**Mr. Gordon Lambert:**

It's a provincially regulated activity. We file reclamation plans that are part of the approvals of oil sands projects. Those reclamation plans assign timelines and milestones that are used for assessing our progress.

**Mr. Nathan Cullen:**

I know they're in the plans, but do they tend to have an average? You're talking about 30 years down to 10 years; is it 40 years? Is there an industry average? Is there something that you internally set? Does the Province of Alberta ask you to set some target on average, or is it always specific to the project itself?

**Mr. Gordon Lambert:**

It has historically been specific to the project itself, based on the type of mine planning and the nature of the operations of any given project. However, I would alert the committee that the ERCB and Alberta Environment have recently tabled further clarity on tailings treatment and reclamation that is providing additional framework elements to how we conduct mining and tailings management operations.

**Mr. Nathan Cullen:**

First nations relations were raised earlier. The terms accommodation and consultation are often used. Those are the legal terms as defined by the Supreme Court, yet there is no working definition from the federal government of what it is for a company to accommodate and consult. It also seems to be project specific, first nations specific.

Would it be helpful if there was a working definition, if the Government of Canada said, "To tick this box, you must go through the following steps", just as you folks do with other requirements of your projects?

Mr. Collyer, to your members, would that be helpful?

**Mr. David Collyer:**

There are consultation guidelines in place today, as I think you are aware—

**Mr. Nathan Cullen:**

Yes. I'm sorry, I'll be specific with my question. What I mean is for you to legally be able to stand in court or go to your shareholders, the companies that you represent, and say, "We have done accommodation and consultation. It looked like this. That's what the feds asked us to do, and that's what we did."

**Mr. David Collyer:**

I think there are two aspects of that.

One is that we would certainly agree that clarity on consultation requirements would be helpful.

Second, accommodation is a more complex issue, as I'm sure you understand, that involves both the role of industry and the role of governments. I think the clarity we're seeking there is what is the role of industry vis-à-vis that of government.

**Mr. Nathan Cullen:**

Right. That's a fair point.

Mr. Wright, I was confused by your comment about there being no special tax allocations to oil and gas, particularly because in part of the budget submissions this year, there's further tax alleviation being sought by the industry. But the Canadian exploration expense, the Canadian development expense, the Canadian oil and gas property expense, the capital cost and accelerated capital cost allowance expense—these are all in place to alleviate the tax burden on energy companies, oil companies, as well as some other industries.

My question is this. There was a budget memo leaked in May of this year that, from the finance department side...they said if Canada has made this commitment at the G-20, which my colleague read out earlier, in terms of removing subsidies to the oil and gas sector because they're harmful to the economy and they're harmful to the environment. If they don't exist, why are internal memos in the finance department asking the government to consider removing them?

How can they remove something that doesn't exist, in your view?



**Mr. John D. Wright:**

I think you're asking me a question about the inner workings of government, which would be far beyond me. But I can say this: deduction of operating expenses is a common deduction in any tax regime I've ever done business with in the world.

On the oil and gas front, what's called the Canadian exploration expense is typically either seismic drilling or exploratory drilling in wildcat areas or dry holes, dry and abandoned wells, which are typically written off as a total loss to the company at a 100% rate, again in almost every jurisdiction on earth that I'm aware of.

As well, in terms of the rate of deductibility of all other expenses, you talked about Canadian development expenses, which are deducted at a 30% declining balance rate, and capital cost allowance, which is typically a 25% declining balance rate. Those are very standard depreciation rates recognized across a number of tax regimes.

There are variations on how taxes are paid. As an example, if you drill a well in the North Sea in Norway, you'll actually receive a cash payment from the government equivalent to 80% of the cost that you incurred on that well as a return on your tax payment. That's something the Canadian government doesn't do.

**Mr. Nathan Cullen:**

Let's not worry ourselves as much with Norway in the sense that—

**The Chair:**

Mr. Cullen, I'm sorry, your time is up.

We'll go now to Ms. Gallant, for up to seven minutes.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Thank you, Mr. Chairman.

I'd like to start off by bringing this down to the human level. The average everyday Canadian mostly cares about what it costs to fill up the tanks in their vehicles. The increase in inflation last month over this month was mostly attributed to increased fuel costs.

Can you tell me how production in the oil sands impacts the cost of gasoline, and how it will in the future impact on the individual filling up their tank, if we do versus don't develop the oil sands, or if we go at a slower pace versus a faster pace?

**Mr. David Collyer:** I can take a crack at that one.

**The Chair:**

Go ahead, Mr. Collyer.

**Mr. David Collyer:**

Thank you.

I think the first important point is that the price of oil is clearly not set in Canada. This is part of a global market, and the price of oil is determined by global factors.

I would submit the view that the more supply that is available to consumers, the more choices that are available, the more likely it is that prices will stay at a more affordable level. I think if you look at the natural gas market, just to take another example right now, we've moved from a period when natural gas was priced in excess of \$10 per MCF. With the abundance of shale gas in the North American market, we're now looking at a price... Don't hold me to a future price forecast, but people are now talking about \$5, \$6, \$7 per MCF as a stable, long-term natural gas price.



I think you could take that same analogy to oil sands and say that the more robust and abundant the supply is, the more choices there are for consumers and the more likely that will keep prices in a more affordable range. But I'd also reinforce the point that the price of oil is established in global markets, not in the Canadian market.



**Mrs. Cheryl Gallant:**

Right.

I was rather surprised by something at a mining association meeting the other day. There was somebody from the oil sands, and we were talking about future costs of fuel. He said it wasn't in the best interests of the oil sands to see the price per barrel continue to increase exponentially, that there's a point of diminishing returns.

Could you explain in economic terms why there would be a point for the oil sands companies at which they wouldn't want the price per barrel to increase that steeply?



**Mr. David Collyer:**

I can't comment on that specific point, because I don't know the context in which he was talking about it.

Like any product, I think it's important that there be a balance between what's attractive to the consumer and what's attractive to the producer. We have to try to find that price level that works for both in the market.



**Mrs. Cheryl Gallant:**

Energy security is very much the topic at our NATO parliamentary association meetings. When we talk about energy and our abundance in the oil sands, our colleagues across the pond refer to the oil from oil sands as "dirty oil". When I ask them what they mean by dirty oil, they say, well, it burns dirty--more dirty than the oil from the Middle East or anywhere else.

Is there an independent study we can refer to that would show a how clean the oil sands products burn compared to production in other parts of the world?



**The Chair:**

Mr. Lambert, then Mr. Collyer.



**Mr. Gordon Lambert:**

First of all, I'd just highlight that the fuel burned in Canada in our gasoline use is as clean as any fuel in North America or in the world. We have sulphur removed from that fuel. That was through regulation. So the fuel quality exiting the refineries is equivalent to the best anywhere.

On life cycle greenhouse gas emissions, a lot of work is under way to benchmark Canada and Canadian oil sands versus those other crude sources. It appears the more data that comes available in that front is showing more close to equivalency that the oil sands are achieving relative to those other sources.

Quite simply put, we don't view the term "dirty oil" as appropriate at all.



**Mrs. Cheryl Gallant:**

So the emissions are the same or lower than production in other parts of the world.



**Mr. Gordon Lambert:**

It's close to equivalent in terms of the life cycle view of that, yes.

**Mrs. Cheryl Gallant:**

Our colleagues aren't really sure why they hear this "dirty oil". They just know they hear it over and over again. This is often the mantra of environmental groups.

These groups always demand independent studies, and guffaw at any studies that are funded, even in part, by the oil industry. But they don't reveal how they themselves are funded or how the studies they conduct are funded.

You know your competition best. Is it possible that competitors, or governments from other countries, are funding groups to depict our oil sands industry in a lesser light?

**The Chair:**

Mr. Collyer, go ahead.

**Mr. David Collyer:**

I have two comments.

Referring to your earlier question, there is what I think is a very good study done by Cambridge Energy just recently that we'd be happy to provide to the committee. It was done independently by a very well-respected independent consulting firm. I think it gets at your questions around greenhouse gas emissions.

I would not know, and wouldn't comment on it specifically, whether governments are funding some of the opposition. I know that other governments are clearly injecting themselves into the dialogue in Canada with respect to how we should approach the oil sands and our energy system more broadly. I do know that much of the opposition to oil sands that we see in Canada is being funded by either environmental groups or foundations from outside this country, who I would argue do not have the best interests of Canadians at heart when they wake up in the morning.

So clearly there is a fair bit of opposition coming from interests outside Canada, some of it I think founded on their particular views around the appropriate balance of energy development and climate policy, and some of it, I would argue, very much representing their own interests with respect to some of these issues.

**Mrs. Cheryl Gallant:**

We read in the newspaper that water samples taken downriver from a bitumen extraction point have a higher bitumen content than water samples taken upriver. Aside from the obvious, which would appear to be tailings or some result of the bitumen mining process, could you offer any other explanation as to the higher content of bitumen downriver than upriver?

**The Chair:**

Mr. Lambert.

**Mr. Gordon Lambert:**

This panel that the Alberta government has put in place is to try to reconcile these different views of this data. Dr. Schindler will be sitting down with other scientists to assess this.

It's important to note as well that the Athabasca River has hydrocarbon that outcrops on the bank of that river as part of its normal course. This means you have hydrocarbon bitumen entering the Athabasca River just through that outcropping of the oil sands resource itself. Separating out the background levels of substances that arise from those natural sources of oil, versus the oil sands, is one of the real challenges.

 (1205)



**The Chair:**

Ms. Gallant, we're out of time.

Thank you, Mr. Collyer, Mr. Wright, and Mr. Lambert, for being here.

Do you have a point of order, Mr. Allen?

**Mr. Mike Allen:**

No, the clerk looked at me anxiously when Mr. Collyer brought up the other study he's prepared to give the committee. I know that the clerk is going to jump on that one too.

**The Chair:**

Yes. We have noted that. Thank you very much, Mr. Allen.

Do you have a point of order, Mrs. Gallant?

**Mrs. Cheryl Gallant:**

On a point of order, we just heard that there's bitumen along the actual shoreline, on the banks of the Athabasca River. I would like either our witnesses or our analysts to get a photograph of that. Just in case we do a report on this, I would like to see what they're talking about.

**The Chair:**

That's not a point of order, but we will...

Mr. Collyer has volunteered to provide that.

Thank you very much, Mr. Collyer.

Again, thank you all for coming.

We will suspend for a couple of minutes and then have the other witnesses come to the table.

**The Chair:**

We will resume our meeting, with our second panel of witnesses.

We have by video conference, from the University of Calgary, Professor David Keith, Institute of Sustainable Energy, Environment and the Economy. Also with us, from the Pembina Institute, is Simon Dyer, policy director. From the Canadian Association of Energy and Pipeline Landowner Association, we have David Core, chairman and chief executive officer, as well as John Goudy, policy adviser.

Welcome to all of you.

We will have the presentations first, and we will start with Professor Keith.

Go ahead, please.

**Dr. David Keith (Professor, Institute for Sustainable Energy, Environment and Economy, University of Calgary):**

Thank you very much for having me today.

I'll start by saying a few words about energy security and the extent to which this topic really is an energy security topic, and then talk a little bit about strategy and tactics around the climate and environmental concerns of the oil sands.

First, on energy security, there are very serious and real energy security concerns in this world. These range from the concentration of the remaining easy oil in the Middle East and the security concerns that come from that to the loose nuclear weapons around the world to the European dependence on natural gas from the Soviet Union. But I think in a Canadian context there really aren't that many energy security concerns that are interesting.

I think the ultimate reason we're having this hearing today, and the reason for the focus on oil sands, has very little to do with energy security. The oil sands and related things like the oil sands, which in some ways you would say includes coal to liquids, are things that produce in principle essentially unlimited supplies of hydrocarbon fuels for the transportation sector at relatively low operating costs but very high capital costs. And those are things that are very important for being able to provide hydrocarbon fuels in the long run but have little to do with energy security, because they can't swing their supply quantities very quickly.

I'll say a few words about strategy and tactics that I hope will help to separate out some of the conflicting claims that you hear about the oil sands or that you heard in the last session.

One frequently hears the industry state that the oil sands aren't particularly worse than conventional oil. Gord Lambert in the last session said that studies were increasingly showing that they were about the same as conventional oil, for example, on life-cycle greenhouse gas and for a variety of other topics. You hear very strong concerns on the other side from the environmental community.

I want to speak to what I think is going on underneath that. I think some of the things the industry says are quite correct. The oil sands are not the greatest environmental disaster on the planet. By many measures, they're only a little bit worse than conventional oil. On greenhouse gas emissions, they're clearly worse.

Just for the record, I have set up, from expertise at Carnegie Mellon University and elsewhere, one of the most serious academic efforts, working closely with industry, to examine the oil sands life-cycle emissions.

I do not believe the claim that they are about the same as conventional is a fair or correct claim, or supported by evidence. It is true, however, that they're not ten times worse. On a well-to-wheels basis, they're maybe 20% worse or something like that, and on a point-of-production basis, they are worse by a factor of maybe two or more.

I think it's also fair to say that some of the concerns--for example, about water contamination--are overstated. There may be some water contamination problems, but at this moment they don't appear to be all that serious.

The climate problems, though, are very serious. The reason that large environmental groups, including large environmental groups from outside the country, are targeting the oil sands has a strategic core that is completely sensible and justified, and, contrary to the comments we heard last, in my view is completely in the interests of Canadians.

In tapping into the oil sands, we are tapping into one of the world's largest carbon stocks. Tapping into it commits us technologically to enormous future carbon emissions. The principal carbon problem is not the carbon emissions from production, it's the carbon emissions from use, and those carbon emissions are very serious.

I'll give you one sense of it. Some of you have probably heard too much about climate models and may be doubtful, but climate models are not the only reason. Although they're a reason that goes back, actually, 100 years, that gives us a lot of confidence about the kind of climate problems we face, and the scientific basis for concern, but they're not the only basis.

Fifty-five million years ago we had a natural release of carbon at the Paleocene–Eocene thermal maximum of about, in round numbers, 1,000 gigatonnes of carbon, similar to what humanity may release this century. The results were dramatic. It was one of the largest mass extinctions in the fossil record. The

climate changes were simply stunning. We didn't have an advanced civilization at that point. We didn't have cities on the coastline. We didn't have an agricultural system acutely attuned up to the current climate. But if we had, I think it's fair to say that the results would have been pretty damaging.

The amount of carbon in the oil sands alone is a quarter of what it takes to do that, roughly. There is something like 250 gigatonnes of carbon. So it is completely sensible and legitimate and strategic for the large environmental groups to want to stop access to that resource.

  (1215)

In my view, their strategic concern is not to clean up local production, because that's not the underlying fundamental concern—although, in the tactical sense, that's what they say. There will be lawsuits about their ducks, which I don't think is really a very serious problem. Ducks are a serious problem, but the ducks dying in tailing ponds are much less important than the actual impact on wildlife from land use changes or the ultimate impact from climate change.

But the large-scale climate changes that are entailed in accessing that carbon resource are large. The strategic view of the large environmental groups—and I've worked with some of the larger groups in the U.S. and in the world—is that it makes sense not to access that resource. That means to shut them down, and that means that the real focus of those groups is not to clean up but to end. I think it's important to have that clearly in one's mind.

Now, we in Canada and we in Alberta have separate interests, and we have to think about balancing these interests. I'm perfectly aware that my salary comes ultimately from the oil wealth in this province, and I don't advocate an immediate shutdown. But we do have to be clear-eyed about the fact that we cannot keep producing this carbon forever and expect to have a stable climate.

I think the security concern, the economic security concern, comes from the risks we bear in committing ourselves substantially to an economy tied too tightly and too solely to oil sands extraction. At some point, whether Albertans like it or not, there will be serious regulation, and when that happens, people in my town of Calgary will be walking away from their homes unless we have done serious work to diversify beforehand.

I think we face both a climate threat, which is real, and an economic threat, which comes from an overly intense concentration of industrial wealth on this topic. We need to think hard about how to manage those twin threats.

Thank you.

#### **The Chair:**

Thank you very much, Professor.

We'll go now to the Pembina Institute and Simon Dyer, policy director.

Go ahead, please, for up to seven minutes.

#### **Mr. Simon Dyer (Policy Director, Pembina Institute):**

Good afternoon, Mr. Chair, and good afternoon, committee.

My name is Simon Dyer. I'm the policy director for the Pembina Institute in Calgary. The Pembina Institute is a sustainable energy think tank, and my policy research focus is on oil sands development.

The topic of today's hearing is energy security as it relates to the oil sands. The term "energy security" is thrown around with increasing frequency, especially with regard to the oil sands. But it's rare for those using it to actually define what energy security means. It implies, I think, the idea of energy availability, but this is a superficial and inaccurate interpretation of energy security.

I draw your attention to the International Energy Agency, which defines energy security as the "uninterrupted physical availability" of energy "at a price which is affordable, while respecting environment concerns". Clearly, then, we need to consider economic costs versus benefits of energy and we need to consider environmental impacts of its production and consumption in any definition of energy security.

With regard to the oil sands, then, of course they hold a very large amount of oil, so physical availability is not a problem, but there are both environmental and economic impacts that undermine the extent to which we can say the oil sands contribute to Canada's, North America's, or the world's energy security.

Given Canada's abundant energy resources and relatively small population, when we're talking about energy security I think we're thinking about not so much domestic supply as our security as a supplier of energy. So how do we supply energy in a way that meets global obligations to reduce greenhouse gas emissions and at the same time protect Canadians from the environmental impacts at home?

The world is aggressively seeking cleaner sources of energy, and we should not take it for granted that our historic position as a supplier of fossil fuels will continue in the future, especially as it's increasingly evident that Canada is not doing its fair share to reduce greenhouse gas pollution and is failing to adequately enforce the law around oil sands development.

I'd like to draw the committee's attention to yesterday's editorial in this week's issue of the journal *Nature*, considered one of the most prestigious scientific publications in the world. It concerns the oil sands. I'll quote from it:

It would be unrealistic to expect that we could harvest fossil fuels or minerals without an effect on the environment. No form of mining is clean. But the fast development of the tar sands, combined with weak regulation and a lack of effective watchdogs, have made them an environmentalist's nightmare.

This is not environmentalists saying this; this is the journal *Nature*. Canada's reputation as a responsible supplier of energy as related to oil sands is being damaged. It's being damaged not because the oil sands have a public relations problem; it's being damaged because development is not proceeding responsibly.

If Canada and Alberta continue to focus on public relations and neglect their responsibilities to enforce existing laws and regulations, the federal government will be exposed to continued legal challenges, the industry will be vulnerable to tougher environmental restrictions in the marketplace, and Canadians will be exposed to economic uncertainty and competitive challenges resulting from tying the value of our dollar to the price of oil.

In October, the Pembina Institute, along with the environmental organizations Environmental Defence and Équiterre, released *Duty Calls: Federal responsibility in Canada's oil sands*. I want to highlight some of the key findings of that report.

A key finding of the report is that government's math on carbon emissions in the oil sands simply doesn't add up. If expansion of the oil sands proceeds as planned, the oil sands industry will outspend its proportional share of Canada's carbon budget under the government's current target by a factor of 3.5 times by 2020 and by a factor of 40 times by 2050. That's even assuming a very optimistic application of carbon capture and storage technology. The oil sands sector must do its fair share to reduce greenhouse gas emissions along with the federal government's commitments.

Our study also showed that we need to acknowledge and minimize negative economic impacts of oil sands development and address petro-currency impacts on Canada's manufacturing sector. We need to protect water quality by setting and enforcing environmental limits to meet the requirements of the Fisheries Act. We need to protect wildlife by enforcing the Species at Risk Act for woodland caribou and working with Alberta and Saskatchewan to create a regional network of protected areas. And we need to set binding caps on air pollution according to the Canadian Environmental Protection Act.

Until Canada acts in these areas, we cannot fulfill our role as a responsible, secure supplier of energy, and this will hinder Canada's ability to develop and market our resources. The governments of Alberta and Canada are over-promising and under-delivering environmental management in the oil sands.

I also want to talk a little bit about some of the predictions of how much oil the world needs. When discussing oil sands, Natural Resources Canada makes a habit of placing development of the oil sands in the context of future global energy demand as assessed by the International Energy Agency. We heard similar comments this morning from both Suncor and CAPP.

 (1220)

The department consistently misuses the IEA's analysis, including the recent testimony of Mr. Mark Corey before this committee. Mr. Corey noted that the IEA projected that global energy needs "will increase

at about 1.5% per year until 2030, which would be an overall increase of about 40%". But both NRCan and Mr. Corey based this premise on the "reference scenario" of the IEA's *World Energy Outlook*, which the IEA actually notes on its website is most definitely not a forecast of what will happen but a baseline picture of how global energy markets would evolve if governments made no changes to their existing policies and measures.

Furthermore, the IEA notes that the reference scenario is actually based on a scenario that takes us to greenhouse gases in the atmosphere of a concentration of 1,000 parts per million and a temperature rise of six degrees. This would almost certainly lead to massive climate change and irreparable damage to the planet. In other words, it seems that NRCan is hedging on a bleak, unlivable world that fails to deal with climate change as a place where we maximize bitumen production.

Not only is NRCan describing the reference scenario as a projection that somehow supports the case for oil sands development, but they also fail to acknowledge that the reference scenario is in direct contradiction to Canada's commitments under the Copenhagen accord, which Canada has endorsed, and which would set the objective of limiting the increase in global temperature to 2°C.

So I think it's fair to say we need to start being honest about the inconsistency between projected oil sands expansion and Canada's commitments to reduce greenhouse gases. As I've stated before, the math does not add up, and ignoring this fact does not address the looming problem. In a world where we need deep reductions in greenhouse gas pollution, there is no energy security without climate security.

I would say, though, that now I need to agree with Suncor: there's a growing consensus that there's a need for a national discussion on energy and the environment. The stakes are simply too high around oil sands development, both economically and environmentally, for development to proceed as it is in the current piecemeal fashion without a coherent vision and a plan that demonstrates how oil sands development can fit into a clean energy transition.

A U.S. journalist said to me last week--referring to the disconnect between Canada's Copenhagen target and its increasing oil sands emissions and the continued downplaying of evidence of pollution from the oil sands--that it seems like the oil sands are defying gravity up there in Fort McMurray.

I think that sums up what we need to do in terms of addressing the issues coherently.

Thanks very much for the opportunity to present today, and I look forward to your results. Thank you.

  (1225)



### **The Chair:**

Thank you very much, Mr. Dyer.

We go now to the Canadian Association of Energy and Pipeline Landowner Associations.

Who will make the presentation today?

Okay, Mr. Core, go ahead for up to seven minutes, please.



### **Mr. David Core (Chairman and Chief Executive Officer, Canadian Association of Energy and Pipeline Landowner Associations):**

Thank you, Mr. Chairman.

We'd like to thank the members of the committee for the opportunity to speak with each of you today. We are appearing on behalf of CAEPLA, the Canadian Association of Energy and Pipeline Landowner Associations.

My name is Dave Core, and I am CAEPLA's CEO. I am accompanied by John Goudy. John lives and works on his family's farm in southwestern Ontario. He is a practising lawyer and a member of CAEPLA's board of policy advisers.

Let me begin by saying that CAEPLA is a pro-development organization. We have several dozen regional and provincial affiliated associations, including four provincial pipeline landowner associations, which, to

the best of our knowledge, are the only provincial pipeline landowner associations in Canada.

The individuals who gave birth to CAEPLA are landowners who'd come to understand that the NEB is not a public interest regulator in the sense that any normal person would understand a public interest regulator to be. For all practical purposes, the NEB has three mandates--as an energy industry facilitator, as a regulatory watchdog, and as a quasi-judicial body and sometimes ombudsman that is seemingly obligated to represent the interests of the people its policies affect.

As an industry facilitator, it is a success. As a regulatory watchdog, it is passive and theoretical. As a sometimes ombudsman giving due regard to the legitimate interests of landowners, it is a failure.

For many years, growing landowner resentment toward the NEB has bubbled beneath the surface. It didn't spill into the public arena because few landowners had been subject to its regulatory provisions. Alberta regulates about 400,000 kilometres of pipeline. By way of contrast, up until recently the NEB's pipeline portfolio was about one-tenth that size. Due to oil sands and other production factors, this is, and will be, dramatically changing.

The first significant public expression of landowner resentment toward the NEB and its policies spilled into the public arena some years ago when two farm couples from southwestern Ontario mortgaged their farms to launch a court action. Frustrated by all that was occurring at the time, these landowners believed it would be easier to address the issues by engaging in a legal action against the pipeline company that operated within the provisions of the NEB regulations rather than against the federal government as represented by the NEB.

The court battle addressed soil degradation and diminished property values. It resulted in a legal victory for landowners, but it didn't change NEB policy.

Since that court case, without consulting landowners the NEB amended its policies to shift financial and legal liability for abandoned pipelines from the pipeline companies to landowners. It established provisions, again apart from landowner consultation, that awarded jurisdictional control, of what today amounts to one million acres of land, to the pipeline companies that the NEB openly and unabashedly was calling its partners.

The NEB then established provisions, again apart from landowner consultation, that resulted in landowners holding liability every time they drove their farm equipment across a buried pipeline on their farms without first obtaining permission from either the NEB or the pipeline company.

The most recent episode of the NEB openly trampling landowner interests occurred in Alberta when it unilaterally stripped thousands of landowners of the legislative and regulatory protections they had enjoyed for decades when it transferred control of 24,000 kilometres of Alberta-regulated pipeline into its own portfolio. It did this even after landowners raised and spent hundreds of thousands of dollars to appear before the NEB with professional witnesses to fully explain the far-reaching implications of such a policy.

 (1230)

Moving to the NEB's current LMCI process--land matters consultation initiative--CAEPLA and other affiliated provincial associations raised several hundred thousand dollars to participate in this undertaking. Our objective was to ensure that we could utilize the expertise of professional witnesses to fully and accurately present the NEB with a clear understanding of the impact its policies had upon landowners.

Let me pause here and parenthetically insert that these are after-tax dollars we must solicit from landowners affected by NEB processes--Canadians who have no financial interest in NEB processes, no financial interest in pipelines, yet whose lives are being imposed upon and whose property values are being diminished.

At the very beginning of the LMCI process, a condition of participation by CAEPLA and our affiliated associations was an assurance that the rules would be amended in such a way that landowners would not hold financial or legal liability for abandoned pipelines. After all, we don't own or hold a financial interest in these pipelines.

We were assured by the NEB that such would be the case. Then, after we appeared at the LMCI, we were told that landowners would have to hold some liability for abandoned pipelines.

The result was that CAEPLA and all our affiliates walked out, knowing we had been misled.



Today we recognize that no single agency of government, no matter how well intended and well funded it may be, can fulfill the mandates as contradictory as those held by the NEB. The NEB cannot be, all at the same time, an energy industry facilitator, a regulatory watchdog, and a type of ombudsman to the people its own policies trample. This is a matter of how you see this.

Regulatory capture at the NEB is very real and very alive. It is our considered opinion that this is not due to an inherent flaw in the character of its managers. Rather, it exists as a natural outworking of the contradictory and competing mandates that the NEB possesses.

Thank you.



**The Chair:**

Thank you very much, Mr. Core.

Mr. Cullen, is it still your intention to have your motion dealt with today?



**Mr. Nathan Cullen:**

Yes.



**The Chair:**

Okay.

We'll have to make this a five-minute round of questions so that we can get to [Mr. Cullen's](#) motion.

Mr. Tonks.



**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you, Mr. Chairman. I do appreciate the issue with respect to time.

Thank you to our witnesses.

Professor Keith, I found it a little satirical, if you will. You gave your overview. You talked about whether the oil sands were dirty. You said, well, greenhouse gases are high, but relative to other emissions are probably not--maybe two times as bad as conventional, maybe 20 times as bad. You mused about that to some extent.

With respect to water issues, you talked about how it didn't appear that there was a huge problem. But then you came down to your bottom line: your job is implicated with respect to whether we go along with some of the suggestions to just shut the oil sands down. You said that you thought the sacrifice was too much, and that we then fall back on serious regulation.

I would take it that serious regulation would let you and the people who have their homes in the west...that they wouldn't be following the situation that is in the United States.

I guess my question is about the area of serious regulation. It would be similar to the question I would put to Mr. Dyer, because he comes down to that bottom line too. He talks about water quality, wildlife issues, and about caps on pollution.

So where do we go in terms of matching our ability to produce...but to produce in an environmentally sustainable way? Where are you in terms of that?

 (1235)



**Dr. David Keith:**

First of all, let me give you a few numbers, and then let me answer your more strategic questions.

On a well-to-wheels basis--that is, counting both the emissions at the source and at the use phase,

when people burn the oil in their tanks--the oil sands carbon emissions are perhaps 20% in round numbers. There's lots of uncertainty in conventional oil. Again, it depends which conventional oil you're talking about.

I think I would answer the strategic question as follows. We cannot keep taking carbon out of the ground and putting it into the atmosphere for this century without really dramatic climate change that will be truly dangerous. We have to have a clear-eyed policy to stop doing that.

There is nothing you can do in the long run about cleaning up the oil sands production that solves that problem, because the product is the problem. Even if there were no emissions at all from the oil sands operations, the main problem is still the product. The main problem is taking the carbon out of the ground and putting it into the atmosphere. So in the long run, if we want a stable climate--and we will, and we do, and our grandkids will--we have to stop, period. There's no technological fix.

But the climate problem gives us some time. It's not a panic. We don't have to do this in five years. This is a half-century problem, but a half-century problem demands, if we're serious about technological change and about doing this with minimum disruption to our way of life, that we start to get serious now about what technologies and what innovations we're going to put in place to allow us to wring the carbon out of the energy system and to deliver more energy services, including delivering energy services to a billion people on this planet who currently have no access to modern energy and who deserve it. They deserve the ability to access it through their own hard work. We need to figure out how to do that with zero carbon emissions, and we need to do that over the space of a bunch of decades--four, five, you name it.

That means we need a serious conversation in Canada that doesn't get locked up on nonsense about dead ducks but focuses on a clear path that agrees on when we are going to peak oil sands emissions and when we are going to tail them off and that thinks hard about how to use all the engineering and managerial talent we have in this town and elsewhere to do things that can supply us with energy in ways that don't put carbon into the atmosphere.



**Mr. Alan Tonks:**

Professor Keith, thank you very much for that.

I'm wondering if Mr. Dyer could have an opportunity to address the same question.



**The Chair:**

Please be very brief, Mr. Dyer. Unfortunately, we're under really tight time constraints.



**Mr. Simon Dyer:**

Absolutely.

I think I'd agree with Dr. Keith that we need to be talking about environmental limits. The discussion around oil sands has been extremely black and white. If you actually want to have responsible oil sands development, you have to be talking about what level of oil sands development achieves the environmental outcomes you need to achieve, and no one in Canada is talking about what level of oil sands development is acceptable.

Going back to the IEA's *World Energy Outlook*, it says, under the "450 scenario"--450 parts per million--the oil sands would only achieve 3.3 million barrels a day. There are 7 million barrels a day of proposed projects on the table currently.

So until we talk about limits and until we actually have the federal government enforcing the law on the ground and enforcing these limits in the oil sands, we're not going to have responsible oil sands development.



**The Chair:**

Thank you, Mr. Tonks.

Go ahead, Monsieur Pomerleau, for up to five minutes.

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you very much, Mr. Chairman.

Thank you to all of our witnesses for appearing before the committee.

My first question is for you, Mr. Keith. I enjoyed your presentation, and, although I am new to this issue

[English]

--I don't know anything about it--

[Translation]

I tend to believe that you are the one that is right.

You are urging us to reflect on the situation we see here. On the one hand, I would agree with you that the planet is overheating, and that this will be more than detrimental to us. On the other, we need energy.

How do you perceive the serious and far-reaching debate you are inviting us to engage in, on what basis should we do that? You say we need to be serious about this, on the one hand, but what should be the focus of our studies so as to find a solution bridging these two concerns: the need for energy, and planetary security?



[English]



**The Chair:**

Go ahead, Professor.



**Dr. David Keith:**

We will do this not, I think, by using less energy, and not by consumer choice. We will do this by switching our primary energy supply to supplies that don't use carbon.

It's important to think about the enormous success we've had in the rich world since the Second World War in cleaning up the environment. On mercury, on lead and gasoline, on air pollution, our water--on all those things we made huge, enormous progress. The places we made progress best were when government set clear targets and industry innovated to find ways to meet those targets.

That could be done here too. There are lots of ways that we can produce abundant energy without carbon emissions, from large-scale nuclear power—which is one of the things I think we must take most seriously—to large-scale wind power, or solar in some places. But we have to be clear-eyed about making that transition. And in Canada, we have to be clear-eyed about making investments in innovation, at both a university level and a corporate level, that allow us to win in a carbon-constrained world.

Currently the amount of energy innovation in Canada, the amount of money, is tiny by many measures of global standards. And it's completely unfocused. Money is dribbled across almost every imaginable energy technology, from tidal to whatnot, with no sense of strategy or focus.

I served with Angus Bruneau on the Bruneau commission a couple of years ago, which tried to make this very clear. I think the central challenge we face is to, first of all, be serious about the long-run challenge of reducing carbon emissions, but also to think about how to do that in a way that provides jobs, and high-quality jobs, for Canadians. That means thinking hard about a limited number of strategic choices we make about clean energy.

So for example, government after government has failed to deal with what we're actually going to do with AECL, and I don't see any sense that people understand the actual way the nuclear industry is working

and the actual strategic choices we face. The same is true for many other technologies. We have a focus on bringing small amounts of wind power into Canada, but no understanding of the industrial implications of who actually owns and controls the major wind power industry. Some much more clear-headed thinking about the intersection of industrial policy and the need to decarbonize is needed.

[Translation]



**Mr. Roger Pomerleau:**

Thank you very much.

Do I have time for one other question? Yes, then it would be for Mr. Dyer.

Sir, just like the company we heard from this morning you are urging us to engage in a public debate on a number of issues, to think about the cars we are building, the way in which we build, or plan our cities, etc. That is what this company was telling us we needed to do. You would agree.

If this public debate does not occur immediately, what do you suggest we do in the meantime?

[English]



**The Chair:**

Mr. Dyer, go ahead.



**Mr. Simon Dyer:**

Thank you.

Obviously there is a need for a broad-scale discussion on a national energy and environmental strategy. But in the absence of that, we need to make steps to address the carbon we're putting into the atmosphere. Canada still has no federal greenhouse gas regulations. Despite what you heard from our industry speakers this morning, the oil sands emissions continue to grow. That growth will continue until we have regulations in place that drive the kind of innovation we need to see. It's naive to expect technological innovation without the regulations to drive things.

I would say that greenhouse gases are the international issue of importance. But as an Albertan, I think we shouldn't ignore some of the regional issues around air, land, and water. I take a slightly more pessimistic view than Dr. Keith on that. There are some serious problems on the ground that affect the quality of life and long-term liability for Albertans and Canadians. Clearly, in our report *Duty Calls*, we outline the key areas where we would like to see the federal government involved.

**Mr. Roger Pomerleau:** *Merci.*

 (1245)



**The Chair:**

*Merci, monsieur Pomerleau.*

Mr. Cullen, you have up to five minutes. Go ahead, please.



**Mr. Nathan Cullen:**

Thank you, Chair.

Thank you to the witnesses.

It's interesting to see the beginning of a "consensus", if that's the right word, about the need for this discussion at a national level around energy security, which, from your testimony today, includes the ideas

of not just production of energy but also the environment and the economy writ large.

The question I have, very specific to you, Mr. Dyer, first, is that we just heard testimony from the energy groups that a 40% increase is expected and we have to expect it as a reality. We're going to need 40% more of this stuff. Then in your testimony today, you said the IEA itself says that scenario leads us to a six-degree rise in temperature globally.

Is that correct? Am I hearing you right?



**Mr. Simon Dyer:**

Yes, that's correct. The IEA makes it very clear that their baseline scenario is not considered the desirable scenario and shouldn't be considered a forecast. So it is extremely irresponsible to say that the world needs a 40% increase in energy when, clearly, the IEA says governments can bring many policies in place to not need that.

The difference in numbers between the do-nothing scenario and actually introducing progressive energy policies is 20 million barrels a day. That's the difference in oil consumption for the world.



**Mr. Nathan Cullen:**

To Mr. Core just for a second, one of the elements of an energy security discussion is around environmental security as well, and you represent landowners. I believe you sent around to members of this committee your access to information request. Is that right?



**Mr. David Core:**

Yes.



**Mr. Nathan Cullen:**

So this was a request to the regulator, the National Energy Board, which, when we raised concerns about what I think you called "a conflicting and competing" role they take on, the government tends to get on their hind legs and argue they're a fantastic regulator and they're excellent.

In this ATIP request you have here, I note that there are 343 blank pages.



**Mr. David Core:**

That's right.



**Mr. Nathan Cullen:**

How is it the public, the landowners whom you represent, are meant to feel confident in a regulator that, when you ask for information, sends you hundreds upon hundreds of pages of nothing?



**Mr. David Core:**

I think it made us feel very insecure that the regulator is impartial and transparent. We wanted to know who was in the room when regulations were created and developed that imposed certain aspects of responsibility and liability on us.



**Mr. Nathan Cullen:**

So that was your request--just to understand who was involved in the process of passing liability from abandoned pipelines onto landowners. That's the security question you were looking for?



**Mr. David Core:**

That's right.



**Mr. Nathan Cullen:**

And what you got back was...?

**Mr. David Core:**

Three hundred blank pages.

**Mr. Nathan Cullen:**

Three hundred blank pages.

Dr. Keith, you talked about climate security. Even though we have some decades, this is always worrisome to those of us trying to affect policy, because it can put off decisions till later. How is Canada doing right now in addressing the question of climate security in terms of government policy and government investment in the non-carbon-emitting sources of energy? How does Canada rate against the others in the OECD, for example?

**The Chair:**

Professor.

**Dr. David Keith:**

It's doing very well. Overall, I'd say that over the last decade--or more--the Canadian parliaments have pretty much failed to grapple with this issue seriously. Nevertheless, some work has been done.

It's easy to imagine that the Europeans are doing much better, but in fact they're still building coal-fired power plants. In some cases there's more talk than action there as well.

But I think we need to focus on what we should do, and there's no question that we could do enormously more than we're doing, both in terms of strategic investments in clean energy and in terms of transparent regulations.

I'd say one crucial thing. Our job in this generation on this topic is both to begin to make cuts and to begin to do what economists call price discovery, trying to understand what things really cost, because most of the big cuts are going to happen after our generation. To do that, we need transparent policies that as much as possible have governments set a clear price and get out of the way.

We have the opposite of that. We have a myriad of little independent policies that incent wind here, and biomass there, and carbon capture and sequestration here, in a way that is utterly non-transparent.

So if 15 years from now our children look at what happened, they will find it extremely difficult to figure out what the real cost-effectiveness of different measures were. I think if you care about and believe in the power of free market solutions to problems--that doesn't mean the free market runs unfettered, because it doesn't do that in anything in modern democracies--then that means we should do something that looks a lot like a clean carbon tax or a clean cap and trade and get out of the way.

Right now we have a series of policies that make it essentially impossible to understand the fact that putting solar on rooftops in Ontario costs more \$1,000 a tonne of carbon, whereas putting wind power in Alberta maybe costs \$200, and we have so many complicated incentives we have no way to see that signal through the noise.

**The Chair:**

Thank you.

Thank you, Mr. Cullen.

Mr. Anderson, you have up to five minutes.

**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

I would like to build on that last comment.

We did some work here, a couple of years ago, on some of the alternative energy forms. We had someone from Germany on a video conference talking about their feed-in tariff program. I think one of the things we discovered from that is if we want to do something like that, we're going to have to look at a 400% or 500% or 600% increase in utility costs to the average Canadian. I'd say that's pretty much impractical.

Do you have any comments on that? Everywhere we look, these things are possible to do, it's just that the consumer is going to have to pay a massive cost to do them, and most people do not seem to be willing to do that when they're unsure of what they're hearing in terms of the science and those kinds of things.

**The Chair:**

Professor Keith.

**Dr. David Keith:**

Thanks.

I would take issue with two things there.

It's certainly true that what the Germans did was extraordinarily expensive and produced little obvious benefit. There were literally tens of billions spent developing solar PV technologies in Germany, which had a minuscule impact on actually cutting emissions.

By many measures, that was an extraordinarily ineffective way even to get to cheap solar. Many observers of global energy innovation regard that German program as a real failure. Indeed, of course, Germany and other places are now backing off.

But it is not true to say, simply not remotely true by any kind of estimate from major EPC firms or major energy companies, that you would have to increase the cost to consumers by factors of anything like four.

The costs of decarbonizing the electricity supply, if you did it in a cost-effective and simple way, are...increase the busbar costs by less than a factor of two, and that means increasing the cost to consumers by something more like 20% or 30%. If you do that slowly over 20 or 30 years, that effect is quite small. It's in the order of 1% of GDP, comparable to the kinds of costs we incurred from the U.S. Clean Air Act, which had benefits that enormously exceeded costs.

So if we focused on things that were actually cost-effective in a simple way, it is simply not true that we need to make enormous, unaffordable increases in the cost of energy to solve this problem.

**Mr. David Anderson:**

I think I need to take issue with that, because in the testimony we've heard it's been consistent that the consequences of these programs are a massive increase at the consumer level.

Just to reflect on what you said about Germany backing away from what it's been doing, we have tried as a government to avoid some of the mistakes that have been made by other governments. I think that—

**The Chair:**

You have a point of order, Madame Brunelle.

[*Translation*]

**Ms. Paule Brunelle:**

I am sorry to interrupt this discussion, Mr. Chairman, but we must vote on a motion. The meeting ends at 1:00 p.m. and I must leave as I will be speaking in the House.

If the mover is in agreement, can we postpone the discussion on the amendment to Tuesday?

[English]



**The Chair:**

Mr. Anderson just has two minutes left in his questioning. We'll get right to the motion. Hopefully we can deal with it without a lot of discussion.

Let's go back to Mr. Anderson.

Just complete your questioning, please.



**Mr. David Anderson:**

I just wanted to make the comment that we've tried to avoid some of the mistakes that other countries have made. In our biofuels programs, for example, we've tried to avoid the mistakes that the Americans have made with their two or three different runs at the biofuels industry. It's been very expensive for their treasury.

I guess I'm interested to hear you say that Germany shied away from this, because they were was presenting this as something that was very successful at the time, when we heard about it.

I want to go back to another question. From your content, from what you've presented today, you basically have to express opposition to all carbon-based energy in order to be consistent with what you've said today. Is that your position, that carbon-based energy is the problem? That seems to be what you've said here. It's not just the oil sands; you say it doesn't matter what the technology is, it's not going to help.

Is that your position, Dr. Keith, that we need to be opposed to carbon-based energy in all forms?




**Dr. David Keith:**

I don't think it's a matter of position; it's a matter of basic physics and conservation of mass. We cannot put gigatonnes of carbon in the atmosphere and expect a stable climate, period.

You could still use carbon-based fuels if you put the carbon back in the ground, with carbon capture and storage. It's not clear that we have to do this immediately. There are hard value trade-offs about how much we value our grandkids versus ourselves. There's no simple answer about what to do.

But the statement that we can't keep transferring carbon from deep underground, the geosphere, to the biosphere is not a matter of opinion, it's just a matter of fact. It's a fact that's uncomfortable and a lot of us like to avoid, and the industry spends money trying to confuse, but it's a fact nonetheless.

 (1255)



**Mr. David Anderson:**

We may agree or disagree on that.

So you're a strong advocate, then, of carbon capture and storage, are you?



**Dr. David Keith:**

I don't see myself as an advocate particularly. It's one of the potentially important technologies. It is one of the few technologies that, with coal-fired power, allows you to produce gigawatt-scale, dispatchable electricity—that means it's on when you want it and is not variable—low-carbon electricity.



Both it and nuclear power are quite important, because industrial societies need dispatchable gigawatt-scale power. If you throw both of them out, it gets a lot harder to solve the problem.

But, you know, we can do without any single one of these technologies. What we need is some clear action.



**Mr. David Anderson:**

Just quickly then, how do you see nuclear development coming forward? Do you see that in terms of the large-scale reactors we've had in the past, or the smaller units that are put in a number of locations? How do you see nuclear energy developing in the future?



**The Chair:**

Make it a very brief answer, please.



**Dr. David Keith:**

I think it's going to be dominated by China. China is rapidly standardizing on the Westinghouse AP1000 reactor, and they are focused very seriously.

I think it's time for, say, Canada to wake up and think about what's happening globally and look around a little bit.



**The Chair:**

Thank you

Thank you very much, Mr. Anderson.

Thank you to all the witnesses today. We appreciate very much your input into our study.

We still have some business do in camera. We hopefully will deal with it quickly.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 35

Tuesday, November 30, 2010

The Standing Committee on Natural Resources met *in camera* by teleconference at 11:06 a.m. this day, in Room 7-52 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Christian Ouellet for Roger Pomerleau and Dave Van Kesteren for Richard M. Harris.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Syncrude:* Marcel R. Coutu, Chairman. *Environmental Defence:* Gillian McEachern, Program Manager, Climate and Energy. *Alberta Federation of Labour:* Gil McGowan, President.

The Committee proceeded to the consideration of matters related to Committee business.

It was agreed, — That the Committee hold at least one meeting to examine: the decision of the Canadian Nuclear Safety Commission (CNSC) concerning the proposed shipment of 1600 tonnes of radioactive steam generators by Bruce Power, the broader policy framework governing import and export of radioactive waste from Canadian territory, transport of radioactive waste through the Great Lakes and the St. Lawrence River, and "recycling" of radioactive metal for free release into the marketplace; that the Committee invite to testify, among others: Canadian Nuclear Safety Commission President Michael Binder, representatives of Bruce Power, Mayor Gaëtan Ruest of Amqui Quebec, David Ullrich of the Great Lakes and St. Lawrence Cities Initiative, Grand Council Chief Patrick Madahbe, Union of Ontario Indians, and Gordon Edwards of the Canadian Coalition for Nuclear Responsibility; and that the Committee report its findings to the House of Commons.

At 11:31 a.m., the sitting was suspended.

At 11:34, the Committee proceeded to sit in public.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

The witnesses made statements and answered questions.

At 1:01 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/12/01 10:26 a.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources








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-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*




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

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-  *The Chair*
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 *Mr. Mike Allen*  
 *Ms. Gillian McEachern*



*Mr. Mike Allen*

**1300**



*The Chair*



*Ms. Gillian McEachern*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 035

1

3rd SESSION

1

40th PARLIAMENT


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## EVIDENCE

Tuesday, November 30, 2010

*[Recorded by Electronic Apparatus]*

\* \* \*

 (1135)*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Order.

We continue our study on energy security in Canada.

We have three witnesses today, one by teleconference—not video conference, so you won't see the witness. That gentleman is from Syncrude, and it's Marcel Coutu, chairman of Syncrude.

We have with us at the table today, from Environmental Defence, Gillian McEachern, program manager for climate and energy; and from the Alberta Federation of Labour, Gil McGowan, president. Welcome.

We will go in the order we have the witnesses listed on the agenda, starting with, from Syncrude, Marcel Coutu.

Welcome, sir. Go ahead and make your presentation.

**Mr. Marcel R. Coutu (Chairman, Syncrude):**

Thank you, and good morning, Mr. Chairman and members of the committee. I appreciate the opportunity to present my views regarding your study of energy security in Canada, and specifically the role of oil sands. I regret that I can't be there in person but am glad to appear by teleconference.

Canadian Oil Sands is the largest owner in the Syncrude joint venture, which is an oil sands mining project. Syncrude is one of the pioneers in the oil sands industry and has been operating in the region for more than 30 years. Syncrude currently has the capacity to produce 350,000 barrels a day of light sweet crude oil.

To begin, I'm going to assume that this committee appreciates the size of this resource, the potential importance to North American energy security, and the positive economic benefits to both Canada and the U.S. These are well-known, cited points put forth by many people, including me. Most people now recognize that the oil sands are large and are economically vital, particularly in today's economy. Oil sands represent 97% of our oil reserves in Canada and currently over 50% of our production.

Without them, Canada's oil production would be in decline and our country would be a net importer, purchasing oil largely from countries that do not demonstrate the same environmental stewardship, social responsibility, or sharing of economic benefit. There's no doubt that the oil sands can and do contribute to Canadian energy security. I believe the question before you is, should they?

First, we must address the use of oil. There is a small but vocal group that believes, for various environmental and social reasons, that the world needs to move away from oil altogether. While this is not practical, in my view, it is a valid viewpoint.

To bring some realism to this question, we must consider the global energy landscape. The International Energy Agency estimates that global energy demand will increase between 36% and 47% over the period out to 2035. This is driven primarily by population growth and expansion of economies of developing countries. This hard and inescapable reality requires us to further develop all forms of energy. Not only do we need to drastically increase renewable energy sources; we need a concerted effort to expand our supplies of fossil fuels. As part of an honest discussion, let's disabuse ourselves of the notion put forth by oil critics that it is one or the other. The fact is, we need all sources of energy, and in growing amounts.

All sources of energy need to be developed responsibly, and we should acknowledge that all energy development, including renewables, has consequences, both environmental and economic. Most people do not appreciate that oil, natural gas, and coal make up about 80% of today's global energy; further, even in a relatively conservative scenario they will contribute 70% to 80% of total global energy needs by 2035. Meanwhile, the world's known oil production is declining at a rate of at least 7% on average, and producing regions are struggling to maintain oil production, let alone try to grow it.

Turning specifically to oil sands development, we fully recognize that our industry has an impact on the environment and local communities. We recognize that our future success depends on our continued ability to show improvement in our environmental and social performance.

The Canadian Association of Petroleum Producers has appeared before this committee on behalf of the broader industry and has followed up with supporting information. With that in mind, I'd like to review some Syncrude specific successes and challenges.

Like the broader industry, Syncrude has a solid track record of improving both its operational and its environmental and social performance. On land, Syncrude has reclaimed 22% of its disturbed land, planted over five million trees, and become the first oil sands operator to receive government certification for a reclaimed area, known as Gateway Hill.

The Alberta government's 2010 Directive 074 has sent challenging requirements that drastically speed up the timeline for reclaiming tailings ponds. Syncrude is responding with a suite of new technologies, such as centrifuging, for managing current tailings and perhaps reducing the need for future ponds. Industry continues to explore these technological opportunities and to share these best practices among themselves.

Syncrude is also pioneering a new initiative to establish newly created wetlands as part of its reclamation efforts. On air, Syncrude's greenhouse gas emissions arise from the use of energy, most notably natural gas in the production of crude oil. Since 1982, however, Syncrude has reduced its energy use per barrel by 39%.

 (1140)

Syncrude has also reduced sulphur dioxide emissions per barrel by about 60% since the early 1980s. Furthermore, in 2011 Syncrude will complete construction of a \$1.6-billion sulphur emissions reduction plant, which will contribute another 60% reduction in sulphur dioxide emissions from the current approved levels and reduce, on top of that, particulate matter by 50%, despite increasing production rates.

Concerning water, Syncrude recycles 85% of the water it uses, with the remainder being lost to evaporation. Syncrude has reduced the water intensity of its process by more than half from its levels in 1980. Syncrude and other companies continue to research new extraction methods that do not require water.

Concerning community, Syncrude is one of the largest employers of aboriginal people in Canada, if not the largest; they represent 8% of our workforce. In addition, since 1992 Syncrude has conducted over \$1.2 billion of business with local aboriginal companies, and Syncrude has donated over \$18 million to community projects since 2005.

We also recognize that we need to do more. Syncrude has the only dedicated research and development facility in the oil sands industry and currently spends more than \$50 million a year on research and development. It pioneered many of the industry's technologies to improve operations and environmental impacts. We will continue to invest heavily in new technologies to reduce the environmental impact of our operation. This commitment has been part of Syncrude for more than 30 years, and history has shown us that innovation holds the key to improved performance.

We need to ensure that the measurement and monitoring systems are effective and transparent and continually improving, and we need to continue to communicate with our stakeholders and stand up to the agenda-driven critics who mislead them with incomplete information. In addition, Canadian Oil Sands is contributing to the ongoing discussions regarding a Canadian energy strategy based on economy-wide solutions that focus equally on industry and consumers, on energy supply and energy demand.

Governments also have a role to play. It includes ensuring a continuing world-class regulatory system and standing up for Canada's record as a steward of the environment. They need to increase investment in technology, expand markets within the U.S. and offshore, and ensure fiscal and regulatory competitiveness

necessary to attract capital and human talent.

Finally, I'd like to close by affirming my belief that the oil sands can and should contribute to Canadian energy security. In fact, it is our greatest opportunity. A lot of rhetoric surrounding energy and the environment focuses on the need to wean North America off oil and convert to renewables. As I said, development of renewables is important; I believe in it. But crude oil, specifically the oil sands, can act as a bridge to a future in which renewables play a much larger role. Given that over the coming decades, again, 70% to 80% of global energy needs will be met using coal, natural gas, and oil, Canada has the opportunity and indeed the responsibility to both provide that source of energy and to do it responsibly.

Crude oil will continue to play a critical role in the global economy, and Canada is indeed very fortunate to have the oil sands. Make no mistake, it is a national treasure.

Mr. Chairman and members of the committee, thank you for your time. I'm available to try to answer any questions you might have.



#### **The Chair:**

Thank you, Mr. Coutu.

We go now to a presentation of up to seven minutes from Environmental Defence, Gillian McEachern, program manager, climate and energy.

Go ahead, please, Ms. McEachern.



(1145)



#### **Ms. Gillian McEachern (Program Manager, Climate and Energy, Environmental Defence):**

Thank you.

Thank you for inviting me here today to speak.

My name is Gillian McEachern. I manage the climate and energy program for Environmental Defence. We are a national non-profit organization. We work on a range of issues, including climate and energy, toxics, and land use, among others.

We were asked to present on energy security, and specifically as it relates to the federal government's role in the tar sands. According to the International Energy Agency, the definition of energy security is the uninterrupted physical availability of energy at a price that is affordable, while respecting environmental concerns. So according to the IEA, energy security inherently means addressing the environmental and economic issues with energy production and consumption.

We would argue that in addition to addressing the local environmental impacts of energy production, any definition of energy security needs to also include climate security. A federal plan to address energy security needs to address the risk posed by climate change. There is no such thing as energy security in a catastrophic climate change scenario; therefore, our working definition of energy security includes climate security and dealing with the economic and environmental impacts of energy production.

The environmental risks of the tar sands are growing, and these risks are not contained to the local region where the production occurs. It includes the Northwest Territories, the Pacific coast, and important watersheds in the United States.

I understand that my colleague, Simon Dyer, was here last week presenting from the Pembina Institute concerning a report that we jointly produced called *Duty Calls*, which clearly outlines the area of federal jurisdiction as it relates to tar sands. I won't repeat much of what he said. We would echo his statements regarding the climate impacts of planned tar sands expansion--how, even with an optimistic role for carbon capture and storage, the planned expansion will blow the current government's carbon budget and force other sectors to do more than their fair share.

Today I'm going to focus in more detail on two areas from that report: first the risk of a major tailings spill, and second the economic implications of our current unspoken energy policy—rapidly escalating tar sands production and export.

The massive toxic tailings lakes in northern Alberta pose a threat to human health, the environment, and the economy, given the risk of a breach of one of the dams that holds the toxic waste back from the nearby rivers. Currently nearly one billion cubic meters of toxic tailings are contained in these lakes. They now cover more than a 130-kilometre square, an area larger than the size of the city of Vancouver.

The tailings contain chemicals harmful to humans and aquatic organisms, including naphthenic acids, polycyclic aromatic hydrocarbons, heavy metals, and arsenic. The contaminated material is held back by unlined earthen dams reaching as high as 300 feet. Worldwide, tailings dams are ten times more likely to fail than other types of dams, and there have already been problems with some tar sands tailings dams.

Given the proximity of the ponds to down-river Saskatchewan and the Northwest Territories, a major spill would have trans-boundary impacts as tar sands tailings entered the Athabasca River and made their way into the Athabasca delta, which is a world heritage site and an important nesting ground for migratory birds from across the continent. It would impact the Mackenzie River basin, which drains about one-fifth of Canada's water supply and is the traditional homeland for dozens of aboriginal communities.

Yet despite this potential risk, the federal government currently has no emergency response plan to deal with a catastrophic spill and is mostly hands-off in terms of dam safety to prevent a spill from ever happening. The Alberta government says that companies have emergency response plans for tailings dam failures, but none of these is open to public scrutiny to allow independent assessment of how effective they would be in the event of a dam breach.

We've seen tailings dams like these fail, with devastating consequences: most recently in Hungary, a couple of years ago in Tennessee. Until the federal government takes responsibility to prevent this type of catastrophe, the legacy of tar sands production is creating a serious risk to the security of people living downstream of the tar sands.

The potential for a major spill, of course, is in addition to the ongoing spill happening in the tar sands. An estimated 11 million litres of tailings is leaking from the ponds every day.

It's hard to call this a secure source of energy, given these risks.

Now I'm going to turn to some of the economic impacts associated with tar sands. The tar sands industry is undoubtedly providing economic benefits in the form of jobs and government revenues; that's not disputed. But what we rarely hear much discussion about is some of the negative economic implications of rising oil exports on other parts of the Canadian economy. So far there's been no robust federal discussion, analysis, and response to deal with this.

 (1150)

Jeff Rubin, the former head of CIBC World Markets, recently asked whether Canada can afford Alberta's tar sands, citing the extent to which Canada's dollar has become a petro-currency. Increasing oil prices and tar sands production will continue to strengthen the Canadian dollar, which when coupled with a continued sluggish economy in the U.S. will have an impact on other sectors in the Canadian economy, most notably manufacturing.

If the tar sands play an increasingly large role in the Canadian economy, we're at risk of succumbing to what is known as Dutch disease, in which increased exploitation of natural resources impacts the nation's currency, thereby making export of other products more expensive. In fact there's evidence already that Canada is suffering from some of the symptoms of Dutch disease. A study published last year by Serge Coulombe at the University of Ottawa found that between 2002 and 2007, 42% of manufacturing job loss in Canada due to rising currency had been the result of Dutch disease stemming from oil exports. The majority of this impact is felt in Ontario and Quebec, the regions where the sectors hardest hit by Dutch disease are located.

As Dan Trefler, a research chair in competitiveness and prosperity at the Rotman School of Management, recently put it,

Canada has regressed. It is time to step back and ask ourselves whether this is what we want. The choice is ours: Sit back while world commodity demand drowns us in our own tailings, or react aggressively and strategically.

Norway, which is the world's third-largest exporter of oil, provides an example of a country that has acted aggressively and strategically in response to a resource boom. Norway set up the government pension fund, which is now worth more than \$400 billion. It invests the vast majority of oil wealth

overseas to avoid driving up the value of the currency, and only 4% of oil wealth is spent every year. Norway's GDP per capita is nearly double that of Canada's. The manufacturing sector is thriving. They have among the highest disposable incomes in the world. And when the oil runs out there will be a very large trust fund to help map out an energy future for them.

It's the role of the federal government to look at these impacts, both positive and negative, and come up with some type of plan that is fair for all regions of the country. So far that has not happened.

In Canada we're still feeling the hangover effects of the National Energy Program, which is now decades past. It's prevented us from planning our energy future. In the absence of a plan or policy to map out energy security in Canada, we've put all our eggs in one basket: tar sands growth. The federal government is allowing tar sands production to rapidly expand, granting approvals for new mines and projects. It is also permitting massive new infrastructure to ship tar sands to consumers, and some of these new pipelines will also ship jobs out of the country.

In light of the looming federal decisions about whether to approve these new mines and pipelines or allow oil tankers off the north coast of B.C., it's time to step back and map out our energy future rather than locking ourselves into decades of expanded fossil fuel production at a time when other countries are recognizing the need to transition off oil to clean energy. We need to decide what pace and scale of tar sands development makes sense.

In terms of the small group of people advocating to get off oil, which was referred to by the previous witness, that small group of people happens to include the President of the United States, the Intergovernmental Panel on Climate Change, and many other countries around the world.

Thank you.



#### **The Chair:**

Thank you for your presentation, Ms. McEachern.

We now go to our final witness for today's meeting, Gil McGowan, president of the Alberta Federation of Labour.

Please go ahead, for a presentation of up to seven minutes.



#### **Mr. Gil McGowan (President, Alberta Federation of Labour):**

Thank you, Mr. Chair and members of the committee.

As president of the Alberta Federation of Labour, I represent many of the Albertans who for the past decade have found themselves at the heart of an economic juggernaut centred around the oil sands. For example, we represent thousands of manufacturing workers who produce the pipes and build the modules that are the building blocks of oil sands projects. We represent thousands of transportation workers who move these building blocks by rail and truck to remote locations in the northern part of our province. We represent thousands of iron workers, welders, electricians, and other construction workers who put the pieces together, in what is becoming one of the biggest industrial projects the world has ever seen. We also represent thousands of plant operators and maintenance people who keep many of the new and existing facilities running. We represent thousands of public sector workers in areas such as health care, education, and municipalities whose work is funded, at least in part, by the proceeds of resource development. Finally, we represent thousands of retail and service sector workers who benefit from spinoffs from the energy sector.

From a distance, the economic edifice that we've created in Alberta looks extremely impressive. Our unemployment rates are low. Our GDP per capita is 75% higher than the Canadian average, and our average wages are 30% higher than the rest of the country's. But as is often the case with things that look good from a distance, when you look at them more closely, cracks become evident. As Alberta workers, or the members of our federation, have taken a closer look, we've seen some troubling cracks.

In my presentation today I'd like to talk about some of these cracks. Given the time constraints, I'll focus my remarks on three areas: first, value-added jobs; second, royalties; and third, a grab bag of other issues that I've put under the heading of unintended consequences. I'll wrap up with a brief discussion of our proposed solutions and some ways forward.

When it comes to jobs in the oil sands, our big concern as a federation is that Canada in general and Alberta in particular are in the process of losing an historic opportunity to move up the value ladder. Up until very recently, more than two-thirds of all the bitumen produced in Alberta was upgraded in the province, meaning it was either transformed into synthetic crude or refined into higher-value products such as gasoline, diesel, or jet fuel. In the process, thousands of high-paying, family-sustaining, community-sustaining jobs were created among upgraders and refineries in places such as Fort McMurray, Fort Saskatchewan, and Edmonton.

To give you a sense of just how many jobs were created, consider the examples of Alberta's two original oil sands producers, Suncor and Syncrude. Both have mines and upgraders in the Fort McMurray area that employ about 5,000 people each in direct operations, and thousands more in ongoing maintenance contracts and other spinoffs. But over the past few years the traditional ratio of value-added upgrading to unprocessed raw exports has begun to slip. According to figures and projections recently released by Alberta's Energy Resources Conservation Board, the proportion of bitumen upgraded in Canada has already fallen from about 70% to 63%, and is projected to fall to 48% by 2019.

This, unfortunately, is exactly what we at the AFL predicted would happen when we appeared before the National Energy Board five times over the past four years to oppose the construction of massive new bitumen export pipelines. It's also what we predicted a year and a half ago, when we published a study called *Lost down the Pipeline*, which I'll make available to members of the committee. In that study, we identified 10 refineries in the U.S. that were being retooled to handle bitumen from the oil sands, with a combined refining capacity of 2.8 million barrels per day. We also pointed out that the NEB had approved two major bitumen pipelines to the U.S., particularly the Keystone pipeline and the Alberta Clipper pipeline, which have a combined capacity to export 1.4 million barrels per day of raw bitumen from Alberta to refineries in the U.S. We also identified six other planned pipelines, which together have the capacity to export 2.3 million barrels of raw bitumen across the border each day.

The size and number of these American refineries and the size and number of the American-bound pipelines is significant, because it means that the U.S. refineries will have the capacity to absorb all expected increases in Alberta's oil sands production over the next ten years, and likely beyond. In other words, we warned then and continue to warn now that if left to themselves, energy companies may decide they don't need any new Alberta-based upgraders, even after the global economy recovers and international prices for oil rebound.



That in fact is exactly the scenario that we see playing out in Alberta today. Almost all of the upgraded projects that had been on the books before the recession have either been mothballed or abandoned altogether, even though prices for oil have recovered and investment in the oil sands is starting to ramp up again.

Of the approximately 250,000 barrels per day in new production that came onstream in 2009, almost all of it is being exported from Alberta in raw form. Even stalwarts like Suncor and Syncrude, who traditionally have upgraded all of their bitumen in Alberta, are starting to export increasing amounts of raw bitumen.

Another example I draw your attention to from today's news, on the front page of the business section in the *Globe and Mail*, is a story about Husky Energy making a decision to invest another billion dollars in the Alberta oil sands. It's important to note that the project that is discussed in this article, the Sunrise project, will be an extraction-only project, and that Husky will be sending all of the bitumen produced from that mine to two refineries that they've bought in the Ohio area.

Without more Alberta-based upgrading, Canada will lose thousands of good jobs in upgrading and refining and associated petrochemical production. Thousands of jobs in plant maintenance and other spinoffs will also be lost. Instead of creating long-term value-added jobs in places like Fort McMurray, Fort Saskatchewan, or Edmonton, those jobs will be shipped down the pipeline to places like Ohio and Illinois. Once the Keystone XL pipeline is complete, many of those jobs will be sent to places like Texas, Mississippi, and Alabama. That's the first big crack in Alberta's economic edifice, and from our perspective it's opening to become a big chasm.

The second crack that I'd like to talk about has to do with royalties. The starting point for this discussion is a reminder about who owns Alberta's energy resources. It's not the energy companies. It's not the pipeline companies. Despite all their talk about continental energy strategies, it's not the American government. Instead, our energy resources are owned by the Canadian public. And in the case of Alberta's

oil, gas, and oil sands resources, they're owned by Albertans. Royalties aren't a price we pay. Royalties are the price we as owners charge energy companies to develop and sell the resources. This is an important point. Royalties are not a tax. They're a price, a price we receive for selling something we own, and which energy companies pay for something they need to run their businesses.

It's also important to note that royalties are only paid after the company using the resource has paid off its costs and taken a normal profit of roughly 10%. Everything earned over and above these amounts is what we call resource rent. The problem we're experiencing in Alberta is that our provincial government has been, from our perspective, lax in collecting the rents that are owed to them as owners of resources.

In that regard, I'll draw the committee's attention to a recent study produced by the Parkland Institute, which is housed in the faculty of arts at the University of Alberta. In the study entitled "Misplaced Generosity", which was released last week, the Parkland Institute demonstrates that despite having a stated target of collecting between 50% and 70% of resource rents from the energy sector, the Alberta government has consistently failed to meet those targets.

As an average over the last ten years, they haven't even met the lower range of that target. So, on average, over the last ten years the Alberta government has collected only 47% of available resource rents. The result is that they have forgone literally billions of dollars in revenue that could have been taken in by the government on behalf of the citizens who own the resource and been made available either for savings or to spend on valuable public services. Those figures refer to the energy industry as a whole.

The situation is even worse when it comes to the oil sands. On average, over the last ten years the Alberta government has collected only 14.6% of available resource rents.

I see that I'm being asked to wrap up, so I'm just going to skip over the unintended consequences—I would encourage the committee to ask me a little bit about that when it comes time for questions—and talk about solutions. In particular, I want to present two suggestions and pose a question.

 (1200)

From our perspective, the first solution that should be considered by both provincial and federal governments is to begin negotiation on the establishment of a national energy plan. We are one of the few energy-producing jurisdictions in the world that doesn't have an overarching energy plan to deal with things like job creation, building industries, environmental impacts of development, and creating opportunities for green energy. As a result of this lack of a plan, decisions are being made, but they're not being made by elected people like yourselves who are accountable to the public; instead, the decisions are being made by industry. I would submit to you that what's good for the industry may not be good—and in many cases it is not good—for the public.

The second suggestion we have, which relates to the first, is that in order to build an energy policy that supports the public interest, governments at the provincial and federal levels should get over their reluctance to consider a more interventionist approach to the oil sands. In particular, I think the Alberta government and the federal government should learn lessons that were learned by the previous Alberta government of Peter Lougheed. He built a petrochemical industry in Alberta where none had existed before explicitly by using the levers of economic public policy to create the conditions for investment.

The final thing I want to do is to ask a question. Given the track record of the Alberta government on these issues, can that government be left on its own to make decisions that obviously have impacts not only on the province of Alberta, but across the country? We're a small economy, with a small population, and I would argue that in many ways our provincial government has become captive of the industry; it cannot by itself make decisions about the development of the resource in the broader public interest.

I'll wrap up there, and I'd be happy to answer questions.

 (1205)



#### **The Chair:**

Thank you all very much for your presentations.

We'll go now to questions and comments.



I do want to point out that Marcel Coutu, from Syncrude, can only be here until 12:30. So if you'd like to ask him questions, maybe think about doing that in the first round.

We'll go to questioning, starting with Mr. Andrews, for up to seven minutes.

Go ahead, please.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you, Mr. Chair.

And thank you to our witnesses for coming in today.

I'll address my first question to Mr. Coutu.

Early in your statement you said that without developing the oil sands we'd have to import our oil. Considering we're doing a study on our energy security, I'm wondering if you could elaborate on that point a bit more. You referenced some numbers there--that if we do not develop we would have to import from other countries. I think you're probably the first witness so far to make reference to our own energy security, so I wonder if you could elaborate on that a little.



**Mr. Marcel R. Coutu:**

I certainly can, and I'm going to give you some round numbers. Canada produces somewhere around 3 million barrels a day of crude oil, a little bit more when you start to include natural gas liquid. We export between 1.5 million barrels and 2 million barrels a day of oil.

The oil sands industry produces about 1.5 million barrels a day and Canada consumes about 1.5 million, so if you do the math, it leaves you short in Canada by up to 500,000 barrels a day. These are very round numbers, but I can say that I think we have crossed the threshold of being able to supply Canadian demand with only our conventional production. Conventional production by itself is not enough to supply Canada. It is in decline, and it has been for about five years now.

Without the oil sands, we're a net importer. That's a clear data point.



**Mr. Scott Andrews:**

Thank you.

My next question is for Gillian.

Gillian, you mentioned the toxic tailing ponds. Has there ever been an incident with the tailing ponds breaking their dams in Canada?



**Ms. Gillian McEachern:**

There has been an example with one of Suncor's ponds. There was a breach in the dam wall; it's been fixed since then. Worldwide, the type of dam that's used for tailings is ten times more likely to fail than a conventional hydro dam, let's say, so in general they are a risk.

The example I mentioned of the failure in Tennessee two years ago was a coal ash dike. Coal ash is one of the wastes they have in the U.S. from coal-fired power production. Its construction was quite similar to the tar sands tailings ponds, where it built up over time—higher and higher. One of the walls failed, and toxic sludge ran into the Emory River.



**Mr. Scott Andrews:**

In Canada we haven't had a major breach of a tailings pond.



(1210)



**Ms. Gillian McEachern:**

We have not yet.

**Mr. Scott Andrews:**

You said there are problems with these ponds in Canada. If we haven't had a breach, where do you see the problems being?

**Ms. Gillian McEachern:**

There have been reports. I can direct you towards a study that the Pembina Institute did that dug up engineers' reports from some of the existing tailings ponds that cited concerns about weaknesses in their walls.

**Mr. Scott Andrews:**

My next questions are to Gil, just a little further conversation about refining in Canada.

You mentioned that your organization has done a number of reports over the years saying that Canada has not lived up to refining its own natural resources. How do we encourage companies to do more refining here? How do we get to the crux of the problem of why we aren't refining more within Canada?

**Mr. Gil McGowan:**

Well, I think it boils down to a philosophical decision made by the Alberta government. In the past, previous conservative governments in Alberta, in particular the government of Peter Lougheed, have used a mix of regulation and even in some cases public ownership to promote value-added production in the energy sector.

More recent Alberta governments have basically left decisions about investment to the market. The market is deciding, and they're deciding to build their upgrading facilities south of the border for a couple of reasons, first because it's cheaper for them in some cases to simply retool existing refineries in places like the American Midwest and the gulf coast, which are major petrochemical hubs in the States, rather than building new facilities here. The decisions are also being driven in that direction by the push for the development of pipelines. So up until recently, pipeline capacity, especially for exporting raw bitumen, was more limited, but as a result of recent approvals by the National Energy Board we now have what we would describe as bitumen superhighways taking resources.

This interest among American companies to have a continental strategy and to build in the States, together with the fact that we've basically built piping that allows them to bring the bitumen there, has provided an incentive for companies to ship across the border.

Our position is that while it may make all sorts of sense for individual companies to do their upgrading and refining in the States, that doesn't necessarily make that decision something that's in the public interest of Canadians or that should be supported here.

I think we should learn lessons from the Lougheed era in particular. There's a very close parallel, actually, between what happened in the 1970s with natural gas and petrochemicals and what's happening now with bitumen. Back then the concern that faced the new Lougheed government when it first assumed power was that natural gas was being exported in its raw form, and what they called natural gas liquids, in particular ethane, were being shipped south and being used as a feedstock for petrochemicals and plastics and that kind of thing. So the plants in eastern Canada and the United States were getting all the jobs and value from this.

Peter Lougheed and his government decided that wasn't in the interest of the broader Alberta public, so he used a mix of regulation and public investment to change the situation. For example, the Alberta Energy Company, which was eventually privatized to become Encana, was a public company created by the Alberta government to take this valuable ethane and turn it into petrochemicals. So they created a multi-billion-dollar industry that hadn't existed there before.

The short answer to your question is that what we need is a willingness to consider an active role for government that's not currently being considered, so we need regulation and public control. Otherwise the market will continue doing what the market has been doing, which is exporting literally thousands and

thousands of value-added jobs down the pipeline.



**The Chair:**

Thank you, Mr. McGowan.

Thank you, Mr. Andrews.

We go now to the Bloc Québécois and Madame Brunelle for up to seven minutes.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chair.

Good afternoon, Mr. Coutu.

We often hear about the disastrous effects that oil sands production has on the environment, on fauna—



[English]



**The Chair:**

Madame Brunelle, could you just wait a few seconds while we get some earpieces in place for our witnesses?

[Translation]



**Ms. Paule Brunelle:**

Very well.

[English]



**The Chair:**

Continue, please.

[Translation]



**Ms. Paule Brunelle:**

Mr. Coutu, more and more, we see—

[English]



**Mr. Marcel R. Coutu:**

I did not hear Ms. Brunelle's comments. I heard the first two sentences, and then it went silent. I'm happy to comment on some of the questions that have been raised, but to Ms. Brunelle, you'll have to repeat what you said.



**The Chair:**

She's starting over, and will continue now.



**Mr. Marcel R. Coutu:**

All right. I'll listen, but I'll jump in if I can't hear.



**The Chair:**

Okay.

[*Translation*]



**Ms. Paule Brunelle:**

Mr. Coutu, more and more, we hear how detrimental oil sands production is to the environment. It affects fauna, forestry and so forth. I went to Alberta at the end of the summer. One report talked about high levels of refuse metals and toxins in the Athabasca River.

What is your response to that? Does Syncrude plan to respond, to do anything about that? Have you improved your processes or practices?

[*English*]



**The Chair:**

Mr. Coutu.



**Mr. Marcel R. Coutu:**

Thank you for your question.

My understanding of your question is that it's with respect to the impact on the biodiversity of forests and fauna, etc., and also about what is in the river's water chemistry and what processes we use.

We do open-pit mining, so we do strip all of the forests. We preserve all of the topsoil. We do our mining operations. When they are complete, we replace that topsoil and replant the trees. This process takes anywhere from 20 to 40 years. We have proven that we can do it. As I mentioned earlier, we've been in business long enough, for 30 years, to have fully reclaimed and returned re-certified land to the province. So I think that cycle works quite well.

To your other question, about river toxicity, remember that the river cuts through the Athabasca formation of oil sands. So the oil sands formation actually intersects the river, and has ever since the river started cutting through this region many millennia ago. So the toxicity level is a reflection of the riverbed, if you will, and we have no impact on that. The oil sands mining industry does not return any processed water whatsoever to the river. There are some sanitation water returns that happen, but that's the same as any municipality: it's treated water. But all the processed water is contained in our tailings ponds and we recycle it in our process. So we do not affect any of the river's chemistry and we only extract, on average, 1% of the river's flow.

I think our processes are fairly well proven. They are under strict scrutiny by the Alberta government and are monitored by two independent water panels.

While I'm at it, if I could, Mr. Chairman, I'll comment on a couple of other questions relating to water. To my knowledge, there have been no breaches of earth-filled dams at Syncrude or elsewhere, and if there have been, they've probably been very minor, which is why I've never heard of them. I've been in this business over ten years. The dams are closely monitored by geo-technical experts, both within industry and by outside third-party independents. We have wells drilled around all these tailings ponds so that we can monitor any flow through the ground. Through these wells and through interceptor ditches, we collect any leakage that comes from these dams and pump it back into the tailings ponds. So that water is maintained and continues to be recycled. Of course, as it evaporates it returns to the atmosphere quite cleanly that way.

In the long term, which Suncor has proved up, these tailings ponds do get filled with sand and sediment and are finally topped off with topsoil and reclaimed as well.

I'll perhaps leave my comment on that, but I'd be happy to comment on upgraders, if you like, as well as on creating wealth for the future from these vast operations.

  (1220)

[*Translation*]

**Ms. Paule Brunelle:**

Thank you, Mr. Coutu.

Ms. McEachern, you raised a number of interesting points, including the economic impact of oil sands production. That is something we do not hear a lot about. The oil sands have led to a strong dollar, which in turn has led to a drop in exports, so it is harder and hard to export goods. In Quebec, as in Ontario, many manufacturing companies have shut down. You said we need an energy plan that works for the entire country. I think that is a very good point.

In this committee, we study energy security, but we never talk about energy savings. We want to ensure the country's energy security, but why is there so little focus on saving energy? We do not talk much about clean energy, renewable energy. Should we expect a national energy plan such as the one you described to include both of the elements I just mentioned?

[*English*]

**Ms. Gillian McEachern:**

Yes, I think addressing the economic impacts and implications of our energy security is absolutely a role for this committee and any type of national energy strategy or discussion. We see provinces like Ontario and Quebec investing heavily in the transition to cleaner energy sources—getting off coal in Ontario, and Quebec of course has hydro power—and creating jobs in that process, thereby receiving some economic benefit for it.

I think until we have a national-level discussion and debate about how to deal with some of the negative impacts of increased tar sands production, it's hard for us to come to a true national energy strategy. We need to figure out how to look at examples like Norway, how to adapt to that, and then have an honest discussion about the pace and scale of energy development in Canada, particularly fossil fuels, in light of the need to address climate change.

There is one issue related to regional fairness that I didn't bring up in my earlier remarks. As we trek toward a federal system to reduce global warming pollution, to reduce greenhouse gases, we have a set target for the country. In theory, we have a hard limit on greenhouse gas emissions. If one sector continues to grow quite rapidly, what that risks doing is squeezing other sectors of the economy into a smaller and smaller piece of the carbon budget. Some in the oil industry, including Mr. Coutu, on a tour to Ontario last year, think that's okay and should be allowed. But from the perspective of an aluminum plant in Quebec or the forestry industry in Ontario, it probably isn't that palatable.

Should one sector be allowed to grow and squeeze everyone else into greater reductions as a result? Or do we need to actually set some absolute limits on polluting industries like the tar sands?

**The Chair:**

Thank you, Ms. McEachern. We're out of time.

Before I go to Mr. Cullen, Mr. Coutu, we have two more questioners of about seven minutes each. If it would be possible for you to stay just a few minutes beyond 12:30, that would be much appreciated.

**Mr. Marcel R. Coutu:**

Mr. Chairman, I'm happy to extend my stay here, so I would appreciate dealing with those as soon as we can.



**The Chair:**

Mr. Cullen, up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thank you, Mr. Chair.

Mr. Coutu, as you see, our time together is brief, so I'll keep my questions brief, if you could as well with your answers as much as possible.

There's been a call from various sectors of the Canadian economy for a national energy security strategy--or at the very least, a discussion. Would Syncrude be opposed to such a conversation?



**Mr. Marcel R. Coutu:**

No. In fact, I would think folks should recognize that we've been one of the proponents to entertain a national energy strategy of sorts, so that all of us can do a bit better planning with respect to the development of the oil sands.



**Mr. Nathan Cullen:**

Thank you.

Some of the elements that are commonly referenced when talking about energy security is that a country needs an affordable, safe, and sustainable energy future. Are those the three key elements that you would also consider in this conversation?



**Mr. Marcel R. Coutu:**

I think we need the energy security for ourselves. But remember, when it comes to crude oil, it is a global market. You should not act unilaterally as a country, because all you'll do is isolate the economics you create with whatever subsidies or other policies you might bring to bear. So you always have to deal with oil from an open, free-market type of perspective.

I'll remind you as well that we are tied to doing this with the United States in our free trade agreement. We do not have the ability to subsidize this business, or withhold exports, etc. So the approach needs to be global.



**Mr. Nathan Cullen:**

Sure, that's appreciated.

Can you understand Mr. McGowan's concerns about the export of raw bitumen and the associated export of jobs? To review the numbers, we're going from 70% upgrading in Canada to a proposed 48% by 2019 if the planned pipelines proceed. I know you're not a pipeline company, but I'm sure you're a proud Canadian and Albertan, and the idea of having more than half of the material upgraded and value-added abroad is probably troubling for you.



**Mr. Marcel R. Coutu:**

I not only understand Mr. McGowan's concerns, I sympathize with him. I am as Canadian as the next guy, and I would very much like to see more of any product that we make here being upgraded in Canada.

The unfortunate economic reality we're facing is that some of the existing upgrading capacity in the U.S. is being freed up. I understand that some of it has been built as an adjunct to existing refineries, which

means it can be done a lot less expensively in those locations. But some of it has become freed up for no money, in large part because other heavy crudes from Venezuela, Mexico, and even the Middle East have reduced their volumes to the U.S., making all this upgrading capacity available at a very low cost, and bidding up the price of competing for this feedstock from Canada.

That has made building upgrading capacity here from grassroots extremely uneconomical and very expensive, and that disadvantage has been compounded by the fact that labour rates, which probably make up half of the cost of doing anything, are much more expensive in Canada than in the U.S.



**Mr. Nathan Cullen:**

Let me get to that.



**Mr. Marcel R. Coutu:**

Well, let me finish.

For this reason, you will not get a single person with an economic mind to invest in upgrading capacity. The only way you could do it is by subsidizing it with government money, and this subsidy would be like burning money. That is what I would suggest to you at this point.



**Mr. Nathan Cullen:**

In your presentation, Mr. Coutu, you talked about the economic vitality and importance of the tar sands and what they bring to Canada, but in the same breath you said that economic realities would lessen that impact over the years.

Mr. McGowan, Mr. Coutu says it's simply the law of economics that because cheaper upgrader capacity has been made available south of the border, we must continue to allow more raw bitumen to leave Alberta, and consequently more jobs to leave Alberta. Is there a place for the federal and provincial governments to say we must seek, as Mr. Lougheed did, to create wealth for Canada from Canadian resources?



**Mr. Gil McGowan:**

I don't think Canadians should throw up their hands and say that the decisions have been made by market forces. At the end of the day, from our perspective, it's a choice made by our leaders. It's unfortunate that this choice has been made more difficult by the fact that the Alberta government and the federal government, through the National Energy Board, have approved the construction of these very large bitumen super-pipelines that connect Alberta to these refineries that are looking for new feedstock. If that decision had not been made, if those approvals had not been granted, we would have been in a better position to upgrade here.

In fact, the Alberta government knew that by building these pipelines they would actually be undermining their own competitive advantage. Before the construction of the Keystone pipeline and the Alberta Clipper pipeline, their own economists were telling them that one of the great competitive advantages Alberta had was that its refineries had access to relatively cheap feedstock in the form of bitumen. Bitumen was sort of a stranded resource. It needed more refining than traditional crudes. The result was that it was cheaper. We could have used that cheap resource to feed our refineries and create a more expansive refining industry, but we undermined that competitive advantage by building these pipelines.

Having said that, that has happened already. So what we're left with now is a choice. The only choice is some form of export restriction, which is exactly what Peter Lougheed did in his day. He basically said that in the case of natural gas, natural gas by-products, especially ethane, would have to be made available to Canadian companies for value-added production, and they couldn't be exported until all Canadian demand had been satisfied.

 (1230)



**Mr. Nathan Cullen:**

Let me get a question to Ms. McEachern before we run out of time here.

We talked about tailings ponds. The question was whether any of the dams had ever failed. Every company has to submit an emergency response plan. Are you aware of whether Syncrude or other companies have made public their emergency response plans in case of failure of any of their dams?

**The Chair:**

You have ten seconds to answer, Ms. McEachern.

**Ms. Gillian McEachern:**

No, they have not. People have asked Alberta and the companies, and they have refused.

**The Chair:**

Thank you.

Thank you, Mr. Cullen.

We go now to Mr. Shory, for up to seven minutes.

**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair, and thank you to the witnesses for coming out this afternoon.

I'm swamped with all the numbers, Mr. Chair. There are so many conflicting views here. On the one hand, we are studying energy security here. I believe we all understand that the requirement for energy will increase globally in the coming days. Mr. Coutu made a comment that all forms of energy should be developed responsibly. It seems, from his presentation, that the oil sands sector is improving technology consistently and is working in a responsible manner.

I have a couple of questions for Mr. Coutu. He mentioned one word. He said that the oil sands industry is economically vital, not only for Alberta but for Canada as well. First, I would like you, Mr. Coutu, to elaborate on that.

I'll ask another question after that. Basically, what I need from you is whether the industry's development has any impact on Canadian jobs or Alberta jobs. And how does it affect jobs directly or indirectly?

**The Chair:**

Go ahead, Mr. Coutu.

**Mr. Marcel R. Coutu:**

I'll give you an overarching statistic that is current. The Canadian Energy Research Institute published a report less than a year ago. That report said that over the next 25 years, the oil sands industry will provide \$1.7 trillion to the Canadian economy. That is a tremendous amount if you string all those zeros out. But I can translate that into the number of jobs, and those are jobs across the country. That translates to 500,000 jobs for Canadian workers, and those would be spread across the provinces. I won't go into the numbers by province. Obviously most would be in Alberta, but quite a significant number would be in the east as well, including in Ontario and Quebec.

**Mr. Devinder Shory:**

On these jobs, I heard the representative from the Alberta Federation of Labour. Mr. McGowan mentioned that the total amount of bitumen being refined in Alberta has dropped from 70% to 63%. However, the actual quantity of bitumen being refined has increased. In my opinion, the drop in overall refining does not necessarily indicate a real loss of jobs in Alberta.



So in this regard, Mr. Coutu, can you please comment on what the expansion of the oil sands means in terms of job gains for my province of Alberta and for Canada at large as well?

  (1235)

**The Chair:**

Mr. Coutu.

**Mr. Marcel R. Coutu:**

I'm not sure I have your question right, but the gist of your point is that although less bitumen on a percentage basis is being upgraded here--you are correct--more bitumen has been upgraded. In fact, I'll just comment about Syncrude. Syncrude, which is the largest mining project, does not sell a single barrel of bitumen. We upgrade every single barrel that we sell. Suncor is very close to that kind of status, as is Canadian Natural, as is Shell. So the mining projects, by and large, upgrade most of their production; and when I say most, it's 90% or more, and some of those are very new projects. So it has increased on an absolute-barrel basis.

So as bitumen has increased its flow into the U.S. and into U.S. upgraders, we have not lost any jobs in the province. In fact, all of the production that has been growing has increased jobs in general.

What I would agree with is that we certainly would have more jobs in Canada if there were more upgrading happening here, but I think the money you would spend to create those jobs would exceed the benefit of actually paying those workers. So I think the right economic decision is being made during this period of time when the differentials, the price for an upgraded barrel versus the price for bitumen--which is the real driver in this---are very close.

So there's not much profit to be made in upgrading, which is why people don't want to get into that business. If that differential changed and went back to historic levels, you would see upgraders built in Canada again in the future, and that's what really drives that economic choice.

**Mr. Devinder Shory:**

I have one more quick question.

Mr. Coutu, recently I have seen that oil sands operations have raised a number of environmental concerns, and I can see Ms. McEachern using tar sands instead of oil sands, even though on the other hand you said we are fortunate to have this wealth or treasure in Canada. The question is how does the industry plan to further reduce the total greenhouse gas emissions from oil sands operations?

**Mr. Marcel R. Coutu:**

Greenhouse gases are a tremendous challenge for all of us. I think, so that everybody's on the same page, greenhouse gases are created by the consumption of energy in any form. We consume primarily natural gas energy, and there is consumption of the off-gases from upgrading the fuel.

We continue to improve that ratio of consumption versus production of oil by applying new technologies and more capital investment. As an industry, we have reduced that greenhouse gas footprint by 40% in the last 20 years. I think that is three or four times better than the improvement in natural gas consumption or in carbon dioxide emissions or gas consumption by the automotive sector, which has been working to improve its gas mileage. So we're all in this together in terms of efficiency of energy and carbon dioxide production. We are spending probably more than any other industry and having greater improvements than any other industry, and we continue to do so.

**Mr. Devinder Shory:**

I'll throw this question out to everyone.

Last year, I believe it was, I heard some politicians suggesting or recommending that we should the stop the expansion of the oil sands totally. The question is--and anybody can answer this--would stopping

the expansion of oil sands help Canada in any manner whatsoever economically?



**Mr. Marcel R. Coutu:**

Stopping the oil sands in any rapid way would be extremely complicated, because there is a lot of capital that has been invested in the oil sands that has not yet come to fruition in terms of production.

It's like any contract. We have attracted capital to the country and capital continues to be invested. Production grows. If you were thinking about stopping the oil sands you would probably only start doing it 20 or 30 years from now if you want to honour the contracts that are in place.

Growth in the oil sands--I would put it to you this way--is not phenomenal growth. I think people quote a lot of numbers about production doubling within 10 or 15 years. I think that is a huge challenge. We will be fortunate if we're able to grow at the rate that we have grown historically.

And I think the growth continues to be more and more responsible. Growth on the mining side, which is the area that is the most focused, because visually it is not as appealing as the conventional drilling industry.... But the priority in growth over the next 20 to 30 years is going to be drilling, because 80% of the resource needs to be extracted by drilling technologies. We can no longer mine outside of the envelope that we're in today, because the reservoir is too deep and non-economic--

 (1240)



**The Chair:**

Mr. Coutu--



**Mr. Marcel R. Coutu:**

So I think we should let the mines play out and be very careful in watching how the drilling industry continues to exploit this resource as they have for years--



**The Chair:**

Mr. Coutu, I have to cut you off there. Mr. Shory's time is more than up.

I know you have to go. I just want to thank you very much for appearing by teleconference as a witness today. Thank you.



**Mr. Marcel R. Coutu:**

It was my pleasure. I'm happy to be here.

Goodbye to everybody.



**The Chair:**

We go now to the second round, and four minutes each is all we'll have time for.

We start with Mr. Tonks, and possibly Mr. Andrews if Mr. Tonks keeps his questions short.



**Mr. Alan Tonks (York South—Weston, Lib.):**

That's a challenge. Thank you, Mr. Chairman.

My question is directed at comments that Ms. McEachern made. We've been sort of under the illusion that the issue around the tailing ponds was one that was related to the leaching and the leaking into the water tables of those toxic chemicals that are in the ponds. Ms. McEachern talked about what happened in Hungary, and we all have that as a graphic illustration of what could happen. Is the suggestion that this is the scale, that there could be a disaster up in the area of the oil sands?

Second, is there the equivalent of a remedial action plan? It's on the heels of Mr. Cullen's questions. That is, a remedial action plan that could gauge what is being done, the analysis and nature of the danger, and a documented and chronological accountable plan that has to be submitted.



**Ms. Gillian McEachern:**

To answer your last question first, no, there isn't. But I'll step back a bit. The issue of leaching from the tailings ponds is definitely a big one, so I'm not discounting that. We took industry's own data, their estimates of how much is leaking out each day, to compile it, and it amounts to 11 million litres each day. That's based on industry's estimates. So that's a large concern.

As for the possibility for a breach, the volume of liquid that's held back by the dams in the tar sands tailings ponds is much greater than what we saw in Hungary. Right now, almost a billion cubic metres of toxic waste is being stored on the landscape in various ponds.

So I can't say what volume would get released, but some of these ponds are 300 feet deep, so it's a very large volume of liquid. Because we've seen similar types of dam structures fail in other parts of the world, we can't discount that this will never happen here. It would be foolish to.

The federal government has no emergency response plan. The Alberta government has no emergency response plan. It's downloaded to industry. They do not release those emergency response plans because they claim it's proprietary. So the public, the federal government, has no way to assess how prepared those individual companies are. That's the concern. The federal government has a clear role because of the potential for trans-boundary impacts and the Fisheries Act impacts.



**The Chair:**

Mr. Andrews, you have a minute and a bit.



**Mr. Scott Andrews:**

My question is to Mr. McGowan, on a related topic that hasn't come up here today.

We talk about representing the Alberta Federation of Labour. Where are we with training, lodging, expertise in the oil sands? Do we have a training gap? I know a lot of workers are working across the country in this, and I don't know if you want to touch on within Alberta. As a country, do we have skilled workers training in place in relation to the oil sands?



**The Chair:**

Mr. McGowan, go ahead.



**Mr. Gil McGowan:**

The best way to answer this question is in the context of an issue that hasn't been touched on but I think is central to the development of the oil sands, and that has to do with pace.

Until this point, projects have proceeded whenever the energy companies developing them have requested it. So they participate in a land sell, they make an application for development, and they're almost always approved. There's no regulation of pace or one after the other.

Our former premier Peter Lougheed suggested that to manage development both in terms of the environment and the economy, it might make better sense to approve only one major project at a time. That hasn't happened.

It's almost like those old Three Stooges movies where all the stooges get caught in the door because they're trying to go through at the same time.

 (1245)



**The Chair:**

Thank you, Mr. McGowan. I'm sorry.

Ms. Gallant, up to four minutes.

**Mr. Gil McGowan:**

I was getting to training. We can do it if we pace development. That's my point.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Thank you, Mr. Chairman.

I'll be sharing my time with Mr. Allen, if there's any time left.

I have the latest WikiLeaks. We might well call it a Wikipedia leak. According to Wikipedia, the word "tar" is used to describe natural bitumen deposits. The use of that word is a misnomer, since chemically speaking tar is a man-made substance produced by the destructive distillation of organic material, usually coal. Coal gas as a fuel has been almost completely replaced by natural gas. Coal tar, as a material for paving roads, has been replaced by the petroleum product asphalt. So naturally occurring bitumen is chemically more similar to asphalt than to tar, and the term "oil sands" is more commonly used in the producing areas than "tar sands" because synthetic oil is manufactured from the bitumen.

This is a serious committee. It's a standing committee in our nation's House of Commons. As such, we want to be accurate. So unless we're trying to make a juvenile slur, I would ask that we refer to the oil sands as such.

The witnesses mentioned they're not for profit. Through you, Mr. Chairman, I would like to know exactly where they get their funding from.

**The Chair:**

Starting with Ms. McEachern, where do you get your funding?

**Ms. Gillian McEachern:**

I would direct Ms. Gallant to our annual report on our website. I could send a link to the committee. It outlines our funders.

**The Chair:**

Mr. McGowan.

**Mr. Gil McGowan:**

Mr. Chair, our federation is funded by unions that voluntarily affiliate with our organization. There are 27 unions in both the public and private sectors representing about 140,000 Alberta workers. They pay dues to their unions, which in turn pay dues to us.

**Mrs. Cheryl Gallant:**

I really would like the witness for Environmental Defence to have on the record, to name, if she can, some of the sources of revenue for the non-profit organizations.

**Mr. Nathan Cullen:**

Point of order.

**The Chair:**

Excuse me, Ms. Gallant.

Point of order, Mr. Cullen.



**Mr. Nathan Cullen:**

I understand where Ms. Gallant is potentially going with this, and I don't doubt that Ms. McEachern can answer it, but I think it's an attempt to seek to undermine the credibility of a witness before the committee.



**The Chair:**

Mr. Cullen, that is a point of debate.



**Mr. Nathan Cullen:**

Hold on for a minute, Chair. This has come up before when we've attempted to understand the affiliation of different groups, and we've been ruled that the line of questioning hasn't been in order simply because today what we're trying to attempt is to get an energy security dialogue. If Ms. Gallant wants to go through the records of each of the witnesses—I know she didn't do that for Mr. Coutu and where his money comes from—I'm not sure this is a profitable path of discussion for the committee to try to—



**The Chair:**

Mr. Cullen, that's not a point of order.

Ms. Gallant, it's a legitimate question.

So could the witness answer the question, please?



**Ms. Gillian McEachern:**

As I mentioned, I can submit for the record our annual report, which lists our funders. I can throw out examples, but I don't see how useful that is right now.



**The Chair:**

Ms. Gallant.



**Mrs. Cheryl Gallant:**

Thank you, Mr. Chairman.

I would like to ensure that the list of funding sources is provided to all members of the committee. I haven't looked at the website. I genuinely don't know where the funding comes from. But I know that in the course of our studies, when different studies do arise—



[*Translation*]



**Hon. Denis Coderre (Bourassa, Lib.):**

Point of order.

[*English*]



**Mrs. Cheryl Gallant:**

—the allegation is made that—



**The Chair:**

A point of order by Mr. Coderre.

[*Translation*]

**Hon. Denis Coderre:**

I will say this in French, in order to keep myself in check.

It is totally unacceptable to use the committee as a venue to insult credible people who are here testifying in good faith. It is fine to ask about substance, but when it comes to form, that is something entirely different. When a member goes so far as to question the source of funding, implying that these people may have ulterior motives related to goodness knows what, I think it is incumbent upon the chair to stand up for the witnesses in question. They are here in good faith. Democracy, as I understand it, does not allow for that kind of questioning.

[*English*]

**The Chair:**

Thank you, Mr. Coderre. That was not a point of order.

Ms. Gallant, please continue with your questions.

**Mrs. Cheryl Gallant:**

When studies are referred to in this committee—

**Hon. Denis Coderre:**

Using money from the nuclear—

**The Chair:**

Order, please.

**Mrs. Cheryl Gallant:**

—the members always want to know if the oil companies have or have not funded all, or part, of these studies. So if it is good enough for one side of the argument to ask these questions, I believe it's fair for our side to ask these questions.

Thank you.

**The Chair:**

Thank you, Ms. Gallant.

We go now, for up to four minutes, to Monsieur Ouellet. Go ahead, please.

[*Translation*]

**Mr. Christian Ouellet (Brome—Missisquoi, BQ):**

Thank you, Mr. Chair.

I am delighted to see you again in this committee. The way I see it, not much has changed in two years. We still do not have an energy security plan. My question is for Mr. McGowan, but Ms. McEachern can also respond.

I do not think we need to adopt a Canada-wide strategy. It could be done on a regional basis. Regardless, do you think it would be possible to come up with an energy security plan based solely on market relations? In other words, we are trying to achieve energy security with oil because it has a high price tag, rather than focusing, as my colleague said, on energy efficiency. But that efficiency has to be accompanied by a reduction in our energy consumption.

In Quebec, last week, a scientist said that if Quebec were to take everything it does not use and artificially convert it into methane, the province could meet 60% of its artificial and natural gas needs.

Can you suggest any ideas for replacing oil? Instead of always coming back to tailing ponds, let's leave them be and stop using that resource. Can you tell us what other solutions a country like Canada could adopt as part of a well-balanced energy security plan?

[English]



**The Chair:**

Mr. McGowan, could you try to give an answer in a minute, so that Ms. McEachern has a chance as well?



**Mr. Gil McGowan:**

There was a lot there, but the part of the question I'd like to address has to do with the member asking me whether or not we can have an energy plan that's created, as opposed to one imposed by government. My answer is that we already have a de facto energy plan that is the result of market decisions, and it's not serving Canadians well. In fact, basically what they're saying, through their investments and efforts to lobby the Alberta government, is that we should develop the resource as quickly as possible and export as much of it as quickly as possible.

A real energy security strategy from our perspective would look at things like the environment, like jobs, like providing energy first to Canadians, and then, second, for export. That can't happen in a model that's purely driven by the market.



**The Chair:**

Thank you very much.

Ms. McEachern.



**Ms. Gillian McEachern:**

I'd agree with a lot of what Mr. McGowan said. I believe part of what you were making a point around is that we need to deal with energy efficiency as part of a real energy security strategy to reduce our overall use of energy.

From my perspective, a true energy security strategy would also be transitioning us to renewable sources of energy. Inherent in that is needing to address the need for jobs in the energy sector. Energy efficiency also creates jobs, as we saw with the hugely successful federal ecoENERGY retrofit for homes program, which was creating ten dollars of investment per dollar of federal funding for things like retrofitting windows and doors, etc.

Saving energy can create jobs as well, and that needs to be part of it.



**The Chair:**

Merci, Monsieur Ouellet.

We go finally to Mr. Allen, for up to four minutes, please.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you very much, Mr. Chair.

And thank you to the witnesses for coming.

Ms. McEachern, I want to follow up on the tailings pond leakage. Mr. Coutu indicated in his testimony that they were collecting all the leakage. Then you're indicating those were industry estimates—the 11 million litres per day.

When they gave that information to you, was there any indication from the industry with respect to that being collected? Mr. Coutu seemed to say it was being collected, and at the same time he also indicated in response to Mr. Andrews' question that we have not suffered a major breach in Canada.

**Ms. Gillian McEachern:**

Those numbers were based on industry estimates after they had accounted for what they collect, so that was their estimate of what gets through. It was a compilation of all the industry assessments of that from their environmental impact assessments.

**Mr. Mike Allen:**

I'm not going to put words in your mouth, but you're inferring that Mr. Coutu saying everything is getting collected, the only thing they were emitting out is really their potable water and other types of things, which will be treated almost like a municipal water system.... You're inferring that's not correct.

**Ms. Gillian McEachern:**

We compiled it for the entire industry, so I cannot provide Syncrude's specific numbers. But as an industry, each company estimates how much gets through after they take into account the pumps that pump the leaked water back into the tailings ponds. That's what our number was based on.

It is an issue of concern. Since they've created those impact assessments perhaps they've developed better technology to collect the water, but there are no numbers around that, which is part of the problem.

**Mr. Mike Allen:**

Okay, that's helpful.

Mr. Coutu was also talking about the transition from the open pits, which we've seen. We travelled to Fort McMurray and we saw that. But he said we're going to be drilling in the future to where 80% is going to be more on the in-situ side.

Have you done any studies with respect to the change in greenhouse gas emissions that would be coming because of that change?

**Ms. Gillian McEachern:**

Yes, the greenhouse gas emissions from in situ are higher than the open pit mines because they require more energy to pump the steam underground and extract the oil. So over time, the greenhouse gas intensity per barrel is projected to go up.

We hear a lot about the reduction in intensity over the last 20 years—Mr. Coutu referred to 40%—well, the key is it is per barrel. The absolute emissions have continued to rise. A large part of the reduction in emission intensity over the last 20 years was when the industry switched from burning coke to natural gas. That was a one-time shift in reduction, and since then it's flatlined.

**Mr. Mike Allen:**

Can you talk a bit about the future? We've heard a lot in this committee about shale gas, natural gas, and the resources we have, which are huge and all across the country. In fact in New Brunswick, my home province, we have an opportunity with shale gas that is developing now.



With regard to the International Energy Agency estimates, what are your thoughts on our usage going out to 2035? With that amount of natural gas, do you see that as potentially being a proxy, I guess, or a change in our use of standard oil and maybe our mining from the oil sands, as opposed to just going more to natural gas? Because the opportunity is there for natural gas fleet vehicles and that type of thing, as well.

Do you see those estimates being a bit fuzzy because of the amount of natural gas that could come onstream?

 (1300)



**The Chair:**

It should be a very short answer.



**Ms. Gillian McEachern:**

Yes, I think natural gas will definitely be an important transition fuel, but where we need to be tracking is to transition ourselves off fossil fuels over time. Obviously it's decades-long to do that. So natural gas will play an important role.

The IEA estimated that if the world actually acts to tackle climate change, tar sands expansion will not be nearly as great as some of the current industry projections.



**The Chair:**

Thank you.

Thank you, Mr. Allen, and thank you to our two witnesses who were with us here today: Gillian McEachern, program manager, climate and energy, from Environmental Defence; and from the Alberta Federation of Labour, Gil McGowan, president.

Thank you very much.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 36

Thursday, December 2, 2010

The Standing Committee on Natural Resources met by videoconference at 11:03 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Cheryl Gallant, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Linda Duncan for Nathan Cullen, Martha Hall Findlay for Alan Tonks and Jack Harris for Nathan Cullen.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Government of Alberta:* Ronald Liepert, Minister of Energy, Department of Energy. *As an individual:* Ben Parfitt. *Montreal Economic Institute:* Jasmin Guénette, Vice-President; Vincent Geloso, Economist. *Conservation Council of New Brunswick Inc.:* David Coon, Executive Director; Stephanie Merrill, Freshwater Protection Program Coordinator. *Atlantic Institute for Market Studies:* Barbara Pike, Vice-President.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Ronald Liepert, Ben Parfitt, by videoconference from Victoria, British Columbia, and Jasmin Guénette made statements and, with Vincent Geloso, answered questions.

At 12:08 p.m., the sitting was suspended.

At 12:11 p.m., the sitting resumed.

David Coon and Barbara Pike, by videoconference from Halifax, Nova Scotia, made statements and, with Stephanie Merrill, answered questions.

At 1:03 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/12/02 4:32 p.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources

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-  *Mr. Ronald Liepert*
-  *Mr. Alan Tonks*
-  *Mr. Ronald Liepert*
-  *Mr. Alan Tonks*
-  *The Chair*
-  *Hon. Denis Coderre (Bourassa, Lib.)*





**1130**

-  *Mr. Ronald Liepert*
-  *Hon. Denis Coderre*
-  *Mr. Ronald Liepert*
-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*
-  *Mr. Jasmin Guénette*





**1135**

-  *Mr. Vincent Geloso (Economist, Montreal Economic Institute)*
-  *Ms. Paule Brunelle*
-  *Mr. Jasmin Guénette*
-  *Ms. Paule Brunelle*
-  *Mr. Ben Parfitt*
-  *The Chair*
-  *Ms. Linda Duncan (Edmonton—Strathcona, NDP)*





**1140**

-  *Mr. Ronald Liepert*
-  *Ms. Linda Duncan*
-  *Mr. Ronald Liepert*
-  *Ms. Linda Duncan*
















**1145**

-  *Mr. Ronald Liepert*
-  *Ms. Linda Duncan*
-  *The Chair*
-  *Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC)*

**1150**

-  *The Chair*
-  *Hon. Denis Coderre*
-  *The Chair*
-  *Mrs. Cheryl Gallant*



**1155**

-  *The Chair*
-  *Mr. Ronald Liepert*
-  *Mrs. Cheryl Gallant*
-  *Mr. Ronald Liepert*
-  *The Chair*
-  *Hon. Denis Coderre*
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-  *Mr. Ronald Liepert*
-  *Hon. Denis Coderre*
-  *Mr. Ronald Liepert*
-  *The Chair*
-  *Mr. Devinder Shory (Calgary Northeast, CPC)*



**1200**

-  *The Chair*
-  *Mr. Jasmin Gu  nette*
-  *Mr. Vincent Geloso*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*
-  *Mr. Jasmin Gu  nette*
-  *Mr. Roger Pomerleau*
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-  *Mr. Roger Pomerleau*
-  *Mr. Jasmin Gu  nette*
-  *The Chair*
-  *Mr. Devinder Shory*

**1205**

-  *Mr. Ronald Liepert*
-  *The Chair*

**1210**

-  *The Chair*
-  *Mr. David Coon (Executive Director, Conservation Council of New Brunswick Inc.)*

**1215**

-  *The Chair*

**1220**

*Mr. David Coon*



*The Chair*



*Ms. Barbara Pike (Vice-President, Atlantic Institute for Market Studies)*

**1225**

*The Chair*



*Ms. Barbara Pike*

**1230**

*The Chair*



*Hon. Denis Coderre*



*Ms. Stephanie Merrill (Freshwater Protection Program Coordinator, Conservation Council of New Brunswick Inc.)*



*Hon. Denis Coderre*



*Ms. Stephanie Merrill*

**1235**

*Mr. Scott Andrews (Avalon, Lib.)*



*Ms. Barbara Pike*



*Mr. Scott Andrews*



*Ms. Barbara Pike*



*Mr. Scott Andrews*



*Ms. Barbara Pike*



*The Chair*



*Ms. Paule Brunelle*

**1240**

*Mr. David Coon*



*Ms. Stephanie Merrill*



*Ms. Paule Brunelle*



*The Chair*

**1245**

*Ms. Barbara Pike*



*The Chair*



*Ms. Paule Brunelle*



*The Chair*



*Mr. Jack Harris (St. John's East, NDP)*



*Mr. David Coon*



*Mr. Jack Harris*



*Mr. David Coon*



*Mr. Jack Harris*

## 1250



*The Chair*



*Ms. Barbara Pike*



*Mr. Jack Harris*



*Ms. Barbara Pike*



*The Chair*



*Mr. Mike Allen (Tobique—Mactaquac, CPC)*



*Mr. David Coon*



*Mr. Mike Allen*

## 1255



*Mr. David Coon*



*Mr. Mike Allen*



*Ms. Barbara Pike*



*Mr. Mike Allen*



*Ms. Barbara Pike*

## 1300



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 036

1

3rd SESSION

1

40th PARLIAMENT


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## EVIDENCE

Thursday, December 2, 2010

[Recorded by Electronic Apparatus]

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 (1105)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone.

We're here today to continue our study on energy security in Canada.

We have as witnesses today, from the Government of Alberta, the Honourable Ronald Liepert, Minister of Energy, Department of Energy. Welcome. By video conference from Victoria we have Ben Parfitt, appearing as an individual. Welcome. And from the Montreal Economic Institute, we have Jasmin Guénette, vice-president, and Vincent Geloso, economist.

That's our first panel for the first hour. We will have presentations in the order that you see them on the agenda.

We'll start with the Honourable Ronald Liepert, Minister of Energy from the Government of Alberta. You have up to seven minutes, sir.

Welcome, and please go ahead with your presentation.



**Mr. Ronald Liepert (Minister of Energy, Department of Energy, Government of Alberta):**

Thank you very much, Chairman Benoit.

And good morning, everyone.

I will try very hard to stay within the five- to seven-minute presentation time, but we're politicians. We'll do our best.

It is a welcome opportunity to appear before the committee today. The Government of Alberta has been undertaking an advocacy campaign for the past year relative to responsible energy development, especially as it relates to the oil sands in Alberta. I view this as another opportunity to ensure that Canadians better understand how important this resource is to the country.

The International Energy Agency expects the world's energy demand will increase by 40% over the next 20 years, and oil will remain the dominant fuel to meet that demand. There are 170 billion barrels of oil in the oil sands that are recoverable with today's technology. That accounts, however, for only one-tenth of the total reserves. And if we're even able to double those recoverable reserves—and I believe we will soon, through new technologies—Alberta would place well ahead of Saudi Arabia, the world leader today in total proven reserves.

One in every six Albertans owes his or her livelihood directly or indirectly to the energy sector. And it's not just Albertans who are benefiting. Tens of thousands of Canadian jobs across this great country are directly or indirectly tied to the success of our industry. There are some 28,000 workers who live in camps in northern Alberta, and more than half of them fly in and out every week or every two weeks from their homes east of the Manitoba-Ontario border. This industry requires billions of dollars in pumps, valves, motors, and other equipment that is manufactured in central Canada. So these jobs mean that Canadians are paying taxes to the federal and other provincial governments, not just to Alberta.

In 2009 Albertans paid an estimated \$40 billion to the federal government in taxes and other payments, while getting back less than half that amount, \$19 billion, in federal services. So that's a net contribution

of \$21 billion that is used to support federal programs outside of Alberta.

A healthy economy is also the means to drive high-tech environmental changes. It's only because we have a thriving economy that we can afford to fund research into renewable technologies. It's only because we have a thriving economy that we can fund a \$2 billion carbon capture and sequestration initiative to meet more stringent emission controls. And we're the only government in North America that places a CO<sub>2</sub> cap on large emitters. Companies that exceed the cap must pay into a fund, which now has collected almost \$200 million since it was created in 2007, and the proceeds are allocated to new environmental technologies.

Now over 3.5 million people choose to call Alberta home. They love their forests, rivers, and valleys and will not allow irresponsible resource development. Albertans care deeply about their environment, and they want their government to make that commitment as well. So ensuring responsible development of oil and gas is a provincial responsibility that we take very seriously. Albertans own the resources, they want them developed responsibly, and they will accept nothing less.

The Energy Resources Conservation Board is the province's regulator of oil and gas development, and it's recognized as a world leader. It is adaptable to changing circumstances to deal with new unconventional discoveries, such as oil sands, shale gas, and horizontal drilling.

While the National Energy Board has jurisdiction over such things as regulating cross-border transmission, the provincial agency ensures that our industry is in compliance. Environmental protection is a more shared responsibility, with provincial and federal regulators working closely together. A good example is in air quality, where the comprehensive air management system is developed by the Council of Ministers of the Environment and reflects shared responsibility for air quality in Canada.

Canadians can be assured that we have a clean, secure supply of energy. The federal minister and I, as co-chairs of next year's federal-provincial-territorial energy ministers' meeting, have committed to working toward a national clean energy strategy. This call has also come from other organizations, the most recent being the Canadian Council of Chief Executives.

So Alberta, in conjunction with Natural Resources Canada, will lead the coordination of this work toward a set of common goals and objectives that all governments in Canada can agree on, which will shape a clean energy strategy. This is another example of how we must all work together for a common goal. No one is served by political leaders not respecting each others' jurisdiction in our federation, and we can work together from a foundation of trust that only comes from respecting federal, provincial, and territorial authority. With this trust, we can build and enable the amazing diversity and strengths we have regarding energy right across our country.

In conclusion, I would like to invite your committee to visit Alberta and tour the oil sands. But I would say maybe wait until next spring.



### **The Chair:**

Thank you, Minister, for your presentation and for the invitation. We actually were going to visit this fall, and the kibosh was put on it for the fall. But I certainly hope that we will carry through in the spring on that. It's well worth the time.

We go to the second presenter now. By video conference, from Victoria, British Columbia, we have Ben Parfitt, as an individual.

Go ahead for between five and seven minutes, please, with your presentation.



### **Mr. Ben Parfitt (As an Individual):**

Thank you for having me. Good morning.

My name is Ben Parfitt, and I am a writer and researcher based in Victoria, British Columbia.

Recently, I authored a report for the program on water issues at the Munk School of Global Affairs, called "Fracture Lines: Will Canada's Water be Protected in the Rush to Develop Shale Gas?" The report was released in mid-October at a conference that officials from Natural Resources Canada, the natural gas industry, and professional hydrologists and geologists attended and at which they spoke. I am currently

researching a report for the B.C. office of the Canadian Centre for Policy Alternatives that will examine the increasing water demands and power needs in the province's expanding natural gas sector.

As all of you have heard, a significant increase in development of unconventional shale gas resources is under way in Canada and is at its forefront in British Columbia. The province offers a taste of what may be coming down the pipe, as it were, elsewhere in the country.

British Columbia, as you may know, has two major shale gas zones situated in the northeast of the province. The southern-most of those zones is known as the Montney basin. It is in proximity to the communities of Fort St. John and Dawson Creek. The Horn River basin is far to the north and is centred around the community of Fort Nelson.

Most people in the province live 1,000 or more kilometres away from these zones and have little understanding of the extent of industry activities, including industry water usage. I should add here that this is a very different situation from what may apply in the province of Quebec, as Utica shale in that province is developed.

Shale gas production is highly energy intensive, and much of its energy intensity is inextricably caught up in the use of water that is pumped underground in large volumes to fracture or create cracks in tightly bound shale formations. During my research, I obtained information from B.C.'s energy regulator, the B.C. Oil and Gas Commission, on water assignments to the natural gas industry. The information showed that as of April 2010, the OGC had issued energy companies approvals to divert water from 540 different points on creeks, rivers, lakes, and reservoirs in the northeast of the province. If the maximum volume of water assigned to energy companies under those permits were used in a single day, it would exceed by two times the daily water usage by all residents and businesses in Victoria combined. However, this only scratches the surface of what water is being used.

Companies such as Encana and Apache Canada now pump water from deep saline aquifers in the Horn River basin to complete their fracking operations. Others draw water from near-surface freshwater aquifers. Others obtain water from private landowners' wells or borrow pits, and still others are building massive borrow pits, some more than a half kilometre long by 200 metres wide by 13 metres deep, which are intended to infill naturally from near-surface waters in the surrounding muskeg.

Nowhere is information on all water assignments or water takings gathered into one place for the public, a situation common to other Canadian provinces. This is troubling, because these are early days yet for shale gas exploration and development. Yet we know that the industry is setting records for water usage. At just one well site, between January and April of this year, in the Two Island Lake area in the Horn River basin, roughly 900,000 cubic metres of fresh water was used to set a world record for fracking operations at a single multi-well pad. Requests for information that your committee has filed with Encana, will, moreover, I believe, show that the record has subsequently been broken in the Horn River basin.

As the committee may also know, the Peace River, its major tributaries, and many other waterways overlaying the Montney shale resource were in the midst of a drought zone this year. Yet evidence I have obtained from the Oil and Gas Commission shows that fracking companies received substantial increases in water-taking approvals from the energy regulator, despite record low water levels in the region.

It is important to note that the Peace River and its tributaries form part of a vast water system that crosses provincial and territorial boundaries and in which the federal government could and ought to be playing a role.

 (1110)

A great concern is that information made available to the general public by the Oil and Gas Commission has downplayed the industry's increasing needs for water, and on at least one occasion, the energy regulator has failed to disclose significant water withdrawals by fracking companies to a British Columbia first nation that formally requested information on water takings within its territory, which is covered by Treaty 8.

I would like to suggest that as shale gas exploration and development intensifies, there is a pressing need to ensure that both the federal and provincial governments act honourably with first nations, as is their legal duty. A key element to acting honourably is to disclose information, information that the provincial governments have or ought to have on water assignments and water withdrawals.

In interviews with professional geologists, hydrologists, and legal experts, I concluded that both the

information gathered on water assignments and the powers to issue water approvals ought properly to rest with provincial environmental regulators, not energy industry regulators, if the primary objective is to ensure safe, renewable supplies of water and sustainable water use. But do governments have all the information they ought to be reasonably expected to be able to provide?

In my "Fracture Lines" report, it is noted that Natural Resources Canada, through the geological survey, is in the midst of analyzing and characterizing 30 key aquifers, mostly in southern Canada, some of which overlay shale formations, but this work is well behind, as respected scientific bodies such as the Council of Canadian Academies has noted. This is why, in the "Fracture Lines" report, the first recommendation made is for the federal and provincial governments, in collaboration with the fracking industry, to immediately fund studies of all aquifers prior to shale gas exploration or sustained hydraulic fracturing.

I would be happy to answer questions about the other recommendations in that report that address other aspects of water usage and waste water treatment and disposal in the fracking industry. Thank you very much for the opportunity to speak with you today.

  (1115)



#### **The Chair:**

Thank you very much, Mr. Parfitt. We have one more group of witnesses before we go to questions. From the Montreal Economic Institute is Jasmin Gu nette, vice-president, who I understand will be making the presentation, and Vincent Geloso, economist.

Go ahead with your presentation for five to seven minutes.

[*Translation*]



#### **Mr. Jasmin Gu nette (Vice-President, Montreal Economic Institute):**

Thank you very much for inviting us, Mr. Chairman.

I would also like to thank my colleague Vincent for preparing this presentation with me. We will be pleased to answer any questions you may have.

I want to recall that the Montreal Economic Institute is an independent, and thus non-partisan, government policy research centre and that we receive no government funding.

What is required to ensure Canada's energy security is the development of our natural resources, both natural gas and oil. If that development is based on the principles of the market economy, private property and entrepreneurship, it will be possible for Canada to achieve sustainable economic growth.

The development of the natural gas industry is an excellent job and wealth creation opportunity for Canada. Canada is ideally placed to benefit from its resources as it is home to the Utica formation in Quebec and the Horton Bluff formation in the Maritimes as well as the Horn River, Montney and Colorado deposits in western Canada.

In Quebec, nearly 600 wells were drilled and developed between the 1960s and 1990. This means that the industry has acquired significant expertise, particularly in horizontal drilling. This gigantic potential must be developed further. Since 2007, 28 wells have been drilled in Quebec, including oil wells, representing nearly \$200 million in investments. Quebec's department of natural resources and wildlife estimates that 200 horizontal wells represent \$1 billion in investment, not to mention thousands of jobs and good prospects for corporate profits.

Economic potential potential on this scale cannot be summarily dismissed when assessing the costs and benefits involved in developing this resource. Of course, an attempt must be made to minimize the environmental risks for this kind of project. However, it is important to say that there is no such thing as zero risk. This is as true for energy development as it is for most human activities. Of course, it's not easy to strike an acceptable balance between risk and economic benefits, but that has to guide decision-makers' actions. If we allow ourselves to be paralyzed by development risks, we will in fact prevent all progress. One need only think of the automobile, airplanes and hydroelectric dams. All these things are now an integral part of our lives and well-being, and they necessarily involve a significant share of risk when they

are being developed.

It is also important to mention that natural gas development also has environmental benefits, since gas produces 31% less greenhouse gas emissions than residential fuel oil, for example, and nearly no atmospheric contaminants that are harmful to health. By developing gas, we will be able to reduce our emissions, and, if it is possible to develop these resources within our own borders, supply will only be more stable and secure.

Now, how should the resource be developed? In our view, development of our energy resources is clearly the best way to ensure greater energy security while promoting economic development.

There is a simple and legitimate way to ensure respect for individuals and businesses concerned in this development, and that is respect for private property. Respect for property presupposes that all orders of government refrain from adopting unwarranted barriers to free negotiation between the various players. There are two things: we must avoid granting excessive expropriation authority and, second, special regulations must not be used to block businesses wishing to negotiate with landowners, just as there must be no regulations preventing individuals from enjoying or using their property as they wish.

  (1120)

Whether it be the federal or provincial government or municipal governments, no one should intervene to compel or prohibit the development of shale gas. Authorities must simply allow free negotiations between businesses and landowners. Businesses wishing to develop this resource must have a right to negotiate for the purpose of compensating individuals for the use of their property, in whole or in part, whether it be to lease it or to purchase it. Individuals who are ready to negotiate with businesses must simply have a right to profit from their property in the manner they consider most profitable.

This kind of negotiation may be conducted on a one-to-one basis, obviously, among a number of parties or based on the bidding principle. Whatever the case may be, landowners and businesses must neither be compelled to work together nor prevented from doing so by legislation. Such negotiations based on the right to property, make it possible to assess the real costs of these undertakings more effectively, reduce the risk of conflict, permit healthy arbitration and help determine the best locations for this type of business and avoid the "not in my backyard" phenomenon.

I will conclude my presentation by saying that a property-rights-friendly approach can assist in the economic development of our resources, with the cooperation of all parties involved. Energy security inevitably depends on the development of our resources and on legislation that promotes economic exchange free of unwarranted obstacles.

Thank you very much.

[English]

**The Chair:**

Thank you, Monsieur Guénette.

We go now to questions. The first round goes to the official opposition, starting with Mr. Tonks. If there's time left, we'll go to Monsieur Coderre.

**Mr. Alan Tonks (York South—Weston, Lib.):**

And then we can bump down to--

**The Chair:**

If there's time left, which there won't be, we'll go to Mr. Andrews.

**Mr. Alan Tonks:**

Thank you very much, Mr. Chairman.

Thank you to our witnesses for being here. It's been very enlightening and we appreciate your presence.

Minister Liepert, I would like you to have an opportunity to explain, from your perspective, the success of what you described as, I guess, the cap on CO<sub>2</sub> in large emitters and how that's working in terms of the government being able to reinvest that in green technologies. That, in fact, would start to allay some of the fears that people have with respect to the accountable development of our resources.

As you are aware, there's a huge debate going on with respect to carbon taxing and cap and trade. The experience of the Province of Alberta would probably be very instructive in terms of where we're going with respect to that kind of a regime that we have in place.

  (1125)



**Mr. Ronald Liepert:**

As I said in my remarks, we're the only province that has a carbon tax right now. It's \$15 a tonne. The funds go into an arm's-length fund. We have what would be considered as a private sector board of directors that administers the fund. It's outside of government.

The fund has now reached almost \$200 million, and this entity seeks out proposals. There are terms of reference around what the proposals must look like, but they have to have an element of renewable and more environmentally friendly.... That committee then makes the decision on how to allocate those dollars.

The board is chaired by Eric Newell, the former CEO of Syncrude, who has a long history of working with the aboriginal community. I think it's going to work very well. As you can appreciate, it's in its infancy. I think the first allocations of dollars just took place this past spring. I do believe it's a model that other jurisdictions could look at.



**Mr. Alan Tonks:**

Thank you very much.

I have just one very short question. On Tuesday, we had testimony, and I can't remember it came from, but I just wanted to raise it. It's on the implications with respect to the tailings ponds in the oil sands. The testimony indicated that not only was there a leaching issue--obviously into the aquifer would be of concern--but also the possibility of a Hungary-type surge from those tailings ponds that could be very devastating.

The question was raised whether there was an accountable regime in place that could anticipate and look at that nature of environmental tragedy, if you will. Would you like to make a comment on that?



**Mr. Ronald Liepert:**

First of all, there are lots of implications. Implications don't necessarily always relate to fact.

A recent one was a national CBC report, which said there was leakage at the CNRL tailings pond. We strictly monitor that. Our regulator, whom I referred to, had been out monitoring two weeks prior. There was no indication that it was happening.

They went out after the report and checked it again. Our environment folks went out and checked it again. There was no breach. The federal environment ministry sent folks from Ottawa to the oil sands and they came back with the same conclusion.

There are lots of implications. I think it needs to be stated that when these projects are approved through the Energy Resources Conservation Board and the Department of the Environment, comprehensive plans are in place for disaster management, if you like.

Much of that is available through requests. As you can appreciate, it is not unlike your defence plan. There is certain proprietary information that needs to be kept....

I would say that overall we are very confident and very comfortable with the fact that many of these tailings ponds have now been in place for in excess of 30 years, in a couple of cases, and our track record

is pretty darn good.



**Mr. Alan Tonks:**

Thank you.



**The Chair:**

Mr. Coderre.



**Hon. Denis Coderre (Bourassa, Lib.):**

Mr. Chair, we probably have one thing in common. I am from Quebec; you're from Alberta. So we are rebels with a cause, and we are clearly respectful of jurisdiction.

Saying that, we have a common role to play. There's a convention between the Government of Canada and the Government of Alberta. I am pleased to say, as you know, I visited Fort McMurray, Edmonton, and Calgary to meet most of the stakeholders.

There are issues regarding monitoring. I spoke with one of your favourite stakeholders, David Schindler. There is an issue regarding the necessity, or not, of independent monitoring. I believe, like others, that it is a strategic resource, and we need to have a balance.

How would you perceive the role of the federal government vis-à-vis monitoring? Do you think we have a role to play, or are we only there to provide some expertise because we already have an agreement? From your own governance perspective, how would you see our role?



(1130)



**Mr. Ronald Liepert:**

At the end of the day, there is only one taxpayer. So if we're going to have duplicate efforts, I don't think that serves the taxpayer well.

I'm not being critical, but in your question you referenced independent monitoring. Although the Energy Resources Conservation Board reports through the Department of Energy, I can tell you it is very independent. We have very strict monitoring by environment officials, who, quite frankly, don't make a lot of friends in government.

I would say we have a very good track record on monitoring, relative to Dr. Schindler. He did a study. The results of his study relative to water were different from what our monitoring was showing us. With Dr. Schindler's input, we appointed a panel to start to verify the data that was being used both by Dr. Schindler and our monitoring panel. Whatever that scientific review comes forward with, we'll abide by.

Beyond the individual regulatory bodies, there is the opportunity to appoint special panels, as we just did.



**Hon. Denis Coderre:**

What do you expect from the federal panel?



**Mr. Ronald Liepert:**

I'm not entirely certain. I think the mandates are somewhat different. I think the timeframes are quite a bit different.

I know our environment department officials are working very closely with federal officials. At the end of the day, we all want the same thing to happen. The reality is that Albertans live in Alberta and drink the water. Albertans don't want unsafe water.

Much is at stake. We've got a lot more at stake than those who don't live in Alberta.



**The Chair:**

Merci, Monsieur Coderre. Your time is more than up. You may get another short round.

Madame Brunelle, go ahead for up to seven minutes.

[*Translation*]

**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chairman.

Good morning, gentlemen.

Mr. Guénette, you mentioned economic impact, investment and jobs, and I think that's appropriate. However, certainly in Quebec, public opinion is generally very much opposed to shale gas development. We're told there are environmental risks. I believe the situation is different from that of the rest of Canada, in particular because these are densely populated places and agricultural areas. So that represents some difficulty.

The Government of Quebec has no legislative framework covering that. It's as though business initiatives had caught us off guard. You talk about applying the rules with regard to respect for private property, about not granting too broad an expropriation framework and about permitting free negotiation between businesses and individuals.

I would like you to tell me two things. First, how can there be free negotiation between individuals and businesses, in view of the fact that the underground does not belong to the people who own the land? Second, do you believe the Government of Quebec has to adopt a legislative framework, at the very least, to manage even only the environmental measures designed to protect the public?

**Mr. Jasmin Guénette:**

You're right to say that the underground does not belong to owners, but there are surface rights. To drill a well, businesses have to reach the necessary agreements with the owners.

With regard to development, if we want to adopt a vision that respects the local villages and the communities affected, the most sensible option is to allow wealth creation, but also development consistent with the spirit of sustainable development. So we include the largest possible number of interested players in the discussions. In that way, we respect individual property, that is the landowners, regardless whether they own woodlots or farms. The underground does belong to the government, but the fact remains that the surface rights belong to the owners. Development isn't possible without the consent of the persons affected.

Would you like to add something, Vincent?

 (1135)

**Mr. Vincent Geloso (Economist, Montreal Economic Institute):**

Yes.

There is the question of surface rights, but some of the negotiation mechanisms involved are very simple. They are largely based on what has been developed in economics, particularly in the works of Leonid Hurwicz, who earned the Nobel prize for economics in 2007. Here I'm talking about the bidding mechanism. The promoter of a development may, for example, indicate which lands are of interest, meet with the owners and make an initial bid. If no owners are interested, a second, more generous bid is made, and so on until there is a taker. This method makes it possible to create a system for interested parties.

In addition, we see that, in the United States, when the implementation of a project disturbs the occupants of a neighbouring property, these exchanges are conducted and money is offered to compensate

individuals whose free use of their property is affected. So there are mechanisms of this kind that work.



**Ms. Paule Brunelle:**

My question was not about economic mechanisms. Yes, regulations can be implemented. You are in business, and you are used to doing it. Mr. Liepert told us that, with regard to the environment, there are rules and a legislative framework that had to be complied with. However, that seems to be lacking in Quebec.

Since you will clearly never be able to secure the Quebec public's consent to carry out your activities, don't you think we should adopt a stricter framework? That's the gist of my question.



**Mr. Jasmin Gu nette:**

Rules that are clear and known to everyone are desirable, precisely to permit more balanced, more equitable development, which includes the members of the community. Of course, if there is a little grey area and we aren't sure what we can do or not do, it's difficult to do business.

So, yes, it is desirable to adopt a legislative framework that is known to all players, whether they be businesses or individuals.



**Ms. Paule Brunelle:**

Thank you.

Good morning, Mr. Parfitt.

You tell us the situation in British Columbia is very different from that of Quebec. Can you tell us what those differences are? Are they extraction areas, ways of doing things? You also tell us that governments should fund studies on the fracturing industry. What should those studies be about?

[English]



**Mr. Ben Parfitt:**

The point I was trying to make about British Columbia being different from Quebec is that the shale resources that are being developed in British Columbia right now are in a remote region where the human population is quite small, compared to what could be happening in Quebec between Montreal and Quebec City and the lowlands, where there is obviously a much higher population and population density.

The second question you raised is a significant one. I believe we must see leadership on the part of the federal and provincial governments to ensure that we have a very good understanding of groundwater resources prior to gas exploration and development activities taking place.

I would say in this regard that if you go back to 2002, for example, the Canadian Council of Ministers of the Environment pointedly recommended that baseline hydrological investigations ought to be completed prior to unconventional gas drilling in order to recognize and track potential groundwater contamination. To date, I don't see any evidence of any province having honoured that critical recommendation.



**The Chair:**

Merci, Madam Brunelle.

We now go to the NDP, with Ms. Duncan, for up to seven minutes.



**Ms. Linda Duncan (Edmonton—Strathcona, NDP):**

Thank you, Mr. Chair.

Mr. Liepert, we have been hearing from a good number of delegations coming to Ottawa and seeking our support on open public dialogue in the Canadian energy strategy. I'm wondering if your government supports this call for an open public dialogue on the Canadian energy strategy towards a secure sustainable

supply in the interest of Canada.

  (1140)



**Mr. Ronald Liepert:**

My answer is very short: absolutely.

I attended my first ever federal-provincial-territorial energy ministers meeting last September in Montreal. I wasn't all that impressed with the content of it. I sat down with Minister Paradis and said that for our conference next year in Alberta we need to have a focus. It has to have a goal. There is a lot of call for a national energy strategy. We support that, so we have agreed that's going to be the focus of our conference next fall.

We're not going to get to a national energy strategy overnight, but I believe there are a number of common goals and objectives we can agree to across this country that can certainly lead us in the direction of getting to a national energy strategy. So we are absolutely supportive of it.



**Ms. Linda Duncan:**

Mr. Liepert, you spoke very glowingly about the regulatory agencies in Alberta. I'd have to agree with you. We have a long history, and the Alberta energy board has been stellar over time in providing opportunity for the public and impacted communities to have a say.

You're probably aware of the motion I tabled last May, which received the unanimous support of the House. It called for an independent review of the adequacy of federal environmental and safety regulation for unconventional oil and gas, which includes shale gas, deep offshore oil, and the oil sands.

Would you support the idea of a review, which could potentially not just engage the NEB, which is legally mandated to conduct such a review, but be in tandem with the regulatory agencies with respect to jurisdictions?



**Mr. Ronald Liepert:**

To some degree, that was one of the reasons why we felt it was important to appear before this committee. In some ways, it's my understanding that what this committee is considering here is an extension of that.

I go back to my first comments. There are clear jurisdictional responsibilities between provinces, territories, and the federal government; there are also overlapping jurisdictional responsibilities. I don't think anyone is served by reduplicative efforts. We have a very good working relationship with the federal Department of the Environment, as I mentioned, and there are a number of areas that we're working together on. The most recent one, as I said, was the review of the water.

I would like to see more specifics on exactly what might be referenced in the motion, but in Alberta, when it comes to shale gas, our Energy Resources Conservation Board, as I said, is adaptable. We have made some significant changes to accommodate the formations.

Fracturing has been around for a long time, especially in Alberta. It's just that we're talking, in shale, about different formations. I know that especially in Quebec, but to some degree in B.C., some of this work is new. I have made the offer to the minister, my counterpart in Quebec, that whatever help we can provide them with in developing the legislative framework they need and that they can learn from us, we're more than happy to cooperate on.

I guess it really comes down to what particular area you're referring to, but we have to be, in this country of ours, respectful of jurisdictional responsibilities.



**Ms. Linda Duncan:**

Alberta, after being persuaded by the wonderful departed and greatly missed Dr. Martha Kostuch, initiated a two-year very intensive review of the oil sands industry. It included the federal government, and it was completed, I believe, in about 2006. This natural resources committee did a review of the oil sands

industry in, I believe, 2007. My committee, the parliamentary Standing Committee on Environment and Sustainable Development, did a two-year review, and I and the Liberal Party issued reports.

My question to you is this. We've had review after review, report after report, and all the recommendations are the same: on filling gaps in monitoring and not leaving the discretion by and large to the industry to be doing the monitoring but having more intervention by the government; expanded regulation on very specifically identified contaminants; action on the Mackenzie Basin. In our review, the deputy premier of the Northwest Territories spoke very strongly. He was very upset by the lack of commitment by the federal government to move on the Mackenzie Basin.

We heard lots of evidence, including some from industry, admitting that the ponds are leaking. You say that the results are pretty good. The results that, for example, Dr. Schindler is showing indicate that perhaps the containment of these contaminants, particularly the airborne ones, is not good enough.

So I'm wondering, could you advise us what can be done to move the federal and provincial governments to act on these recommendations, these same recommendations that keep coming forward to both levels of government?

  (1145)



**Mr. Ronald Liepert:**

I don't have in front of me.... First of all, I'm not the Minister of Environment, but we could spend a lot of time here, and I could debate an awful lot of the comments you made in your preamble, and just about all of them I don't agree with you on.

We have a significant track record that we're very proud of. One of your comments was that the monitoring is done by industry. You're wrong. The monitoring is not done by industry. The monitoring is done by Department of Environment officials; it is done by the Energy Resources Conservation Board. When your federal Department of Environment came in and did a review of what we did in reviewing the implications around leaking tailings ponds, they found no evidence of it.

So I do not agree with what you're saying. Our track record is, I would say, not just okay; it's darned good.



**Ms. Linda Duncan:**

Mr. Liepert, it's not what I am saying; it is the evidence that appeared before our committee. I'll be happy to send you personally the report.

In testimony, representatives of the oil sands sector spoke to the fact that their ponds are leaking. It's not I who am saying that; I'm not doing the monitoring.

Unfortunately, we're at a disadvantage, because despite invitations, we did not have the Government of Alberta or the energy board testifying; we could only go on the basis of industry witnesses—and we had some federal authorities. So based on the evidence that we heard, we were told that there are a number of problems, including those mentioned in the testimony by Dr. Schindler and the testimony on potential problems with groundwater.

I would be happy to share my report, and of course you are party to...it is, I think, the Department of Energy that sponsored the review of the oil sands. And the former deputy minister of environment did a background report advising that pacing may be a problem—



**The Chair:**

Ms. Duncan, you're over time, so I have to cut you off. I'm sorry about that.

Ms. Gallant, you have up to seven minutes. Go ahead, please.



**Ms. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Thank you, Mr. Chairman.

The Hansard isn't out from the last committee meeting, so the questions I have require a bit of background information for the witnesses today, Mr. Chairman.

I'd like to say from the outset that I believe environmental groups are necessary, that they perform a very important function in ensuring that our environment is taken care of and that large corporations that are taking our natural resources from the air, the ground, etc., are doing so in a respectful way that is not going to cause harm to people.

What puzzled me last day was that when I quite innocently asked a question as to how one of the witnesses received their revenues—that was Environmental Defence—she was very defensive and suggested that I go to her website. So I did, and to understand how the environment works and what's really at play here, even the reason why we have the oil sands as an unconventional source of oil as our subject matter, this does come into play.

What I learned was that one of the donors for Environmental Defence is called Tides Canada. I had never heard of Tides Canada, so I looked up a bit about Tides Canada and found out that Tides Canada is actually funded through the U.S. Tides Foundation, of California, and that its Canadian counterpart has paid millions to at least 36 campaign organizations. Tides U.S. isn't alone; they have other charity bases as well, in California and New York, and they have had \$50 million since 2003 specifically for campaigns against Alberta oil and against oil tanker traffic and pipelines through British Columbia.

The purposes for these grants are clearly outlined in the tax filings. For example, Tides U.S. received U.S.—

**Hon. Denis Coderre:** I have a point of order, Mr. Chairman.

**Mrs. Cheryl Gallant:** This is background information and is very important—

  (1150)

**The Chair:**

Ms. Gallant, order, please.

Monsieur Coderre, proceed on your point of order.

[*Translation*]

**Hon. Denis Coderre:**

Mr. Chairman, I have no objection to anyone telling the story of his life, the research he has done or what he found on the Internet last night, but what is sad is that we have a government minister here who deserves respect. It seems to me we have other things to do than examine the research report of a member of some political party.

I don't know whether this is an admissible point of order, but I believe this has nothing to do with the people who are here today.

[*English*]

**The Chair:**

Thank you, Mr. Coderre.

As you know, Mr. Coderre, the members of this committee are free to make comments on the subject we're dealing with or to ask questions to the witnesses, and Ms. Gallant is certainly on topic.

You may continue, Ms. Gallant. You certainly decide how you will use your time.

**Mrs. Cheryl Gallant:**

I'm just trying to follow the dollars so that everybody understands who's trying to do what and perhaps understands why.

Tides U.S. received \$700,000 U.S. in 2009 from the Oak Foundation of San Francisco to raise the visibility of the "tar sands" issue and slow the expansion of tar sands production by stopping new infrastructure development.

Now, I could go through the explanation of why "tar sands" is an inaccurate description of the oil sands, but I think just about everybody here was present last week, so I won't repeat that.

The Oak Foundation was created by a duty free shop founder, an American, and he in turn paid Greenpeace Canada an undisclosed sum of money to leverage the growing interest of ranchers and landowners in limiting unbridled oil and gas exploration and production in southern Alberta. Apparently, Greenpeace was also funded to conduct specialized opinion research and media work and to identify messaging for maximum information value among Albertans.

Even the World Wildlife Fund has kicked in. World Wildlife Fund Canada was paid an unreported amount by the Oak Foundation for a campaign to mobilize Canadians and send a politically compelling message.

The U.S. tax returns show that Tides and Tides Canada have paid \$4.3 million for a "tar sands" campaign. The top recipients were: the Sierra Club, which was U.S. \$909,000, approximately; Corporate Ethics International, with U.S. \$750,000; the Natural Resources Defense Council, with half a million U.S. dollars; and ForestEthics, with U.S. \$400,000.

Many of these grants that were put forth for the tar sands campaign are far larger than the grants for the other important causes. For example, a rape intervention project in sub-Saharan Africa got \$9,000, and a project to support people with HIV in Indonesia, who were on the Hill yesterday, got \$9,098. In comparison, Greenpeace got U.S. \$186,000, and the World Wildlife Fund got \$160,000.

Unlike many of the charitable foundations, Tides U.S. doesn't have a large endowment. In practice—and this is what is being reported now in different media—it behaves less like a philanthropy than a money-laundering enterprise, taking money from other foundations and spending as the donor requires.

What that means is that we have situations in which we have a witness such as we had last day, Environmental Defence. Right on their website they have Tides Canada Foundation and the Tides Foundation listed as their donors. Tides Canada in turn get their money, \$56 million since 2000, from Tides U.S.

When Tides U.S. funnels money to Tides Canada, it tells them how they want to spend the money. The Oak Foundation gives money to Tides U.S., and what we don't know are who the foreign contributors to the Oak Foundation are. We don't know whether they're companies competing with the oil companies in Alberta, whether it's offshore, whether it's Middle East, or some other group, but what we do know is that there's an active, well-oiled campaign against the industry in Canada, specifically in Alberta, and actually against Canadians in general—a campaign against jobs here.

My question, first of all to Mr. Liepert, is—

**An hon. member:** Time's up.

**Mrs. Cheryl Gallant:** It's just a yes or no.

Prior to applying for a charitable tax status, an organization must be either federally or provincially incorporated. Do you know whether or not Alberta has any anti-oil sands organizations provincially incorporated?

  (1155)

**The Chair:**

I will require a short answer, Minister.

**Mr. Ronald Liepert:**

I guess it depends on what your description of "anti-oil sands organizations" is. There are organizations that have expressed concern about the development of the oil sands, such as the Pembina Institute, which I believe is based out of Alberta.



**Mrs. Cheryl Gallant:**

And they get money from Tides as well.



**Mr. Ronald Liepert:**

I don't know that.



**The Chair:**

Your time is up, Ms. Gallant. Thank you.

On the second round, we have about two minutes each, basically one question and a short answer.

Mr. Coderre, go ahead, please.

[*Translation*]



**Hon. Denis Coderre:**

I never thought I would see McCarthyism in 2010, Mr. Chairman. That's interesting. I wasn't around at the time.

[*English*]

Minister, I have a serious question. You spoke about national strategy. Of course, I don't believe in a one-size-fits-all situation because we have to be respectful of jurisdiction. You said you were disappointed, rightfully so, about the content of the last conference.

For the benefit of our study, how would you perceive that national strategy? We're all working together.



**Mr. Ronald Liepert:**

I'm going to relate this a little bit to health care. Everybody agrees we need to change how we deliver health care, but when we come down to the really serious discussions on specifics that we need to change, then we start to run into issues.

I think everyone can agree that we need a national energy strategy for Canada. What's going to be really difficult is when we peel that onion back, one layer, and start to talk about specifics. I do believe there are some things that we can agree on.



**Hon. Denis Coderre:**

What would be your definition of the word "national", then?



**Mr. Ronald Liepert:**

You can have a national strategy that clearly protects and respects provincial and territorial jurisdiction. That's easily accomplished.

Let me just conclude by saying this. I actually believe we need a continental energy strategy, because so many issues that develop in the United States that impact Canada are not part of a strategy; they're one-offs. If we had a continental energy strategy, that wouldn't happen. The problem is we need to get to a national, a Canadian, strategy first before we go to a continental strategy.



**Hon. Denis Coderre:**

Would you believe our partnership should be, then, to invest more in R and D and green technology? Would that be the relationship among governments, the industry, and environmentalists?



**Mr. Ronald Liepert:**

I can only tell you what we're doing in Alberta. As I explained earlier, we have the fund that does exactly that. I believe Canadians want us to invest more in research and development into alternate technologies. I don't think that's much of a dispute.



**Hon. Denis Coderre:**

Would you prefer that to fiscal incentives?



**Mr. Ronald Liepert:**

Yes, to be short.

[Translation]



**The Chair:**

Thank you, Mr. Coderre.

[English]

We go now to Mr. Shory for two minutes.



**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair.

I also want to talk about the tar sands and other things, and the economic impacts of the natural resources of Alberta throughout Canada. I don't understand what the NDP has against Alberta's natural resources. I'll come back to that after.

My first question is for the Montreal Economic Institute. It's a threefold question.

One, what economic benefits are there for Quebec if shale gas is developed? Also, have you done any numbers on it? The last question on this issue is this. What are some negative consequences if Quebec does not develop the resource, both in terms of the economy and regulations?



**The Chair:**

Who would like to answer that?

[Translation]



**Mr. Jasmin Gu nette:**

Both of us can, if possible.

First, with regard to the economic benefits, as I said in my presentation, according to the Government of Quebec itself, the development of 250 wells represents investments of \$1 billion. We're also talking about 10,000 jobs that would be linked to the sector, obviously without including the profits that businesses could make, the direct and indirect taxes that would be paid in Quebec.

Those in fact are figures that show that the economic benefit of the development of this resource is significant.



Vincent, do you want to add something?



**Mr. Vincent Geloso:**

Yes, I would like to add something.

[English]

There's also the fact that in Quebec there's a huge consumption of heavy fuels, *mazout lourde*, and actually Quebec is the highest producer in Canada. Forty percent of Canadian consumption of this heavy fuel, which I sadly don't know the English term for, *mazout lourde*, is a highly pollutant substance. It also causes a lot of smog. And it is easily replaceable by natural gas for industries like concrete and other fuel industries.

It doesn't only have economic benefits for society in general; it also has environmental benefits, in the sense that it would most likely reduce greenhouse gas emissions, because, first of all, natural gas produces nearly 30% fewer emissions for GHG emissions, and it also doesn't create any particles that actually cause smog as *mazout lourde* does.



**The Chair:**

Thank you.

Thank you, Mr. Shory.

We'll go now to the Bloc Québécois, Monsieur Pomerleau, for two minutes.

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you, Mr. Chairman.

Good morning, everyone, including the person who is with us by video conference, Mr. Parfitt.

My question will be for you, Mr. Guénette. You spoke at length about respect for private property, about the right to free negotiation, in fact about issues that come up quite often and are good issues. The problem here, as my colleague noted, is that entrepreneurs negotiate with people who have land and not with the owner of the resource. That's the problem. They negotiate with the person who will give them a right of way, but to access a resource that does not belong to the owner of the land. The owner of that resource is the population of Quebec.

At what point do you think businesses really negotiate with the population of Quebec to acquire a right to access the resource?



**Mr. Jasmin Guénette:**

If there is some legal confusion, the partners should first sit down and find a basis for agreement so that the rules are clear and known to everyone. That's the first thing to do, in my view.

Second, when the time comes to drill, as drilling is obviously done on the land of an owner, the negotiation should be started at that point. We believe that proceeding with drilling with the owner's consent as to the place where it will be done will make the transactions much more "normal", I would say. Both parties involved will therefore be in agreement since the—



**Mr. Roger Pomerleau:**

Are you aware that the owner of the land is not the owner of that resource?



**Mr. Jasmin Guénette:**

Exactly, the business therefore can lease part of the land for five, seven or 10 years, long enough to—

**Mr. Roger Pomerleau:**

It leases a right of way, that's all.

**Mr. Jasmin Guénette:**

Exactly, but the surface rights still belong to the owner, and that resource must still be developed in cooperation with the landowners. When the time comes to drill, they must be at the bargaining table with the business, individually or collectively, so that acceptable prices can be negotiated both for the landowner and for the business.

If the business is prepared to offer such and such an amount of money and the people accept it, then everyone comes out a winner.

[English]

**The Chair:**

*Merci*, Monsieur Pomerleau.

We go, finally for this round, to Mr. Shory again for two minutes.

**Mr. Devinder Shory:**

Thank you very much, Mr. Chair, for giving me this opportunity.

This question will be to Mr. Liepert.

First of all, thank you for coming all the way here.

In your presentation, Mr. Liepert, you talked about the demand for energy in the coming days, that it will increase. You also talked about energy, specifically about the oil sands and how they're beneficial to the rest of Canada, and you tied it with the jobs throughout Canada, whereas the NDP leader, during the 2008 elections, wanted to stop any expansion in that industry.

My question is on the economy. Would you elaborate on some of the economic relationships that have been built between Alberta and the rest of Canada as a result of Alberta's success in the oil and gas industries?

**Mr. Ronald Liepert:**

First of all, I'll make maybe just a quick comment on your very first remark.

I think there is this sort of belief by some that there is a diminishing demand for oil in the world. The U.S. energy department just released statistics about two days ago, and it said that the usage of oil last year, from the year previous—and keep in mind we're in a recession—increased by 936,000 barrels a day. So there is no decreased demand for oil in the world.

So how do you deal with it? You either rely on it from offshore or you develop your own energy security supply.

This is a national treasure of the country. It was described by an American senator as a national treasure. It creates jobs not just in Canada but in the United States. I like to say, "We don't build any caterpillars in Alberta, but we sure use a lot of them." They're built across North America.

I think the most telling statistic is the one I quoted in my remarks, that there are 28,000 people today who are working in camps in Northern Alberta on construction sites. Half of those Canadians are flying in and out every week or every two weeks from east of the Manitoba-Ontario border. It is creating jobs. It is

creating tax benefits to those communities. And I'll tell you that it's a win for everybody because those workers are able to stay in their communities, their families are able to stay in their communities, whether they're in Quebec or Newfoundland, and their children go to the same schools they're used to going to, and they're working.

I think that's the part of this whole discussion that is overlooked, that this isn't just a benefit to Alberta. This is a Canadian treasure that we should all be very proud of.



**The Chair:**

Thank you, Mr. Shory. You're out of time.

Thank you very much to all of our witnesses today: Minister Liepert, Mr. Guénette, Mr. Geloso, and also to Mr. Parfitt. Thank you all very much for coming. It was very helpful.

We'll suspend for just a couple of minutes as we set up the next video conference and get to the second panel of witnesses.



**The Chair:**

We will reconvene the committee, in spite of the news that apparently the Riders coach has just resigned. I know that's traumatic for some of our members here at the table.

But seriously, back to the second panel today on our study on energy security in Canada. We have with us on the panel David Coon, the executive director from the Conservation Council of New Brunswick, and Stephanie Merrill, the freshwater protection program coordinator. Thank you very much for being here. And by video conference from Halifax, Nova Scotia, we have Barbara Pike from the Atlantic Institute for Market Studies.

Thank you all very much for coming. We will have presentations of up to seven minutes from each of the two groups and then get to the questions. We'll do it in the order listed. From the Conservation Council of New Brunswick, go ahead with your presentation, please.



**Mr. David Coon (Executive Director, Conservation Council of New Brunswick Inc.):**

Thank you very much, Mr. Chairman, and good afternoon, everyone. Thank you for the opportunity to speak to you this afternoon.

I'm speaking from the perspective of New Brunswick, a place apart from the rest of Canada. In New Brunswick, we have more than 1.4 million hectares under licence for shale gas development, which probably you haven't heard much about. We have been working with local communities. Some 90 communities fall within the leased and licensed area, in a wide arc sweeping across the province, from Chebucto, on the Northumberland coast--nice swimming, beautiful beaches--all the way to the Maine border, by McAdam and St. Stephen, near where I live.

We have been working with many of those communities. They've banded together and created a coalition called the Citizens for Responsible Resource Development. We've been in conversation with our provincial government on this issue for almost a year now, and we've been in conversation with the industry since they arrived in New Brunswick.

We have a tiger by the tail with this issue. This is not the natural gas of our childhood—our communities are out there flicking on the end of the tail of that tiger.

I apologize to the translators; I'll try to minimize my asides from my notes.

We don't have the regulatory framework. Today, we want to try to identify some clear roles for the federal government, which we believe are important, and some of the needs that could be filled.

Last Monday night, the New York State Assembly passed a piece of legislation by overwhelming majority to suspend, until May of next year, the issuance of permits for shale gas drilling using hydraulic fracturing and horizontal drilling. This is a resource that could enhance their energy security. So why did they do that? In the United States, the U.S. Environmental Protection Agency, an august body recognized internationally for its work over the years, has launched a major study on the impacts of shale gas drilling and hydrofracking, which they expect to finalize some time in 2012, with some significant public engagement as they go along.

Why have they done this? Because experience in the United States has demonstrated that exploration for, and the development of, shale gas poses a host of risks to public health, the environment, water supplies, and the social fabric of rural communities, which conventional gas exploitation does not. We're talking about something very different. I say it's a sleeping tiger, because natural gas prices are low right now. When those prices rise, that tiger will wake up and we will see very rapid development, I expect, in places like New Brunswick and Quebec.

What are the problems? For one thing, we're talking about huge depths, drilling down to two kilometres. Doing something that in the conventional industry is quite straightforward, like cementing around the well casing to protect water supplies, is very difficult when you're in that deep. When you're fracking, that raises questions about the integrity of the cementing around it and whether in the long term it's going to protect water supplies.

So it's very different. You have to withdraw something like four million litres of water from somewhere for every frack. That's two Olympic-sized swimming pools' worth. In New Brunswick, just about every stream goes into the ocean and contains migratory fish. The Bay of Fundy salmon are protected under the Species at Risk Act, because their numbers have dwindled so much. So there are questions about, for example, the kind of stream flow that we require to maintain habitat for those endangered Atlantic salmon. It depends a lot on information that we don't have. Clearly, the federal government has a responsibility to address this situation.

That's one of the reasons we're concerned about these water withdrawals.

The millions of litres of water are mixed with sand and chemicals. These chemicals are pumped under pressure, as has been mentioned earlier, and something like 40% or 50% of that mixture is left underground. We don't know what the long-term fate of this might be. And we don't have the geological studies or hydrogeological mapping to help us understand what might happen if this flows through existing fractures or fissures, which we haven't characterized necessarily before this happens, to ensure that we don't create long-term environmental risks.

 (1215)

So by intentionally pumping this down, deep into the ground, and leaving it there, below the water supplies, the question is, what's the long term fate?

Then, of course, you have within that mixture, potentially, some CEPA toxic substances, like benzene. And there's no requirement at this point for companies to publicly disclose the chemicals they're using in these mixtures. Of course, when this comes back out—about 50%, or roughly so, of it comes out—you have a hazardous waste stream, a large hazardous waste stream that actually is of a different consistency than when it went in because you're scavenging other naturally occurring contaminants like heavy metals from deep in the geology.

In New Brunswick right now this hazardous waste stream is being trucked across interprovincial borders for treatment in Nova Scotia. What will happen when this takes off? How will it be treated? We're talking about thousands of wells in New Brunswick likely, if this takes off. What does that mean? How will it be managed as hazardous waste?

The high moisture content of this gas means that the water has to be stripped out as it comes to the surface, which produces volatile organic compounds, emissions, some of which are CEPA toxic.

As far as greenhouse gases go, there's been some work to suggest that in fact this kind of natural gas exploitation may have as big a carbon footprint equivalently as coal. So that's an important issue when you're thinking about this from an energy security perspective.

The stated purpose of the moratorium in New York is simply to afford the state and its residents the opportunity to continue to review and analyze the effects of hydrofracking on water and air quality, environmental safety, and public health. This is not happening in Canada. There are no plans for a national investigation into the consequences of Shell gas development, and there should be.

So let me quickly go to what I think the federal government could do here.

We see in New Brunswick—



**The Chair:**

Mr. Coon, you'll have to do that in a very short time. You're over time already. So just be very quick, please.



**Mr. David Coon:**

On the question of energy security, how is this gas going to be used if it gets developed? Will it benefit New Brunswickers, will it benefit Canadians, or is it simply going to be shipped to the United States? That's an important issue, particularly given the risks here, and that needs to be addressed.

The Geological Survey of Canada and other parts of Natural Resources Canada have important resources capacity that could support provinces like New Brunswick that lack that, that don't have the money to do the kind of baseline studies that are necessary to help protect our people and our environment.

Certainly in terms of the potential impact on future fisheries, the federal government has an important role to play there.

Finally, I think the federal government could look at developing a model regulatory framework, because we've heard the same thing in Quebec. It doesn't exist in the provinces, and it would be a great help, particularly in the provinces with little resources, to have that to look towards and consider adopting.

Thank you very much for the opportunity to speak to you. We'll entertain questions when it's our turn.



**The Chair:**

Thank you for your presentation.

We go now to Barbara Pike, from the Atlantic Institute for Market Studies. Go ahead please, Ms. Pike, for up to seven minutes.



**Ms. Barbara Pike (Vice-President, Atlantic Institute for Market Studies):**

Good afternoon.

My name is Barbara Pike, and I'm the vice-president of the Atlantic Institute for Market Studies, commonly known here as AIMS. Thank you for the invitation to speak to your committee.

As a quick background, AIMS is an independent, non-partisan public policy think tank. We're one of the most decorated think tanks in the world. We just celebrated our 15th anniversary. We're a registered charity in both Canada and the United States. We accept no money from government. About 70% of our money comes from philanthropic foundations, about 20% from corporations, and the rest from private individuals.

Our papers and research are peer reviewed in a double blind process. In addition to that, we basically do not take any contract work. We basically take a look at our projects by asking ourselves a few questions before proceeding. These questions include: is anyone else doing that work, and can AIMS add value to it? We also sometimes add in the question, is it fun?

Others are going to talk to you about the oil sands. They're going to talk to you about natural gas, or shale gas, or deepwater drilling.

Today I want to concentrate on one topic, electricity, and more specifically, the transmission of electricity.

We sit here in Atlantic Canada at the end of the grid, a grid that is not conducive to the free flow of electricity. Just last month, AIMS released a commentary by energy consultant Gordon Weil called "Freeing the Flow: Proposals for Reform of Canadian Electric Industry Regulation". The conclusion: it's long past time for Canada to reform the regulation of its electric industry.

Weil reviews the options to improve regulations governing Canada's electrical industry. He says that while it's not necessary to go as far as a single national regulator, there does need to be reform, so that all provinces are treated fairly. He identifies a number of essential elements for the reform of the existing system.

There is no doubt that the current system of regulation discriminates against Newfoundland and Labrador. It discriminates against P.E.I., Nova Scotia, and New Brunswick. That's because the federal system of review of interprovincial transactions does not function and offers no real protection for any province. As we witnessed last year with the failed NB Power-Hydro-Québec MOU, there is no federal regulatory regime for transactions from one province through another to a third, or to markets in the United States.

That's not to say there should be a single Canadian system, like FERC in the United States, but rather that we should use the existing National Energy Board as the review agency that treats electricity transmission, just like we do oil or gas, so that one province can't block the transmission of electricity to another market.

AIMS has said for years that we need to lower the barriers to interprovincial trade across the country. Electrical transmission needs to be at the top of the list. The free flow of electricity is an important element of Atlantic Canada's prosperity.

In the absence of regional cooperation on common regulation and open borders, a Canadian federal regulator could review transactions involving power flows originated in one province and crossing another on its way to a third market. Given our geography, and the current market conditions in North America, this authority would apply mostly in eastern Canada. For example, if Hydro-Québec wanted to sell power to New England by transmitting across New Brunswick, the transaction could be regulated. An impartial body might block Hydro-Québec, or allow it, from monopolizing the New England interconnections, thus encouraging new green power resources in Atlantic Canada.

Imagine if this proposal had applied to the original Churchill Falls transaction. Newfoundland and Labrador could have sold to the American market instead of being forced to sell to Hydro-Québec, and a regulator, i.e. the NEB, could have set a reasonable rate for both parties. Hydro-Québec reportedly wants to sell power to Nova Scotia and P.E.I across the New Brunswick system. A regulator could assure a fair deal for all parties.

For transactions between two neighbouring provinces, such regulatory review could be optional. The parties could choose federal regulation or make the deal without such a review. The regulator could also have the authority to approve mergers across provincial borders. It could provide neutral assurance that customers would be no worse off because of a merger.

Let's take a look at the benefits of the announcement two weeks ago for Muskrat Falls on the Lower Churchill in Labrador. The Nalcor-Emera deal has the potential to benefit New Brunswick as well as Prince Edward Island. This is a win-win scenario. Yes, there is still work that has to be done. But most heartening on this file is the level of regional cooperation, seeking a win for everyone in the region. Now, I'm not saying parochialism is dead in this region, but this proves that it can be overcome for a common good.

As you know, the deal is between Emera, which is a publicly traded company, and Nalcor, which is a Newfoundland and Labrador crown corporation. The Newfoundland government obviously has a hand in the deal, but the support and participation of the Nova Scotia government is essential.

More to the point, the provinces have made it clear that while Ottawa's participation is welcome, it is not a precondition. Premier Dexter has been particularly blunt: the deal will move ahead with or without a contribution from Ottawa.

That's what energy security sounds like in Atlantic Canada, and it sounds very good these days.

I'm not sure that there is a more secure or greener energy source for Atlantic Canada, in fact Canada as a whole, than hydro generated electricity.

  (1225)

Freeing the flow, opening the transmission corridors, and enabling provinces to transmit across interprovincial barriers and borders could mean that rather than having two new nuclear plants in Ontario supplying future energy needs, there could be electricity generated at Gull Island in Labrador powering homes in Toronto rather than in New York. Transmission is what enables this.

For the current deal, the fact that transmission exists in New England and that Emera is a player there helps. And it's not just this project on the Lower Churchill at Muskrat Falls that benefits or the possibility that a second Lower Churchill project at Gull Island would benefit. It's also the independent producers of renewables in Atlantic Canada. Those include wind power and the wind technology being developed and researched on Prince Edward Island. Those include the tidal power that is being developed and researched in Nova Scotia. But transmission, as I have said, is the key to that, and it's the key to energy security.

Last April, Emera, Nova Scotia Power, NB Power, and the Governments of Nova Scotia and New Brunswick struck a deal to expand transmission between the two provinces. It too is an essential piece to the whole free flow discussion and indeed the question of viable energy security on a national scale.

Getting back to Premier Dexter's position that federal investment is warranted but not required for the Muskrat Falls project, he is right on both counts. Transmission capacity as nation-building is the principal foundation for the requested investment from P3 Canada of about \$375 million for the transmission line to bring power from Muskrat Falls to the Maritimes. Such an investment does precisely what the P3 fund was intended to do, leverage private investment driven by a business case in needed public infrastructure, a far cry from the pointless largesse of traditional, politically driven, federal investment and stimulus programs.

The willingness of traditional "tin-cup" federalists to go it alone on this project speaks volumes to the current and future business case. The new energy source and the associated transmission infrastructure are huge boons for Atlantic Canada.

If Nova Scotia is to be weaned off fossil-fuel-generated electricity, it needs hydroelectricity. Biomass is an option, but it is not as green as hydro. Apart from one generating station at Tufts Cove, the existing plants are too far from the existing natural gas pipeline for natural gas to be a viable option in Nova Scotia. On top of that, Nova Scotia Power is a cost-of-service utility, so if oil is cheaper, it's required that oil rather than natural gas be burned.

With regard to tidal energy, we've talked about it for generations. Acadia has been doing work on it for decades. This is still, for the most part, in a research and development phase, but the potential is huge. Work is progressing in the Bay of Fundy. The environment is harsh, and the technology is in its infancy, but if it can work in the Bay of Fundy, it can work pretty well anywhere, and that means that we would be world leaders in tidal generation, an industry that can be exported around the globe.

Without the free flow of electricity in this region, such development just stalls. There is no doubt about Nova Scotia's reliance on coal-fired generating plants. Foreign coal is an issue both from a greenhouse gas perspective and with respect to security of supply. The province's over-reliance on coal is the result of federal--

**The Chair:**

Excuse me, Ms. Pike, could you wrap it up really quickly, please? You're a little bit over time already.

Thank you.

**Ms. Barbara Pike:**

Okay.

Basically, the Province of Nova Scotia's reliance on coal is the result of federal-provincial energy security and economic development policies of decades ago when coal was king in Cape Breton.

On the island of Newfoundland, the Holyrood plant continues to burn, yet that province sits on the

largest mega hydro project existing in North America today. In New Brunswick, Point Lepreau is down and continues to be down.

Transmission is the key to this, and the National Energy Board and the regulatory regime need to be changed and need to be advanced in order for us to take the opportunity that exists for electrical transmission in this region.

  (1230)



**The Chair:**

We'll now go to questions and comments from members, starting with the official opposition.

Mr. Coderre.

[*Translation*]



**Hon. Denis Coderre:**

Thank you, Mr. Chairman. I'm going to share my speaking time with my colleague Scott Andrews.

I'm a member for a Quebec constituency, but I know that energy security is important for all regions of the country. Without necessarily sharing this interpretation of the Quebec's situation, I understand that the important point is to ensure that two provinces can agree. I'm obviously sensitive to what the National Assembly and the Government of Quebec have said about the societal choice they made at the time regarding hydroelectricity.

I'm going to ask our friends from New Brunswick some questions. The situation we're in with regard to shale gas is somewhat the same.

[*English*]

There is an issue regarding the perception. People are scared because—I don't know about New Brunswick, but in Quebec they had a feeling that because the industry started first...frankly, they lectured people too much, instead of educating.

I'm at the federal level, and it is a provincial jurisdiction, but I would just like to understand how things are going in New Brunswick. How is the government working with the population on that situation? I have a lot of people in Quebec who are saying the same thing, that they want to have a moratorium, for all the same reasons that you're saying. They've been seeing all the documentaries, *Gasland* and all that, but at the same time this is a strategic resource, and if it's well done and environmentally okay, you might have something there. There is also a relationship with the municipalities and all that.

How are things going truly? Is there a compensation process? How does it work? What is the relationship with the people?

The second question is to Ms. Merrill, regarding water--water as the main issue, the way you treat it and use it. How are things going in your province from that perspective?

**The Chair:** Ms. Merrill, go ahead.



**Ms. Stephanie Merrill (Freshwater Protection Program Coordinator, Conservation Council of New Brunswick Inc.):**

Our provincial governments act in a number of ways. They are the promoter, they are the regulator, and they represent the people of New Brunswick. I think a lot of people feel there are probably conflicts of interest there. A lot of communities are really feeling that they've been railroaded.

Some exploration companies have had a licence for exploration for nine years before communities are even aware that they exist. So they are really feeling like the provincial government is not stepping up to the plate to inform them of what is happening, and what will happen, and to act on behalf of the public interest.



They really feel like they have been left to struggle personally with industry. We heard previously about some landowner negotiations with industry. Landowners do not have the tools to negotiate with industry. Industry has a lot of backing, public relations people who know how to have landowners sign leases. Individuals and landowners do not have the tools to know what's in their interests sometimes.

So I'm hearing a lot from the public of New Brunswick that the government is not stepping up and protecting them.



**Hon. Denis Coderre:**

So you don't have anything like the monitoring process vis-à-vis toxicity or future...?



**Ms. Stephanie Merrill:**

No. This is an exploration phase in New Brunswick. As David said, there are a lot of questions left unanswered. People in rural communities are posing questions about what is going to happen when damage occurs. Will industry be responsible for cleaning up the mess? Where is the water being treated? Where is it going? What's the end result? Where is that water being ultimately discharged? Do we have the processes in place to effectively take out the toxins? Do we have that technology?

So there are a lot of questions that are being asked and very few answers given to them. The provincial government points to provincial acts that are triggered at multiple steps along the way, but they don't actually clarify what the specific rules and regulations are to protect New Brunswickers.

**Hon. Denis Coderre:** Thank you.

Scott?

**The Chair:** Mr. Andrews, go ahead, please.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you very much.

My questions are going to be for Barbara, an old neighbour and friend of mine from Newfoundland.

Barbara, you spoke at great length about the deal that was just struck in Newfoundland and Labrador and Nova Scotia for hydro development of the Lower Churchill project. You said that both premiers have mentioned that the project will proceed whether or not the federal government invests. The amount of the project is \$6.2 billion. They've asked for \$400 million, a small amount, to invest in a green energy project. Do you think the federal government should be investing in this type of green energy?

The other part of their ask would be for loan guarantees, which are similar to the aerospace industry and the auto industry as well. I don't know if you'd like to comment on that, Barb.

**The Chair:** Ms. Pike, go ahead.



**Ms. Barbara Pike:**

Hi, Scott. It's nice to see you.

If there is a P3 project that fits the bill, this is it, because as you say, it's green. With a business plan of \$6.2 billion, it's huge. As far as its impact on Atlantic Canada and its future impact across the country is concerned, this is a very large project even though the megawatts are small.

I guess the short answer is that this is what P3 was set up for. So if you're going to be handing out money, hand it out to something such as this.



**Mr. Scott Andrews:**

Secondly, you were talking at the end of your presentation about the environmental impacts of Holyrood generating station and the coal-fired generation. I don't know if you'd like to elaborate a little bit more on what this project will actually do for the environment and green energy.



**Ms. Barbara Pike:**

For starters, it would shut down the Holyrood station, which I believe is currently burning bunker C. It would also take off line approximately 10% of what we're now generating in Nova Scotia through coal fired.... Once this project goes forward and we take a look at the next project, we can be completely green in Atlantic Canada.

For Newfoundland, I think then you would be green--probably the only province outside of Quebec that would be. I believe they are saying it would basically be 98% or 99% hydro generation. That is huge, but it also provides, down the road, the stability that is needed if we're talking about economic development. If you want to attract business to this region, the fact that you can have long-term, secure green energy with secure prices that are not fluctuating because of fossil fuel world prices is a huge selling point.



**Mr. Scott Andrews:**

What about an east-west power grid across Canada? How do you see that being beneficial to the nation as a whole?



**Ms. Barbara Pike:**

As I mentioned, if you take a look at security of supply, the fact remains that we are powering New York when Ontario is talking about building new nuclear plants. Should we not be looking at an east-west power grid so that in fact the hydro power generated in this country is supplying Ontario markets?



**The Chair:**

Thank you very much, Mr. Andrews and Mr. Coderre.

We will go now to the Bloc Québécois. Madame Brunelle, you have up to seven minutes.

[*Translation*]



**Ms. Paule Brunelle:**

Thank you, Mr. Chairman.

Mr. Coon, Ms. Merrill, to date in Quebec, energy security has relied to a considerable degree on the development of hydroelectricity and wind energy. We've been taking considerable steps in that direction for many years now. Our environmental rules are definitely stricter than those enforced elsewhere in Canada. And we're proud of that fact.

However, this entire shale gas development issue has really taken the public by surprise. People aren't very informed. This concerns densely populated areas, particularly the St. Lawrence Valley where our most fertile farm lands are. We sense a great deal of concern and anger among citizens. However, I would say it's disorganized anger. BAPE is conducting hearings. There's some talk about that, but citizens are banding together in large numbers to demonstrate.

Mr. Coon, you talked about Citizens for Responsible Resource Development. What is that? Is it an organization? Perhaps we could use it as a model in Quebec. Can you give me more details about that?



[*English*]



**Mr. David Coon:**

Stephanie actually works directly with the coalition, so I'll ask her to respond.



**Ms. Stephanie Merrill:**

The coalition is newly formed. It is only about two or three weeks old. Basically, the coalition formed out of concern in a number of communities. What we were seeing were very similar things happening in the communities where exploration was coming forth. We saw that municipalities were not sure what to do. They obviously had to make decisions that were in the best interests of their community residents, who didn't like the idea. We had rural communities in New Brunswick that did not have local governance--the province represents these rural communities--so they had no formal mechanism for addressing their concerns.

We were seeing a pattern of things emerging across the landscape in terms of how industry and government were approaching communities. So basically, it was a grassroots movement of different individuals and community groups, such as the Cornhill Residents Association, for example. Those types of groups came together and decided to just start talking to each other so that they could learn from each other what was happening in their communities. So when industry moves to the next place, they will be well informed about what to expect, such as what types of things industry is saying and how things are going to play out.

They just decided that they would be more effective if they joined together to share information. They are not necessarily against any form of shale gas development or other resources. They have a very broad mandate. But they really feel that there needs to be responsible development of that resource in the interest of the public. And if there is economic benefit from the industry, if there is some, it should be for New Brunswickers, and specifically for communities where extraction takes place. Currently, in New Brunswick, the community where our current natural gas field is located cannot themselves hook up to natural gas. They think that is unfair.

In general, the coalition formed so that they could all learn from each other. They felt the government was not informing them as they should have been, so they took it upon themselves to learn from each other.

[Translation]



**Ms. Paule Brunelle:**

I see that situations are similar from place to place. That's why the idea of a moratorium is increasingly widespread in Quebec, at least so that we can review our legislation, since this issue is governed by an old Quebec mining act. So it's inadequate. It's time we were able to properly gather information and inform the public, who were already very concerned about drinking water. Thank you.

Ms. Pike, I'd like to tell you I profoundly disagree with you on almost everything you say.

I would remind you that natural resources are a provincial jurisdiction and that, if we had to begin talks, we might perhaps have to reopen the Constitution. I don't think that's really what the members around this table want.

If we have to establish an agreement between the provinces on the free movement of energy, if it's as hazardous as the manpower agreement with regard to recognition and credentials, that may be difficult. Quebec currently agrees more readily with France on labour force credentials. They've reached about 100 agreements on credentials, much more than in Canada. Consequently, if we use this file as an example, yours could be quite hard to manage.

That was a comment.

Thank you.

[English]



**The Chair:**

Go ahead, Ms. Pike.

  (1245)

**Ms. Barbara Pike:**

I didn't hear the question, except for the fact that you disagreed with everything I said.

**The Chair:**

If you would not like to comment, we'll go to the next question.

[*Translation*]

**Ms. Paule Brunelle:**

That was a comment; I didn't want an answer.

[*English*]

**The Chair:**

Madame Brunelle, do you have any more questions or comments?

Then we'll go to the New Democratic Party and Mr. Harris for up to seven minutes.

**Mr. Jack Harris (St. John's East, NDP):**

Thank you, Chair, and thank you to our participants and witnesses today.

First of all, Mr. Coon, I wonder if you could tell us if there is something about the nature of shale gas development that has caused this concern, as you said, about social disruption and it being an issue? Does 1,000 wells seem like a lot? Is it due to the nature of the resource that it is spread out in such a way? Can you elaborate on that?

Would you tell us whether you agree with our position that, as the EPA is doing in the United States, there should be a full review, at the national level, of shale gas, among other things, before we proceed quickly with this?

**Mr. David Coon:**

Thank you, Mr. Harris.

Yes, absolutely. As in Quebec, the areas being drilled and explored now are very similar to those in the St. Lawrence lowlands. You pretty well can't throw a stone in New Brunswick without hitting someone's house. We have agricultural areas and areas that are full of woodlots and communities. We're very spread out. So what people are concerned about is essentially the industrialization of their rural communities.

Certainly, in some parts of the United States, that's been the experience with the intensive development of shale gas. I say so because it's not just the pumping of the gas out of the ground that happens, but there's all of this ancillary equipment—the compressors, the condensers, and the pipelines, and so on and so forth—and the trucking, which is huge, to bring the water in and to take the waste out, all of which can really, truly industrialize communities. That's the issue there.

On an inquiry, we absolutely support having one, and in fact we think it's essential, because, as Madame Brunelle said, the issues are very similar across jurisdictions. We think an inquiry would help shine the light of day on the issue for all Canadians, so we can all work from a common set of information and ideas about how this can move forward in a way that, first, would be in the public interest of Canada in the regions where it's being developed, and, second, in a way that's safe for people and their environment.

**Mr. Jack Harris:**

Would that require support from governments, say, to allow intervenors to have technical information to be able to participate?

**Mr. David Coon:**

Well, sure. Under CEAA now, it's a well-established approach that there's the potential for intervenor funding under the Canadian Environmental Assessment Act. That principle should be in place for this kind of an inquiry, so you can bring expert evidence forward.

Not too long ago, we were intervenors on a proposal to build a large new oil refinery in Saint John, around the marine side of the proposal or the harbour they were going to build. We had opportunities to access that information and to bring in expertise that really added considerable value to the discussions.

So, yes, I agree.

**Mr. Jack Harris:**

Thank you.

Ms. Pike, if I can ask you a couple of questions, being a Newfoundland and Labradorian, I, too, am pretty excited about the agreement announced last week between Emera and Nalcor Energy and the Newfoundland and Nova Scotia governments, which will, as you say, bring 98% renewable energy to Newfoundland and Labrador. I think there's a small number, maybe in the twenties, of remote, isolated diesel stations that will probably remain, but that's a remarkable achievement. And the 300-megawatt bunker sea-burning outfit in Seal Cove, which we've been criticizing for many years, will be taken out of the system as well, as well as some of the coal in New Brunswick.

This is an interprovincial project, perhaps eventually involving all four provinces using the electricity and making these agreements to make this project happen.

You indicated it may go ahead without federal support, because the drive is there for it, but this is a project of national significance. But do you support the federal government providing some assistance for that through the PPP program, or perhaps through a loan guarantee of some kind that would reduce the cost?

And can you comment on the energy security side of things with respect to what Newfoundland is doing by using some of its revenues from the offshore oil, the fossil fuel, to actually invest in renewable energy? Does that contribute to energy security, in your mind, and do you see that as a goal?



(1250)

**The Chair:**

Ms. Pike, go ahead.

**Ms. Barbara Pike:**

Thank you.

Hello, Jack. I have couple of points.

One, as I mentioned to Scott earlier, if you're handing out money in P3, then this is the project and this money should go that way.

As far as the loan guarantees are concerned, the business plan is in place. It may come as a surprise, but these companies and this project will be making money. It's not as though the government is going to be on the hook for that money.

When you talk about security, it is about getting rid of the Holyrood plant or the Seal Cove plant. Again, that is absolutely significant and important, and we only wish it could happen in the rest of Atlantic Canada. It's going to be a while before that happens. We still have a lot of coal power here in Nova Scotia.

One of the things, in talking with P.E.I., is that they'd like to get their wind power on the grid, and then they would be able to use wind power. And when the wind doesn't blow, they can use hydro.

Sorry, I don't remember your last question.



**Mr. Jack Harris:**

The use of the green energy income stream from fossil fuel to invest in renewable energy and the effect of that. Of course, the other thing about Holyrood is that not only does it provide cleaner energy, but it reduces dependence on imported oil—in this case, probably Middle East or South American—to burn there. It's bunker C, so it's polluting, but it also increases energy security.



**Ms. Barbara Pike:**

When we talk about the use of our non-renewable resource revenues, they should be used to pay down debt. But in this particular case, by investing it in a renewable resource--one that you're going to have a return for decades and generations to come--that is a smart use of that money.



**The Chair:**

Thank you, Mr. Harris.

We go finally to Mr. Allen for up to seven minutes.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Chair.

Thank you to our witnesses for being here today. It's especially nice to see fellow New Brunswickers here at committee. We might not always agree, but I do appreciate the debate, and I do appreciate the perspectives that the Conservation Council does bring to the debate on development.

Mr. Coon, going back in some of the local press, you have really not said anything about being against the development of the shale gas, and I don't think the Conservation Council has taken that position at all. It's more about making sure the proper regulations are in place. I think that's the position you've taken. Is that correct?



**Mr. David Coon:**

I can clarify a little bit. That has been our position, but because of the lack of progress--even on having the province establish a trigger under environmental assessment regulation to capture this kind of exploration in hydro-fracking--our board passed a resolution two weeks ago or so to instruct staff to work towards a moratorium until we get our ducks lined up well. That needs to happen.

So it's just a bit of a broadening of that position to one that says, look, we'd better have a moratorium--as they've done in New York--until we get our ducks in line, because clearly the discussions over the past eight to 12 months haven't really led very far.



**Mr. Mike Allen:**

You obviously sent the letter to me wanting to appear before committee. I'm assuming you've had a chance to read some of the previous testimony at the committee from the witnesses who were in. There's been some pretty compelling testimony in the use of water being a significantly small percentage of even what's used for agricultural use.

The drilling and cementing technologies, and the safety of the groundwater, the reduction in chemical use.... As you've said, this might not be the natural gas of before, but it's certainly not the fracking of before either. I think we have to reflect that, and the footprint is actually quite small on some of these things now.

Having said that, I encourage everybody, and I encourage the citizens of New Brunswick, to read the testimony on this, because it is compelling, and it does go way down below the aquifers as well.

I want to go specifically to a couple of points. You've talked about the regulatory framework. Can you comment about what regulatory frameworks, in your view, have worked and stimulated responsible shale gas development?

Do you have any provincial jurisdictions that have regulations in place that you think could be models for New Brunswick?

  (1255)



**Mr. David Coon:**

Well, we're actually just undertaking a review now of regulation in the U.S. There are three states that have developed some pretty impressive regulation on different aspects of this that we're looking at, that we want to be able to bring forward to regulators in our province and share with others across the country.

So there's that, and I guess that's what got me thinking that there would be a useful role here for the federal government to actually put together a model legislative framework for provinces to look at in discussion with the provinces. We do that with the National Building Code. It has no legal implication, but provinces can go to the National Building Code and use that to create their own provincial building codes. On something like this, it seems like quite an appropriate initiative for Natural Resources Canada, for example, to undertake in conjunction with Environment Canada. To do just that kind of thing, it would be a tremendous help. Not all provinces are created equal, and ours, in particular, is lacking in a lot of capacity by way of resources. We don't have the money to do some of the kinds of work and research and baseline work that should happen to do this safely, and the federal government has a role to play there as well.

So there are good examples of regulations. That's why New York has brought in its moratorium. The State of New York is saying they want to come forward with the very best regulations and to know whether there are areas that they should establish as no-go zones just because the risks are too high. We think that's a responsible approach. There's no rush here to get this gas out; the gas isn't going anywhere. It will be a strategic resource, and should be, for us for a long time. There's no reason that we can't get it right and ensure that we get it right environmentally, socially, and economically, so that we don't end up with a situation where the companies win and everyone else loses. We don't want that.

So we want the public to win, we want our provinces to win, and we want Canada to win here.



**Mr. Mike Allen:**

I guess I support Minister Northrup and not the moratorium. At the same time, there's a school of thought that says we can miss the train as we go here too.

Barbara Pike, I'd like to ask you a question with respect to AIMS. I know a lot of the others have focused on the electricity side, but I want to take on the gas development side. Has AIMS done any research or any type of development work on the economic benefits of the potential shale gas in eastern Canada, and specifically the deposits that are in New Brunswick, which actually extend right through P.E.I.?



**Ms. Barbara Pike:**

Unfortunately, we haven't, and if we'd had more time in this preparation, we would have been able to do more.

Having said that, one of the things to remember, whether we're talking about shale gas or in fact the oil sands, is that the technology for this continues to improve dramatically in very short periods of time. I keep hearing the scary stories about the oil sands from when they first started 20, 30 years ago, and that's the same with shale gas, when we're talking about fracking and other things. We are very much in the infancy here. Yes, our geology looks really great for it, but they said that about offshore Nova Scotia too.

So there's still a lot of work that has to be done, but as I say, the technology is improving dramatically, so it is not the same industry as it was even five years ago.



**Mr. Mike Allen:**

Based on the deal that has been signed between Newfoundland and Nova Scotia, with the development

of 800 or so megawatts in Newfoundland...about 40% of that I think will be used in Newfoundland and then potentially come into Nova Scotia, which is a much higher fossil fuel burner than even New Brunswick. We have about 1,500 megawatts right off the top with Coleson Cove and Belledune that are fossil generation.

Has AIMS done any work with respect to the long-term energy projections in Atlantic Canada? And how would a mixture of shale gas as well as electricity play a role in our economy?



**Ms. Barbara Pike:**

No, we haven't. Sorry about that. We took quite a look at NB Power when the NB Power MOU with Hydro-Québec went in, and New Brunswick itself has a huge issue because the plants in New Brunswick that are currently producing fossil-fuel-generated electricity are old. They need to be replaced; they need to be taken offline, and that is going to be a cost to New Brunswick taxpayers. So the fact remains that they can be and probably will be the big customer for now for the extra Muskrat Falls hydroelectricity.

We hear it will be another year before Point Lepreau is back online, and it's another billion dollars. So New Brunswick does have some issue with its generation. Even with shale gas, with natural gas, there is still going to be an issue, much like in Nova Scotia. Most of the plants that are currently generating fuel in New Brunswick from fossil fuels are not close enough to the pipeline.

 (1300)



**The Chair:**

Thank you, Mr. Allen. Our time is up.

I have two minutes. I have a couple of things I want to ask the committee.

But I will first thank the witnesses very much--Barbara Pike, David Coon, and Stephanie Merrill--for being with us today. Your input was very helpful and is much appreciated.

Before I adjourn the meeting, I would like to remind people that tomorrow noon is the deadline for getting your witness lists to the clerk on the regional economic impacts of oil and gas development and on offshore oil and gas drilling off Canada's west coast. So perhaps you could get the witness lists in tomorrow.

Two other things. We'll try to get witnesses for the meetings on Tuesday, December 14, the second last day, and December 16. We'll certainly invite witnesses on the regional economic impacts and offshore oil and gas, but whether enough will come is the question.

Do you want to book a meeting for Thursday, December 16, the last Thursday before the Christmas break?

**Some hon. members:** No.

**The Chair:** Okay, we won't book that. We don't want to invite witnesses only to have them find out there's no meeting. There's a consensus that we don't invite witnesses for that meeting, so we'll do our best for December 14. The others are pretty much arranged.

Thank you all very much for your input.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 37

Tuesday, December 7, 2010

The Standing Committee on Natural Resources met in a televised session at 11:02 a.m. this day, in Room C-110, 1 Wellington Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Oil Sands Developers Group:* Don Thompson, President. *Athabasca Chipewyan First Nation:* Lionel Lepine, Traditional Environmental Knowledge Coordinator, Industry Relations. *As an individual:* Ezra Levant. *Alberta Innovates Technology Futures:* Ian Potter, Chief Operating Officer. *As an individual:* Vivian Krause. *HTC Pureenergy Inc.:* Jessie Inman, Executive Director, Corporate Development.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Don Thompson, by videoconference from Edmonton, Alberta, Lionel Lepine and Ezra Levant made statements and answered questions.

At 12:02 p.m., the sitting was suspended.

At 12:05 p.m., the sitting resumed.

Ian Potter, Vivian Krause and Jessie Inman made statements and answered questions.

At 1:02 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon

Clerk of the Committee

2010/12/08 9:46 a.m.

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## 40th PARLIAMENT, 3rd SESSION

### Standing Committee on Natural Resources



EVIDENCE

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



















**Tuesday, December 7, 2010****1105***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))**Mr. Don Thompson (President, Oil Sands Developers Group)**The Chair**Mr. Don Thompson***1110****1115***The Chair**Mr. Lionel Lepine (Traditional Environmental Knowledge Coordinator, Industry Relations, Athabasca Chipewyan First Nation)***1120***The Chair**Mr. Ezra Levant (As an Individual)***1125***The Chair*

-  *Hon. Denis Coderre (Bourassa, Lib.)*
-  *Mr. Roger Pomerleau (Drummond, BQ)*
-  *Hon. Denis Coderre*
-  *The Chair*
-  *Mr. Don Thompson*

**1130**




-  *Hon. Denis Coderre*
-  *Mr. Don Thompson*
-  *Hon. Denis Coderre*
-  *Mr. Lionel Lepine*
-  *Hon. Denis Coderre*
-  *Mr. Lionel Lepine*
-  *Hon. Denis Coderre*
-  *Mr. Lionel Lepine*

**1135**


-  *The Chair*
-  *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *The Clerk of the Committee (Mr. Andrew Lauzon)*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*
-  *The Chair*
-  *Ms. Paule Brunelle*

-  *The Chair*
-  *Ms. Paule Brunelle*
-  *The Chair*
-  *Ms. Paule Brunelle*
-  *The Chair*
-  *Mr. Lionel Lepine*

**1140**

-  *Ms. Paule Brunelle*
-  *Mr. Lionel Lepine*
-  *The Chair*

**1145**







-  *Mr. Nathan Cullen*
-  *Mr. Lionel Lepine*
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-  *Mr. Don Thompson*
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-  *Mr. Don Thompson*

**1150**










-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Mr. Don Thompson*
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-  *Mr. Don Thompson*
-  *The Chair*
-  *Mr. David Anderson*

-  *Mr. Lionel Lepine*
-  *Mr. David Anderson*
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**1155**

-  *Mr. David Anderson*
-  *Mr. Lionel Lepine*
-  *Mr. David Anderson*
-  *Mr. Ezra Levant*
-  *Mr. David Anderson*
-  *Mr. Ezra Levant*
-  *Mr. David Anderson*
-  *Mr. Ezra Levant*
-  *Mr. David Anderson*
-  *Mr. Lionel Lepine*
-  *Mr. David Anderson*
-  *Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC)*
-  *Mr. Ezra Levant*

**1200**

-  *The Chair*
-  *Mr. Lionel Lepine*
-  *The Chair*
-  *Mr. Lionel Lepine*
-  *The Chair*
-  *Mr. Lionel Lepine*
-  *The Chair*
-  *The Chair*
-  *Mr. Ian Potter (Chief Operating Officer, Alberta Innovates Technology Futures)*

**1210**



*The Chair*



*Ms. Vivian Krause (As an Individual)*

#### 1215

#### 1220



*The Chair*



*Ms. Jessie Inman (Executive Director, Corporate Development, HTC Pureenergy Inc.)*

#### 1225

#### 1230



*The Chair*



*Mr. Alan Tonks (York South—Weston, Lib.)*



*Mr. Ian Potter*



*Mr. Alan Tonks*



*Mr. Ian Potter*

#### 1235



*Mr. Alan Tonks*



*The Chair*



*Ms. Vivian Krause*



*The Chair*

#### 1240



*Mr. Roger Pomerleau*



*Mr. Ian Potter*



*Mr. Roger Pomerleau*



*Ms. Vivian Krause*



*Mr. Roger Pomerleau*

#### 1245



*Ms. Vivian Krause*



*Mr. Roger Pomerleau*



*Ms. Vivian Krause*



*Mr. Roger Pomerleau*



*Ms. Vivian Krause*



*Mr. Roger Pomerleau*



*The Chair*



*Mr. Nathan Cullen*



*Ms. Jessie Inman*






















*Mr. Nathan Cullen*



*Mr. Ian Potter*

-  *Mr. Nathan Cullen*
-  *Mr. Ian Potter*
-  *Ms. Jessie Inman*
-  *Mr. Nathan Cullen*
-  *Ms. Jessie Inman*
-  *Mr. Nathan Cullen*
-  *Ms. Jessie Inman*
-  *Mr. Nathan Cullen*

**1250**

-  *Mr. Ian Potter*
-  *Mr. Nathan Cullen*
-  *Mr. Ian Potter*
-  *Mr. Nathan Cullen*
-  *Ms. Vivian Krause*
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-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Mike Allen (Tobique—Mactaquac, CPC)*
-  *Ms. Jessie Inman*

**1255**

-  *Mr. Mike Allen*
-  *Ms. Jessie Inman*
-  *Mr. Mike Allen*
-  *Ms. Jessie Inman*
-  *Mr. Mike Allen*
-  *Ms. Vivian Krause*
-  *Mr. Mike Allen*
-  *Ms. Vivian Krause*

**1300**

-  *The Chair*
-







CANADA

## Standing Committee on Natural Resources

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NUMBER 037

1

3rd SESSION


1

40th PARLIAMENT

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**EVIDENCE****Tuesday, December 7, 2010***[Recorded by Electronic Apparatus]*

\* \* \*

 (1105)*[English]***The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone.

We're here today, of course, to continue our study on energy security in Canada, including looking at what the federal role may be in unconventional oil and gas development, such as deep-water offshore drilling, shale gas exploration, and oil sands development; regional economic impacts of oil and gas development; and the National Energy Board's role in the development and export of unconventional resources. So we're continuing our study on that.

We have two panels today, the first from eleven until noon, and the second from noon until one.

On the first panel, from Edmonton, Alberta, by video conference we have, from the Oil Sands Developers Group, Don Thompson, president. Welcome, Mr. Thompson.

**Mr. Don Thompson (President, Oil Sands Developers Group):**

Thank you for having me.

**The Chair:**

We have, from the Athabasca Chipewyan First Nation, Lionel Lepine, traditional environmental knowledge coordinator, industry relations. Welcome, Mr. Lepine.

And we have, as an individual, Ezra Levant.

We'll take the presentations in the order listed on the agenda--up to seven minutes, if you could, with your presentations--starting with Mr. Thompson, from the Oil Sands Developers Group.

Go ahead, please, Mr. Thompson.

**Mr. Don Thompson:**

Thank you, Mr. Chairman.

I trust my presentation materials made it here and they're in front of you. I've no intention of going over them in detail. I wanted to give you the highlights.

First of all, to introduce Oil Sands Developers Group, we began in 1997. You can see from our committee structure, on the first page, that we are primarily focused on local issues impacting oil sands, but we will deal with issues wherever they exist with respect to our industry.

I think the first thing people should know is that there are two things driving the need for energy, whether around the world or in fact in Canada: the number of people and their lifestyles. They are growing in all dimensions. I think I want to see improvements in people's lifestyles all around the world, including in Canada.

Our population continues to grow. Therefore energy demand continues to grow, as shown on page 3. You will note that it particularly grows in non-OECD nations.

Even including oil sands, the global energy picture requires that about 64 million barrels a day of new capacity be found by 2030. Global depletion rates are in the order of four million barrels per day per year. Finding rates are about half of that.

In the global energy mix dominated by oil, Canada has a slightly different energy mix, primarily because hydroelectric power, which we happen to be blessed with in certain regions of Canada, has offset coal. But you will notice that our requirements for oil are not dissimilar to other countries around the world, with some 32% of our energy mix being from oil.

Page 7 I think is instructive, in that it lays out reserves positioned around the world. You will note that Canada, at 178 billion barrels, is second in terms of global oil reserves. You should note that 95% of those, or 170 billion barrels, are in fact oil sands.

The question you should ask yourselves is this: If we did not have the oil sands, from where would we be getting our oil? I draw your attention to Saudi Arabia, Iran, Iraq, Kuwait, and Venezuela. These are the places to which we would be turning if we did not have oil sands.

Leaving aside the issues that I'm sure Mr. Levant will talk about, you also should know that increasingly, these countries are turning to the non-OECD nations for their markets, since they are closer and have a higher net back. Interestingly enough, Saudi Arabia's shipments to North America seem to be dwindling in favour of those other markets. That is certainly true for Venezuela.

I want to draw your attention to two things. First, only 20% of the resource in the oil sands is minable. This is the resource that is less than 70 metres deep. This is the resource that was initiated first, because the technology was available. It has only been about 12 or 13 years since the bulk of the oil sands, that being the in situ portion--80% of the resource is too deep to be mined--was in fact commercialized.

If you look at the existing and proposed projects, right now operating projects have a capacity of 1.7 million barrels a day. Last year that capacity expressed itself in the production of 1.4 million barrels. A number of new projects were not fully ramped up. Under construction there are another 600,000 barrels. Those that have regulatory approval or are under regulatory review have sufficient capacity to take us into the range of three and a half to four million barrels a day.

The oil sands is a huge driver of Canada's economy. I need not underscore that. The bottom line, from the Canadian Energy Research Institute, shows that it contributes about \$1.7 trillion of GDP and 456,000 jobs across all markets in Canada.

We value, as an industry, development of strong business relationships. One of our objectives is to increase participation locally, and certainly with aboriginal businesses. When we first were formed, we did a survey--this was in 1997--showing that our members did about \$80 million a year in aboriginal business. We have almost increased that by a factor of ten. Last year it was \$711 million. Similarly, on direct employment with my members, we have moved from 80 in 1998 to over 1,600 self-reporting aboriginals who are now employed directly by my members, and of course there are many more in those businesses.

This is an industry that donates substantial amounts to the community for hospitals, recreation, and cultural education.

Page 13 shows this is an industry that by any measure has world-class environmental monitoring and management. I know of no other air monitoring network as large in terms of scope or in terms of geographic extent as the Wood Buffalo Environmental Association. You may take a look at their website and see the air quality from any area in the region.

Similarly, the aquatics monitoring program, \$4 million a year spent on monitoring chemical, physical, and biological properties of the river, and all the cumulative effects, management frameworks developed and recommended through the cumulative environmental management association....

Benchmarked by Cambridge Energy Research Associates, this is also an industry that has world-class regulatory processes in place, including agencies from the Government of Alberta, quasi-judicial regulatory agencies from Alberta, and from Canada.

On page 15, I draw your attention to the fact that technology development will continue to be a key enabler of growth. That 170 billion barrels of reserves is USSEC-qualified, which is to say that it is producible with today's economics and technology. It is about 10% to 17% of the geological resource. Particularly in the in situ, but also in the mining area, new technologies are coming a plenty. The focus in

the in situ business is to drive down the energy and water use and drive up recovery. We can explore a tremendous range of new technologies, but not in seven minutes, so if you have questions, I'd be pleased. The mining area of research focuses particularly on tailings use--moving, of course, toward drier tailings--and on minimization of water use, not to say there aren't other focuses.

On slide 16 I get to the recommendations, my comments.

First of all, in terms of what the OSDG members will continue to do with respect to advancing responsible development in the oil sands, we will do what we do best, which is to continue to seek and develop economic investments, and then operate the facilities we have in a safe, reliable, and environmentally responsible manner. That is our primary contribution to the energy security and economic prosperity of both our province and our nation.

Secondly, we will continue to communicate and discharge our responsibility for consultation, particularly with respect to aboriginal consultation.

Thirdly, we will continue to focus on technology development and innovation, primarily to increase the proportion of the resource that can be produced, and also to improve our environmental performance. I would draw your attention to the fact that I have at least four members who have their own internal research priorities and who fund that to the tune of over \$100 million a year. There are also many very entrepreneurial in situ companies who are pushing the technology envelope very hard.

We will continue to work with the regional municipality and the province to ensure the physical and social infrastructure is in place to support the requirements of our industry. In that regard, we particularly focus locally on transportation, infrastructure, housing, health care, and the like. That is evident in the structure of our organization.

We will continue to contribute to the ongoing development of the communities we operate in: donations and support of our employees; educational, recreational, and cultural facilities. Similarly, we will continue to develop the workforce of the future. We have created and supported many organizations to do so. I particularly draw your attention to CAREERS: The Next Generation, and also to funding in support of things like Keyano College, NAIT/SAIT--Northern Alberta and Southern Alberta Institute of Technology--and apprenticeship programs. We will continue to ensure that monitoring and reporting in the region is state of the art and transparent.

Finally, we will continue to engage and contribute to the ongoing dialogue in Canada about energy and environmental policy generally, and the oil sands specifically.

 (1110)

In terms of what I think governments should have as their key elements going forward, I would say, first and foremost, leading and contributing to honest conversations about energy and the environment. The fact is, we all need to be willing to be transparent about the real-world choices that are available and the timeframes within which these choices may be operative. We need to make sure that people understand the impacts and implications of these different policy choices and how they will impact energy consumers across Canada.

I seek a policy environment for Canada that recognizes our specific geographic and energy circumstances. We are a nation founded on an export-based economy. It is not warm in Edmonton today; I don't know what it is like in Ottawa. We also have a country with a low population density, large distances, and the like. We need energy policy that not only advances but balances the three key dimensions of our interests: firstly, economic interests; secondly, energy security and reliability of supply; and thirdly, of course, environmental performance.

We need a policy environment that maintains open borders and trade with, and market access to, our largest trading partner, the United States, but also offshore markets. And we need a policy environment that is founded on economy-wide solutions, ensuring competitiveness and stimulating investment particularly in the use of technology and innovation.

Mr. Chairman and members of the committee, I thank you for your time. I look forward to your questions.

 (1115)

**The Chair:**

Thank you very much, Mr. Thompson.

We now go directly to Mr. Lionel Lepine from the Athabasca Chipewyan First Nation.

Go ahead, please, for up to seven minutes.

**Mr. Lionel Lepine (Traditional Environmental Knowledge Coordinator, Industry Relations, Athabasca Chipewyan First Nation):**

Thank you, Mr. Chairman, for giving the Athabasca Chipewyan First Nation the opportunity to address this committee on this important topic, which concerns our people today. I am honoured to come here and tell you about some of the pressing issues that may severely affect energy security in Canada.

As you may know, the Athabasca Chipewyan First Nation's traditional territories cover much of the minable and non-minable oil sands in the Athabasca region of northern Alberta.

On his famous voyages, guided by the Dene people, Alexander Mackenzie used one of those same tar sands, exposed along the shores of the Athabasca River, to waterproof his canoes, as did the Dene people.

Now, some 230 years later, estimates put the oil reserves in the tar sands at hundreds of billions of barrels, making it the second-largest deposit of oil in the world next to Saudi Arabia. Although estimates may vary, there is certainly enough oil to meet Canada's foreseeable security needs and allow significant exports of oil as well. These reserves are so attractive that companies and governments from all corners of the world are rushing to Alberta, especially to ACFN's traditional territory, to participate in this bounty of petroleum wealth. This rush of activity has been called the largest and most destructive industrial project in the world. The lands torn apart are clearly visible from space with the naked eye.

You might think this is all good and economically safe. Unfortunately, it is obvious that this greed for oil has created huge impacts in the region and, more importantly, impacts on our aboriginal and treaty rights to continue the use of our traditional territory.

Now there are proposals to double or triple again the number of oil sand projects in our area, which will significantly increase the impacts and erase our ability to practise our treaty rights granted to us 100-plus years ago.

Unlike previous debates, we have enough oil to meet our oil security demands. Instead, the problem is the safe, proper, and fair development and production of existing oil reserves. The question is, what environmental and human cost must Canadians pay for this oil, and will this price be excessively loaded on the backs of the ACFN and other first nation peoples of the area?

Our governments cannot tell you the answers to these questions because they simply do not know the answers. The Alberta government is taking a minimalist approach with respect to our treaty rights to securely use our traditional territory. As a result, the ACFN's rights are being eroded and the Government of Canada has been standing back and allowing this breach to occur.

Face-to-face consultation with governments on oil sands impacts is non-existent, leaving ACFN little choice but to mount challenges such as court actions and media campaigns.

As we speak, recent technical reports have shown large holes in the existing monitoring processes for chemical exposure, and no resolution of the cumulative impacts is being sought.

The honour of the crown is at stake here. Instead of making absurd legal arguments, the provincial and federal crown representatives have a duty to properly engage the ACFN with proper face-to-face, government-to-government consultation, which must include mitigation and accommodation of environmental and economic impacts.

If proper consultation is not undertaken, oil sands projects may be threatened and the resulting oil production put in question. If proper consultation is not undertaken, the negative environmental impacts may be irreversible and ultimately devastating to the aboriginal communities in northern Alberta and up into the Northwest Territories.

If you ask what the energy security issues are in the Canadian oil sands, the answer is dealing with the huge impacts on aboriginal rights and on the environment.

Currently, the consultation support process is in a dividing line. The provincial government is attempting, with success, to delegate its responsibilities to consult with industry, even on regional issues, even on issues that involve regional non-specific effects.

Despite continuous appeals to both levels of government, there has been no direct crown consultation. As a result of this lack of consultation, ACFN rights are being eroded and our ability to use the lands is completely impaired; Athabasca River water testing has come under a lot of scrutiny because of questionable monitoring practices; human health impacts, particularly with respect to high cancer rates in Fort Chipewyan, have become a crucial issue; and endangered species, wildlife habitat, and their food sources are now threatened without mitigation processes.

Lack of consultation will result in more court battles, such as the West Moberly First Nations case in our Treaty 8 area, where a coal mining project has been stopped due to lack of consultation with respect to endangered caribou. Woodland caribou are now threatened, and they're on the verge of extinction in northern Alberta. It is very important to the ACFN in the oil sands area, as that is traditionally part of our main subsistence diet.

In summary, the ACFN submits that oil energy security is not a matter of having enough oil, but a matter of the proper development of huge existing reserves.

  (1120)

Canada's energy security is challenged by the failure of the crown to properly consult on the massive impacts of the largest industrial project in the world. This development is in our backyards. It's in the ACFN's front yard and backyards. This is the type of intensive development that the Supreme Court of Canada referred to when it required the crown to consult intensively with aboriginal peoples.

We are asking that the governments of Canada and Alberta live up to those constitutional responsibilities. If they did, they would also protect the security of Canadian energy.

I'd like to thank you for this time to allow me to speak.

#### **The Chair:**

Thank you very much, Mr. Lepine, for your presentation.

We go finally to Mr. Ezra Levant. Go ahead, please, Mr. Levant.

#### **Mr. Ezra Levant (As an Individual):**

Thanks for the invitation to be here.

One day we might discover a fuel source with no environmental side effects that's affordable and practical; but until that day comes, we need oil. It's not just for us, but for the United States, to whom we sell 1.4 million barrels of oil sands oil every day.

Last year, for the first time, more cars were sold in China than in the U.S., and they all want to be two-car families too. The same goes for India and the rest of the developing world.

So the choice isn't oil sands oil versus some fantasy fuel of the future. It's oil sands oil versus the oil that comes from other places, mainly OPEC countries. I don't know what God was thinking when he was handing out oil, but he gave it to all the world's bastards—Saudi Arabia, Iran, Venezuela, and Nigeria. Out of the top ten countries ranked by oil reserves, Canada is the only western liberal democracy on the list.

That doesn't matter if all you care about is driving your car; it all burns the same. But what about the ethics of oil? In my book *Ethical Oil*—which I'd be happy to give everyone a copy of afterwards, courtesy of my publisher—I suggest four liberal values by which we should judge the morality of a barrel of oil: respect for the environment; peace; fair wages for workers; and human rights. I compare oil sands oil with OPEC oil using these four measures. I come to the conclusion that oil sands oil is the fair trade coffee of the world's oil industry.

Take the environment. Greenpeace propaganda pictures make the oil sands look like something out of the Land of Mordor in *The Lord of the Rings*. But in only 2% of the area, where there is 20% of the resource, is the oil close enough to the surface for it to be mined that way. The rest of it has to be obtained underground, or in situ, with methods that don't tear up the surface. They don't use any river water, and even the 2% that's mined has to be reclaimed afterwards. Already more than 60 square kilometres have been. Compare that with the 2,000 unremediated toxic oil spills in Nigeria that will never be cleaned up.

Then there's carbon dioxide. Using the Obama administration's well-to-wheels analysis, oil from the oil sands has the same carbon footprint as oil from Nigeria or Iraq, because the latter waste so much natural gas. But we have a lower carbon footprint than U.S. imports from Venezuela, and much less carbon than oil from Nancy Pelosi's own state, which is actually called "California heavy" for a reason.

So if you're concerned about carbon emissions, shouldn't we replace higher carbon oil from Venezuela and California with our lower carbon oil from the oil sands? Since 1990, the carbon footprint of the average barrel of oil from the oil sands has fallen by 38%. I can hardly wait to see where it's going to be ten years from now.

But the environment is not the only measure of ethics. What about peace?

Canada invented peacekeeping. Saudi Arabia invented 9/11. Iran is using its oil profits to build a nuclear bomb. Sudan uses its oil profits to buy weapons to prosecute the genocide in Darfur. If you multiply 300,000 murders in Darfur by 185 ounces of blood per human body, and you divide it into the number of barrels of oil exported by Sudan over the same period of time, it works out to 6.5 millilitres of blood in every damn barrel. That would fill a lipstick tube.

What about fair wages, though? Fort McMurray is Canada's wealthiest city—and the most generous, according to the United Way. The working poor there, the lowest quartile, have 77% more purchasing power than in other cities, like Edmonton. Compare that to Saudi Arabia, which uses poorly paid migrant labourers who have no civil rights; or Nigeria, where over \$300 billion has been stolen by dictators from bureaucrats, leaving the country one of the poorest on earth.

Then there are human rights. The mayor of Fort McMurray is a young woman named Melissa Blake. How many women mayors are there in Saudi Arabia? There are none. It's against the law. In Iran, women are stoned to death if they're accused of adultery. Ahmadinejad says there are no gays in Iran, and you know, he's not lying, because when he finds them he kills them.

Then there's the fact that the oil sands are Canada's largest employer of aboriginal people, not only providing 2,000 direct jobs but also billions of dollars to aboriginal-owned businesses.

If you don't care about morality, then buy oil from Iran or Sudan. It's just as good as Canadian oil. But if you believe in making the world a better place, then the moral imperative is to replace unethical OPEC oil with Canadian green oil, conflict-free oil, fair wage oil, human rights oil.

The leader of the opposition says it's important to increase trade with China and India. I agree. Right now those countries are forced to buy terrorist oil, dictatorship oil, Darfur oil, because we only let Americans buy our oil right now. I love our American neighbours, but it's dangerous to have just one customer for our product. We're at the mercy of protectionism and taxes, and sometimes we're taken for granted. That's why the pipeline to the west coast makes so much strategic sense. It makes us an independent country with options.

I find it very irritating that so many of the anti-oil-sands activists are taking their funding from U.S. lobby groups like the Tides Foundation. Of course it's in America's interests that no other customers are able to buy our Canadian oil, but it's in Canada's interests that we are able to sell it to whomever we choose, and if you care about industrial ethics, it's in the world's interests too.

 (1125)

A lot of people are watching how Canada is handling the oil sands—not just Canadians, the American ambassador is watching too. He hopes the pipelines shut down so he can have the oil all to himself. The Saudi ambassador is watching too. Maybe they're watching together, I don't know. He also hopes the pipeline is killed, so he doesn't lose any market share in Asia, the way he's lost in the United States. But for those who love Canada, expanding the oil sands is the right thing for our country and for those who think globally and act locally, because every barrel of oil sands oil we can sell to Asia or the United States



is one less barrel sold by the world's terrorists and dictators.

Thank you.



**The Chair:**

Thank you for your presentation, Mr. Levant.

We've heard the presentations. We will go directly to questions or comments.

Monsieur Coderre.



**Hon. Denis Coderre (Bourassa, Lib.):**

I love Canada, I'll build a pipeline. All right.

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

That's about the size of it. Oh, oh!

[English]



**Hon. Denis Coderre:**

*Oui.*

I want to be nice, because you might say bad things like you said about Julian Assange in the *Toronto Sun*. I might have a contract on my head.

Mr. Thompson, it is a serious issue, a strategic resource. Before asking questions, I felt it was appropriate for me to visit Fort McMurray. I spoke to most of the stakeholders, including the first nations. There is an issue of perception. There is a lack of inclusiveness, or, as some people think, a lack of monitoring. I saw all your numbers. I heard about your numbers.

Why do you think that some people might feel that your figures regarding the toxicity and all that are not accurate? Is there something more that you should have done? When I spoke to the first nations, they said they're not part of the deal. The answer from your group is, "Well, we hire more aboriginal people and they're a part of it". They talk about Fort McKay and all that.

It is clearly a strategic resource, but you cannot do it at any cost. The environment is also important. It's not a menu à la carte, it's a one-two punch. What do you feel, for the sake of our study, that the industry should do better to make sure that from coast to coast to coast people might think it is important to expand?



**The Chair:**

Mr. Thompson, go ahead.



**Mr. Don Thompson:**

I think the number one thing is that we need to communicate much more broadly. It's fair to say that while we were developing the technology, while we were making it robust and investable, we did not spend much time talking to our stakeholders, particularly stakeholders beyond Fort McMurray. Into that void leapt others. I will continue to work on that issue myself. I made over a hundred speeches across North America last year on the topic of oil sands reputation and educating people on what we do, and when they find out about things like the Wood Buffalo Environmental Association, they are impressed.

I can take credit for it, because one of my colleagues at Suncor and I began the Wood Buffalo Environmental Association many years ago, and we did so with a couple of primary points. One, we wanted

to combine what was then two separate air-monitoring networks, with me at Syncrude and him at Suncor. Two, we wanted to make it much more inclusive and transparent. So we formed an organization, and we invited stakeholders to participate. In those days, as it is today, all stakeholders in the region could participate, including first nations. That is also true of the regional aquatics monitoring program. In fact, first nations can participate in the water monitoring programs in the region.

So these two organizations are very inclusive. The same goes for the Cumulative Environmental Management Association. First nations have been and continue to be members. And when it comes to influencing programs, that's also true.

So I think what it comes down to is that people either don't wish to learn or don't understand what's going on there. I cannot anywhere in North America find a trio of broader monitoring management organizations.

  (1130)



**Hon. Denis Coderre:**

Mr. Thompson, there are some issues, though. Some are scientific. I think it's in the interest of the industry to address some of these points. I'm trying to understand. Dr. Schindler provides some other numbers, and there are experts who disagree with you. Do you believe we need better monitoring? There is the issue of toxicity, and there's also the issue of water. You said we addressed that. How would you perceive the role of the federal government? There's already a convention between the Government of Canada and the Government of Alberta, which is doing its own monitoring. Do you believe that we should have a better role to play? What should we do as a government?



**Mr. Don Thompson:**

The federal government has been a member of the regional aquatic monitoring program since day one and has influenced its scope and its study since day one. What we have is a paper by Dr. Schindler, which is narrow in terms of time and geography. We have that versus 13 years, 2.5 million data points, and the regional aquatic monitoring program, which is broad in terms of scope and geography.

We also have two panels looking into it right now. If we need to change as a result of the recommendations from those panels, we will do so.



**Hon. Denis Coderre:**

Mr. Lepine, obviously I wanted to ask him the question first so you would be able to react, because this is an important issue. Inclusiveness and transparency demand that the first nations would also be part of it. Now some of the people in the industry say they're doing what it takes. You don't. How would you react to what Mr. Thompson just mentioned?



**Mr. Lionel Lepine:**

He mentioned RAMP, which is the regional aquatics monitoring program at CEMA. ACFN was at one time a member of those organizations, but we have since pulled out, because in our opinion the results that were coming back to us were inadequate.

Where I come from, the elders live off the land, and they see the changes out there. There are fish coming out of that lake and fish coming out of the river that are deformed. The animals are getting sick. The medicinal plants are getting sick. So our whole traditional way of living is becoming pretty--



**Hon. Denis Coderre:**

I don't have a lot of time left, but the issue of cancer is clearly a sensitive one for me.



**Mr. Lionel Lepine:**

Yes, that's a big issue.

**Hon. Denis Coderre:**

We're saying there's more cancer. Do we have some monitoring? Do we have some numbers that prove that?

**Mr. Lionel Lepine:**

Right now the only proof we have, aside from RAMP, is David Schindler's report. His study is, in my opinion, one of the most thorough investigations that were done. I think we need more of that. Right now we can't point fingers at oil sands development or anybody else. Right now, because the cancer rate has gone up so much in the last 20 years, it's only obvious that it's coming from directly south of us, which is the oil sands development area.

**The Chair:**

Thank you, Mr. Lepine. Thank you, Monsieur Coderre.

We go now to Madame--

**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Point of order, Mr. Chair.

**The Chair:**

On a point of point of order, Mr. Cullen.

**Mr. Nathan Cullen:**

Just for the committee's sake and because I want to understand our process as a committee, we've sought a number of times to have other committees televised. This is such an important and national issue affecting many millions of Canadians. Yet today--and I don't wish to cast aspersions, Chair--I'm confused as to the process that led to us being televised today when we have a former Conservative candidate and a former Conservative employee with us, when on other days we've sought television coverage so that Canadians can better understand our hearings, and we've seen nothing.

What I'd like to understand, for the sake of all committee members, is how the process works so that we end up in these circumstances, which as you can expect are somewhat murky for me and perhaps for other committee members and Canadians watching.

**The Chair:**

Thank you, Mr. Cullen.

Actually, the process is very clear. If any member of the committee requests that a meeting be televised, it will be if we can find an appropriate room. The clerk does his best on every occasion to do that. It's that simple, really.

This was actually the first meeting in this series for which there's been a request to have it televised.

**Mr. Nathan Cullen:**

It was also good fortune, because for this committee's meetings a number of requests to be televised were submitted and were not accepted. So was it just fortune that this room was available?

**The Chair:**

Were there other requests for meetings?



**The Clerk of the Committee (Mr. Andrew Lauzon):**

I haven't had an official request.



**The Chair:**

We haven't had a request.



**Mr. Nathan Cullen:**

That was on this particular study, but we've made previous requests before, obviously.



**The Chair:**

Thank you, Mr. Cullen.

Mr. Anderson.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Mr. Chair, I'm not sure why Mr. Cullen.... I think we've raised this issue before. He knows full well if he asks to be on TV we try to accommodate that. I'm not sure that he's not trying to filibuster something here, so we should get back to our witnesses.



**Mr. Nathan Cullen:**

It's the shortest filibuster in parliamentary history.



**The Chair:**

Mr. Cullen, please just let the clerk know if you'd like a meeting to be televised. If there's any way the clerk can get a room that will allow that, we will do it.



**Mr. Nathan Cullen:**

As I said, Chair, and I mention this to the clerk--casting no aspersions on his good work, of course--I was just curious as to our process.



**The Chair:**

He does his best.



**Mr. Nathan Cullen:**

He does his very best.



**The Chair:**

I'm sure he will try to get a room in which we can be televised if the request is sent.



**Mr. Nathan Cullen:**

Thank you.



**The Chair:**

Go ahead, Madame Brunelle, for up to seven minutes, please.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chair.

Good day, Mr. Lépine. I'm disturbed by what you are telling us today. Really, we know...

[English]



**The Chair:**

Please hold on a minute.

Can you hear the interpretation?

Good.

[Translation]



**Ms. Paule Brunelle:**

Let's start over again.

[English]



**The Chair:**

Great.

[Translation]



**Ms. Paule Brunelle:**

Good day to everyone following these proceedings on television. Oh! oh!

**Voices:** Oh, oh!

[English]



**The Chair:**

Continue, Madame Brunelle.

[Translation]



**Ms. Paule Brunelle:**

Good day, Mr. Lépine. I am deeply disturbed by what you said about first nations.

Of course we have heard about Mr. Schindler's research on the Athabasca River. News of this research travelled all the way back to Québec. Can you tell me just how polluted the river has become and how you use this waterway?

There is one other thing I'd like to know. You stated in your presentation that the rights of the Athabasca Chepewyan First Nation are gradually being eroded and that your ability to use your lands is being erased.

Help me to understand. Did you sign a land use agreement with the federal government? When was it signed? What did you mean when you said your rights are being eroded?

[English]



**The Chair:**

Mr. Lepine, go ahead.



**Mr. Lionel Lepine:**

That's a good question.

Going back to 1899, Treaty 8 was signed and it gave us the right to hunt, fish, and trap. Today it's pretty much impossible to go into areas where we went forty years ago. Twenty years ago there were lakes that don't exist any more. There are signs of contamination along the river shores, and you can see this odd foam-looking, weird substance that the elders cannot describe because they haven't seen it before.

The main channel that comes through Lake Athabasca has a silver streak going across it. There are various tributaries that go into the Peace-Athabasca Delta, which is the one of the largest freshwater deltas in the world. There are a lot of tributaries that go into areas where we used to go before, but they are inaccessible today because of lack of water.

The industry uses four barrels of water to extract one barrel of oil from the ground. So if you do the math, in one day I'm pretty sure about a million barrels of water come out of that river. If that Athabasca River is gone... It has been one of the main sources for rivers that we've used for centuries upon centuries. I foresee that river becoming a creek; it's going to be the Athabasca Creek. So if mining continues at this fast and furious rate, I see that Athabasca River becoming a creek, and there won't be anywhere to get the water.

Now they're resorting to underground streams. They say they're not going to contaminate the underground water, but if they touch the water that's underground, that will affect underground water streams that ultimately lead into the Athabasca River. There are various tributaries and lakes that don't exist any more that were there thirty or forty years ago. Today there are some elders who could take you to places and show you where what you see now as prairies were once lakes. You can now walk across where lakes were at one time.

The cancer rate in Fort Chipewyan has quadrupled in the last ten years. In one month we buried seven people due to cancers that are very rare. One of the cancers is so rare that the ratio is one in a population of 100,000 people. Our population of Fort Chipewyan, where I live, is only 1,200 people. So explain two deaths in one year after being diagnosed with this rare form of cancer. Where is it coming from? These are questions we've been bringing up, and the only answer we can come up with is it's from this whole way of mining oil out of the ground right now.

 (1140)

[Translation]



**Ms. Paule Brunelle:**

But since consultation is no longer an option, what do you intend to do? If you wait until your case is heard by the courts, everyone will be dead by then! And the damage to the wildlife and vegetation will be irreparable.

Are there certain actions that we could suggest to the government? Do we need a permanent forum for consultations between first nations and the various levels of government, one that would be required to meet, take action and get results? My concern is that if we let things continue on this path, decades will pass and nothing whatsoever will be resolved.

[English]

**Mr. Lionel Lepine:**

Yes, perfect. In terms of the consultation process, like I said earlier, there is no crown consultation. As far as I'm concerned, and as far as I know, Canada has a duty to consult with aboriginals, the first nations, prior to development, prior to the planning stages, and that doesn't happen.

What happens is that industry officials come to our town, Fort Chipewyan, and they consult with us. They tell us about their plans. They tell us about their projects. We don't see any government officials. We would love to sit down with the government to come up with safer and more adequate ways of mining this oil, which is going to ensure the safety of not only my children, but your children as well. All of our great-grandchildren, who haven't even been born yet, are going to be affected if this continues at this rate. All we're asking is that we have adequate consultation.

The process right now is flawed, in my opinion. We haven't consulted properly with any government officials. Our consultation is always with industry. It's always industry people, or ERCB. We would love to sit down at the table to consult with the federal government, on a monthly basis if possible. Every time a project is proposed, we would love to sit down with the government and consult.

We have all these foreign countries, foreign investors coming in, and these people don't even know who we are as indigenous people. We would love for them to know who we are as well.

It's the consultation process that has to be revamped.

**The Chair:**

Merçi, Madame Brunelle.

We go now to Mr. Cullen, for up to seven minutes. Go ahead, please.

 (1145)

**Mr. Nathan Cullen:**

Thank you, Chair.

Thank you, gentlemen, for appearing today.

In the last thing you said, Mr. Lepine, you talked about the need for consultation. First nations have often been described as anti-development, as ideologically against what's happening in the tar sands. The last statement you said doesn't sound like an anti-development statement; it sounds like you want to be consulted prior to licences being issued.

**Mr. Lionel Lepine:**

Exactly.

**Mr. Nathan Cullen:**

To hear Mr. Thompson and others from industry describe the relationships between industry, the government, and first nations, it sounds like things are pretty good. They're a big employer of first nations—the largest in Alberta—things are great, you guys are making some money. There may be some environmental problems, but not according to the energy industry.

I guess Canadians can be forgiven for being confused. If you hear one side of the story, it sounds like everything is absolutely great with first nations relations and the oil industry in northern Alberta. But then you come before us and say otherwise.

**Mr. Lionel Lepine:**

You know, Canada always wants to promote industry and they want to promote jobs. Like I said, our

community has only 1,200 people. They want to promote jobs. They want to promote oil sands development and oil. But what they don't know, and what Canada seems to hide, is the fact that aside from the cancer rates in Fort Chipewyan.... I want to be able to go out in the bush and hunt. I want to be able to go out and kill a moose, and today it's getting to the point where we have to travel farther and farther away.



**Mr. Nathan Cullen:**

You said something earlier in your testimony about the cumulative impacts, one development project after another after another. They seem to get reviewed in isolation, as if they were existing in different parts of the world.



**Mr. Lionel Lepine:**

Exactly.



**Mr. Nathan Cullen:**

This committee is trying to understand energy security, and part of energy security for Canada is also environmental security, knowing we can keep doing this in the foreseeable future.

Is it your suggestion that cumulative impacts are critical to understanding the environmental component of energy security?



**Mr. Lionel Lepine:**

Very crucial.



**Mr. Nathan Cullen:**

I want to turn that to Mr. Thompson. We've had CAPP and we've had Syncrude, Suncor, many of the leading oil companies in Alberta say Canada needs an energy security plan. Is your group of that opinion, or are you contrary to that opinion?



**Mr. Don Thompson:**

In fact if you look at it I think one of the issues facing us as a nation is the need to ensure that all energy forms are understood and contribute to our long-term energy security. In that regard, we would not be opposed to a strategic energy plan.



**Mr. Nathan Cullen:**

In that vein, then, and from my conversation with Mr. Lepine, there is frustration that when the government assesses these projects when they're being proposed there is never a consideration of the cumulative impact on the watershed. It's that each project is taken in isolation. As former premier Lougheed said, there never was a plan, and we needed a plan.

Are we not repeating that history again right now? Let me be specific on one point, because I think this is an important one for Canadians—proud Canadians, as has been said. Projects are now being approved explicitly for the export of raw bitumen in pipelines to other places for processing and upgrading. Is that true?



**Mr. Don Thompson:**

First of all, let me take them in order.

In terms of cumulative impacts, every regulatory process that has ever gone on for as long as I can remember, going back to the 1970s, has required a cumulative impact assessment as part of the EIA process. That is a fundamental requirement. If you look at any environmental impact assessment or any regulatory process on any oil sands project, you will find that this is complete.



Second, in the province of Alberta, the lower Athabasca regional plan has rolled out. It is specifically a large-scale regional plan to deal with cumulative effects. With respect to land, just as an example, if you include Wood Buffalo National Park, as well as the 20% of northeast Alberta for which the Province of Alberta has asked for plans, it will amount to something like 40% of northeast Alberta that is set aside, free and clear of development. I know of not very many jurisdictions in the world that can say that.

With respect to....



**Mr. Nathan Cullen:**

I want to be clear on the raw exports piece. Energy security is often talked about as affordable and sustainable. The current estimates are that for every 525,000 barrels of raw bitumen that go down a pipeline, we lose somewhere in the neighbourhood of 15,000 upgrading jobs and associated jobs in that industry. Does this plan feed Canada's energy security?



**Mr. Don Thompson:**

Canada is an export market and economy. The aspects of that are that we need to export bitumen, because there is not sufficient market demand in Canada. There are also many facilities--



**Mr. Nathan Cullen:**

Sorry, can I stop you on that? I don't think what you just said is necessarily the point.



**The Chair:**

Mr. Cullen, could you just let him complete his answer?



**Mr. Nathan Cullen:**

I think he may have misunderstood my question, Chair, so I just want to clarify the question.

We're not talking about all of the oil that's processed in Canada being used in Canada. The specific question is about sending jobs down those same pipelines. If we previously set up the industry in such a way that the upgrading happened in Alberta, particularly, then when you lose those thousands of jobs, the energy security of Canada, in terms of reaping the best reward we can from our endowment of resources, is lessened, is it not?



**Mr. Don Thompson:**

What's happening, if you look at our market in the States, is that some of those large heavy-oil refineries are no longer receiving supplies from Venezuela and Mexico and those heavy-oil-producing states. That is creating a market for Canadian heavy oil in the south, and that's what is happening. That oil is being exported to where the market demand is.

Right now there is not a sufficient spread between the price of bitumen and the price of upgraded crude oil to justify upgraders. So in fact that's not exporting jobs; that's responding to market demand.



**Mr. Nathan Cullen:**

I have a question. You mentioned the energy outlook from the International Energy Agency in your testimony. Is that right?



**Mr. Don Thompson:**

Yes.



**Mr. Nathan Cullen:**

I'm wondering why you neglected to include the second piece of what the IEA suggests in that 40% increase picture, which is that governments take no action. That's the preface to what that 40% increase says. It also implies, and this is according to the IEA, a six-degree rise in temperature globally. That's the associated reference you just made today. I know you said that it is cold today in Alberta, but I'm hoping you're not suggesting that a prediction of a six-degree rise, and that the government is complicit in such an endeavour, would be a good thing for Canada's energy security.

**Mr. Don Thompson:**

The Government of Canada has set its climate change policy, and we will be looking to that policy being enacted....

**Mr. Nathan Cullen:**

We all would.

**Mr. Don Thompson:**

We will respond to it, but for now, our job, as I said, is to respond to market demand, to produce the energy that is required for Canada, and to create economic well-being for Canadian citizens.

**The Chair:**

Thank you, Mr. Cullen.

We will go finally to Mr. Anderson, for up to seven minutes.

**Mr. David Anderson:**

Would you let me know when I have a minute left? I'd like Ms. Gallant to have the last minute or minute and a half or whatever.

I'm going to go quickly through my questions. I have a number of them, so I may be cutting people off if I need to.

Mr. Lepine, you have about 920 people in the ACFN as a registered population, I believe. Do you represent the ACFN Business Group?

**Mr. Lionel Lepine:**

I don't represent the ACFN Business Group.

**Mr. David Anderson:**

Who would be the person we could talk to if we wanted to bring someone in to represent them? Do you know who that person would be?

**Mr. Lionel Lepine:**

Yes, it's a guy named Garry Flett. He is the CEO.

**Mr. David Anderson:**

I notice that the ACFN Business Group is an umbrella organization for Athabasca Chipewyan First Nation business ventures and that it employs over 1,400 people. So it seems that there is obviously another story to be told from your community, as well, about the employment opportunities that exist there.

**Mr. Lionel Lepine:**

Out of that 1,400, I believe maybe 20 to 30 members of the ACFN work there.

**Mr. David Anderson:**

Is there a reason why your own community businesses aren't employing your own people?

**Mr. Lionel Lepine:**

Because a lot of people would like to reside in Fort Chipewyan. They want to stay home. They get forced to a point where they have no choice but to go and work down south. Industry comes to our local schools and brainwashes children into limiting their education to get a trade as a welder or pipefitter. If you go to Fort Chipewyan and ask some little kid what they want to be when they grow up, they're going to say a welder or a pipefitter.

**Mr. David Anderson:**

I take great exception to that. My son just got his journeyman carpentry, and I don't consider him to have a limited education. I think he's a young man who is showing great initiative to be able to go out and get that. Most of us would probably think that way as well. The opportunities are there. People may not be taking them is what you're saying to us today.

**Mr. Lionel Lepine:**

Yes.

**Mr. David Anderson:**

Okay.

Mr. Levant brought up the issue of funding from outside. Where do you get the funding for your organization and your work?

**Mr. Lionel Lepine:**

Me?

**Mr. David Anderson:**

Yes.

**Mr. Lionel Lepine:**

For my line of work it comes directly from industry. My job is part of the energy information administration process. My job was a traditional environmental knowledge facilitator. Prior to these developments, I interviewed and talked to elders. Industry requires us to come up with an EIA, to come up with a traditional--

**Mr. David Anderson:**

So industry is consulting with you. They're paying your wages so they can get the information from you?

**Mr. Lionel Lepine:**

Yes.

**Mr. David Anderson:**

Mr. Levant, in your book, do you deal with the issue of cancer rates?



**Mr. Ezra Levant:**

Yes, I do.

John O'Connor was the doctor, from Nova Scotia originally, who rang the alarm bell really hard. He said there were six cases of this rare bile duct cancer called cholangiocarcinoma. The funny thing is as soon as he went to the media about that and Alberta Health said let's get to the bottom of this and the Alberta Cancer Board asked for his patient charts, he refused, which was startling. The chief nurse said they had to give those cancer reports; it's required by law. He stonewalled. So the College of Physicians and Surgeons launched an ethics investigation. These weren't politicians or bureaucrats. These were his fellow doctors.

Dr. O'Connor had been talking about skyrocketing cancer cases, six rare cancer cases, a 33-year-old dying of cancer. He told this story for two years. Finally, when the ethics report from the College of Physicians and Surgeons came out, they ruled he was inaccurate, that he had reported cases that did not exist: four out of these six cholangiocarcinomas did not exist. No one could find a trace of the 33-year-old who allegedly died of cancer. Instead of punishing the doctor, the college said they would put out a factual statement they could all agree on, because he'd caused so much alarm in Fort Chip. Amazingly, Dr. O'Connor refused to put out a joint statement of fact with the college. Again, I'm not talking politicians or bureaucrats; I'm talking fellow doctors who issued a ruling that he had conducted himself unethically.

When I saw Dr. O'Connor a couple of weeks ago in Calgary I asked him if he was going to appeal this ruling; they said he was a liar. He said no, he was not going to appeal it, which I think says it all right there.



**Mr. David Anderson:**

I have another question for you.

You mentioned Tides Foundation, I think it was, in terms of funding from outside. The Rockefeller Foundation is one of the groups that organizes that. Steven Rockefeller is one of the drafters of the Earth Charter. The document says it laments that "the dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species".

Do you have any comment on that kind of funding coming from outside our country? I would suggest it's anti-Canadian. What are the reasons for that?



**Mr. Ezra Levant:**

Vivian Krause, who I understand has testified, has done all the research on this. But \$190 million from United States lobby groups is poured into Canada to affect our domestic policy. I love the Americans, but I don't want them to tell us how to write our laws. I love them as neighbours, not as bosses. They're not the only ones. Greenpeace, which started out as a Canadian lobby group, is now a quarter-billion-dollar-a-year multinational corporation based in Europe.

I really don't want foreign lobbyists telling us how to make our decisions. Let's make our decisions using Canadian values. When Americans tell us not to export oil to China, that we should stay totally dependent on them for a market, is that really in our interest? Follow the money, I say. Who is celebrating the slowdown of the oil sands? The Saudi ambassador.



**Mr. David Anderson:**

There's more to this than just environmental issues.



**Mr. Ezra Levant:**

Absolutely.

It's an ideological agenda. It's a foreign policy agenda. I wish that everyone from Greenpeace to the Tides Foundation to the Suzuki Foundation, which has taken \$10 million from these guys, would have to register as foreign lobbyists, because they're taking foreign cash.



**Mr. David Anderson:**

I'd like to turn it over to Ms. Gallant.

But I notice, Mr. Lepine, you seem to be agreeing with Mr. Levant.



**Mr. Lionel Lepine:**

Yes.



**Mr. David Anderson:**

Thank you.



**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):**

Mr. Chairman, our opposition colleagues allege the Canadian mining companies use substandard employment practices in other countries but deem it perfectly acceptable for foreign oil companies to oppress their workers in favour of Canadian oil. Even here today we hear the inaccurate juvenile slur "tar sands", as opposed to oil sands.

Mr. Levant, what's behind this contradiction? Are there outside or foreign entities influencing our legislators in some way?



**Mr. Ezra Levant:**

Some of it is Nimbyism. I think there are some folks who don't want to see any environmental side effects in Canada, but they don't mind if Nigeria has 2,000 toxic waste dumps. They don't mind if women are oppressed in Saudi Arabia because they don't have to see it.

A few weeks ago 230 ducks were killed when they sat down on our tailings ponds. *Mea culpa*, that's terrible. I'm not going to call it a tragedy, though, because there really is blood oil out there--300,000 Darfuris. Maybe if those 300,000 Darfuris were ducks, Tides Foundation would give a damn, but they don't. And do you know what? I think we should always improve in Canada. Frankly, I agree with some of what Mr. Cullen says about constant improvement and constant self-criticism. And I think I actually agree with Mr. Lepine on that.

But what we're seeing instead, instead of focusing on improving, this Nimbyism...the people who say they would rather buy misogynist, terrorist Saudi oil or they would rather buy Russian military dictatorship oil, invade Georgia, than have it here.... And do you know what? I discovered this after writing the book; I didn't discover it until afterwards. Half of Canada imports its oil. We're exporting the oil in the west, but folks in the Atlantic, even in Montreal.... There are tankers of OPEC oil flowing into this country. I bet you most folks in Montreal don't realize that when they turn on their car, they're burning oil from Saudi Arabia, where women aren't allowed to vote.

I say let's pull the camera back and think globally and act locally. If you're okay with buying conflict oil from Sudan, go for it. But I just--



**The Chair:**

Sorry, Mr. Levant, your time is up. And unfortunately our time is up for this panel.

Thank you you all very much for your presentations and for answering questions. This was a very informative panel.

We'll suspend the committee for two minutes, to change panel members. We'll do that as quickly as possible.

Mr. Lepine, do you have a short comment?



**Mr. Lionel Lepine:**

I want to ask just one question.



**The Chair:**

Sure.



**Mr. Lionel Lepine:**

I've been asked to ask you if this committee is going to make a strong recommendation to ensure the safety of the woodland caribou, buffalo, which are now endangered, and other animals, to minimize further destruction in that area.



**The Chair:**

After discussion among committee members, the report will be determined. So I can't comment on that with any certainty. But certainly the committee members have heard your plea.



**Mr. Lionel Lepine:**

Thank you.



**The Chair:**

Thank you all very much.

We'll suspend for just a couple of minutes, and then come back with the second panel.



**The Chair:**

Good afternoon, ladies and gentlemen.

We're here for our second panel, continuing our study on energy security in Canada.

We have on our second panel, from the Alberta Innovates Technology Futures, Ian Potter, chief operating officer. Welcome. We have, as an individual, Vivian Krause. Welcome. And we have, from HTC Pureenergy Inc., Jessie Inman, executive director, corporate development. Welcome.

We will have the presentations in the order listed on the agenda. We'll start with Ian Potter, from the Alberta Innovates Technology Futures. Go ahead, for up to seven minutes.



**Mr. Ian Potter (Chief Operating Officer, Alberta Innovates Technology Futures):**

Thank you, Mr. Chair.

It's a pleasure to be here today on behalf of Alberta Innovates Technology Futures. For those of you who aren't familiar with us, that was the original Alberta Research Council. We restructured on January 1, 2010, as part of the provincial restructuring of the innovation system.

This is a wide-ranging and complex field. To my mind, I'm a simple guy. My wife says I'm a simple guy. So I'd like to bring it back to simplicities. The question of energy security is wide-ranging; even its definition can be challenging. You'll find numerous definitions. I'm sure you've heard several during your

work. But simply put, average Canadians want electricity when they flip a switch, hot water when they turn on the water faucet, and gasoline when they go to the gas station. Unfortunately, they want it all at a reasonable price, whatever that means nowadays. They also want energy extraction methods to be environmentally sound—as long as it doesn't cost any more.

The reality of energy security for Canada is very complex. We are both an importer and an exporter of energy in all its forms. Some is raw material such as oil, coal, or uranium. But we also have electricity, an energy vector that we communicate with the U.S. and across provincial boundaries. We live in a huge, sparsely populated country with amazing extremes of temperatures. Building the infrastructure required to exploit and provide energy to Canadians was historically one of the most ambitious and complex engineering endeavours of all time. In my opinion, we were very lucky to have had people who took up that challenge and had the internal energy to do it.

Looking at energy security in a wider manner, I agree with the recent 2009-10 Capstone seminar student report from the graduate school of public and international affairs at the University of Ottawa that there are eight interdependent factors that constitute Canadian energy security: diversity of Canada's energy mix, the level of market transparency, investment, the free market nature of the Canadian energy sector, energy infrastructure, energy intensity, environmental considerations, and geopolitics.

But in my opinion, there are other more complex issues that muddy the waters of energy security and the role that governments need to play in sustaining it. First, there is risk management. Our role as government is to manage the risk, understand the risks. We may not know the issue to the nth degree, but we can manage the uncertainty and mitigate the risks as a continuous process.

Second, there is sovereignty. One example is the Arctic—there are sovereignty issues in the Arctic territories. Whose is it? Where does it belong? Where's the dividing line?

Third, and this is my belief, we need to assert world leadership in energy and environmental stewardship. Are we an energy superpower or just a commodity trader? How can we be acknowledged as an energy superpower, rather than just claiming to be one?

Fourth, there is the cause-effect challenge. In many cases, the energy developed around the world is huge. The environmental consequences are also huge. But there are other challenges that seek the heart of the social and economic well-being of communities.

Lastly, there is innovation. There is an unmet desire that all the preceding issues will be managed and understood if only we could innovate in areas such as technology development, policy frameworks, and health management. In my opinion, innovation strategy is central to energy security. The recent work by the Canadian Council of Chief Executives is one example of possible options in the innovation agenda. There's always another conference just around the corner on innovation, where previous innovation agendas have failed. When Herb Dhaliwal was the Minister of Natural Resources, I remember him saying that the discussion on innovation was hampered by a translation gap. Government is innovating, and industry is innovating. But how do we get them innovating together?

Why did we fail? First, I think the science and technology agendas that have been enacted haven't really understood and embedded the longer-term thinking that innovation requires. Second, I don't think we're asking the right questions. What is innovation? What are we trying to do with innovation? Is it environmental? Is it economic? What is it? How are we trying to get a grip on this major area?

 (1210)

A third area, perhaps the most important, as with any strategic agenda is leadership or lack thereof. We need a champion to move this agenda forward. It won't happen overnight, and probably not within a couple of electoral periods, but we need the long-term commitment to make sure that an innovation agenda, feeding into an energy security agenda, can be acted upon.

In Alberta, many of the recent recommendations from the CCCE, such as nurturing start-up companies, improving business academic links, building talent pools of highly qualified personnel, and reshaping policy frameworks in developing newly formed companies, are actually happening. My new company name is as a result of that restructuring of the innovation system, myself, and three sister organizations around health, bio-industries, and energy.

On the federal side of innovation, the ability to focus the agenda is paramount. The complex agenda is maybe limiting the ability for federal policy development to learn from the science and technology agendas

and move forward in support of the energy security challenge.

We need to ask the basic questions: what needs to be done, who needs to do it, when does it need to be done, what resources do they need to execute, and how do we keep them accountable?

The natural long cycle of innovation, although complex, needs to feed from the universities and groups such as the National Research Council, where the big science can happen under a national focus, but collaborate in regional frameworks by linking with the various provincial research entities, such as the New Brunswick Research and Productivity Council, Saskatchewan Research Council, Manitoba Industrial Technology Centre, CRIQ in Quebec, and my own group, the Alberta Innovates Technology Futures. Here, we understand the jurisdictional advantage for energy in the environment and we can directly support companies to drive the economy but also understand and support the well-being of all Canadians in our own provincial areas.

I'm an optimist, and I firmly believe that the challenges our forefathers overcame in the early days of Canada's energy growth are the strength and resolve that we need to move forward in today's challenges and turn them into tomorrow's opportunities. Canada's energy resources are central to development as a country, but with these resources come responsibilities.

Governments in Canada must supply good management and leadership to develop policy and fiscal frameworks to assess when or if these resources should be accessed and under what terms. In my opinion, the regulatory system in Canada is robust, appropriate, and accountable, but it can be improved. We should always look to improve our systems, always questioning whether we're doing the right thing for the right reasons, and improving all the time.

With the above said, I believe that government's fundamental role in energy security is leadership on the provincial, national, and international stage. That doesn't mean always being at the front, but it does mean understanding the risks; managing them; nurturing when needed with fiscal and policy support; effectively communicating with stakeholders to understand their concerns rather than just transmitting at them; advancing future policy development based on sound science and engineering; knowing when to pass on that leadership; showing innovation to capitalize future action and good management. But above all, as we hold politicians accountable by our votes, you need to hold us accountable, as industry and research groups, for our actions and inactions.

Thank you once again, Mr. Chair, for the opportunity to appear. I look forward to the questions.



#### **The Chair:**

Thank you very much for your presentation, Mr. Potter, from Alberta Innovates Technology Futures.

We now go to the second presentation, Vivian Krause, here as an individual. Go ahead, please, for up to seven minutes.



#### **Ms. Vivian Krause (As an Individual):**

Thank you.

I'm a resident of North Vancouver. I have a master of science degree in nutrition and I have worked most of my years with the United Nations Children's Fund, six years in Guatemala and five in Indonesia.

For the sake of time, I won't go into how I went from UNICEF to salmon farming to an extensive review of the more than 6,000 pages of the U.S. tax returns of the charitable foundations who are funding a campaign against Alberta oil. But I would like to say from the outset that I am not funded by anyone, and I am not part of any industry or any political party.

I would also like to acknowledge the much-appreciated contributions of my colleague, Rob Scagel.

I'd like to focus my remarks on the foreign funding, by American charitable foundations, of what I call the "demarketing" of Alberta oil. Demarketing is reducing demand or shifting demand away from something. We don't hear much about demarketing, because marketing is mostly about selling more, not selling less. But when it comes to Alberta oil, demarketing is precisely what Canadian environmental organizations have been paid to do by American charitable foundations.

Alberta oil isn't the only or first important Canadian export that's been demarketed by million-dollar



American-funded campaigns. The same thing has been done with Canadian forest products and farmed salmon. If every negative thing said about Alberta oil were true, I would agree it should be demarketed. But as we heard in the previous session, some of what is said is flagrantly untrue.

So I believe the question needs to be asked, is there a sound scientific basis, a sound case for the demarketing of Alberta oil? And if not, then why is it being demarketed?

According to my analysis of U.S. tax returns, American charitable foundations have granted at least \$18 million specifically for the demarketing of Alberta oil and thwarting of the Canadian oil and gas industry. By the way, that figure is up by about \$3 million from the \$15 million that I reported in an op-ed piece in the *Financial Post* in October. Some grants were specifically aimed to thwart the Canadian oil and gas industry. For example, in 2006 the Rockefeller Brothers Fund paid \$200,000 to the Pembina Foundation and West Coast Environmental Law "to prevent the development of a pipeline and tanker port...", among other things.

In 2009 the Bullitt Foundation paid the Tides Foundation to get the Dogwood Initiative "to expand outreach campaign to mobilize urban voters for a federal ban on coastal tankers...". And the Brainerd Foundation, another American foundation, paid the Dogwood Initiative "to help grow public opposition to counter the Enbridge pipeline...". They're doing what they're paid to do.

The Rockefeller Brothers Fund granted at least \$105,000 specifically to the first nations who are right at the mouth of the Douglas Channel, right where oil tankers would need to load if they were export-bound for Asia. That included \$70,000 for an anniversary celebration in 2004 and \$35,000 for a ceremonial event in 2006. Now, of all the aboriginal people in the world and all the places in the world, why does the Rockefeller Brothers Fund choose to pay more than \$100,000 to the first nations at the Kitimat village right at the mouth of the Douglas Channel?

I can see that what they are doing is protecting the environment. I can also see that what they are doing is protectionism in the name of the environment. I believe it's important to look at the campaign against Alberta oil within the broader context of the initiatives that American foundations have funded in our country.

According to my analysis and preliminary calculations, over the past ten years American foundations have spent approximately \$300 million on conservation initiatives in Canada and the so-called reform of our resource-based industries—forestry, mining, aquaculture, and oil and gas. About \$50 million of that went straight to first nations, especially on the coast of British Columbia, including, for example, one grant for \$27.3 million. That was a single grant.

Roughly 80% of that \$209 million came from five foundations: the Hewlett Foundation, the Packard Foundation, the Gordon and Betty Moore Foundation, the Pew Charitable Trusts, and the Rockefeller Brothers Fund. These are the foundations I have referred to as "The Big Five". They have \$22 billion in assets. They give away \$1.2 billion every year. Their CEOs earn \$600,000 to \$700,000 a year. Their senior environmental staff are paid in the \$300,000 range. Some of these professional environmentalists are paid more than the Prime Minister of our country.

 (1215)

In my remaining time I would like to share with you the three most important conclusions that I draw from my research and analysis.

First, there is no doubt that environmentalists care profoundly about the environment, but there is more to it than that. Some of the same foundations that are funding the demarketing of Alberta oil have made grants that specifically mention reduction in the dependence on fossil fuels as a matter of national security. So obviously this isn't purely about the environment; there are other interests.

Over roughly the same period that the Hewlett Foundation and the Packard Foundation--two separate foundations--granted \$83 million for environmental initiatives in Canada, they also paid more than half a billion dollars to the ClimateWorks Foundation and the Energy Foundation.

The Energy Foundation has a clear agenda "to create a robust solar market". Since 2009 the Energy Foundation has made at least 33 grants to reduce market barriers to solar development; support utility-scale solar power; design solar policy; and support regulatory interventions, long-term transmission corridor planning, and solar finance models.

Growing a solar business takes more than sunshine. It also requires shifting investment capital away from competing industries, especially oil. Sunshine may be infinite, but capital isn't, and scaring consumers, voters, and investors--which is what campaigns do--is a way of swaying investors and their capital.

So the Hewlett Foundation funds the Energy Foundation to create a robust solar market and thwart the coal industry, at the same time that the Hewlett Foundation funds the Tides Foundations and Tides Canada to demarket Alberta oil and thwart the Canadian oil and gas industry.

As I see it, the demarketing of Alberta oil is part and parcel of Hewlett's huge, heavily funded initiative to shift the energy market away from fossil fuels and towards renewables.

The problem with demarketing is that you paint yourself into a corner, because if you've positioned your products and services as being better than those of the competition, which is bad, and all of a sudden you start changing what you're saying about the competition, in the marketplace that changes not only what the market thinks about the competition, but what they say about you. So you have to stick to your positioning, and that's where you're painted into a corner, because even if your competitors reform and improve, you're stuck with de-positioning and demarketing them, which is what we're seeing.

My second point is that environmental activism isn't what it used to be. The new factor is money--millions and millions of dollars. As long as environmental organizations are paid to run multi-million-dollar campaigns, I think it's unreasonable to hope that they won't.

My last point is a suggestion. Considering that American foundations have spent upwards of \$300 million in our country--especially \$120 million on the Great Bear Rainforest initiative and the boreal forest initiative--it's pretty clear that they're serious about what they're doing. So my hope is that the leadership of government and industry will speak directly with the CEOs of these foundations.

The development of Alberta oil is a billion-dollar opportunity, and I hope we will make the most of that opportunity by minimizing the risks to a level that Canadians can accept. Both at home and abroad we could do a lot of good with that, and in terms of energy security. My hope is that we will.

Thank you, Mr. Chair.

  (1220)



**The Chair:**

Thank you very much, Ms. Krause, for your presentation.

We will go finally to Jessie Inman, executive director of corporate development for HTC Pureenergy Inc.

Thank you very much for being here. Go ahead with your presentation for up to seven minutes.



**Ms. Jessie Inman (Executive Director, Corporate Development, HTC Pureenergy Inc.):**

Honourable members of the natural resources committee of the House of Commons, Mr. Chair Leon Benoit, thank you very much for the opportunity to be here today.

I submitted a paper to you before coming into this session, and it is too long to read in seven minutes, so I'm going to pick out the highlights from that paper. Hopefully, you will have a chance to read it later on.

The people of Canada are very blessed. We're endowed with such a vast natural resource space, and we have a relatively small population in such a very large land mass. We use 2.3 billion barrels of oil equivalent per year at this point in time, and that will grow by 34 million barrels of oil equivalent by 2025, taking us to 2.9 billion barrels of oil that we will need in equivalency by 2025.

We have this incredible standard of living because we are such a blessed nation. We have it because we have the resource for ourselves and have sufficient resources to export to our neighbours. So Canada is a very blessed country, but this doesn't mean we can sit back on our laurels and say, this is fine, and we have a very rosy future in front of us. We can't do that.

We have to do exactly what this committee is doing right now, and that is trying to understand and plan and manage a reasonable and sustainable mix in our energy supply for the future. Currently, we're using approximately 30% from oil, 27% from natural gas, approximately 8% from coal, 6.5% from nuclear, and 28% from hydroelectricity. You can see from those numbers that 65% of our energy is coming from fossil fuels.

The fact of the matter is, to make this sustainable we have to increase our renewable resources. We're very blessed with the hydroelectricity that we have, but we have minimum ability to increase that hydroelectricity. We're working very hard on our solar, but we only have 120 megawatts of installed solar power at this point in time. Even in wind, on which we're working very hard, we have 3,320 megawatts of wind. That is only 0.2% of our energy requirements in the country. It is very small. We also have ethanol as an alternative, at 5.8 million barrels of oil, which is 0.27%.

If you took the total of wind, solar, and ethanol and said that you were going to just supply the increase in demand from now until 2025, you would have to increase these by 300% every year until 2025. That's an incredible investment in renewable energies that we have to make in this country. Clearly, we need to do something about fossil fuels as we go along that path towards a renewable society.

I think that to look at unconventional sources of supply is very important. Obviously, we have the coal bed methane, which is unconventional, and we have all heard about the shale storm that has taken this continent, and we're very much looking at the fact that we have 160 billion barrels of oil and that approximately 20% of it will be recoverable. There are all the kinds of issues we're dealing with in order to make that happen, with new fracking and other methods of exploiting that resource.

What I'm here today to talk about is what I believe is the incredible opportunity we have in this country to have energy security at the same time as environmental security: that we can use our unconventional resource called carbon dioxide to increase our energy production. I believe that we have this asset called carbon dioxide, which we're emitting to the atmosphere for absolutely no reason. It is destroying our image; it is giving us a dirty-oil image, which I agree we don't deserve, but unfortunately we already have it. It's easily solved by collecting that carbon dioxide from the oil sands in particular. That's what my strategy is for Alberta: to take the carbon dioxide from the SAGD boilers and use it for enhanced oil recovery production from conventional and heavy oil in central and south Saskatchewan and Alberta.

We have 170 billion barrels of oil in the oil sands. It will be produced, as everybody has said around this table today—we all agree it's going to be produced. We're going to be emitting by 2025 more than 60 million tonnes of carbon dioxide from all of that production. Why would we let that asset go into the atmosphere, when it can be used?



We all know that 80% of the oil sands is in situ production—it's not open-pit mining—and that in situ production requires steam to be injected into one of the horizontal wells, and that it is once-through steam generators that we use to make that steam. Those generators produce carbon dioxide. Those are the emissions I'm talking about.

Why not use that carbon dioxide for unconventional production, which I call enhanced oil recovery? Some people in the industry call it miscible or immiscible flood. Simply, what you're doing is changing the viscosity of the oil so that it will swell and you can recover it.

In conventional oil in Alberta, the estimates are that we could increase our production by 3.5 billion barrels of oil.

On page three of the paper I gave you, I must tell you that I put an "m" instead of a "b". In this industry you always have to make sure you get your Ms and your Bs straight, because they create quite different numbers.

So it's 3.5 billion additional barrels by using this asset that we're letting go into the atmosphere called carbon dioxide. Why would we do that? It doesn't make sense. We need to collect it and use it.

The same applies to the heavy oil that we have in central Alberta and in particular in Saskatchewan. There's another one billion barrels of oil that we can produce using carbon dioxide by injecting it into those oil fields.

So we have a unique opportunity, and one of the things I would like to bring to the attention of the

committee, and I've done that, is that we have a centre of excellence on carbon dioxide in Regina. This is one of a few centres of excellence in the world. I think it's something we need to be very proud of. Our company uses that technology. It can be exploited in Saskatchewan and in Alberta to collect the carbon dioxide from these once-through steam generators and take out this additional oil that Canada can use for our own security.

We need to do the renewables and we need to increase our nuclear capabilities; I agree with that. But there is absolutely no reason that we cannot have clean fossil-fuel production. That can be done by taking the carbon dioxide from the oil sands. It has a high impact on the prosperity for Canada.

I would like to invite the members of this committee to come out to Regina and to look at the centre of excellence we have on carbon dioxide and at how we can make it a real win-win for Canada on all levels.

Thank you very much for the opportunity to be here today. I look forward to your questions.

  (1230)



**The Chair:**

Thank you, Ms. Inman, from HTC Pureenergy Incorporated.

We go directly to questions for up to seven minutes.

Mr. Tonks, go ahead, please.



**Mr. Alan Tonks (York South—Weston, Lib.):**

I hardly know where to start. This committee has been infinitely educated by the quality of witnesses we have. This is certainly no exception; we've had great presentations today.

Mr. Potter, I have to say, you're far from a simple guy. If I were as simple as that, I wouldn't have any trouble going home and saying it. You've outlined what is the strategic interconnectedness with respect to what you talk about: taking tomorrow's opportunities from today's challenges. You talk about working with the National Research Council and the provincial affiliates to have a jurisdictional strategic policy development entity or regime.

You've heard Ms. Krause, who has described what I am inferring—and this is my own inference—is a conspiracy theory, which in some way suggests that we are not capable of dealing with balanced criticisms that are funded by legitimate entities, and that this conspiracy is in fact going to take us further from what you, Mr. Potter, have described as an opportunity. You've given us a clinical analysis and a prognosis for action.

My question is for you, Mr. Potter. You've heard Ms. Inman, who has also talked about the technology of developing carbon dioxide and using it to come to grips technologically with the issues that are affecting health and creating concerns for Canadians. I'm going to give you the floor now. What is your take? Are you still optimistic with respect to the capacity-building that is needed to generate the solutions that have been addressed by others?



**Mr. Ian Potter:**

Thank you for the question.

Again, I'll try to keep my answer short.



**Mr. Alan Tonks:**

Shorter than the question.



**Mr. Ian Potter:**

I'll just give you a quick background on myself.

I left home when I was 16 and joined the merchant fleet with Shell Oil before joining the Royal Navy as a marine engineering officer and then going into academia and getting my doctorate in mechanical engineering, focused on power systems and submarine design. Submarine design in the prairies is pretty unique, unless you live in West Edmonton Mall.

For the last ten years I've focused my efforts on climate change. I was the first manager of the climate change group of the Alberta Research Council. I moved into sustainable development more broadly, dealing with things like LOR acclimations, soil amendments, and manure to energy. For the last five years I was the vice-president at primarily the hydrocarbon group before taking my existing job as chief operating officer.

I've been involved in every road map, I think, Canada's ever done in the last ten years on hydrogen, oil sands, oil, and renewables. The ability of Canadians to catalyze around a road map is amazing. The ability to move beyond that road map to action plans lacks leadership.

I believe there's a thirst for doing something. I believe there's a thirst, an entrepreneurialism in Canadians, and the yearning to do the right thing for the right reasons. So I believe there's a huge momentum underlying, which is waiting to come out to address these issues.

Is one technology going to be the silver bullet? No. We have such a diverse country, such a diverse environment, such diverse energy sources that we're going to need a whole suite of technologies. We need to go through the various sequences of development from lab, to company, to field implementation, to pilots, to demonstration on a scale that will reduce the investment risk.

Investment risk is the critical thing here. Having a policy framework that supports that investment risk is critical.

So there's a lot of connectivity here, but I believe that underneath it, Canadians like the challenge. I like the challenge. It's what actually drives me to go to work each day.

  (1235)



**Mr. Alan Tonks:**

Thank you for that, Mr. Potter.

My question is for Ms. Krause.

I hope you don't take exception to the notion of conspiracy, because in your paper you also point out that those organizations and foundations are also investing in what has been considered part of the strategic reaction to concerns about fossil fuels, and that is solar, wind, tidal, and so on. Those same organizations are investing in it.

Does that not somewhat ameliorate your thesis that there is such a huge balance towards the oil sands that it is in fact mitigating against the overall economic and sustainable development objectives that have, in the past, driven Canadian policy on the environment, recognizing that there are huge issues with the tailings ponds and the use of water and the leaching into the aquifer, and all of those things?

Given what you have heard and what you have experienced with so many different organizations that are attempting to be part of that sustainable development equation--and there are many variables in that equation--does it not somewhat ameliorate your thesis that rather than a conspiracy, it's a search for balance, and it's a very democratic and objective-driven pursuit, and that activists and all have a role to play?



**The Chair:**

You have about a minute to answer that, Ms. Krause. Go ahead.



**Ms. Vivian Krause:**

I agree that activists have a role to play. They keep government and industry on their toes, and rightly so. I have more than a decade of working in the United Nations and funding activists. I've been one myself.

I think, though, that on all sides of the equation--in government, industry, and activism--the ethics are really important. We need activism that's grounded in transparency and in truthfulness. Sometimes I think that when criticisms are levied against our industries, and when they're fair, and when they're true, then we need to say so. We also need to say when things that are said are untrue.

I don't think issues should be raised that are fronts for other issues. In this particular case, I think what we're seeing is that there are multiple issues. There is more than one interest at play here.

It's very simple to raise wild salmon as a concern or to raise environmental issues as a concern, but we need to realize that there's more to it than that. I think we need to think outside of the port, too, and think of the global ramifications.

Banning exports in the name of marine conservation is not going to go unnoticed. If it's about marine conservation, then there are many places in the world where money could be spent. It raises questions for me that hundreds of millions of dollars are being spent here, and far less is being spent in other parts of the world.

**The Chair:**

Thank you.

Thank you, Mr. Tonks.

We go now to the Bloc Québécois. Monsieur Pomerleau, you have up to seven minutes.



[Translation]

**Mr. Roger Pomerleau:**

Thank you, Mr. Chair.

Thank you everyone. I concur with my colleague. We have heard some excellent presentations today from individuals who come from very diverse backgrounds.

Mr. Potter, you said the time had come to ask some solid questions about innovation. I quite enjoy the name of your organization, Alberta Innovates - Technology Futures. As far as the name goes, it's quite extraordinary. You talk about the long term. You say that we should avoid thinking about the next election and focus instead on the many other elections to come if we truly want to consider Canada's energy security.

Much has been said here about oil in all its various forms. This country has vast oil resources, but it also has other forms of energy derived from wind power, tidal power, geothermal power, which is widely used in Iceland, and solar power. I was in Gibraltar recently and saw fields covered with solar panels generating electricity for homes. So then, there are other types of energy.

Do you not feel that aside from energy produced from oil, there is not a great deal of research being done at this time on other forms of energy that could be used, such as CO2?

[English]

**Mr. Ian Potter:**

Thank you for the question.

I'm in Alberta. I obviously work in oil sands. I work in oil, but I do a lot of work in renewables. To me, it's not necessarily about the source. I need an end product. I need electricity. I need something to run my car. Where do I get it from? Where am I? I'm a fan of investing in all forms, depending on where you are and what you actually need.

I think wind is a very good source. There are some limitations with regard to when the wind blows.

Where the wind actually is strong, for example, in the province of Alberta, is down in the southwest. It's not practical to have long-grid transmission losses to actually get the wind energy up to the oil sands, for example, because it fluctuates. There are problems with the grid and the way the grid is managed and the harmonics injected into the grid.

If I look at Canada as a whole, I can't think of one energy form we have that can't be used effectively. So I agree. I look at the International Energy Agency's statistics on energy investments by the governments of Canada, federal and provincial, and I look at how they have morphed over the last 30-odd years. You can see swings. Different groups have different reasons. They'll say we're going to have bioenergy as a topic today and oil as a topic for tomorrow, and you can see the swings. Nuclear is there as well.

My only concern is that we don't do what I would call "flavour of the month" research. Research has a long-term agenda, normally. If I take it cradle to grave, from an idea in a university to effective field implementation, if you want, in oil sands, you know, it takes 15 years. You need that long-term agenda. If I switch it on and off every three years, I'll never get to the actual mission and the actual end prize of actually doing it. You do need consistency.

So I come back to the provincial groups. I come back to groups such as the National Research Council that can weather the different regimes within the governments and actually do the right things in a long-term, sustainable manner.

But I'm an advocate of all forms of energy, for the right reasons in the right areas.

[Translation]



**Mr. Roger Pomerleau:**

Still on the same subject, Ms. Krause, there are some things in your report that I don't quite understand. As you know, the Americans need our oil. US companies come to Canada to invest and some Americans criticize the use of this oil for other reasons. They are within their right to do so.

You stated that at some point, these people wind up painting themselves into a corner. Don't you think that if companies spend large amounts of risk capital improving their techniques, conducting research, developing new procedures and so forth...At some point, these companies have invested so much money in this venture that they have in fact "painted themselves into a corner" and can no longer consider developing other forms of energy. That is not their role either, but governments have a stake in this. So then, at some point, everyone finds themselves "painted into a corner", and things are at an impasse.



**Ms. Vivian Krause:**

I totally agree with you.

[English]



**Mr. Roger Pomerleau:**

That's a good answer.



[Translation]



**Ms. Vivian Krause:**

If I understand what you are saying, the industry is improving—and we want that—but activists are still protesting. If there is a valid reason for demarketing oil, then alright. But if there is no valid reason to do so, then it has to stop.



**Mr. Roger Pomerleau:**

That is your opinion.



**Ms. Vivian Krause:**

Yes, it is.



**Mr. Roger Pomerleau:**

You are asked to testify in forums like this one to denounce that which, in your opinion, does not constitute a valid reason. In that respect, it's good.



**Ms. Vivian Krause:**

I raised the issue and I tried to identify...The key thing is finding out whether there is a valid reason for demarketing. Is there any sound scientific basis for these types of campaigns? If there is, then we need to consider ways of improving the industry. If there is not, then we have to ask ourselves why these campaigns are being waged.

The goal is to get at the truth. Are there valid reasons? I'm not the person... This isn't a question that only one person can answer. It comes down to science and technical expertise. That is what we need to consider.



**Mr. Roger Pomerleau:**

I see.

I have nothing further, Mr. Chair.

[English]



**The Chair:**

We'll go now to Mr. Cullen, for up to seven minutes.



**Mr. Nathan Cullen:**

Thank you, and thank you to our witnesses.

First, to Ms. Inman, in trying to understand energy security, one of the questions we raise is what is the role of the federal government? And saying those words sometimes in Alberta can get you into a lot of trouble. What is the role of the federal government with respect to energy? There is a certain constituency that gets really nervous.

Yet we've been hearing consistently from the oil companies, many of them based in Alberta, saying "We need the federal government to play a role", and some suggest a stronger role around the question of energy security.

Your group and the industry that you represent is with regard to the capture of carbon sequestration. Is the lack of a carbon price a factor in the decisions that get made in your specific industry, that Canada has no carbon price that we know of right now? We're sort of waiting on the U.S. Congress. That is what the current minister tells us. What's the resulting uncertainty in your industry?



**Ms. Jessie Inman:**

The lack of a carbon price is the number one reason why we're not capturing carbon dioxide right now, yes, absolutely. In Alberta we have a price of \$15 a tonne, but this doesn't go anywhere near creating incentives to companies to capture carbon dioxide.



**Mr. Nathan Cullen:**

The role of the federal and provincial governments when creating incentives in the early days in



northern Alberta and the tar sands was complete. There were tax incentives. There were all sorts of industry groups set up with government to enable that industry to exist because up until that point it was just too expensive to get bitumen to oil. That was the technological barrier.

Mr. Potter, is that true?



**Mr. Ian Potter:**

Yes.



**Mr. Nathan Cullen:**

So the role of the federal government in energy at that moment for Alberta was, I would suggest, significant in enabling the creation of the industry that exists today.

Is that correct, Mr. Potter?



**Mr. Ian Potter:**

That's correct.



**Ms. Jessie Inman:**

I have a comment on that, which is really important. If we go back even further than that and look at the role the federal government played when we put in the infrastructure for the existing oil and gas industry in Alberta, that was put in by the federal government. Why shouldn't the federal government help us put in some of the infrastructure that's required to take that carbon dioxide and move it about?



**Mr. Nathan Cullen:**

I follow you to a point on that argument. Oil is \$90 a barrel again today. On the price point, even with carbon capture, the Canadian public is going to wonder why would that cost not just be internalized.

I go back to my point about pricing carbon. Shell has already started to price carbon internally. They've said they're going to put a \$40 a tonne price into their future plans. Why should the public have to pick up the cost of capturing that carbon on behalf of oil companies, which, for all intents and purposes, are doing very well right now and have been for some time?



**Ms. Jessie Inman:**

From my perspective, I don't think our company is asking for the government to make a long-term commitment to subsidizing the capture of carbon dioxide, but there is a gap at the moment. Even if we are using that carbon dioxide for enhanced oil recovery, there is \$1 gap between the cost of capture and getting it to that enhanced oil recovery production, because enhanced recovery is not just straightforward. Not every reservoir is perfect for recovery, so it's a hit and miss game.



**Mr. Nathan Cullen:**

It's expensive in the early days.



**Ms. Jessie Inman:**

It is very, very expensive in the early days.



**Mr. Nathan Cullen:**

I'm going to have to cut you off, because I'm going to run out of time and I want to get to Mr. Potter for a second.

Mr. Potter, in April this year this federal government resisted Sinopec's offer to buy into the tar sands, particularly on the export of raw bitumen to a lower-level region for refinement. The Prime Minister had

made a commitment in 2006 and then again in 2008 not to export raw bitumen to jurisdictions that had lower environmental standards than our own.

You talked about free market and geopolitics being two factors in an energy security environment. Is what the Prime Minister did in alignment with free market principles, to resist a free market offer for Sinopec to come in and buy up a big chunk in the oil sands?

  (1250)



**Mr. Ian Potter:**

I'm not a market expert, so I probably won't get into hot water by trying to answer the question directly.



**Mr. Nathan Cullen:**

It's an interesting moment, though, isn't it? Sinopec wants to buy ConocoPhillips. Some billions of dollars of so-called foreign investment are on the table and the government says no. The government says it's because of lower standards in China, in particular, for upgrading on GHG emissions.



**Mr. Ian Potter:**

That is a very strong geopolitical reality. That's why you have the expertise in other groups, not in my person, to actually advise you accordingly. I will advise you on the technology and on the research needs for it, but the market side of it is beyond my résumé, if you want to be simplistic.



**Mr. Nathan Cullen:**

Then it comes back to what this committee's trying to study, which is around the notions of energy security. If I'm in the oil sector, that puts an element of uncertainty to me in terms of who I'm available to be sold to and who I'm not, depending on where they come from. This was a Chinese endeavour. If it had been German, French, or Australian, maybe the sale would have gone ahead. We don't know. It's again back to the role of the federal government.

Ms. Krause, I want to turn to you for a second. I've looked at your article in the post, and I think you've had to take some down, in terms of the connections of Tides Canada and Tides in the U.S., but perhaps not. Your thesis is that outside influence, essentially, outside money is coming in and affecting Canadian policy and Canadian lives. Is that right? Is that the concern you raise in the article I'm reading?



**Ms. Vivian Krause:**

My concern is that there's a mix of interests. It's not purely about the environment. I can see that what they're doing would protect the environment, but I can also see the other purposes on other--



**Mr. Nathan Cullen:**

The notion of the money coming from the U.S.... If the money had been raised in Toronto or Calgary or Vancouver to fight that same fight, your concerns would be fewer. In your article, again and again you talk about how the money is--



**Ms. Vivian Krause:**

No.



**Mr. Nathan Cullen:**

No, you very much do. These are your own words.

The question I have is this. There's a proposal happening right now with the Enbridge pipeline, which I'm sure all the witnesses are familiar with. Enbridge has told me and told the public that they've raised \$100 million, \$10 million from 10 different companies to promote their project. Some of those companies

are foreign and they are buying influence, if they can. They are paying for things in Kitimat Village, which you mentioned earlier. They're paying for festivities. They're paying for new skateboard parks. They're spending money, which is of foreign origin, to affect Canadians' hearts and minds. Why haven't you investigated that?



**Ms. Vivian Krause:**

Let me be very clear. I think charities should be doing charity. I would be just as disappointed if Canadian charitable foundations were funding something that wasn't exclusively charitable. It just so happens that the charitable foundations that are funding this are American. I would be calling them out, no matter which country they were from--



**Mr. Nathan Cullen:**

Are they not Canadian as well?



**Ms. Vivian Krause:**

--including if they were from our own.

Yes, there is some charitable funding, but very, very little compared to what is coming in from other sources.



**Mr. Nathan Cullen:**

So you have no concern about Enbridge. That's fascinating.



**The Chair:**

You're out of time, Mr. Cullen.



**Mr. Nathan Cullen:**

The question she didn't get to answer, Chair, was that Enbridge has raised similar tens of millions of dollars, but there's no concern at all.



**The Chair:**

Well, your time's up. She may choose to answer it when she's responding to questions from Mr. Allen, who is next.

Go ahead, please, Mr. Allen.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Mr. Chair.

Thank you to our witnesses for being here today.

Ms. Inman, I'd like to start with you and pick up on one of the comments that Mr. Cullen started, which was building \$40 per tonne into the pricing. Then you talked about the \$15 per tonne in Alberta. What would that impact be? We all know that it's going to be transferred to the consumer. What would be the impact of that on the consumer? Do you have any estimates on what that price per tonne is?



**Ms. Jessie Inman:**

On the gap at the moment between the cost of capture, the cost of transportation, and the cost of injecting that into a reservoir that may have incremental oil production, I believe the cost is somewhere between \$70 and \$100. Right at the moment the tax in Alberta is \$15 a tonne, so that's not going to get us anywhere close to covering those costs. When I talked to the enhanced oil recovery producers, they're saying "Well, maybe a price of \$40 a tonne is something we would like to pay". So you can see there's a

very large gap, and that's why, to get this industry kick-started, we need some help from the government to get our technology, which I believe is completely proven technology at this very small scale, into the commercial realm. We would like that kick-started with the government's assistance.

Does that answer your question?

  (1255)



**Mr. Mike Allen:**

It does. Either way, we're going to create, in my view, a false market, because—



**Ms. Jessie Inman:**

Not over time.



**Mr. Mike Allen:**

—the government has been subsidizing, or the consumers are going to pay in the end.



**Ms. Jessie Inman:**

But only in the beginning.

I don't have those exact numbers with me, Mr. Allen, but I can get them for you. If you take that out over the vast number of consumers there are across the country, it's a very, very small increment in terms of the cost of our energy that we use every day in our homes and in our cars. It's much, much smaller than we think it is.

Recently, in the last few years, gasoline prices have tripled. Did anybody stop driving their cars? No, they didn't. So I don't think that in the end the consumer is going to be vastly affected by the cost to capture our carbon. But we do need the government to get on board with this so we can get it started. In the end, the consumers will be willing to pay for it.



**Mr. Mike Allen:**

Okay. Well, I might debate that with you.

Ms. Krause, going to you with respect to one of the comments you made, that activism isn't what it used to be, yes, I would say so. I mean, I'm looking at some of the chief investment officers' salaries here on one of the slides--\$1.6 million, \$1.5 million a year in CEO salaries. They're pretty significant dollars; they're almost like the major banks.

You said \$300 million over the last ten years in some of the research you've done. You also commented it was on three things, though. It was oil and gas, it was forestry, and that type of thing. Then you said this year it has gone from \$15 million to \$18 million, the lobby efforts on oil and gas.

Has that been a decreasing amount over the ten years, or have you seen the oil and gas ramp up? Are you seeing an acceleration in those amounts in the last ten years, or even in the last two or three years?



**Ms. Vivian Krause:**

A huge increase, yes.

The first comment I wanted to make was that the main reason I say that environmental activism isn't what it used to be is because if you look back over the last ten years, in the late 1990s the average grant might have been \$50,000. You saw lots of grants for \$10,000 or \$12,000, or even less than \$10,000. By the mid-1990s, you see half-a-million-dollar grants are not at all unusual. Now, it's not at all unusual to see million-dollar or multi-million-dollar grants in a single grant. So we've gone from five-digits to six-digits to seven-digit grants. That's what I see.

For instance, one foundation, the Tides Canada Foundation, in 2001 had assets of \$1 million. Now they have assets of \$33 million. How do they go from \$1 million in assets to \$33 million? You can do quite a bit with the earnings off \$33 million.

To give you an example from the Hewlett Foundation, in 2004 they paid Tides Canada \$70,000 to develop, and I quote, "a strategic plan to address oil and gas development in B.C.". I'd like to know what was that strategic plan. Since then, in the last four years.... After \$70,000 in 2004, then \$250,000, then \$1.5 million in 2007, the next year it went from \$1.5 million to \$3 million, and then the last two years \$2 million, and this year \$2.4 million.

So yes, we have seen a very, very steep increase in the funding.



**Mr. Mike Allen:**

Can you comment on one of your slides? It's the one that says \$56 million U.S. paid to Tides Canada:

Since 2003 when Tides Canada got equivalency status in the U.S., Tides Canada can re-grant U.S. funds in the name of Tides Canada.

How does that process work on that regranteeing?



**Ms. Vivian Krause:**

My understanding, to the best of my knowledge, is that Tides Canada has essentially two entities. In Canada there are two registered charities; one is called the Tides Canada Foundation and one is called the Tides Canada Initiative Society. The Tides Canada Foundation has equivalency status in the U.S. They file tax returns with the IRS. So American charitable foundations can make grants to Tides Canada Foundation. Tides Canada Foundation then regrants a part of that money to itself, to the Tides Canada Initiative Society. Then, when Tides Canada Foundation makes grants in Canada, they're made in the name of Tides Canada. So you don't know, for instance, where the grants originated.

I think it's really important to look at what some of the grants were actually for. For instance, \$700,000, and I quote, "to slow the expansion of tar sands production by stopping new infrastructure development". I'd like to know.... For example, the water quality research that was done on the impact of the oil sands on the Athabasca River was done at the same university, funded by the same organization, Tides, published in the same journal, and publicized in the same journal as another set of research that has been used to thwart the salmon farming industry. It's important to know: Is that research funded as part and parcel of a demarketing campaign?

 (1300)



**The Chair:**

I'm sorry, Mr. Allen, you're out of time.

I'd like to thank all three of you for coming today. The information you've provided to the committee is very helpful indeed. Jessie Inman, Ian Potter, and Vivian Krause, thank you.

We're finished with our meeting for today.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 38

Thursday, December 9, 2010

The Standing Committee on Natural Resources met by videoconference at 11:03 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* André Bellavance for Paule Brunelle, Blaine Calkins for Richard M. Harris, Hon. Laurie Hawn for Cheryl Gallant and Yves Lessard for Paule Brunelle.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Northern Gateway Alliance:* Colin Kinsley, Chairman. *Coastal First Nations:* Art Sterritt, Executive Director, Great Bear Initiative. *United Fishermen and Allied Workers' Union - Canadian Auto Workers:* Arnold Nagy, President, Local 31. *Canadian Energy Pipeline Association:* Brenda Kenny, President and Chief Executive Officer. *International Ship-Owners Alliance of Canada Inc.:* Kaity Arsoniadis-Stein, President and Secretary-General.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Colin Kinsley and Art Sterritt, by videoconference from Vancouver, British Columbia, made statements and answered questions.

At 11:55 a.m., the sitting was suspended.

At 12:03 p.m., the sitting resumed.

Arnold Nagy, by videoconference from Prince Rupert, British Columbia, Brenda Kenny, by videoconference from Calgary, Alberta, and Kaity Arsoniadis-Stein, by videoconference from Vancouver, British Columbia, made statements and answered questions.

At 1:06 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2010/12/13 10:07 a.m.

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## 40th PARLIAMENT, 3rd SESSION































### Standing Committee on Natural Resources

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**1145**

-  *Mr. Art Sterritt*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*
-  *Mr. Colin Kinsley*






**1150**


-  *Mr. Richard Harris*
-  *Mr. Colin Kinsley*
-  *Mr. Richard Harris*
-  *Mr. Colin Kinsley*
-  *The Chair*

**1200**

-  *The Chair*
-  *Mr. Arnold Nagy (President, Local 31, United Fishermen and Allied Workers' Union - Canadian Auto Workers)*


**1205****1210****1215**

-  *The Chair*
-  *Ms. Brenda Kenny (President and Chief Executive Officer, Canadian Energy Pipeline Association)*
-  *The Chair*
-  *Ms. Brenda Kenny*
-  *The Chair*

 *Ms. Brenda Kenny*

#### 1220


 *The Chair*

 *Ms. Kaity Arsoniadis Stein (President and Secretary-General, International Ship-Owners Alliance of Canada Inc.)*

#### 1225


#### 1230

 *The Chair*

 *Hon. Denis Coderre (Bourassa, Lib.)*


 *Ms. Kaity Arsoniadis Stein*

 *Ms. Kaity Arsoniadis Stein*


 *Hon. Denis Coderre*

#### 1235


 *Ms. Kaity Arsoniadis Stein*

 *Hon. Denis Coderre*


 *Ms. Kaity Arsoniadis Stein*

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 *Ms. Kaity Arsoniadis Stein*


 *The Chair*

 *Ms. Kaity Arsoniadis Stein*


 *Hon. Denis Coderre*

 *Ms. Brenda Kenny*






#### 1240

 *Hon. Denis Coderre*

 *The Chair*

 *Hon. Denis Coderre*







 *Mr. Scott Andrews (Avalon, Lib.)*

-  *Ms. Kaity Arsoniadis Stein*
-  *The Chair*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Ms. Brenda Kenny*
















**1245**

-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Ms. Brenda Kenny*
-  *The Chair*
-  *Mr. André Bellavance (Richmond—Arthabaska, BQ)*
-  *The Chair*
-  *Mr. Arnold Nagy*
-  *Mr. André Bellavance*
-  *The Chair*
-  *Mr. Roger Pomerleau*
-  *Mr. André Bellavance*
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-  *Mr. André Bellavance*
-  *The Chair*
-  *Mr. Arnold Nagy*

**1250**

-  *The Chair*
-  *Mr. Arnold Nagy*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Ms. Kaity Arsoniadis Stein*
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-  *Mr. Nathan Cullen*
-  *Ms. Brenda Kenny*
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## 1255

-  *The Chair*
-  *Ms. Brenda Kenny*
-  *Mr. Nathan Cullen*
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-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Ms. Brenda Kenny*
-  *Mr. David Anderson*
-  *Ms. Brenda Kenny*

## 1300

-  *Mr. David Anderson*
-  *Ms. Kaity Arsoniadis Stein*
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-  *Ms. Kaity Arsoniadis Stein*
-  *Hon. Denis Coderre*
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-  *Mr. Arnold Nagy*
-  *Hon. Denis Coderre*
-  *The Chair*



*Mr. David Anderson*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 038

1

3rd SESSION

1

40th PARLIAMENT


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## EVIDENCE

Thursday, December 9, 2010

[Recorded by Electronic Apparatus]

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 (1105)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone.

As you know, we're here today to continue our study of energy security in Canada. We have two panels today. For the first panel, we have, from the Northern Gateway Alliance, Colin Kinsley, chairman, and from the Coastal First Nations, Art Sterritt, executive director, Great Bear Initiative.

Welcome to both of you.

In the second panel, we have three witnesses, all by video conference. That will be interesting. We've never tried that before, so I'm looking forward to that.

Let's get on with the panel. We'll have the presentations in the order they are listed on the agenda.

We'll start with the Northern Gateway Alliance.

Mr. Kinsley, go ahead, please, for up to seven minutes.



**Mr. Colin Kinsley (Chairman, Northern Gateway Alliance):**

Thank you, *monsieur le président*.

Gentlemen, it's my pleasure to be here this morning to present on behalf of the Enbridge Northern Gateway Alliance. Simply put, it's a group of community leaders—elected officials, mayors, regional district chairs and others, community leaders from chambers of commerce, and some labour groups—whose main purpose is to be a voice to the membership and to keep them apprised of the project as it goes forward through the joint review panel.

First, if I may just share this with the panel, Enbridge is an energy transportation company, one of the largest in North America, and serves industrial, commercial, and retail consumers in Canada and the United States. They operate the longest crude oil pipeline system in the world, with about 15,000 kilometres of pipe, extending from Canada's Northwest Territories to northern Alberta to the American Midwest and all the way down to Oklahoma. They also transport natural gas. They have an extensive and growing portfolio of renewable and green energy generation facilities in both Canada and the United States.

The purpose of Enbridge's Northern Gateway pipeline project is to have strategic access to Canada's west coast. National Energy Board data from 2009 shows us that less than 1% of Canada's petroleum exports went anywhere other than the United States, yet just a little more than a thousand kilometres west of us—with the world's largest industry resources—is a coastline that is perfectly positioned, strategically and geographically, to connect Canada's petroleum supplies to the growing demand of Asian markets.

Right now, there is little oil flowing west towards those markets. Northern Gateway will change that picture and have a huge strategic impact on Canada. I would like to share with the panel the fact that this is Canada's resource—not Alberta's resource, not B.C.'s, but Canada's. And it's Canada's resources, I would submit, that pay for the health care system we proudly have, for our education system, and for many other of the services that Canadian citizens demand of their leaders.

Northern Gateway provides a much-needed large-volume option for Canadian energy to the Pacific Rim, which includes the U.S. west coast and east Asia. With the only market available to us now being the



United States, we are more of a price-taker than a price-maker. The Americans dictate pretty much what our energy is worth and we have no choice as to where that could go. By accessing what is known as the fastest-growing middle class on earth, in China, where their energy needs are vast....

There's an argument that I have heard from time to time, which is that Canadian oil into Asia would in fact increase their greenhouse gas effects and such, and I would submit that this argument is stated by those who haven't been to China. If you see how the Chinese create the bulk of their energy, electric energy in particular.... In my experience—and I have been there more than a dozen times—they produce electricity and community energy with low-grade coal for every part of China, including the far north, Heilongjiang province, in Harbin. The environmental impacts are devastating. Being a proud Canadian from the north, I had never seen grey snow until I went to northern China.

With respect to demand in America and in Asia, I'd like to speak briefly to a paper that David Emerson wrote. David Emerson is a former federal Minister of International Trade and Minister of Foreign Affairs. He noted that of all the G-8 countries, Canada is the one most dependent on trade, and that hitching our wagon to the U.S. alone, which is currently struggling to emerge from what some have called the "great recession", is not a prudent approach in maintaining our long-term prosperity as a nation.

If we are trade dependent, then let's play to our strengths and foster diversified trade with global trading partners, not just the North American markets. This will help insulate our nation from economic challenges that any single market might experience.

Coming from Prince George—one of the wood capitals of the world, I would submit—we know what devastation occurred when we relied on one marketplace for our softwood lumber products. When the U.S. housing market collapsed, our forestry industry faced almost the same fate.

Also, in considering Canada's west coast and the Pacific Rim, the geographical fact is that Canada's west coast ports are two days closer to the Far East than other ports in North America and South America. That's an important consideration in a world where competitiveness in our supply chain is defining our success factor. Our nation's Pacific advantage is clear.

Another advantage we have is our world-class energy advantage. A Northern Gateway pipeline is an opportunity to marry these two fundamental global competitive advantages for the long-term benefit of the nation, both strategically and economically. In very broad strokes, that's the strategic case for the Northern Gateway.

Now, let me take you very quickly through some of the aspects of the project. It comprises two parallel pipelines extending 1,172 kilometres from Edmonton, Alberta, to a marine terminal at Kitimat, British Columbia. The projected cost in 2010 dollars is \$5.5 billion.

The 36-inch westbound oil line will have a capacity of 525,000 barrels per day from Edmonton to Kitimat. A 20-inch returning line to the east will carry condensate. Condensate is a product used to distill the oil to make it flow better--think of it almost like paint thinner. It will deliver 193,000 barrels of condensate from Kitimat to the industry in Edmonton. Today that condensate comes from various countries. It's a derivative of natural gas. It's delivered to Kitimat in tankers--and has been for 25 years--put on railcars, and shipped from Kitimat to Edmonton to be used in the industry.

Next I'll talk very quickly about the regulatory review process. A joint review panel was established with consultation between the National Energy Board and Enbridge. The joint review panel was chosen because it also brings in the Canadian Environmental Assessment Agency, so there can be a parallel discussion on the national interest and the environmental concerns that will be raised.

The initial filing has been done and the JRP has been formed. They've had some preliminary hearings on how they should proceed. We're waiting to hear when the public hearings will take place and where. These public hearings will take place at least over the next year. The entire review process could take from 18 months to 36 months, depending on the type of extra information required.

In the filing, there are 17,500 pages of geotechnical, geophysical, and first nations issues, from traditional use to traditional medicines, and those types of things. Through this review process, Enbridge will most likely be given more requests to find and submit information as it goes forward.

When and if the approval to construct is given, there will be about a three-year construction period. That will impact every community from Edmonton to Kitimat because of local procurement, first nations procurement, and opportunities.

The opportunities are vast. The stakes are high. It's a Canadian issue. And I appreciate being here today because it needs Canadian attention.

Thank you, Mr. Chairman and gentlemen.

  (1110)



**The Chair:**

Thank you very much, Mr. Kinsley, for your presentation. I'm sure you'll have questions directed at you later.

We'll go now by video conference to Art Sterritt, executive director of the Great Bear Initiative, from the Coastal First Nations.

Go ahead, for up to seven minutes.



**Mr. Art Sterritt (Executive Director, Great Bear Initiative, Coastal First Nations):**

Good morning, gentlemen, and thank you for inviting me to present to you.

As you said, I'm the executive director of the Coastal First Nations. We are an amalgamation of 10 separate first nations comprising 20,000 members, the vast majority of the population from Rivers Inlet, on the central coast, to the B.C.-Alaska border.

I want to speak to you today about our concerns about energy development in Canada and how it affects us. You have heard other people's concerns about the threats posed to them from oil drilling, shale gas development, and oil sands. We, too, share these concerns.

The marine resources we harvest sustain our communities and our culture. They create who we are. Our future is dependent on these coastal waters. We are the ones who face all the risks but derive few benefits from any such developments.

We are not some not-in-my-back-yard group. We hold constitutionally protected aboriginal and treaty rights that would be seriously threatened by offshore drilling and oil tankers in the waters off the central and north coasts of British Columbia.

Let me be clear. The Coastal First Nations are not against development. We are promoting it. For the past eight years, the Coastal First Nations have brought together industry, the environmental community, and governments, both municipal and provincial, to develop a sustainable economy on the central and north coasts and Haida Gwaii. We've done this to breathe life into our economy and into our rights and our title.

We have raised and invested in excess of \$300 million in this geographic area on things such as building a shellfish industry. We have a partner out of China. I've been to China many times and have seen their industry. In our initiative to try to protect these waters, we have support from the Chinese as well.

These economic initiatives, as well as our rights and title of each nation, are threatened by oil spills. That's why we are firmly opposed to offshore drilling and the introduction of oil tankers as proposed by Enbridge. I don't have to remind you folks that accidents affecting the marine environment do happen--I visited the Gulf of Mexico this summer.

These accidents happen despite government oversight and regulatory control, and despite promises and commitments made by their owners and developers. In other words, we, the Coastal First Nations, will face all the risks.

When I visited the Gulf of Mexico, I found a very disturbing scenario. About half the amount of oil that spilled over these many months in the gulf would be carried by each tanker that plies the waters of Douglas Channel and our coast. The consequences of a catastrophic oil spill on our people cannot be calculated, nor can it be compensated.

I want to remind you that, like in the Arctic, the effects of an oil spill and the difficulties of cleaning it up are problematic on the north coast. We have much higher tides and a much greater chop in the winter

than the gulf, but we don't have the cleanup fleet or the micro-organisms that absorb oil in the Gulf of Mexico.

Suffice it to say that the technology, the management, the regulatory regimes, the intergovernmental agreements, the oil spill response capability does not exist to deal with oil spills on the north and central coasts of British Columbia and Haida Gwaii. There is no way that we will be able to clean up an oil spill. The technology we found in the gulf, where all the technology of the world was concentrating on trying to clean up an oil spill, is 1960s technology. Nothing has advanced on this in the last four or five decades.

This is what Coastal First Nations are afraid of. This is why we are opposed to offshore drilling and oil tankers in our water. Out of respect for our rights and our title, the current moratorium on offshore drilling should be maintained, and the informal ban on oil tankers off the north coast of B.C. should be legislated, as the majority of parliamentarians indicated a couple of days ago in Ottawa.

Until first nations are satisfied that such development can be done in a way that doesn't pose an unacceptable risk to them, the National Energy Board should not approve specific projects that will introduce oil tankers on B.C.'s north and central coasts, such as the Enbridge Northern Gateway project.



Further development would require a strategic environmental assessment for the region, such as you heard the chairman of the Canada-Newfoundland and Labrador Offshore Petroleum Board say they conduct before even contemplating any approvals for drilling or exploration. Any such developments also require a regional risk assessment and the kind of inquiry that the National Energy Board is launching with respect to Arctic drilling. You have also heard the suggestion that a commission of inquiry be created, one that deals with oil tankers, offshore oil exploration, and licensing and oil spill response.

Lastly, no oil tanker should be introduced in B.C.'s north and central coasts or the offshore drilling moratorium lifted until the National Energy Board, Transport Canada, and the Government of Canada can satisfy us that an acceptable process is in place to consult with first nations on approving and managing these developments and that government agencies have the financial and human resource capability to deal with catastrophic oil spills. I know that you heard earlier in the week from a panel that said we don't possess that ability right now.

A full regional study needs to be done for the west coast of B.C. on the consequences to first nations of a catastrophic oil spill, including worst-case scenarios. The National Energy Board and Transport Canada must consult with first nations on any related regulatory standards it uses as part of their so-called goal-oriented regulatory regimes.

And certainly, adequate tanker owners' liability for spill cleanup needs to be addressed, so that Canadian taxpayers do not have to pay for the cost of cleanup and people seeking compensation don't have to go to court, where the oil companies can run them out for decades. Accidents that can cause irreparable harm to first nations constitutionally protected rights can, do, and will happen. This cannot be in the national interest.

We on the coast are the ones who are facing the risks and we are the ones who must be satisfied that the risks are worth taking. Until that happens, offshore drilling and the introduction of oil tankers on the north and central coasts of B.C., through the back door of a project-specific approval such as that of Enbridge, is wrong and totally unacceptable. We are not asking for anything different from what you would want to protect your family if something that threatened them--like an oil refinery or a crack house--was allowed to locate next door to you.

I've been to China on numerous occasions and I don't buy the idea that we need to have a reason to send oil to China just to raise the price of oil. The last time I looked, the most lucrative industry on planet earth was the oil industry, and they don't need any help making any more money at the expense of the rest of us.

Enbridge, over the last decade or so, has spilled millions and millions and millions of litres of oil throughout North America. Coastal First Nations find it unacceptable that they are proposing to do that in our areas and that first nations in the interior of B.C. find it acceptable that they propose to do it there.

Thank you. I look forward to your questions.



**The Chair:**

Thank you very much, Mr. Sterritt.

We'll go now directly to questioning, starting with the official opposition.

Mr. Tonks, you have up to seven minutes. Go ahead, please.

**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you very much.

Thank you once again to our deputations for the testimony you've given.

My question is for Mr. Sterritt. You heard Mr. Kinsley talk about the environmental assessment, and you also heard him talk about the issues related to a parallel pipeline to transport condensate, which is required for the development of the bitumen. You have heard him say that at present the traffic in condensate is carried by tanker, and we obviously are very concerned about your testimony with respect to emergency response and so on.

Could you tell the committee whether you are satisfied with the terms of the environmental assessment that have been described? Because that seems to be a very immediate concern to you, on behalf of the first nations. Are you satisfied? He has indicated that there will be thousands of pages of technical data and so on and so forth. Have you been brought into preliminary discussions on how the terms of reference for the EA will be prepared and what your opportunity for input is? Have you been given any funding, if you will, to be part of that process?

**The Chair:**

Mr. Sterritt, go ahead.

**Mr. Art Sterritt:**

Yes, we have. We applied and received funding to be engaged in that review process. We have written briefs to the panel indicating what we consider to be the many deficiencies that are evident within the report. With reference to the pipeline, the condensate and all of that, the issue with Coastal First Nations is about crude oil, crude in the true sense, when we talk about crude oil coming out of the tar sands.

Our issue is not about trying to shut down the tar sands. Our issue is about allowing crude oil to be introduced to our coast in a way that would jeopardize what we have there now. Coastal First Nations and others currently have 17,000 to 20,000 jobs that are dependent on a healthy coast. There is nothing in this review that is going to show us that Canada or British Columbia or any oil company has the capability of cleaning up a spill of crude oil.

Now, on the difference between crude oil and the condensate that's moving in right now, we're not particularly happy with the condensate that's coming in right now; however, it can be cleaned up to a certain extent. For crude oil, it would be impossible, based on the technology that exists for this today.

I hope that answers your question.

 (1125)

**Mr. Alan Tonks:**

That's very good. Thank you, Mr. Sterritt.

As a follow-up to that, I guess, you've talked about the 1960s technology with respect to the response if there were a spill and to the impact it would have, for example, on shellfish production and so on. That production is adding huge value to the first nations that you speak on behalf of. In regard to the environmental assessment, has the joint panel also included that as part of the terms of reference for the environmental assessment?

**Mr. Art Sterritt:**

From our perspective, they have not done a risk assessment of everything that would happen in the case of a spill. What they're doing is trying to show us that there is some kind of technology out there, that Canada is ready for a spill. Really, the report that came out in Ottawa earlier in the week I think is the definitive statement on that: this kind of technology doesn't exist.

When I was in the Gulf of Mexico, I went right out into the gulf area with the head of the Louisiana Shrimp Association, a fellow who worked in the oil industry for decades. When we went out there and looked, we saw were billions and billions of dollars' worth of vessels that were anchored up. We were out there in an 18-foot skiff in a two-foot chop. They were anchored because they couldn't skim oil because of this two-foot chop.

They only have two-foot tides in the gulf. We have 24-foot tides in Douglas Channel, where they're proposing to do this. On any good sunny, calm day, tide slop in our area can exceed that. So this oil, if there were ever a spill, would literally coat the whole coast of British Columbia in a very short period of time. This is the major concern we have: that we do not have the technology.

I give the oil industry absolute credit for being able to move oil faster and further and dig deeper to get it, but they have not spent the resources necessary to clean up a spill when it happens. And it does happen, as we have seen over the last six or eight months.

**Mr. Alan Tonks:**

Thank you for that, Mr. Sterritt.

I have just one question, then, for Mr. Kinsley.

Mr. Kinsley, with respect to the preliminary preparation on the EA, you've listened to Mr. Sterritt's concerns, and you've heard that they're not fundamentally opposed to the added value and so on. What is your response to the concerns they raise, particularly in terms of technical response?

**Mr. Colin Kinsley:**

I'm not technically expert in those fields. I certainly respect the comments of Mr. Sterritt, and I understand them. It just so happens that the Douglas Channel has been kind of my second home for 30 years, too, because of the pleasure of fishing, crabbing, and prawning out there. I know it extremely well.

I've read extensively on this project, and from the information I have, and from what I know exists out there, spill response is not where it should be right now. In fact, Mr. Sterritt would probably agree that since the sinking of the ferry that struck Gil Island, emergency response has not changed on the northwest coast of British Columbia. The spill response comes out of Kitimat.

Under Enbridge's proposal, the entire coastal region response and emergency preparedness will grow, and it will employ first nations along the channel to do that emergency response. This will actually enhance what exists, because the transportation of oil takes place now, too, albeit in smaller ways, even into Haida Gwaii. Some million gallons a year of diesel goes in to feed the oil electric generation plants and also some coastal villages up and down the B.C. coast because they're not on the grid.

So this type of activity takes place all the time, and this proposal will enhance it, and not only on the spill response. As you know, in health care, staying healthy is more important than trying to get healthy after you're sick. To that end, this proposal, again, will make the coast safer because radar will be introduced. There will be better weather monitoring, better buoys. The speeds will be altered. Weather conditions will be put in. It has been proven that the tugs that are going to be designed and built in British Columbia to be tethered to these tankers can actually stop a tanker or steer a tanker if it loses rudder control or power.

I can't dispute what Mr. Sterritt was saying exists today, but I can argue, I think, that a project such as this will enhance not only what will be coming but what is there now. When you talk about what's taking place now, there's a 50-kilometre exclusion zone on the outside of Haida Gwaii, from Alaska to Cherry Point down in Washington State. About 350 tankers a year go down there and have for many years.

The 50-kilometre exclusion zone is there because there are no rescue tugs anywhere along that sphere, so if a tanker were to get in trouble off the coast of British Columbia, Haida Gwaii or otherwise, the rescue tug would have to come from Alaska or Washington State. Under this plan, they will be closer to home and they will be locally operated. It's amazing how it will change this.

  (1130)



**Mr. Alan Tonks:**

Thank you.



**The Chair:**

Thank you very much, Mr. Tonks.

Witnesses, the next questioning will be in French, so if you need interpretation, you can make it available.

Monsieur Pomerleau, please, for up to seven minutes.

[*Translation*]



**Mr. Roger Pomerleau (Drummond, BQ):**

Good point! Thank you, Mr. Chairman.

**Some hon. members:** Oh, oh!

[*English*]



**Mr. Colin Kinsley:**

Mr. Pomerleau, I may get it if you go real slow. I had high school French for years.

[*Translation*]



**Mr. Roger Pomerleau:**

Thank you to both of you for being here today to help us with the study we have undertaken.

Mr. Kinsley, most of the arguments you have presented today are based on economics and make sense. You claim that we must turn towards Asia to find new markets for western oil, and that it is not a good thing to have only a single client. Because as it now stands, we depend entirely on that single client to set the price he is willing to pay, whereas if we had several clients, we could get a better price.

I completely agree with you, that's true. This is an economic argument and I believe that other arguments can be made in the study we have undertaken. Other arguments include the one made by Mr. Sterritt regarding the rights of aboriginals, whose lands will be affected. Of course, natural resources fall under provincial jurisdiction, but aboriginal rights fall under Ottawa's jurisdiction. I wanted to frame the issue this way.

You know that Quebec had the same problem which you will or might be faced with, as well. We wanted to develop hydroelectricity in northern Quebec on native land. We built power plants on the lands of the Cree, the Naskapi and the Inuit. Legally, you cannot build something on your neighbour's land without first obtaining his consent to be absolutely sure that you have the right to do so. This is why in Quebec, we signed an agreement with the aboriginal nations—which took a long time to negotiate—and which is called the James Bay and Northern Quebec Agreement. Canada was involved, that is, the federal government, of course, because it is the trustee of aboriginal rights. Therefore, we worked very hard, very specifically, over a very long time, to meet the needs of aboriginal people, to meet the needs of those who wanted to

build the power stations, and to meet the needs of the federal government, since it is responsible for protecting the rights of aboriginal people in the long run. We ultimately signed an agreement which was recognized as being an extraordinary one, since it was one of the first major agreements we signed with aboriginal people.

So if you want to send oil through a pipeline over native land, what kind of long-term, well thought-out and detailed agreement have you begun to undertake, or are thinking of undertaking, with the aboriginal people who will be affected?

[English]



**The Chair:**

Go ahead, Mr. Kinsley.



**Mr. Colin Kinsley:**

*Merci, monsieur Pomerleau.*

The discussions with first nations--and there are some 50 of them, including aboriginal and Métis, along the proposed corridor--have been ongoing for several years. Protocol agreements have been signed with 30 of the various aboriginal groups out of about 50, and discussions are going on with others. Many more may sign on, because the approach has been, first of all, to engage first nations experts on gathering traditional knowledge, such as the use of the land, ceremonial sites, traditional medicines and those kinds of things, and other traditional uses as they go along the corridor.

To give you a very quick description, the corridor right now is a kilometre wide for identification purposes and geotechnical studies. The construction right-of-way will be 50 metres wide. The end right-of-way will be 25 metres wide. Everything will be returned to its natural state except on that final 25 metres.

What has taken place with aboriginal people is discussion on an equity position. There are going to be 40 units of economic opportunity for the first nations, funded by Enbridge, so it's about 10% of the value of the pipeline. It's in the millions of dollars. The financing will be conducted by Enbridge for the nations because, as you probably know, a lot of first nations don't have the financial capacity to put in their own funds. This will be paid back through their share of revenue on the pipeline.

In addition to that opportunity, they will have opportunities for procurement, provision of services, and training. There's a plan in place. Discussions have been going on for two years with Northwest Community College in Terrace, which is about 150 miles northwest of the proposed line, with the College of New Caledonia in Prince George, with Northern Lights College in Dawson Creek, and with the University of Northern British Columbia, with its main campus in Prince George.

This is to identify what employers will need: the types of employees and the kind of training they'll require. The opportunity has been given for first nations to participate in that. First nations chiefs and councils have been consulted with for some time. Not all, of course, are in agreement, and some have actually not had consultation because they have chosen not to.

So the job before Enbridge and the development team is of course to earn the trust of those first nations, to earn a social license with them, and to have acceptance to cross their traditional territories. In my previous life, I was the mayor of Prince George for 12 years and chairman for several years of the regional district—which takes in a large rural area—and we had incredible relationships with our first nation neighbours.

Three of the chiefs I have consulted with are very open to participating in this. The resistance grows the further west we go. We recognize fully that the introduction of the pipeline industry is new west of Prince George. There are three lines that come down out of northeastern British Columbia through Prince George to serve the southern coast, Vancouver, and the Lower Mainland. There's only one small gas line that runs from Prince George west to Kitimat. It's Pacific Northern Gas, supplying natural gas.

It's new, and there is a challenge, but the fact remains that we feel the economic opportunity, the educational opportunity, and the lifelong opportunity for first nations are there, and the partnerships are being developed. I think they will be developed over the next six months or so to where we need to be to

receive that social license.

  (1135)

**The Chair:**

Monsieur Pomerleau, your time is up.

Mr. Cullen, you have up to seven minutes.

**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thank you.

Thank you to both gentlemen for being here today.

Mr. Kinsley, we're studying energy security. Has your group endeavoured to understand the job loss potential for moving unprocessed bitumen out of Alberta through the Enbridge pipeline?

**Mr. Colin Kinsley:**

I'm sorry, but are you making reference to it not being upgraded in Alberta? No, because from my understanding.... Again, I chair the alliance, which is an advocate to see it go through the process as opposed to the project itself.... But in talking with Mayor Mandel of Edmonton and other people who have asked this same question of me about upgrading, the market isn't there for upgraded areas, so the opportunity is to sell our product to new markets.

**Mr. Nathan Cullen:**

This was asked of witnesses previously. In terms of funding, who funds the Northern Gateway Alliance?

**Mr. Colin Kinsley:**

The Northern Gateway Alliance is funded by Enbridge. I have a small consulting firm and I was contracted to chair the alliance on a part-time basis. I'm the only one who is paid in that capacity. But in the spirit of full disclosure, I do get some administrative help from both the corporate office in Calgary and the operations office in Edmonton.

  (1140)

**Mr. Nathan Cullen:**

This has been noted by the current mayor, your successor, Mayor Rogers, and I'm quoting the mayor here: "I think that everyone understands that is participating is that it's being driven by Enbridge. No surprises there. It's PR strategy".

Would you disagree with the mayor of Prince George?

**Mr. Colin Kinsley:**

Well, yes and no. As you can appreciate, Mayor Rogers was on my council with me for nine years. What I would say to that is that I don't see it as public relations; I see it as public information so that mayors such as Mayor Rogers, the mayor of Dawson Creek, and the mayor of Prince Rupert can be included in all the latest information.

**Mr. Nathan Cullen:**

The mayor of Terrace pulled out of the community advisory board, saying that it was fraught with conflict of interest and he couldn't participate. Recently, a mayor from Kitimat, which this project is



supposedly meant to mostly benefit, said, and I'm quoting again:

Throughout this time the group was changing, the vacant chairs w[ere] being filled, new faces appeared around the table but not one citizen of Kitimat, only companies set to make a profit. The CAB is now ostensibly made up of project supporters from the Lower Mainland, from Terrace, with a few from Kitimat, including our EDO, with the remaining being Enbridge staff.

Furthermore, I don't know how you can call what remains "a Community Advisory Board" when most members are from out of town and the region.

Enbridge set up these community advisory boards. Is that correct?



**Mr. Colin Kinsley:**

The community advisory boards have been in existence--and I think they're on round seven--for about a year and a half. Just to correct you, Mr. Cullen, that was not the mayor of Kitimat. The mayor is Joanne Monaghan. That was a—



**Mr. Nathan Cullen:**

Oh, no, I wasn't quoting the mayor of Kitimat.



**Mr. Colin Kinsley:**

I thought you said the mayor.



**Mr. Nathan Cullen:**

The mayor of Terrace pulled out of the community advisory board—

**Mr. Colin Kinsley:** Yes, I heard that, but then—

**Mr. Nathan Cullen:** —and a councillor from Kitimat.



**Mr. Colin Kinsley:**

—I thought you said the mayor of Kitimat. That's Randy Halyk. He sat on the board. That's a personal decision of his to remove...and those are his thoughts.



**Mr. Nathan Cullen:**

Sure.

I just want to clarify a quote you said earlier. Did you say that Americans dictate the price of our energy?



**Mr. Colin Kinsley:**

On our oil, it's our only marketplace: 99% of our oil goes there.



**Mr. Nathan Cullen:**

It's so strange because we're talking about energy security here and we've had oil companies in front of this committee talking about how this is a globally traded commodity and Americans don't control the price. the market controls the price.

You said in an open letter to members of Parliament, which you signed here, and went into a lot of national papers.... I assume Enbridge paid for this as well.



**Mr. Colin Kinsley:**

That's correct. That's right.



**Mr. Nathan Cullen:**

You said, "Don't be fooled by unsubstantiated hype and outright deceit". Were you talking about anyone in particular in terms of the deceit?

**Mr. Colin Kinsley:**

No, there's a general theme that has been brought to my attention—because I actually have an e-mail address as the chair of the alliance—with some claims and stuff that, in my view, are wrong.

**Mr. Nathan Cullen:**

Enbridge has said in its application that it can't be responsible for shipping liability. Is that true?

**Mr. Colin Kinsley:**

I would understand that once the product, any product, is put on a ship, it becomes the responsibility of the shipper.

**Mr. Nathan Cullen:**

Enbridge is a pipeline company.

**Mr. Colin Kinsley:**

That's right.

**Mr. Nathan Cullen:**

Raw logs—

**Mr. Colin Kinsley:**

But under this proposal, Enbridge will vet who those carriers are. They'll have to meet the standards set out by Canada and Enbridge before that product could be put on the ships.

**Mr. Nathan Cullen:**

You travel Highway 16 quite a bit.

**Mr. Colin Kinsley:**

A lot.

**Mr. Nathan Cullen:**

You've seen what's happened to our forestry sector in terms of mills closing and communities being hurt.

**Mr. Colin Kinsley:**

Absolutely.

**Mr. Nathan Cullen:**

Did raw log exports help or hurt the upgrading manufacturing, the value-added industry in forestry, in British Columbia in particular?

**Mr. Colin Kinsley:**

Well, I have friends in the logging business in the Terrace region. There are no mills open, and now the

mill in Rupert has closed down. I would suggest that the raw log exports have helped, because maybe the mill workers aren't working but the loggers are. Would you have everybody out of work?



**Mr. Nathan Cullen:**

That's an interesting notion.

We invited Enbridge to the committee. They chose not to attend today. We've asked for clarification. They've declared publicly and to me privately--I'm sure to you as well--that they were able to raise \$100 million for the promotion of the Enbridge gateway pipeline project, but they won't tell us from whom.

Are you aware of where the money has come from?



**Mr. Colin Kinsley:**

No. There are unitholders on a proposal, and as I think any fair-minded person would know, they're not going to divulge who those people are who are funding a review process, if you will, a project. There's no licence and over \$100 million will be spent preparing for the submission.



**Mr. Nathan Cullen:**

Mr. Sterritt, across British Columbia, can we allocate a percentage of what public and official declarations first nations have made with respect to the export of 500,000 barrels a day of raw bitumen down the Enbridge pipeline to Kitimat?



**Mr. Art Sterritt:**

The percentage of first nations who are against this project right now, from our perspective, has been just about 100%. The Union of BC Indian Chiefs, the First Nations Summit, the Fraser tribes, and the coastal tribes have all declared that they're opposed to this project.

I want the committee to be aware that the fact that Enbridge may or may not have entered into protocols with certain first nations is not an indication of support. Protocols are a requirement that proponents are encouraged to enter into with first nations to try to develop relationships. Indeed, five years ago, Coastal First Nations entered into a protocol with Enbridge itself, and we're opposed.

I know for a fact that there is not one first nation in British Columbia that supports the Enbridge Northern Gateway project.

I'm not sure whether that answers your question, Nathan.



**Mr. Nathan Cullen:**

Yes.

Mr. Sterritt, just to be clear—



**The Chair:**

Mr. Cullen, I'm sorry, but your time is up.



**Mr. Nathan Cullen:**

Thank you.



**The Chair:**

By the way, I just want to mention, Mr. Cullen, that I think you indicated that Enbridge had declined to come. That's not true. They were invited. They haven't responded yet. If we choose to extend this study,

which I want a 15-minute discussion about at the end of Tuesday's meeting, they may well, with more time, decide to come. That will be determined.



**Mr. Nathan Cullen:**

That would be excellent. Thank you for clarifying, Chair.



**The Chair:**

I just wanted to correct that.

We'll go to Mr. Harris for up to seven minutes.



**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chair.

I'm sure that was an oversight by Mr. Cullen in his remarks.

Mr. Kinsley, it's nice to see you here today.

I want to try to focus and see whether I have it right on the exhaustive environmental review process that this has to go through before even one shovel goes into the ground for the pipeline.

But also, it's my understanding that the tanker ships we're talking about are beyond world class from the safety point of view, with double or triple hulls, compartmentalization, and every possible safety feature to guard against a major spill in the event of going onto a rock or something like that. Now, when you add to that the GPS technology, which I'm not an expert in either, I am led to understand that this can track a 400- or 500-foot ship within inches of where they are on their route. Then you add to that the tug boats, which will be mandatory to guide the ships out of the channels, and you add to that the commitment for the vastly increased spill response commitments that Enbridge is going to be obligated to commit to and to keep.

If some day the sky is going fall and the world is going to end, somehow, in this particular case, I think the likelihood of an accident—anything that it is presupposed could happen—is being looked after now, so that if, God forbid, anything ever does happen, and it may not ever, for sure....

But Mr. Cullen and Mr. Sterritt don't seem to recognize all of these precautions, processes, regulations, compliances, and obligations that are put in place before even one shovel goes into the ground, let alone one drop of oil.... Can you comment on this?

I'm sorry--I took too long.



**Mr. Colin Kinsley:**

Mr. Chairman, if I have the leeway, I could comment on the industry, because also in my previous life I was in the pipeline industry and a construction superintendent for northern British Columbia with BC Gas.

Everything has changed. For the pipe integrity, right from the factories in Regina now, it's a whole new process in how the steel is produced and how the pipe is made. We used to wrap the pipe for corrosion protection with tar paper. It's now epoxied right onto the pipe. That's the same thing.... I would speak very briefly. Almost 22 years ago, the *Exxon Valdez* disaster in Prince William Sound was an incredible environmental disaster, there's no question. It hasn't happened since, because the rules changed the next day.

One good thing about us as humankind is that we learn from our mistakes. Some 90% of the world's oil moves around on tankers. They're taking it to the tankers by pipeline. I hope our technical people come to supply the technical stuff on the numbers. The volumes of oil on a chart go upwards, and the incidents have gone down, because we learn. It's a changed world.

There was a report done. Unfortunately, I only perused it, because it was quite lengthy. The occurrence for a spill was one in two hundred years or something like that. Mr. Sterritt talked about the worst-case scenario, and I think it was like a perfect storm; it was about one in two thousand. Those technical

numbers are available to the committee through the submission that Enbridge has already made to the JRP.

  (1150)

**Mr. Richard Harris:**

Mr. Cullen talks about things that need to be done before tanker traffic could ever conceivably be operated and the pipeline built. My understanding is that there is a commitment, not only by the regulators that this must be done, but also by the proponents: that they understand this is an obligation before anything happens.

**Mr. Colin Kinsley:**

Absolutely. Enbridge is a transportation company. Think of it as a trucking company without the wheels and tires. It's a pipeline. They need to get the product that they've contracted for from a producer to a customer. Every drop has to get there. That's how shareholder value is built; that's how profits are generated. They're not in the business of taking shortcuts to do that. This will be done not only to Canada's world-class standards. It will be done to Enbridge world-class operational guidelines.

**Mr. Richard Harris:**

Just to be clear, this is not simply about a project going on to benefit Alberta and the areas of British Columbia and the west coast. This project in fact is part of the Canadian economy. This will contribute tax dollars to the federal coffers, as well as the provincial coffers, to be part of paying for every single spending program we have, including every social program, every employment assistance program, every educational program, and every health program. Every program you can imagine that's funded by the federal or provincial government can only come from one source and that's from tax revenue.

While folks like Mr. Cullen want to keep his area of the province in the global recession that we're nicely coming out of in the rest of Canada, I would like to think that the job opportunities and the economic benefits that could be provided to the communities along this proposed pipeline could be tremendous, and I suggest that they're perhaps not giving enough attention to that.

**Mr. Colin Kinsley:**

The numbers are huge, but the one that's closest to my heart relates to local government. The local government taxation—municipal taxes—to pay for municipal services such as solid-waste management, 9-1-1 response, regional parks, and all of those kinds of things, will be in the neighbourhood, over the 30-year economic lifespan of a pipeline, of almost \$1 billion. That will go to small and large communities all the way from Bruderheim, Alberta, to Kitimat, B.C.

**Mr. Richard Harris:** Thank you.

**The Chair:**

Thank you, Mr. Harris.

We have three witnesses by video conference in the second half of our meeting. It will take a bit longer to set it up, so we're going to break a bit early in this session.

Thank you very much, Mr. Kinsley, and thank you very much, Mr. Sterritt, for appearing before our committee today. We very much appreciate it.

We'll suspend the meeting now for a couple of minutes as we get set up for the second panel.

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  (1200)

**The Chair:**

We'll resume our meeting now on energy security.

The second panel involves three witnesses coming to us by video conference. The first is from Prince Rupert, British Columbia, from the United Fishermen and Allied Workers' Union—Canadian Auto Workers, Arnold Nagy, president of Local 31.

Go ahead, please, Mr. Nagy, for up to seven minutes.

**Mr. Arnold Nagy (President, Local 31, United Fishermen and Allied Workers' Union - Canadian Auto Workers):**

Thanks to you, Mr. Chair, and also to the rest of the committee, for allowing me to speak to you today.

My name is Arnold Nagy. I'm here on behalf of the United Fishermen and Allied Workers' Union--Canadian Auto Workers.

I have worked in the fishing industry for the past 32 years. I am the president of Local 31 of our union and also the chair of its environment committee. All the work done by our environment committee is done on a volunteer basis. Any costs are fully paid for by our membership from the dues we collect from them.

  (1205)

The fishing industry has been the one economic constant on the north coast for over 100 years, providing employment to countless generations of shore workers and fishermen. These plant workers and fishermen don't come only from the community of Prince Rupert where I live. Many also come from the surrounding first nation and non-first-nations communities, including some that are hundreds of miles up the Skeena River.

On average, the fishing industry provides \$135 million a year to the economies of these areas. With the collapse of the forest industry in British Columbia, the fishing industry is now the largest private employer in the north and central coasts of British Columbia.

The UFAWU has for many years defended both the freshwater and marine environments that our fisheries depend on. Whether it has been pesticide spraying, forestry practices, offshore oil and gas exploration, coal-bed methane drilling, or dams on important rivers, we have been standing up for the environment of our fish resource, which we depend on to make our living. That is why we are presenting our concerns to you today.

I once again find myself having to put forward our position in order to make sure our concerns are heard. We are witnessing an unprecedented gold rush mentality in the north that threatens the future of the fishing industry, the many coastal communities that depend on it, and the people who work in it.

Over the years, we have witnessed many proposals that pose risks to the Skeena River and the surrounding areas, where salmon runs could be wiped out forever. Every time we have raised our concerns, we have been called fearmongers or accused of spreading misinformation. I would suggest that protecting our livelihoods and the environment we depend on is the responsible thing to do if we wish to preserve this industry for future generations.

Proposals have recently been put forward by Shell to drill for coal-bed methane at the confluence of the Nass, the Stikine, and the Skeena Rivers; it is also known as the Klappan or Sacred Headwaters. One accident on this proposed project would wipe out three high-producing salmon rivers and ruin the livelihoods of everyone who depends on these rivers to make their living. The tourism industry, the guides, the entire northern commercial fishing industry—all these would be wiped out.

Today, once again, the issue of pipelines and oil tankers has raised its ugly head, with little concern for the local economies and the industries that would be affected by an accident. The bottom line is to build the two pipelines and move bitumen to Kitimat, to be loaded onto oil tankers along with condensate and shipped to Alberta at whatever cost.

I find it interesting, but not surprising, to hear those interested in seeing an oil port in Kitimat trying to sell us on the safety of these proposals, even while Mr. Scott Vaughan, Commissioner of the Environment and Sustainable Development, raises the alarm that Canada cannot deal with a major oil spill emanating from a tanker. He was troubled by the government's lack of readiness, given that one oil spill is reported to the Canadian Coast Guard every day.

  (1210)

Mr. Chairman, these jobs in the fishing industry are permanent, high-paying jobs that employ thousands of British Columbia residents. The pipeline jobs will create short-term construction, but after they are done, there will not be many full-time jobs created by any projects of this kind.

Does it really make sense not to take a serious look at how we are being caught up in this gold rush mentality to maximize profits at any cost? I would suggest not. We must be willing to approach these issues with the common sense that is required to protect our environment and the many communities that will be affected by the decisions made. We have paid a very heavy economic price to rebuild our salmon resource and other fish resources here in the north, and our communities cannot afford another economic hit, which we will take if the commercial fishery is damaged.

As a member of the Haida nations, I can say that the fishing industry has been an important part of my family's history for well over 100 years and the fisheries resource for well over 10,000 years. I raise this issue because the issue of compensation always raises its head as the way to alleviate the fear of any spills or damage to the environment when an accident occurs. I have spent many a night thinking about this question and trying to figure out something that nobody is willing to answer.

The question is, Mr. Chair, when an accident happens, how is money going to compensate the first nations peoples for 10,000 years of culture that has been destroyed? As I say, I cannot find the answer, and I cannot find anybody willing to give me that answer.

Secondly, we in the fishing industry do not want to live off compensation payments. We want to catch fish. We want to process them in our plants. That's what we do best, and that's why we are the best in the world at what we do. The Canadian canned salmon market fish is the best in the world and is considered so. The Skeena River sockeye is the only can of fish that has its own identity code. It is identified as fish caught in the Skeena River because of the supreme quality of the product going into that can.

Working in the fishing industry is a job we want to do for many generations to come, and we want to be able to pass it on to future generations. We have the opportunity today to help inform you of our concerns so you can help us to protect our livelihoods and understand our concerns in that regard.

As Canadians, we cannot afford to follow the gold rush mentality we are all witnessing. We have to be able to take back control, step back, and make sure that our future communities and livelihoods are not put at risk to increase the profit margin of shareholders or big companies.

I have been accused in the past, Mr. Chair, of being used to further American interests to access our oil by working to have oil tanker bans and by working against the Enbridge pipeline project. I would like to assure the committee that this is the farthest thing from what I am working towards. My concern is to stand up for the communities and the industry in which I make my living, and for the environment, a healthy environment that provides these economic opportunities in the community I live in.

I would like to let the committee know that I also work as a longshoreman in the Port of Prince Rupert. We depend on the shipping industry for that work. I would like to let you know that I have received nothing but good comments from the people I work with at Maher Terminals on the efforts we are making in our union to raise the issue of our coastal communities and to protect them, their economies, and the environment on which we all depend so much here in the north.

Mr. Chair, the first nations say that you cannot separate fish from people. The well-being of our communities and that of the sea are inseparable. Fishermen say that the sea is part of their soul.

Commercial fishery members are optimistic that sanity will prevail and that our communities will continue to profit from an unspoiled marine habitat, abundant fish stocks, and healthy fisheries for many generations to come.

  (1215)

In closing, Mr. Chair, I'd like to thank you for your time in allowing me to speak on this issue.



**The Chair:**

Thank you, Mr. Nagy, for your presentation, and thank you for taking the time to be with us today.

The second witness is by video conference as well. From Calgary, Alberta, from the Canadian Energy Pipeline Association, we have Brenda Kenny, president and chief executive officer. As soon as we get you on the video, we'll ask you to start, Ms. Kenny.



**Ms. Brenda Kenny (President and Chief Executive Officer, Canadian Energy Pipeline Association):**

Thank you.



**The Chair:**

Okay. We have you now. Go ahead with your presentation, please.



**Ms. Brenda Kenny:**

Thank you very much.



**The Chair:**

Excuse me. Before we can allow you to speak, you're going to have to take that Calgary Flames logo down, because I simply can't live with that.

**Some hon. members:** Oh, oh!

**The Chair:** Go ahead, please.

**An hon. member:** I'm starting the questions afterwards and I'm from Montreal if you want to have fun.



**Ms. Brenda Kenny:**

I haven't been in this room before--

**Some hon. members:** Oh, oh!

**Ms. Brenda Kenny:** --and as soon as I came in this morning, I thought, boy, I hope there aren't any major Senators fans or Leaf fans out there.

In any event, I am here representing the pipeline sector. I'll provide a few perspectives from the pipeline point of view.

Of course, the members I represent with the Canadian Energy Pipeline Association are all of the major oil and gas transmission pipeline companies in Canada. I believe that before the committee this morning are a few slides that you'll have in hard copy. I hope that came through okay. There are some maps and some other photographs that might be useful to you.

If you think about movement of energy, we're the highways. Across a network of over 100,000 kilometres of large pipelines, we transport virtually all of the oil and natural gas that's produced and used in Canada. Pipelines are by far the safest means to transport large quantities of energy.

We are essential to ensuring Canada's place in a changing global economy. Truly, the interests of CEPA's member companies are critical to the public interest. The energy that we deliver is essential to our survival, be that heat and power in homes, industries, hospitals, or schools. It transports the food that we eat. It transports clean water to our taps every day. It moves people, goods, and information, and ultimately provides an unparalleled quality of life across this nation.

My comments today are from the perspective of the major energy sector, and I want to say that this is rooted in a very strong sense of duty. We have a duty to enable the meeting of energy needs and enabling



trade, and an utmost duty to do so with a clear and strong sense of responsibility for safety and environmental protection. We also have a duty to speak out when we see danger signs that affect the Canadian public interest. My remarks today will look at this through the lens of pipelines and will focus on trade, on safety, and on regulation.

First of all, on markets and trade, Canada is and always has been a trading nation, right from our first nations. Indeed, we are the most trade-dependent member of the G-8 group of countries. It means that a huge part of what creates a quality of life for Canadians is tied to trade.

In the west, the strategic importance of Canada's Pacific Gateway strategy is well understood by governments of all stripes and it is very much tied to our past, current, and future prosperity. Energy products are not a new part of that picture.

Canada's situation in the world of energy is unique. This country has unparalleled opportunities. The oil sands, for one, contain 170 billion barrels of oil. That accounts for half of all of the accessible world oil supplies. The energy sector represents about a quarter of all the value on the Toronto Stock Exchange.

Let's keep in mind that is not about big business. That means people. That's pensioners. That's parents saving for kids' education. That's capital to invest in our future. Over the next 25 years, investments in oil sands are expected to spur the creation of some 500,000 jobs and bring in nearly \$491 billion in government revenues.

From a west coast perspective, pipelines represent the opportunity to bring Canada's resources to the world at the same time as contributing to local and regional prosperity. The expanding economies on the west side of the Pacific Ocean--including China, Japan, and India--need energy, and Canada must compete with other energy providers. Ensuring these markets are open to Canada will provide critical diversity in this trade-dependent economy. It will also build and strengthen important new trade relationships that increase Canada's power and influence in the international community. By looking ahead over the next 20 years, pipelines alone intend to invest \$80 billion.

When we consider energy from the point of view of security and sustainability, we have to acknowledge that the long-term interests of this nation ripple across many decades and perhaps centuries. But imagine today if there were no energy delivery at all.



By way of comparison in terms of critical infrastructure, imagine if we had failed to build the CPR railway. I think the map of this nation would undoubtedly be different from what it is today. Or consider the St. Lawrence Seaway and the impact that has had over time. Getting the right infrastructure in place has profound implications not only for today, but for many tomorrows.

Safety is the number one and critical duty and interest for pipelines. In our day-to-day operations, nothing else matters more, and there is absolutely no competitive advantage to cutting corners on safety and the environment. Indeed, more than \$1.6 billion is spent annually to promote and advance this.

We're among the most sophisticated in the world. Pipe design and installation is low impact, and pipelines, unlike highways and railways, can be restored to productive habitat for wildlife following construction. With regard to pipeline and marine operations, CEPA member companies are constantly involved in updating and advancing environmental and safety standards.

We also have been proactive in the development of new technologies, such as advanced technologies for 24-7 monitoring, control centres, remote centres, automatic shut-off, and emergency planning, and also internal inspection, which gives us new data that's critical to ensuring we can maintain these systems very safely. Those combined advances in technologies have resulted in a significant improvement in safety over the last 20 years. However, we will not and cannot rest. We understand our duty and responsibility to protect the environment and the general public and are committed to continuing to improve.

Clearly, Canada wants and needs energy and trade. Where projects are needed to deliver that energy, regulation influences that economic activity. It protects the public and the environment and enables without restricting outright.

Integrated decision-making, stakeholder engagement, and aboriginal consultation are core parts of sustainable development. Resource projects are no different. Our historical patchwork of laws and segregation can create a false sense of security and undermine the ability to optimize outcomes and adjust

designs where needed.

If a project is in the public interest, it needs to be integrated, and we believe that, ideally, over time regulation will be improved in this country, leading to one project, one assessment, and a true consolidation of safety and environmental protection. Longer reviews are not better reviews.

Effective consultation and timely review focused on strategic issues have the following: decisions need to be transparent, with good follow-through and monitoring. That follow-up comes after a fundamental public interest determination over whether a project is to proceed or not. The interests of all Canadians and the duties of pipeline operators are tied to this. We must have a better system of regulation over time so we can focus on the things that matter most.

In the meantime, the pipeline industry has a duty to Canadians. Not only must we provide the highways needed to fulfill consumer needs and to facilitate trade, but we must also be diligent on an ongoing basis in terms of safety and the state of the environment.

Thank you for this opportunity.



### **The Chair:**

Thank you very much for your presentation.

We'll now go to our third witness. From the International Ship-owners Alliance of Canada, we have Kaity Arsoniadis Stein, president and secretary-general.

Go ahead, please. You have up to seven minutes.



### **Ms. Kaity Arsoniadis Stein (President and Secretary-General, International Ship-Owners Alliance of Canada Inc.):**

Thank you and good morning.

My name is Kaity Arsoniadis Stein. I am the president and secretary-general of the International Ship-Owners Alliance of Canada. I'm also director of the International Maritime Centre, director and vice-president of the Vancouver Maritime Arbitrators Association, and a trustee of the Insurance Dispute Resolution Services of British Columbia.

I appear before you today on behalf of the International Ship-Owners Alliance of Canada. This group represents local and international merchant shipowners, managers, and operators of ships, who collectively control a fleet of over 500 ocean-going vessels and employ over 10,000 sea-going and shore-based employees.

Through their Canadian companies in Vancouver, they employ over 340 direct management jobs. Their membership includes a Canadian ferry operation, a coastal tug and barge operation, and international members who have been in Canada employing Canadians since 1991.

Among the ISAC members, I benefit from the fact that a founding member is an integral provider of marine services to the oil and gas extraction business, transporting more than 10% of global seaborne oil. In addition to this member, there are several other members of ISAC who are engaged in providing similar services, albeit on a small scale.

The ISAC members are responsible Canadian corporate citizens. In fact, they maintain this reputation internationally and have sought to encourage the marine industry to address air contaminant matters by adopting the use of cleaner fuels. Domestic regulators, like Environment Canada, are aware of the contributions ISAC has made in this regard. ISAC maintains contact with the Canadian regulatory environment and wishes to continue operations consistent with Canadian societal objectives.

On the west coast we see propositions for a ban on tankers being advanced, yet on the east coast we see no similar constraints or concerns being entertained. Our observations include this: that the nature of the stimulus behind this proposed ban is questionable for its authenticity. The waters on the east coast and on the west coast represent demands upon those operating on either coast, yet the west coast is being singled out for environmental concerns that apparently are not considered on the east coast. This dichotomy begs the question: why has this occurred?

Recent observations have been made in the press that the pretext is not genuine and may be for other strategic and economic reasons. I reference the *Financial Post* article dated October 14 and written by Vivian Krause, indicating that U.S. foundations are compromised in their agenda and have been financing Canadian environmental groups and others to advance the American-based agendas of their American contributors.

The resounding question remains: why? What is the Canadian strategy? We have members who are experts in moving oil globally and who are at a loss with respect to what is occurring here in Canada and why. Is this a U.S. plot to ensure that Canadian oil can only be destined for the U.S. market?

We submit that the safe and responsible movement of Canadian resources into the international market could and should be a source of employment creation for communities on the coast. The logistical chain of resource extraction includes the exploration, the production, and the transportation of the products.

I will quote from page 4 of *Ethical Oil* by Ezra Levant. It is believed that the Alberta oil sands:

...represent the largest single deposit of petroleum reserves on the planet, with, by some estimates, between 1.7 trillion and 2.5 trillion barrels of oil inside it. The recoverable oil in Alberta's north has the potential to deliver a stable oil supply to the world for the next one hundred years.

Perhaps a solution to the dilemma caused by a ban on tankers could be found in the creation of sustainable jobs for stakeholders, both aboriginal and non-aboriginal. Sustainable employment in the transportation of these goods could come in the form of creating and utilizing an internationally capable Canadian fleet of tankers, with corporate headquarters in Canada, employing Canadian citizens and transporting Canadian resources. A Canadian fleet with Canadian staff will abide by Canadian environmental standards and would endeavour to ensure that Canadian requirements were met.



Further safeguards, creating additional layers of employment, could be instigated to bring comfort to coastal communities, the fishing industries, and our government, before we even start discussing a ban on tankers.

For example, we could have additional escort tugs, increased numbers of pilots, and specified sea lanes, and we could designate companies with social corporate responsibility status. Also, with respect to a very current issue now, we could see the continued retention of coastal watch by staffed light stations, thus building a strong coastal infrastructure and creating numerous jobs for aboriginal and non-aboriginal stakeholders along the west coast.

The extraction and exploration industries are major employers, but to constrain our ability to transport will only see a reduction in the employment opportunities afforded by exploration and extraction.

We are of the view that trade diversification is more desirable than reliance on a single market. If Canada were unable to export from the west coast to areas of the world where demand existed, such as Asia and India, would we not be limited in the markets to which we could sell, in the jobs that we could create, and in the prices we could command?

Would a west coast ban not result in the reduction of employment opportunities within the oil and gas sector? If you cannot sell the product internationally, you cannot command an international price. Therefore, inevitably, we would be giving it away at a discount. Is this the U.S. agenda and are we playing into this plot?

On the east coast, oil goes to the U.S. as a consequence of choice. On the west coast, in the face of a tanker ban, oil from the oil sands will be denied the markets of Asia and elsewhere. By consequence, we will be restricting our sales to the U.S.

The irony is that tanker traffic from Alaska to Washington State along the west coast of Canada will continue unimpeded. Recent statistics show there are over 500 such voyages a year. American flagged vessels under the Jones act can transit from one U.S. port to another U.S. port of call. Of interest should be why they are travelling along the coast and not shipping the oil by pipeline.

The answer is evident: it's American security of supply. They do not want American oil to enter Canada by pipeline, but they will take Canadian oil via pipeline for their own use. This again provokes the question: why? The arbitrary choice of denying Canada the offshore markets seems to fly in the face of the economic development principles of Alberta and B.C. and their indigenous and non-indigenous

communities.

Canada has the single greatest coastline in the world. Canada as a trading nation must remain a global trading entity. Canada's environmental concerns must be preserved, but a balance must be achieved to ensure continued global trade.

I will leave you with the example of Norway, a country much smaller than Canada, which boasts a nominal GDP of \$88,000 per capita, while Canada's comparable number comes in at \$40,000 per capita. In Norway, the oil and gas industry is the backbone of its economy. To quote the minister of oil and energy, "It is the government's ambition that Norway shall remain a significant supplier of oil and gas to the world markets for a long time". This industry is embraced by the people of Norway.

We encourage Parliament and this committee to achieve an equilibrium for west coast exports of all natural resources. We further encourage the committee to recognize the appropriateness of allowing Canadian natural resource producers to engage in global trade.

Thank you very much.

  (1230)



**The Chair:**

Thank you very much, Ms. Arsoniadis Stein, for your presentation.

We'll go directly to questions by Monsieur Coderre, for up to seven minutes.

[*Translation*]



**Hon. Denis Coderre (Bourassa, Lib.):**

Mr. Chairman, in the last two days, I have heard so many conspiracy theories that we should call in Mel Gibson for the sequel.

[*English*]

*Kalispera*, Ms. Arsoniadis Stein. How are you today?

There's a smile there. That's a start.



**Ms. Kaity Arsoniadis Stein:**

Very good--

**Some hon. members:** Oh, oh!



**Ms. Kaity Arsoniadis Stein:**

You're impressive with the Greek.

**Hon. Denis Coderre:** That's my souvlaki. I eat too much souvlaki. I'm working on that.

**Ms. Kaity Arsoniadis Stein:** *Très bien, monsieur, et merci bien.*



**Hon. Denis Coderre:**

*Yasou.*

That means "hey", okay?

From the way you have been talking, you think it is the Americans who are setting the price of oil right now. I thought it was--

  (1235)

**Ms. Kaity Arsoniadis Stein:**

I think the point that--

**Hon. Denis Coderre:**

You were saying that it is the Americans who are putting up the price of oil. Was that what you were saying?

**Ms. Kaity Arsoniadis Stein:**

No, I didn't say the Americans are putting up the price of oil. I'm saying that if Canada is limited to providing its resource to one market--

**Hon. Denis Coderre:** Oh, okay.

**Ms. Kaity Arsoniadis Stein:** --a single market price will be the price we can get. We won't be able to compete internationally.

**Hon. Denis Coderre:**

Okay. You like the Norwegian way of doing things. Do you think we should do what Norway is doing?

**Ms. Kaity Arsoniadis Stein:**

I think we could look to Norway for examples--

**Hon. Denis Coderre:**

Do you want to nationalize oil?

**Ms. Kaity Arsoniadis Stein:**

Now we're getting into a different discussion. You're leading it into a different discussion.

**Hon. Denis Coderre:**

Okay. I was just checking.

Are you a member of the Conservative Party?

**Ms. Kaity Arsoniadis Stein:**

I'm sorry?

**Hon. Denis Coderre:**

Are you a member of the Conservative Party?

**Ms. Kaity Arsoniadis Stein:**

Actually, I have no alliances at this particular time.

**Hon. Denis Coderre:**

All right. That's a good start. I was just checking.

**An hon. member:** [*Inaudible--Editor*]

**Some hon. members:** Oh, oh!

**Hon. Denis Coderre:** I might talk about the Calgary Flames later on.

But there are some alternatives, because there is a pipeline at the port of Vancouver. Don't you believe that...? Because we believe in the ban. Do you think expanding the one that already exists at the port of Vancouver would be a good alternative?



**Ms. Kaity Arsoniadis Stein:**

What's curious about the ban, if we really analyze it--

**Hon. Denis Coderre:** That was a specific question, please.

**Ms. Kaity Arsoniadis Stein:** We look at the ban, and it's—



**Hon. Denis Coderre:**

That was a specific question about the expansion.



**Ms. Kaity Arsoniadis Stein:**

Yes, I'm getting to it. We're targeting--



**The Chair:**

Mr. Coderre, you asked the question. Please let her answer. She's answering the question you asked.

Go ahead, please.



**Ms. Kaity Arsoniadis Stein:**

Okay. So on my question with the respect to the ban, the ban is targeted in a particular area on our north coast. But what it's banning is entrance in and out of our coast, when at the very same time—and this is where the irony is—we have tankers transiting from Alaska down to Cherry Point, Washington, and Long Beach, along our coast, with freedom of passage through what is called innocent passage. It seems to me that what we're doing is preventing transit from our coast, yet we're allowing it along our coast alongside these areas where the tanker ban is instigated. So it's a curious--



**Hon. Denis Coderre:**

Thank you. I'm sorry, but I have limited time.

I have the same question for Ms. Kenny. Secondly, I'm very interested in what you said about the regulatory process. Who should be in charge?

My first question is about expanding the pipeline that already exists instead of building another one.



**Ms. Brenda Kenny:**

Starting on the question of expansion, I think you're absolutely correct in pointing to the fact that infrastructure does exist. For over 50 years there has been trade through the port of Vancouver, and that continues. The Kinder Morgan system is expandable, and even today I'm told that out of every 10 barrels that are shipped there, about one is heading to Asia.

I think what's important in terms of looking at public policy is to not foreclose market options. Whether the right choice is to incrementally expand the Kinder system and/or bring in a new system, the key is to leave that open to choices best made in terms of the scale of market development, timing, and the types of investments. I'm not convinced that it's an either-or.

With respect to regulatory decision-making, what I was trying to allude to is that when you're looking at sustainable development, it's very important that you look at questions of the environment within the context of what works for society, social communities, and the economics related to that. Integrated decision-making is a part of what came out in the Rio principles, as well as public participation.

Today you asked the question with respect to oversight. For any international or trans-provincial pipelines, we have the National Energy Board Act. It regulates the large pipelines that cross borders, which I believe makes a lot of sense, because they are contiguous with a vast network of pipelines in North America.

It's also important to ensure that the requirements of CEAA are met. As of this year, often that can be managed through a substituted process so that, again, you are able to do one project, one assessment.

I remain concerned that some of the permitting can take people off track very late in the game. In your deck, there are some photographs of required permits that are clearly not legitimately of high concern. Those are important to address in final construction design and not particularly relevant in large public interest decision-making. That's the sort of streamlining that will give us the ability to make consolidated decisions a little better than we do today.

  (1240)



**Hon. Denis Coderre:**

Thank you.



**The Chair:**

Make it a short question for a short answer, Mr. Coderre



**Hon. Denis Coderre:**

This is for my colleague, Scott Andrews.



**Mr. Scott Andrews (Avalon, Lib.):**

My question is for Kaity.

Yesterday the Auditor General's office gave a scathing report on the coast guard's ability to respond to a ship oil spill. Since they are the lead agency, it's something of a concern when they rely on the shipping companies to be the first responders.

If Canada's lead agency doesn't have the ability to clean up a spill, how can we have any confidence that the shipping companies and the people they contract have up-to-date equipment and are capable of cleaning up spills that happen?



**Ms. Kaity Arsoniadis Stein:**

Thank you.

I think that report needs further analysis, but I can tell you that with oil response in Canada it's a cascading system. In other words, the coast guard is the point of first response, but in addition to that, and not to a lesser degree...in fact, I would say that the primary role is where we contract out. On our west coast, we have Burrard Clean, which I would say is the lead agency with respect to cleanup. So I think the two things are a little bit different.

Now the coast guard has the report from the commissioner of the environment and it has recommendations. Great. We need to review those recommendations and we need to ensure that everything is possible to take on the recommendations and address the report that has come out.

[*Translation*]

**The Chair:**

Thank you, Mr. Coderre.

[English]

Monsieur Pomerleau, you have up to seven minutes.

[Translation]

**Mr. Roger Pomerleau:**

Thank you, Mr. Chairman.

Perhaps my colleague will also ask a question afterwards.

First, I would like to say something which, to me, seems self-evident. The subject of our study is energy security in Canada. After everything I have heard this morning—we have talked about trade, prices, clients, more efficient deliveries—I feel we should call our study "Trade Security in Canada". That would be more appropriate.

That being said, my question will be for Ms. Kenny.

Ms. Kenny, this project involves the construction of a pipeline to the west coast. We know that, since it was explained to us, there might be problems negotiating an agreement with aboriginal people, on the one hand. There certainly are environmental risks, because we don't know if we could deal within environmental disaster, if such a thing were to happen.

What do you think of this: instead of spending 5 or 6 billion dollars to build this pipeline, someone, somewhere, might say that it would be better to build a processing industry here?

In other words, we would continue to send our fuel via pipeline to the United States, and build the capacity here, spend our money and invest venture capital in the processing of products, and then we could send plastics or other products elsewhere in the world, but in a manner so as not to create environmental problems or problems with aboriginal people, which might happen as a result of the construction of a pipeline.

What do you think of this?

[English]

**The Chair:**

Ms. Kenny, go ahead, please.

**Ms. Brenda Kenny:**

That question covers several different points. Let me try to respond.

First of all, in terms of focusing on energy security in Canada, my own view is that it's important to keep in mind that economic development can be a tool through which we enlarge other types of energy security. To walk away from the potential for \$500-billion worth of government revenue in 20 years really cuts short the opportunity to provide for advances in renewables, technology investments, other sorts of energy system encouragements, moneys to municipalities to afford better built environments, etc.

So we have to think about an energy system, rather than just focusing on whether trading a barrel of crude creates a disadvantage for the future, because we clearly have an ample supply for the foreseeable future and beyond.

You also questioned spill response. I believe the regulatory review will do a good job of airing the facts around that: the risk factors, the response, the requirement, and the additional investments to improve



navigation oversight. Certainly on the pipeline portion, I can tell you in detail about some of those sorts of factors that are routine beyond my statements, but I'm confident that can be addressed.

Finally, on the question of processing crude in Canada versus abroad, there are a lot of avenues to encourage market responses that are appropriate to meet Canadian needs and to make sure we optimize value for Canadians. Right now, the market signals are causing us to move those offshore. That's appropriate, and I don't think it has to be an either-or situation. You can establish good trade in one commodity. Keep in mind that a tube of steel can serve a lot of different products, so if in the future there were a choice to upgrade in Canada, we might be exporting gasoline.

The key is whether you have the right infrastructure in place to be a competitive global player. Are you addressing the safety and environmental issues appropriately and are you considering reinvestment for Canada's long-term security?

  (1245)

[*Translation*]

**Mr. Roger Pomerleau:**

Ms. Kenny, don't you have the impression that, if we invest billions of dollars in the construction of a pipeline, we are in fact building something which might deter us from investing many more billions of dollars in processing capacity, which would interfere with the construction of a pipeline? In other words, the choice we are making would mean that there is no going back, given the amount of money which would be invested up front.

[*English*]

**The Chair:**

Ms. Kenny, go ahead.

**Ms. Brenda Kenny:**

I think it's important to put the \$5.5 billion into context and to consider the scale. I don't want to focus on Gateway, because the same could be said of expansions on the Kinder Morgan line. Either way, infrastructure investment to provide the choice of exports does not take away from the economic options of you might choose with respect to bitumen in Canada, just like building a new highway doesn't predetermine whether you're going to have shipments of oranges or shipments of orange juice.

It is about having appropriate infrastructure to create options in terms of trade. I'm not an expert in terms of netbacks, but I would also say that directionally there is a significant discount on Canadian crude right now because of having only one market. Just the differential, and the government revenues related to that, if you had multiple markets, can in itself create a huge economic opportunity to reinvest as you see fit as government.

**The Chair:**

Mr. Bellavance, go ahead. You have just one minute for the question and the answer.

[*Translation*]

**Mr. André Bellavance (Richmond—Arthabaska, BQ):**

Thank you, Mr. Chairman. All I need is a minute.

Mr. Nagy, how many fishers do you represent? I would like you to provide us a bit more detail about the fishing zone which would be affected by the pipeline. As you know, there are surely stream and rivers through which the pipeline will pass.

[English]



**The Chair:**

Did you hear the interpreter, Mr. Nagy?



**Mr. Arnold Nagy:**

I represent between 4,000 and 6,000 members depending on the type of fisheries that are going on.

[Translation]



**Mr. André Bellavance:**

Wait a moment, Mr. Nagy.

[English]



**The Chair:**

The question was for Ms. Kenny, I believe.

**Mr. André Bellavance:** No.

**The Chair:** Oh, go ahead, Mr. Nagy. That's my mistake.



**Mr. Roger Pomerleau:**

It was not complete.

[Translation]



**Mr. André Bellavance:**

No, I wasn't done yet. Wait a moment.

[English]



**The Chair:**

We will have Monsieur Bellavance ask the question again.

[Translation]



**Mr. André Bellavance:**

It won't be long, Mr. Nagy. Our colleagues are having a bit of a translation problem.

You understood the question, which was about the number of fishers you represent. I would also like you to talk about the fishing area in British Columbia which will be affected by the pipeline, because it will surely go through streams and rivers.

To what extent will this pipeline negatively affect your fishing zones? It's not just the pipeline. We know that the pipeline itself has a purpose, namely to reach the oil tankers. Therefore, there will be many oil tankers in the ocean. As a result, some of your members will be affected by the fact that there will be more and more oil tankers in their fishing zones.

I would like to know what you think about this.

[English]



**The Chair:**

Mr. Nagy, go ahead.



**Mr. Arnold Nagy:**

I represent between 4,000 and 6,000 people in the commercial fishing industry in British Columbia. In the north, I represent about 3,000 members.

The plan is for the pipeline to go through the Skeena River and the tributaries. A spill up there or an accident on the pipeline would send that water—



**The Chair:**

Mr. Nagy, could you just wait a minute? We're not getting the translation into French now. We'll see if we can get that arranged.

Try it again, Mr. Nagy.



**Mr. Arnold Nagy:**

I represent between 4,000 and 6,000 members close by. In the area in the north that I represent, my members number about 3,000 people. The proposed Enbridge project would run pipelines at the headwaters, crossing some of the tributaries and streams on the Skeena River, and the tanker traffic coming out of Kitimat places our industry at risk from both ends.

An accident on the pipeline area would bleed into the main stem of the Skeena River, killing an industry that has been rebuilt over many generations to a sustainable run and that employs a lot of our people. An accident on the route that the tankers are travelling would be in the same area where the *Queen of the North* went down off Gil Island. In the past year or so, another tanker coming through Douglas Channel ran up on the beach. The risk to the area and to our fishing industry posed by these two projects is unacceptable.



**The Chair:**

Thank you, Mr. Nagy. I have to end your answer there. We are running out of time and have two questioners.

Mr. Cullen, go ahead, please, for up to seven minutes.



**Mr. Nathan Cullen:**

Thank you, Chair.

Thank you to our witnesses.

I'm going to butcher your name here, but I'll give it a try. Ms. Arsoniadis Stein, are you aware of the liability regimes for tankers in Canada? Are you familiar with that act?



**Ms. Kaity Arsoniadis Stein:**

Yes, I am.



**Mr. Nathan Cullen:**

I'm just reading from the act now. There's a \$30 million liability limit "in respect of any area to which the Act applies and for which no other limit is prescribed by these Regulations, the amount of 30 million dollars". Is that correct, to your understanding?

**Ms. Kaity Arsoniadis Stein:**

I think you need to look at the holistic regime. We have the ship-source oil pollution fund in Canada, and then we have the international oil pollution compensation fund. That's an international fund.

I don't have the numbers in front of me, but billions are available for any type of spill that would come. I could come back to you with the analysis of that. I don't have it off the top of my head.

**Mr. Nathan Cullen:**

That's fine.

**Ms. Kaity Arsoniadis Stein:**

It's way in excess of \$30 million, way in excess.

**Mr. Nathan Cullen:**

The way the act is written right now, liability limits exist unless negligence is proven. Is that correct?

**Ms. Kaity Arsoniadis Stein:**

Liability will be there irrespective of the type of accident. I don't understand what you're getting at with this.

**Mr. Nathan Cullen:**

Okay. That's interesting. The liability regimes in Canada that exist, even precluding those two funds you mentioned, subscribe that the liability limit for an oil spill in the ocean environment off the west coast is \$30 million until liability can be proven--negligence can be proven--in court.

I have a question for our friend from Calgary. I'm looking at the Alberta Energy and Utilities Board report, "Pipeline Performance in Alberta, 1990-2005". Are you familiar with this report, Ms. Kenny?

**Ms. Brenda Kenny:**

Only vaguely, because that covers a large number of pipelines that are more related to gathering and small-level pipelines, not the major transmission systems.

**Mr. Nathan Cullen:**

Sure. I'm a little surprised, because this is one of the most major and comprehensive reports done by the Alberta government with respect to pipelines in general. That is your association, the Canadian Energy Pipeline Association, and in this report--

**Ms. Brenda Kenny:**

But what--

**Mr. Nathan Cullen:** Allow me just to--

**Ms. Brenda Kenny** --I have to point out, sir.... Okay.

**Mr. Nathan Cullen:**

Allow me to suggest what this report says, and I'm quoting again: "During the period 1990 to 2005,

there were 12,848 pipeline incidents reported to the EUB (not including test failures). Of these, 657 were hits with no release, leaving 12,191 resulting in a pipeline release". That's industry terminology for "oil spill". It says that of all of these "93.8% were leaks, and the other 6.2% were ruptures".

Should that cause any pause for the people in northern British Columbia who are facing the prospect of another pipeline?

  (1255)



**The Chair:**

Go ahead, Ms. Kenny.



**Ms. Brenda Kenny:**

Not at all. I would direct you to the slides I provided. The actual data with respect to large transmission pipelines, as provided by the National Energy Board, is on the seventh-view graph you have. It clearly demonstrates that ruptures for large-scale pipelines are significantly lower and are declining rapidly. That goes back to what I said in my opening statements with respect to internal inspection.

The numbers you're directing to are numbers related to upstream development. That is not at all related to the major pipelines. It would be similar to saying that the design of a major highway compared to a gravel road, for instance, is quite different. The safety requirements for small travel versus large travel are quite different. So the results I have for you there are much more relevant.



**Mr. Nathan Cullen:**

Thank you.

Are you aware of the recent Sinopec deal in May of this year to purchase, with \$4.6 billion, a portion of the Syncrude operations in Alberta? Are you familiar with that at all?



**Ms. Brenda Kenny:**

Yes, somewhat.



**Mr. Nathan Cullen:**

You realize that the government, the Prime Minister's Office, decided to end that deal before it could get any progress. Is that true?



**Ms. Brenda Kenny:**

I can't speak to the validity of that directly, but I do know that there were requirements clarified over the last couple of years with respect to foreign direct investment. They were really targeted at ensuring that money flowing into Canada would be governed under the same sort of classification as private enterprises here: transparency, good governance, and clearly not co-opted by state regimes.



**Mr. Nathan Cullen:**

That's interesting, because that's not the reason given by the Government of Canada. Mr. Harper's spokesperson, Andrew MacDougall, said, "The government is committed to implementing our campaign pledge" to not send raw bitumen to places where they have lower environmental standards. Are you familiar with this pledge from Mr. Harper?



**Ms. Brenda Kenny:**

I am familiar with that pledge, yes, and--



**Mr. Nathan Cullen:**

The confusion that's raised with respect to the projects, particularly with the Enbridge project, is that it's designed, as both you and our friends from the shippers association--to ship raw bitumen to Asia to, as you say, "diversify" our markets.

**Ms. Brenda Kenny:**

Yes--

**Mr. Nathan Cullen:**

The raw bitumen would be going into a regime with lower environmental standards than we have here in Canada. Is that not true?

**Ms. Brenda Kenny:**

I don't think that is true. I think what's important to keep in mind is that by the time these pipelines... If they were to be deemed to be in the public interest, what you're going to be seeing overseas is a significant development of brand new technology, so just as we have a number of upgrades under way in our own refineries today, and current and new technology is at least compatible with Canadian standards.

I believe that when we're looking at Canadian public interest, particularly on global issues such as air quality and climate change, we need to understand the energy system on a global level. That would be something that over the course of the next six to seven years I think you'd see considerable gains in with new installations.

**The Chair:**

Thank you, Mr. Cullen.

I'll go finally to Mr. Anderson for about six minutes.

**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Oh, Mr. Chair....

**Voices:** Oh, oh!

**Mr. David Anderson:** To go back to Ms. Kenny, you referenced the handout you've given us about the historical pipeline ruptures. Are we to read from this that from 2003 to 2009 there were only two ruptures in the large-scale pipelines?

**Ms. Brenda Kenny:**

Yes. I believe 2008 is the last date on that particular view graph. The National Energy Board had released its data based on that. Yes, that's correct.

**Mr. David Anderson:**

So according to your organization, what are the reasons for this decline in these incidents over the years? Because that's quite a significant change there.

**Ms. Brenda Kenny:**

It is. I think the number one development is much better internal inspection tools. Internal inspection is routine for these large diameter pipelines, much as medical technologies have advanced considerably in terms of imaging and an ability to see inside your heart, let's say. You can determine without having to see with your own eyes that there is or is not a problem or what you need to monitor.

Also, that data feeds into much more advanced integrity management systems, and that has allowed us to have a very elaborate system in place. There will be mistakes from time to time, but the trend line is

very positive and will continue.

 (1300)



**Mr. David Anderson:**

Ms. Stein, this morning we had a witness who told us that nothing has changed in 40 years in terms of safety technology and marine transportation. I'm just wondering if you have any comments on that or, anything to say about changes in ship technology and those kinds of things.



**Ms. Kaity Arsoniadis Stein:**

Oh, that's a gross misstatement, and actually, if you look at statistics in the past 40 years and compare the amount of oil that has been transported then and today, of course there has been a tremendous increase in transport and again a tremendous decrease in incidents. In fact, in 2009, there was not a single incident of oil spilled over 700 tonnes. The reason for this is better practices and better technologies. I think everybody knows that we're transitioning from single hull to double-hulled vessels. By 2015, no single hull vessels will be transiting our waters.

Further to that, I can tell you that when an incident occurred, many international organizations and shipping companies themselves analyzed what went wrong and why it went wrong, and improvements are consistently being made. Then, we layer on top of that the global regulation of the shipping industry by the International Maritime Organization, with literally hundreds of conventions that have been established and accepted. Over and above that, we have--



**Mr. David Anderson:**

May I interrupt you?



**Ms. Kaity Arsoniadis Stein:**

--the additional layers of protection.



**Mr. David Anderson:**

I'll just interrupt you for one minute. Mr. Coderre is off-camera and you can't see him, but I think he was wondering what the difference is between single hull and double hull. I'm wondering if you could tell us the difference and what an impact that makes on ship safety.



**Ms. Kaity Arsoniadis Stein:**

A single hull is just the one hull of the vessel. A double hull includes a second skin, so if there's a grounding and there's a piercing within the first hull of the vessel, there's still the second skin.

I'm just looking at people laughing, but anyhow--



**Hon. Denis Coderre:**

I don't understand English anyway, so I don't mind--



**Ms. Kaity Arsoniadis Stein:**

Anyhow, a double hull affords a second skin to the vessel, a second layer of protection.



**Hon. Denis Coderre:**

On a point of order, Mr. Chair, I thought he meant single malt.

**Voices:** Oh, oh!



**The Chair:**

I'm sure that's not a point of order, Monsieur Coderre.

**Mr. David Anderson:**

We're just discovering whether Mr. Coderre's skin is thin or thick, I think.

I just have time for one final question here.

Mr. Nagy, earlier when you made your presentation, you made a statement towards the end that you'd been accused of representing U.S. interests. I'm just wondering what are the specifics of those accusations. What have you been accused of?

**Mr. Arnold Nagy:**

It was stated to me that I'm being used by the Americans on the agenda that I'm pushing forward to protect our coast because I do not support the issue of tankers along our coastal waters in the north. It was a statement that I had—

**Mr. David Anderson:**

The issue of funding has come up a few times. I'm just wondering—

**Mr. Arnold Nagy:**

It was an issue—

**Mr. David Anderson:**

Can you tell me if you get any funding from outside the country for your union activities or organization?

**Mr. Arnold Nagy:**

What I do with my union here in Prince Rupert is fully funded by our membership on the dues that we collect as part of our mandate to represent the workers in the—

**Mr. David Anderson:**

So all of your environmental activism in your area is paid by your local members? There's no money coming in from the unions from outside Canada?

**Mr. Arnold Nagy:**

None coming for the work that I've been doing for the last 32 years has gone into my pocket. The majority has been voluntary on my behalf, and it has actually cost me thousands of dollars over the years in wages that I won't accept to represent our membership. To me, it's a principle of protecting my industry—

**The Chair:** A point of order, Mr. Coderre?

[*Translation*]

**Hon. Denis Coderre:**

I must say that I find it highly unfortunate that my colleague Mr. Anderson is questioning the credibility of our witness. From the very start, our witness said that his organization's activities were funded by the membership. I find that the campaign of allegations and the smear campaign is very unfortunate.

[*English*]



**The Chair:**

Okay, Mr. Coderre. That of course isn't a point of order and the questions are completely within reason and appropriate.

Mr. Anderson, we have to wrap up, very quickly.

**Mr. David Anderson:**

Well, yes, just to respond to Mr. Coderre, I just asked that because typically and often these unions are funded across the border internationally. Certainly that would play into a lot of the discussion and debate that we've heard over the last couple of weeks.

Thank you.

**The Chair:**

Okay.

Thank you very much to all the witnesses. That was very helpful information indeed. We do appreciate your time, effort, and costs for being involved in this.

We are finished our meeting for today. We'll be back again on Tuesday morning at 11 o'clock.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 39

Tuesday, December 14, 2010

The Standing Committee on Natural Resources met by videoconference at 11:04 a.m. this day, in Room 7-52, 131 Queen St., the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Cheryl Gallant, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: BC Oil and Gas Commission:* Eric Alexander Ferguson, Commissioner and Chief Executive Officer. *Alberta's Industrial Heartland Association:* Neil Shelly, Executive Director; Jana Tolmie-Thompson, Economic Development Officer. *University of Ottawa:* Serge Coulombe, Professor, Department of Economics. *Canadian Energy Research Institute:* Peter Howard, President and Chief Executive Officer.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Eric Alexander Ferguson, and Neil Shelly and Jana Tolmie-Thompson, by videoconference from Edmonton, Alberta, made statements and answered questions.

At 11:55 a.m., the sitting was suspended.

At 11:57 a.m., the sitting resumed.

Serge Coulombe and Peter Howard, by videoconference from Calgary, Alberta, made statements and answered questions.

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At 12:49 p.m., the sitting was suspended.

At 12:49 p.m., the Committee proceeded to sit *in camera*.

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**40th PARLIAMENT, 3rd SESSION**  
**Standing Committee on Natural Resources**


EVIDENCE


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 *Mr. Eric Alexander Ferguson*


 *Hon. Denis Coderre*

 *Mr. Eric Alexander Ferguson*


 *Hon. Denis Coderre*

### 1130

 *Mr. Eric Alexander Ferguson*

 *Hon. Denis Coderre*

 *Mr. Eric Alexander Ferguson*

 *Hon. Denis Coderre*


 *Mr. Eric Alexander Ferguson*

 *The Chair*


 *Ms. Paule Brunelle (Trois-Rivières, BQ)*

 *Mr. Eric Alexander Ferguson*


### 1135

 *Ms. Paule Brunelle*


 *Mr. Eric Alexander Ferguson*

 *Ms. Paule Brunelle*

 *Mr. Eric Alexander Ferguson*

 *Ms. Paule Brunelle*


 *Mr. Eric Alexander Ferguson*

 *Ms. Paule Brunelle*


 *Mr. Eric Alexander Ferguson*

### 1140


 *The Chair*

 *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*


 *Mr. Eric Alexander Ferguson*

 *Mr. Nathan Cullen*


 *Mr. Eric Alexander Ferguson*

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 *Mr. Eric Alexander Ferguson*

-  *Mr. Nathan Cullen*
-  *Mr. Eric Alexander Ferguson*
-  *Mr. Nathan Cullen*
-  *Mr. Neil Shelly*

**1145**

-  *Mr. Nathan Cullen*
-  *Mr. Neil Shelly*
-  *Mr. Nathan Cullen*
-  *Mr. Neil Shelly*
-  *The Chair*
-  *Mr. Devinder Shory (Calgary Northeast, CPC)*
-  *Mr. Eric Alexander Ferguson*



**1150**

-  *Mr. Devinder Shory*
-  *Mr. Eric Alexander Ferguson*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Mr. Eric Alexander Ferguson*
-  *Mr. David Anderson*
-  *Mr. Eric Alexander Ferguson*
-  *Mr. David Anderson*
-  *Mr. Eric Alexander Ferguson*




**1155**

-  *The Chair*
-  *The Chair*
-  *Hon. Denis Coderre*
-  *The Chair*
-  *Dr. Serge Coulombe (Professor, Department of Economics, University of Ottawa)*

**1200****1205**





-  *The Chair*
-  *Mr. Peter Howard (President and Chief Executive Officer, Canadian Energy Research Institute)*

**1210**

-  *Hon. Denis Coderre*
-  *The Chair*
-  *Hon. Denis Coderre*

-  *The Chair*
-  *Mr. Peter Howard*
-  *The Chair*
-  *Hon. Denis Coderre*
-  *Mr. Peter Howard*











**1215**

-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
-  *The Chair*
-  *Dr. Serge Coulombe*







**1220**

-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Peter Howard*
-  *The Chair*
-  *Mr. Alan Tonks*
-  *Mr. Scott Andrews (Avalon, Lib.)*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*

**1225**

-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*
-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*
-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*
-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*
-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*

**1230**

-  *Dr. Serge Coulombe*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Dr. Serge Coulombe*
-  *Mr. Nathan Cullen*



*Dr. Serge Coulombe*



*Mr. Nathan Cullen*

### 1235



*Mr. Peter Howard*



*Mr. Nathan Cullen*



*The Chair*



*Mr. Peter Howard*



*The Chair*



*Mr. Mike Allen (Tobique—Mactaquac, CPC)*

### 1240



*Dr. Serge Coulombe*



*Mr. Mike Allen*



*Dr. Serge Coulombe*



*Mr. Mike Allen*



*Mr. Peter Howard*



*Mr. Mike Allen*

### 1245



*Mr. Peter Howard*



*Mr. Mike Allen*



*The Chair*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 039

1

3rd SESSION

1

40th PARLIAMENT

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## EVIDENCE

Tuesday, December 14, 2010

[Recorded by Electronic Apparatus]

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 (1105)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good morning, everyone. We're here today to continue our study on energy security in Canada.

We're dealing today with the section of the motion that we passed to give a framework to this study. We're dealing today with regional economic impacts of oil and gas development.

We have with us today two groups of witnesses on the first panel and we also have two groups of witnesses on the second panel.

In the first panel today we have, from the B.C. Oil and Gas Commission, Eric Alexander Ferguson, commissioner and chief executive officer. Welcome, Mr. Ferguson.

And we have, by video conference today from Edmonton, Alberta, Alberta's Industrial Heartland Association, Neil Shelly, executive director, and Jana Tolmie-Thompson, economic development officer. Welcome to both of you from Edmonton. The area you're talking about today extends into the constituency I represent, so you're particularly welcome today.

We will go directly to presentations in the order listed on the agenda.

Mr. Alexander, go ahead with your presentation for up to seven minutes.



**Mr. Eric Alexander Ferguson (Commissioner and Chief Executive Officer, B.C. Oil and Gas Commission):**

Thank you.

Good morning, everyone. I am Alex Ferguson, commissioner and chief executive officer for the British Columbia Oil and Gas Commission.

Some earlier submissions to this committee have highlighted the fact that unconventional gas--and more specifically, shale gas--is changing the energy landscape in Canada. Believe me, nowhere is that more evident than in British Columbia today.

In this submission I'll speak about our role as a regulator in British Columbia and the extent of the province's natural gas resources from what we know today, and look forward a little bit from our perspective.

Certainly natural gas exploration and production has grown to become a crucial part of our province's economy, and as such, safe, responsible development has become a priority to stakeholders and citizens. The resource is abundant within our borders, and advances in horizontal drilling technologies have enabled more efficient capture. However, being rich in natural gas isn't the only piece we have in front of us. The government has driven competitive royalty regimes and a progressive regulatory structure we operate within. Prioritizing environmental and social stewardship has put us in the position we are in today.

My organization is a crown corporation that was signed into existence in 1998 through a piece of legislation in the province. We're headquartered in Fort St. John, which is the heart of our oil and gas industry for the province. We also have offices in Victoria, and satellite offices in Fort Nelson and Dawson Creek. We are an independent regulatory agency with responsibilities for overseeing oil and gas operations in the province through exploration, development, and pipeline transportation, all the way to reclamation--

essentially a one-stop or single-window regulatory agency.

Essentially this means there's a split between government policy and the regulatory world. The province sells the land tenure, which gives companies the right to operate, and develops policies, whether they're environmental policies or fiscal policies, while we take on the regulatory responsibilities or the implementation of those policies. Our one-stop format not only brings all the industry requirements together in one place for streamlining; it provides a really good focus for coordinated, responsive decision-making. Part of our role is to inform our decision-making with a range of interests, from environmental to first nations and public concerns.

Our core roles as a commission, a regulatory agency, include reviewing and assessing applications for industry activity, consulting with first nations on every application, ensuring industry complies with the legislation, and cooperating with partner agencies. We don't do it alone. The policy interpretation work requires a lot of back and forth with different government agencies. The public interest is protected through the objectives of ensuring public safety--which is paramount for us, protecting the environment, conserving petroleum resources, and ensuring equitable participation in production for all operators.

As I said earlier, we are a crown agency funded by application review fees and production levies. Our sole shareholder is the Province of British Columbia, and our governing body is a board of directors appointed by cabinet. Regulatory decision-making is vested in me as commissioner. I also serve as the chief executive officer for the crown corporation in terms of keeping the operation running.

Decision-making authority is further delegated--I have the power to delegate authorities into the operation. We have three core operational divisions led by deputy commissioners: project assessment and compliance assurance; engineering, which is a core strength for us; and regulatory affairs and stewardship. Of course, we support that business with a variety of other administrative functions as a functioning business.

Natural gas in British Columbia is significant and growing. With the price of gas lately, it is a bit of a headache for people trying to figure out where that gas will go. But we have an opportunity in the province--it's the ninth year in a row that our reserves estimates have grown. We are one of the few jurisdictions in North America that have had consistent growth year-over-year, prior to unconventional gas discoveries through today.

 (1110)

We certainly have some of the more robust and defined basins for shale gas in Canada. The names of some of those basins are synonymous with anything you hear from the jurisdictions in the States: the Horn River Basin is one in particular; the Montney, in the south part of the Peace; the Cordova Embayment; and the Liard Basin. Those are significant opportunities, world-class shale gas or type gas plays.

The resource estimates for the Horn River Basin, for example, are anywhere between 500 trillion and 1,000 trillion cubic feet of gas. To put that in perspective, currently British Columbia produces approximately one trillion cubic feet per year. Given that one basin alone has upwards of 1,000 trillion cubic feet, we have a significant resource opportunity in front of us. These amounts of course are in addition to the approximately 90 trillion cubic feet remaining proven reserves in unconventional gas. These are reserves that are recoverable from our current technology.

Petroleum and natural gas land sales are a key indicator of industry's investment in the province. The year 2008 was a record year for us, generating over \$2 billion in sales for the province. In 2009 it was slightly below that, at about \$893 million for the province. It is anticipated that 2010 will surpass 2009 at this point. This June saw the fifth-highest single sale in the province's history, at over \$400 million. Those are direct revenues to the crown. Royalties are forecast to increase \$1.25 billion as a result of natural gas production increase alone between 2009 and 2013, and that trend is going to continue in the long-term forecast.

Coming back to the commission, we are recognized as a regulatory leader. We work well with other jurisdictions, most notably Alberta, our neighbour directly beside us. Our experience is being sought from other jurisdictions where unconventional gas interest is growing, for example, everywhere from Quebec, Atlantic Canada, and even Poland, as of the last few weeks. We're also a member of the Interstate Oil and Gas Compact Commission, a stateside agency that brings regulators together to share best practices. That's been a longstanding relationship we've had with all the jurisdictions across North America, in terms of understanding the regulatory pressures.

The commission maintains a number of working agreements and memorandums with different government agencies in the province. It's our way of properly interpreting the policy and legislation. The agreements we have support the commission's authority with respect to upholding the values associated with those partner agencies' mandates. We very much are a taker of their instructions and policies.

Commission employees ensure resources are recovered in the safest and most effective possible manner. We always attempt to ensure that liabilities incurred through these activities are borne by the operators. We interface with industry, first nations, landowners, the public, other government agencies, and of course peers in other jurisdictions.

The shift to unconventional gas in B.C. has been anticipated in the regulatory framework of the province. We recently enacted a new act in the province, the Oil and Gas Activities Act, which was brought into force on October 4 of this year. This legislation reflects a shift towards the future of oil and gas activity in the province, everything from ensuring we have the ability to incorporate technology advances, certainly the interest in unconventional gas and the different methods that are employed there versus the more conventional approach; increased social and environmental expectations—we've raised the bar in terms of addressing public and landowner issues—and also having the flexibility to allow the industry to drive forward.

In developing those regulations we've had extensive consultations over a four-year period with first nations, environmental groups, and industry. We believe we have a very streamlined and enhanced piece of legislation and regulations, reflecting the needs of those people, the environment, industry, and government itself.

On the ground we are certainly a newer jurisdiction, but we are one of the predominant shale gas operators in the country. In 2009-10 there were 557 wells drilled, which isn't a very large number. We're in the early stages of developing the plays.

Approximately 1,100 kilometres of pipeline were built in the province during this last year.

 (1115)

In the same period, on a yearly basis, we issued about 2,700 approvals for different aspects of oil and gas development in the province and we completed 4,300 site inspections with our field inspectors.

In conclusion, I really wanted to leave you with the notion that the success for us in responsibly developing this resource really comes down to four key attributes. One is what we like to refer to as "having the rocks". We do have the resource. The shale is there and it's world-class. We do have a second component. It's having an effective and efficient regulatory model, which we believe we've slowly started to implement now. Third, it's having a competitive fiscal and policy environment, which is certainly not my mandate as the regulator, but I do see that evident in the province. And of course the fourth is executing well on all those as we go through.

We believe we are on the path to responsible, world-class shale gas development.

Thank you very much.



#### **The Chair:**

Thank you very much, Mr. Ferguson, for your presentation.

We go now to Alberta's Industrial Heartland Association. Mr. Shelly and Ms. Tolmie-Thompson, go ahead, please, with your presentation, for up to seven minutes.



#### **Mr. Neil Shelly (Executive Director, Alberta's Industrial Heartland Association):**

Great. Thank you.

We appreciate the opportunity to speak before the committee here today.

What we'd like to talk about with you today is regarding a very important aspect of our resource development, and that is, adding value to the resources themselves. While we have this tremendous natural resource here in Canada, recent trends are towards exporting our resources out in a raw form and bypassing the economic opportunities for Canada.

Ms. Thompson will provide an overview of what's happening in the area, and then I'll follow up with some trends and facts and figures regarding what we see going into the future.



**Ms. Jana Tolmie-Thompson (Economic Development Officer, Alberta's Industrial Heartland Association):**

Thank you.

I wanted to give you a little bit of history on Alberta's Industrial Heartland Association, why it came to be. We were actually incorporated in May 1998 and became operational in January 1999. What's important is that prior to that, between 1993 and 1998, we worked very closely with the industry. This in fact was an industry-driven initiative, wanting the municipalities to come together and get some common regulations, guidelines for industries to exist.

We encompass five municipalities, and each municipality at the time had different municipal development plans, area structure plans, etc., and different rules. It was making it difficult for industries that worked in one and had pipelines going to another for the regulations. That was very much a local impact, getting the local industries—and these are mega-players, your Dow, Shell, Sherritt—coming together to incorporate or to have municipalities incorporate this.

I sent a map to you. I don't know if you received it or not. I'm assuming you did. It gives you the geographic outline of the heartland. We are 582 square kilometres, zoned heavy industrial primarily, with of course some conservation area and buffer zones in there.

We presently have 48 industries existing in the area. They employ over 7,500 staff, full-time and contractors, and the majority are very highly skilled and trained employees—the managers, the operators, the PhDs, etc. Based on the multiplier effect of one to four, that's equivalent to about 30,000 jobs directly and indirectly created just due to the industries. That's not including the different positions such as engineering EMPs, the maintenance, the turnarounds, etc.

In terms of value of job creation, revenue generation, it's very important within the Alberta context and of course the greater Edmonton region.

In addition, on the map, we also have 20 land holdings that folks are holding onto. They purchased land back in 2003, 2008. Suncor, Petro-Canada, etc. are looking to build their upgraders. A lot of those have been deferred right now. Hopefully something will happen on those lands as well, because we have the potential of creating another 2,000 to 4,000 jobs, excluding the construction jobs.

We do work very closely with our province, our provincial government, with Alberta Energy, Finance and Enterprise, Environment, and Intergovernmental Relations.

I'll pass back to Neil for an overview of Heartland again.

 (1120)



**Mr. Neil Shelly:**

Thank you, Jana.

That gives you an overview. In our area, in addition to Sarnia, are some of the major hydrocarbon processing areas. There's been a lot of discussion lately regarding the development of Canada's oil sands resources and their future, but extracting the material from the ground is just part of the story.

The bitumen that is extracted from the oil sands is one of the heaviest forms of crude oil in the world, and, unlike conventional oil, must be upgraded before it can be used in the refining process. The upgrading process transforms this very heavy crude oil into a material called "synthetic crude oil" that has properties as good as, if not better than, light sweet oil and can be used at any refinery operation virtually anywhere in the world. These upgraders are very capital-intensive and create huge economic spinoffs in terms of the construction and operation jobs in the region in which they are developed.

But the upgrading of the bitumen into that synthetic crude oil is just the first step in the process. There are other benefits to upgrading that lead to future opportunities. One material that is produced as a byproduct is actually very rich in the basic chemical feedstocks required for the petrochemical industry.

We've looked at these opportunities and how we can advance further up the value chain. Studies done by us in conjunction with the Government of Alberta and supported by the federal government have identified numerous opportunities to actually take our raw resources more towards a consumer-ready type of product.

The bottom line in our analysis is that, at a minimum, two-thirds of the value of the resource in the oil sands lies in the processing of the materials, and the region that processes the materials is the one that's going to gain the most economic opportunity and diversity from these materials.

This trend towards exporting raw products in a raw form with less processing in Canada is becoming apparent when we look at the refining situation in western Canada. In 2000 western Canada as a region was a net exporter of refined products. If you fast-forward to 2008, you'll see that western Canada is actually now a net importer of refined products. A recent study done by the Government of Alberta indicates that if we don't get more processing capacity, western Canada alone could actually be importing 200,000 barrels a day of refined products into our region to meet our needs.

While the west is sort of becoming what's being considered an energy superpower, the trend is to extract the raw products, ship the materials out of the country, and have somebody else process and refine them. We are then buying back the finished products. Not only does this rob us of an economic opportunity, but it has created a situation where in western Canada we are now running into fuel shortages. It seems to happen just about every year now as we rely upon longer and longer supply chains to get diesel to our farmers, our miners, and our logging operations.

So as we said, while the extraction side of the business seems to be enjoying a resurgence in these last days, we cannot say the same thing for the value-added side of the business. A recent report from Alberta's Energy Resources Conservation Board predicts that by 2020 our share of processing of this bitumen material will go from where it's at currently, at about 64%, down to about 44%, unless something is done. What this means is that the majority of our resources will be shipped out in the raw form and other countries will enjoy the benefits and the economic diversity of processing these into consumer-ready types of products.

The lost opportunity we're looking at by exporting these materials is fairly staggering. Based upon the analysis we've done of five individual projects that may or may not go ahead in our region, the economic impacts amount to \$40 billion in capital investments, 50,000 person-years of construction jobs, 10,000 person-years of engineering design work, and close to \$1 billion in federal and provincial corporate income tax.

Another aspect of this, as well as the environmental interests associated with upgrading, is that our region, the Heartland region, actually has some very good geology for carbon capture and storage in and around the area. In our area we actually have three projects on the go that are looking at carbon capture and storage, supported by the provincial and federal governments.

By tying the processing into a carbon capture and storage project, we can actually reduce the carbon footprint of our oil-sands-based fuels to standards that would actually meet what's being considered in California for carbon-intensity standards. So when we take a look at energy security for Canada, by processing it here and employing carbon capture and storage technologies, we can actually have control over the environmental factors and help set the agenda around this matter.

So what can and should be done? Well, this is a very complex situation. It's something that we are discussing right now with the provincial government. We feel that it's something the federal government, through its policies and processes, needs to consider as a very important part of the agenda for Canada when we look at energy security and how we maintain the maximum economic opportunity for our country.

 (1125)

Thank you.



**The Chair:**

Thank you very much to both of you for your presentation.

We will go now directly to questions and comments, starting with Monsieur Coderre for up to seven minutes.

Go ahead, please.

[Translation]



**Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chair.

[English]

Mr. Ferguson, it's really interesting to have you here, because of course I'm from Quebec, and there are issues regarding shale gas.

Of course we want to be respectful of jurisdictions. You are a provincial regulatory body, and natural resources are under provincial jurisdiction. Nevertheless, I think that the Government of Canada might have a role to play vis-à-vis the monitoring.

I'm going to ask you a few questions to understand how it works, because clearly, what we've been learning since day one and what we hear every time we're talking about shale gas and the regulatory body is that, frankly, B.C. is a model. I'd like to understand more.

[Translation]

First of all, I would like to know how your organization works. When we talk about shale gas, that involves drilling holes, of course, which can lead to certain situations regarding the public.

How is your organization dealing with concerns between individuals and the industry? Specifically, what is your role? You talked about protecting people and the environment, but when it comes to people, what is your role in protecting the public?

[English]



**The Chair:**

Mr. Ferguson, go ahead, please.



**Mr. Eric Alexander Ferguson:**

Thank you for the question.

Certainly we distinguish between individuals who are public landowners, because we do have operations that are permitted on private land under certain conditions, with the right of entry being one of the preconditions. We do have a significant mediation role, which was set up in legislation 12 years ago, when we were formed, to offer an opportunity for those landowners to be treated fairly, equitably, properly, whether in compensation or in operating practices. We have quite a number of staff up in the north, even though the population certainly isn't anywhere as great as it is in many other jurisdictions, in Quebec for example.

We do have a significant amount of resources applied to liaison with landowners. Quality of life is a pretty significant precursor to other issues that may happen, whether safety-related or not, so we pay a lot of attention to those quality of life issues first and foremost. There is road dust, for example, from increased traffic. We look at what kinds of reclamation standards are applied to the site once it's completed. There's construction--



**Hon. Denis Coderre:**

I guess you're also working closely with environment, because water is an issue there. Is the protection of water and all that under your own jurisdiction, because it all came with...?



**Mr. Eric Alexander Ferguson:**

Well, there are two levels. With regard to water specifically, we do take our mandate from the Ministry of Environment. We are given the authority to issue short-term water-use permits only, for one year at a time. The Ministry of Environment regulates longer-term, more stable licensing of water use, so ours are typically smaller.

One of the issues we're having now as the industry is starting to grow is how we properly align the Ministry of Environment mandate and instructions for us with an increased level of activity, or what we expect to be an increased level of activity, and demand for those short-term licences.



**Hon. Denis Coderre:**

I understand that the Quebec situation is quite different, because the shale gas would be in the St. Lawrence River Valley, which is where you have two-thirds of the population, so it's not the same as B.C. You have to work, of course, with the first nations. How do you perceive your role? It's not just based on regulations. You also have to apply them and to upgrade. I guess you have an upgrading process to make sure you are connected with reality. How does it work in B.C.?

 (1130)



**Mr. Eric Alexander Ferguson:**

With respect to first nations, we have contractual arrangements with each of the bands in the northeast part of the province. Those define specific types of applications, consultation periods and process requirements, as well as how we interact, so they're very detailed, spelled-out contractual arrangements. On top of that, certainly we apply a lot of resources to building a relationship over and above that contractual relationship.

I think no matter which business you're in, contractual arrangements are only as good as the relationship behind them. So we try to apply due diligence, both to ensure that if people are unhappy with the contractual process they have another avenue to have those kinds of discussions and hopefully to improve those.



**Hon. Denis Coderre:**

So you've said you're based also on mediation or conflict resolution. Do you have kind of an appeal process, or does the buck stop there? How does it work?



**Mr. Eric Alexander Ferguson:**

Well, we have a number of appeal processes. Certainly we strive a lot to mediate and get involved with landowner stakeholder concerns with the industry up front. If that's unsuccessful and we do go ahead and make a decision, that stakeholder has a right of appeal external to us in a new appeal tribunal that was formed under the new piece of legislation that I mentioned.



**Hon. Denis Coderre:**

Do you perceive yourself as an independent monitoring process? One of the issues we're looking for is we have to be respectful of provincial jurisdiction. Is there a role for the Government of Canada to play? That's important, how you define yourself, because of course on environment assessment we have a role. Maybe eventually we'll think about, while still being respectful of jurisdictions, kind of a national strategy process where even the minister of Alberta, for example, wants it. So western Canada is very adamant on that. How do you define yourself regarding the monitoring process?



**Mr. Eric Alexander Ferguson:**

As a regulator, we strive every day to maintain a level of independence from the policy-maker. I think if you talk to any of the jurisdictions through the U.S., it's very important to have that similar level of independence. We do have very good working relationships with the National Energy Board and some relationships for training as well as first-responder type things, because we have more people available within the province on some of those sites. So that level of independence allows us to form those kinds of

relationships. But we're very much an on-the-ground, upstream regulator, and we try to maintain our independence as such.



**The Chair:**

Thank you, Mr. Ferguson.

Merci, Mr. Coderre.

Madame Brunelle, for up to seven minutes. Go ahead.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Chair.

Hello, Mr. Ferguson.

I am also from Quebec, so of course my concerns have also been expressed by the public and are very similar to Mr. Coderre's concerns.

How far are the drill sites from the nearest residences where you are in British Columbia? As we know, in Quebec, they are in the St. Lawrence Valley, which is densely populated. That is also agricultural land. This raises the issue of clean drinking water. It seems to me that, where you are, they are far from any residential areas. How far?

[English]



**Mr. Eric Alexander Ferguson:**

Thank you very much.

We have some regulatory requirements right now. We call them setbacks from residences, and depending on the hydrogen sulphide content of the gas, there's a different distance that we require wells to be set back. Those are established from a longstanding review of the safety issues that have occurred with that distance. We also have a policy setback, we'll call it, which is not regulatory in nature. Right now I think our closest wells we have to residences are in the order of 300 metres distance to a residence. Part of the setbacks are probably more distance-related to issues like noise, light, for drilling. Those kinds of things create more of a setback than the actual safety setback for hydrogen sulphide gas.

 (1135)

[Translation]



**Ms. Paule Brunelle:**

That seems pretty close to me, 300 metres, but I understand the situation better.

In your presentation, you said that petroleum and natural gas land sales have increased significantly. Who owns the land? The subsoil, the resource, should normally belong to the province. Was the land sold to people who live there? Who owns the land?

[English]



**Mr. Eric Alexander Ferguson:**

British Columbia, like most of Canada, has a split estate model. The crown has reserved the subsurface mineral resources. In the process that government has for administering tenure, selling tenure, is giving



those certain rights for that subsurface resource. Our job is to enable the surface access as well as the method of functioning to get that subsurface resource.

On private land, the companies will typically enter into a lease agreement for a period of time with the landowner for access to that piece of ground for the well or the road or the pipeline, whatever the case may be. There is a separate process from us for allowing those leases to be executed and managed; it's more of a contractual arrangement between the landowner and the operator.

[Translation]



**Ms. Paule Brunelle:**

Is the value of those leases based on the market, the quantity of gas? Do you become involved in the relationship between the land owner and the company?

[English]



**Mr. Eric Alexander Ferguson:**

It's not in my jurisdiction to mediate any of the commercial issues between the leaseholder and the oil and gas operator. My understanding is that it's very much more of a free market type of approach. The landowners--certainly in my area, and I used to live up there--gather together and share information on what some of the lease values have been and what other kinds of compensation are available.

I know the Province of British Columbia has funded a special office in the northeast for assisting landowners with more advocacy to make sure they get a fair deal in that kind of transaction, but I do not believe the value is totally related to the value of the subsurface resource there. That would be expressed in the company's interest in concluding an arrangement.

[Translation]



**Ms. Paule Brunelle:**

You said that the members of your board, the BC Oil and Gas Commission, are appointed by Cabinet. Is the public represented on that board? Does the public have a seat?

[English]



**Mr. Eric Alexander Ferguson:**

In any good corporate governance model, I would think the cabinet authorities or the cabinet assignments are done in the public interest. The board, like any board, has a responsibility to all the stakeholders in Canada, as opposed to one single shareholder. I think it's always a governance issue for any organization that's governed that way to understand the responsibilities to all the stakeholders and not just the one shareholder, or a shareholder.

We have many other ways for the public to give input to our processes. We are driven primarily by a piece of legislation and all the regulations under that, on which we consult widely with the public and the stakeholders. We also have the ability to strike advisory committees to advise the board on any kind of public interest matter that they wish to put before them in terms of changing how the commission is operated, but the board is the primary governance of the operation, not the statutory decision-makers that are there.

[Translation]



**Ms. Paule Brunelle:**

If I am a land owner and I sign a lease with a company, if I am unhappy for any reason or if I have any

concerns, to whom would I address my complaint?

[English]



**Mr. Eric Alexander Ferguson:**

In terms of a contractual arrangement, the one certain place for landowners to go to get their rights better expressed would be a court process, because it is a third party contractual arrangement. If there are issues between the operator and the landowner, we do offer to mediate and we find ourselves quite engaged in mediating. If there is a break in that agreement that leads to a regulatory issue for us, we will address that directly, but if it's related to a compensation discharge that wasn't done appropriately or something, depending on our relationship with the landowner and the operator, we often find ourselves engaged in an informal mediation role. We have quite a bit of influence on the industry in that regard.



**The Chair:**

Merci, Madame Brunelle.

Mr. Shelly and Ms. Tolmie-Thompson, we remember you're there. I'm sure someone will have some questions for you.

We go now to Mr. Cullen. I'm pretty sure he'll be the first one to do that.

Go ahead, Mr. Cullen.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

I was going to ask Mr. Ferguson some questions first, but I am coming to you good folks in Alberta.

Mr. Ferguson, at the very end of his presentation we heard Mr. Shelly mention the need to maximize the economic opportunity from the resources in Alberta. Does the B.C. Oil and Gas Commission have that as their mandate? In the legislation that guides you or directs how you do leases or what you approve or don't approve, is there anything that directs you to maximize the economic opportunities for British Columbia?



**Mr. Eric Alexander Ferguson:**

Thank you.

I would suggest it's more in the form of soft, indirect language related to an optimization, given all the other issues that we have in front of us.



**Mr. Nathan Cullen:**

I suppose there are competing interests whenever you sit on a commission.



**Mr. Eric Alexander Ferguson:**

Yes.



**Mr. Nathan Cullen:**

I just wanted to go over your numbers again. In 2008, around \$2 billion in leases, is that right?



**Mr. Eric Alexander Ferguson:**

In land sales.



**Mr. Nathan Cullen:**

In land sales, and then in 2009, \$893 million?

**Mr. Eric Alexander Ferguson:**

Yes.

**Mr. Nathan Cullen:**

That's dramatic. Is that simply a reflection of prices?

**Mr. Eric Alexander Ferguson:**

Certainly the big year was an interest in the shale gas basins that were up there. I do want to clarify that those land sales are done by the Ministry of Energy now, not by us as a commission.

**Mr. Nathan Cullen:**

Some boards are set up in such a way that people who sit on the board represent a certain perspective. They come from an industry perspective and that's the chair that they hold. The B.C. Oil and Gas Commission isn't set up that way, though. You have members appointed who are meant to hold all perspectives, is that the idea?

**Mr. Eric Alexander Ferguson:**

It's not--

**Mr. Nathan Cullen:**

My question is you don't have anyone who sits there and says "I come from a first nations perspective and I hold that position so that we can have that perspective in our meetings", or someone from an environment perspective--nothing like that, right?

**Mr. Eric Alexander Ferguson:**

None that I know of, although we do have one board member who is a retired industry executive from a drilling company. I don't know if that would be an interest area. From my experience, I haven't seen him talk about an industry emphasis.

**Mr. Nathan Cullen:**

Does B.C. have an energy security strategy? Does that discussion happen in British Columbia? Do you have a mandate for that? Do you have a plan?

**Mr. Eric Alexander Ferguson:**

As a regulator, no, we don't.

**Mr. Nathan Cullen:**

Now to our good folks in Alberta.

Mr. Shelly, this is a very interesting presentation, by the way, in terms of looking at the actual value of bitumen when you get it out of the ground: how much is actually achieved through mining, and how much is achieved through upgrading.

To go over your numbers, on two million barrels a day, you have \$25 billion for the actual bitumen mining, but twice that for the synthetic crude production, and then three times that amount for the petrochemicals production. Is that correct? Am I hearing those numbers right?



**Mr. Neil Shelly:**

That's correct.

One of the differences between bitumen and synthetic crude oil is called the light-heavy differential, and this number actually bounces around quite a bit on market factors. The numbers you see there were done back in about 2008 based upon market prices. Since then the differential has narrowed down, but it's widening back out again, so these numbers depend upon market factors that are there. The doubling is based upon about a 50% difference in heavy and light prices. Right now we're sitting at about 30%, so you can sort of factor that in there.

The \$25 billion in petrochemicals was based upon three different studies we've done in conjunction with the Government of Alberta that said if we now take these byproducts and move them up the chain, what will the net value be? They identified a number of different opportunities. There would be feedstock advantage, and the consultants' estimates were that the value of these petrochemicals would be \$25 billion annually.

  (1145)

**Mr. Nathan Cullen:**

So these studies, and you mentioned another one that was supported by both the provincial and federal government... We've invested taxpayer money to understand what the value could be in upgrading bitumen, yet it seems that the same governments, both provincially and federally, are also promoting a policy that says export it before any of those values can be achieved, before the money can be made for the people of Alberta, for the people of Canada.

It seems contradictory on the surface for a government to support studies that say here's all the value we can get, and at the same time, in the same breath, say we'd like to export it raw anyways.

**Mr. Neil Shelly:**

If you look back to the map that Ms. Tolmie-Thompson provided with all the land holdings, it goes back to what we call the gold rush days back in our areas, where we were cost-advantaged and all this was going to happen. Because of a number of different factors—the rising Canadian dollar, inflationary costs, and whatever—a lot of companies are proposing to go to the United States. I think the will is there when you talk to a lot of people. It's almost like motherhood and apple pie that we advance this up the chain.

The question is, how do you do it now? It forms a balance between not scaring away investors in the actual extraction of the resource, and yet making us more competitive here. We've been on fact-finding missions to Louisiana and Houston, and we've seen some of the incentives they have in place there. An accelerated capital cost allowance for refinery upgrades is in place in the United States, which gives them an advantage. There's a lot of infrastructure in the United States that's considered public infrastructure that directly helps the industry in that area.

As I said, I wish there was a silver bullet answer that if you just do this, we'll get to retain the value. Now that we've identified the size of the prize, the next challenge is to look at what practical policy options can be put into place to make sure that we gain this maximum value.

**Mr. Nathan Cullen:**

We're in the midst of studying energy security in this country. One of the questions we've been putting to various representatives from industry and other stakeholders is whether Canada needs a Canadian energy security strategy. Energy security is about affordability, economic benefits, and some sort of long-term plan. Former premier Lougheed and others have talked about this with respect to Alberta.

What is your group's opinion about the need to have some sort of national strategy to address some of the questions you've raised here today?

**Mr. Neil Shelly:**

We believe that there actually needs to be a long-term vision. As we said earlier, we've been given this

huge national advantage in Canada, and across western Canada, specifically. We have it, and it's almost like we don't know what to do with it.

There are a lot of aspects to energy security. As we mentioned earlier, we're having problems with refining capacity in western Canada. We have diesel supply shortages, because we have underutilized or not enough refining capacity.

Whether it's a national strategy or just a vision, it's a consideration that as we develop the resources, we have to understand that this is multi-faceted. There are a number of factors, other than just pulling it out of the ground, that have to be considered and built into policies.



**The Chair:**

Thank you.

Thank you, Mr. Cullen.

We go now to Mr. Shory, for up to seven minutes.



**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair.

Thank you to the witnesses for coming to help us study energy security in Canada.

My question would be to Mr. Ferguson.

Mr. Ferguson, in your opening remarks you made a comment that shale gas is changing the landscape in the industry and that B.C. is a model for shale gas exploration. You also said that B.C. has an effective and efficient regulatory model and that the B.C. Oil and Gas Commission is recognized as a regulatory leader.

We all know that natural resources are under provincial jurisdiction. We also know that the federal government is leading with several research and mapping initiatives in the field, as well. I also understand that other governments and foreign entities have recently been engaging with Canadian experts with regard to developing their oil and gas exploration and their regulatory frameworks.

My question to you is whether you are aware of any of these jurisdictions. If yes, then I'd like you to elaborate on what you feel Canada has to offer in terms of expertise, both in establishing the proper regulatory framework and with regard to the potential economic opportunities.



**Mr. Eric Alexander Ferguson:**

Thank you.

We do, as a matter of course, with our fellow regulatory agencies across Canada and the United States, share a lot of information. So we're quite familiar with and understand what each jurisdiction is struggling with and tackling in terms of issues and opportunities. At least we try to share it.

As an example, one of the jurisdictions that both Alberta, as a regulator, and I visited three or four weeks ago was in Poland. The request, other than to have three or four days of a lot of meetings, was to help the Polish government, through the Canadian government, understand what different regulatory models might look like for that jurisdiction, which frankly doesn't have one at this point. Of course, it's a very heavily populated area. There are 39 million people living on a land base a third of the size of British Columbia who have a significant shale gas play in the works underneath them. There's cause for a lot of work on their part to get the resource out using a very well-defined energy security model and to understand, at the same time, how that affects the energy balance for the country.

I think all those types of things, if I use Poland as an example, certainly speak to the kinds of issues we have across Canada, whether they're in Quebec or Alberta, Saskatchewan, the Maritimes, or certainly British Columbia. I think the varied issues across those jurisdictions, as I know them today, offer experience and tools that can be applied and shared with the rest of the countries in the world. I think Canada has a great opportunity to demonstrate leadership in providing that expertise beyond our borders.

⏪ ⏩ (1150)

⏪ ⏩

**Mr. Devinder Shory:**

That is regarding the regulatory framework.

Are you aware of any comparative studies on the overall economic impact of energy development in Canada and countries like Norway, or any others?

⏪ ⏩

**Mr. Eric Alexander Ferguson:**

Certainly I focus a lot of my attention on regulatory constructs, and not so much on fiscal and broader government policy issues. I know that Australia has done quite a bit of work in trying to understand and pick apart the competitiveness of their upstream regulatory model. I think that work was completed a year or so ago. It was a fairly extensive piece of work. I think they compared it to other jurisdictions as well.

I believe my favourite province next to us, Alberta, has also been doing a lot of work on a regulatory improvement competitiveness piece that I would point you to. There's probably some good learning there as well.

⏪ ⏩

**The Chair:**

Mr. Anderson, go ahead.

⏪ ⏩

**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Mr. Ferguson, you mentioned the Interstate Oil and Gas Compact Commission. Can you tell us about it? What role does it play? I assume it's international.

⏪ ⏩

**Mr. Eric Alexander Ferguson:**

It's international as a name. It is certainly centred and founded in the United States. It is a formally recognized organization of all the state regulatory agencies. They appoint people to it. We and several of the provinces in Canada are associate members--we're certainly not full members. But it is an avenue for those states and us as associate members to get involved and share information.

Our interest is probably more in the regulatory tools and enhancement they're working on and struggling with. It's also an outstanding network of opportunity for learning what's going on.

⏪ ⏩

**Mr. David Anderson:**

Is it mainly an advisory commission? Does it have any legislative teeth?

⏪ ⏩

**Mr. Eric Alexander Ferguson:**

No.

⏪ ⏩

**Mr. David Anderson:**

But it's a good avenue for you to get information, and that kind of thing.

Mr. Cullen talked about the land sales, and I know that in my province the land sales dropped off dramatically in 2009. You say royalties are forecast to increase \$1.25 billion as a result of natural gas production. Do you want to talk a little more about the longer-term benefits of natural gas production? Do you have any numbers on the kind of impact it's going to make on the economy?

⏪ ⏩

**Mr. Eric Alexander Ferguson:**

My apologies, but as a regulatory agency I'd have to pass you over to the Ministry of Energy in our province to talk more about those kinds of long-term predictions and value gains. I just quoted the

numbers they gave us that are published on their websites.

As far as ultimate value to the crown over time, the only thing I would offer is my knowledge that those are direct revenues only. They are not the indirect revenues from employment and other spinoff opportunities we see throughout the industry.

  (1155)



**The Chair:**

Thank you, Mr. Anderson. We are out of time.

Just before we suspend to get the second panel in place, I'd like to thank very much all of you who presented: Mr. Ferguson; and Mr. Shelly and Ms. Tolmie-Thompson from Alberta. Thank you very much for coming today. You have been very helpful for our study.

We will now suspend for a few minutes as we change to the second panel for the day.

  (1155)

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  (1155)



**The Chair:**

We will resume the meeting with our second panel.

From the University of Ottawa we have Serge Coulombe, professor, department of economics. By video conference from Calgary, Alberta, from the Canadian Energy Research Institute we have Peter Howard, president and chief executive officer.

We will have the presentations in the order on the agenda, starting with Professor Coulombe from the Department of Economics.



**Hon. Denis Coderre:**

Repeat after me: Coulombe.



**The Chair:**

Got it. Thank you. I appreciate your tutoring, Monsieur Coderre.

Go ahead, Professor.

[*Translation*]



**Dr. Serge Coulombe (Professor, Department of Economics, University of Ottawa):**

Thank you.

It took the English-speaking economic community in Canada over ten years to properly pronounce my name. It was not easy.

In the few minutes I have here today, I would like to address two subjects. The first is the issue known as Dutch disease, in the Canadian context. The second subject has to do with the relationship between oil and gas development and regional increases in productivity.

With respect to Dutch disease, the name comes from an article published in *The Economist* in the 1960s regarding the Dutch economy. The Dutch manufacturing sector suffered considerably following the discovery of oil and gas in the North Sea. Several theoretical and empirical studies were then conducted.

To put it in extremely simple terms, Dutch disease results from the relationship between a booming resource sector and the manufacturing sector.

A booming resource sector leads to rising production costs and an appreciation of the national currency. That is what happened in Holland's case and in many other countries like Australia, Norway and Canada. This increase in the value of the exchange rate decreases the competitiveness of the manufacturing sector.

In Canada, Dutch disease has a very particular regional dimension because, generally speaking, the resource boom is in Alberta and Saskatchewan. The secondary sector, manufacturing, is in Ontario and Quebec. Australia is facing a similar problem.

For instance, during the resource boom of 2002-2007, Canada lost approximately 275,000 manufacturing jobs. In a study I did with some European colleagues, we estimated that approximately 50% of these job losses in the manufacturing sector were caused by the impact of the resource boom on the value of the Canadian dollar.

Clearly, the question we must ask ourselves is this: Is Dutch disease really a disease—a bad thing—or is it simply a question of labour market adjustments? When there is a boom in one sector, jobs must come from elsewhere.

I would now like to quote Mr. Krugman, the 2008 Nobel Prize winner in economics. When he was an economist, and not a journalist, he said: "The worry seems to be that when the natural resources run out, the lost manufacturing sectors will not come back."

As far as Canada is concerned, it is pretty clear that our oil and gas resources will not run out any time soon. One way to address this problem would be to significantly drop the price of oil, for instance, in the medium and long term. This could also create a problem like the one Krugman describes.

It is worth noting that Canada's manufacturing sector has not always been depressed by the resource sector. Prior to 2002, for about six years, the opposite effect was noted. With a drop in the cost of raw materials and a decline in the value of the Canadian dollar, many jobs were created in Canada's manufacturing sector.

The basic problem with the relationship between Canada's resources sector and manufacturing sector is that there seems to be excessive volatility in the manufacturing sector. This excessive volatility stems from how natural resources affect the value of the Canadian dollar. Thus, it is pretty clear that Ontario and Quebec benefit from having a more stable currency that does not depend on the uncertainties of the resources sector, therefore, a currency like the euro or American dollar.

My second point pertains to certain facts from a study I am currently preparing for the C.D. Howe Institute on the relationship between Canada's resources sector and regional productivity.



In the study, I compared the strong growth of resources in Newfoundland following Hibernia, so Terra Nova and White Rose, and the growth in Alberta.

Note that productivity in Newfoundland has seen the largest improvement in Canada in the past 25 years, and this is mainly because of changes to the economy's structure. I am summarizing and simplifying, but we have gone from a very low-productivity resource, fish, to a very high-productivity resource.

In contrast, Alberta has seen among the lowest growth in productivity in Canada. Since 2002, productivity growth has been relatively weak in Canada. Note that the level of productivity is still very high, but the growth has been very weak. Basically, this is because we have moved away from oil production using normal standards with relatively high productivity. That source has been partially used up and there is growing reliance on extracting oil from the oil sands, which requires more labour and very high production costs.

I have provided a graph that shows both productivity measures. The graph shows that the oil boom has caused extraordinary growth in productivity in Newfoundland, while productivity in Alberta has actually decreased.

When we look at what is going on in the economy as a whole, we again see the opposite effect. It may



seem a little surprising, but in Alberta, productivity growth has been extremely strong in sectors other than natural resources since 2002. Thus, the resource boom in Alberta appears to spread more easily to the other sectors of the economy, while this has not at all been the case in Newfoundland.

So that is basically my second conclusion for you here this morning. We must not assume that oil and gas development will always have the same effect on regional economies. It basically depends on the type of resource.

Thank you.

  (1205)

[English]

**The Chair:**

Merci, Professor Coulombe. We appreciate it very much.

We'll now go by video conference to Peter Howard, president and chief executive officer of the Canadian Energy Research Institute.

Go ahead, please, for up to seven minutes.

**Mr. Peter Howard (President and Chief Executive Officer, Canadian Energy Research Institute):**

Thank you

Good morning. My name is Peter Howard, and as the moderator indicated, I am the president and CEO of the Canadian Energy Research Institute.

Founded in 1975, the Canadian Energy Research Institute, or CERI, as we call it, is an independent, non-profit research institute specializing in the analysis of energy economics and related environmental policy issues in the energy production, transportation, and consumption sectors. Our mission is to provide relevant, independent, and objective economic research.

Members of the institute include the Government of Canada, the Government of Alberta, the University of Calgary, the Canadian Association of Petroleum Producers, and the Small Explorers and Producers Association of Canada.

On the oil and gas industry in Canada, the oil and gas component of the Canadian economy is historically focused on hydrocarbon production, pricing, royalties, and taxation. Success or failure is usually measured by levels of production, the profitability of hydrocarbon exploration and production companies, the royalty, and taxation levels of government. Often absent from this group of companies are the tens of thousands of workers that support the efforts of the E and P sector, namely the oil and gas service sector, or the OGS.

My brief this morning will focus on the economic impacts of the oil and gas service sector and its relationship to the Canadian economy.

Before I start I would like to go over a few definitions. The oil and gas producers are the corporate entities whose business it is to explore and develop hydrocarbon resources in the form of oil, oil sands, natural gas--including conventional, tight, and shale--and natural gas from coal, commonly referred to as coalbed methane.

Oil sands operators are a subset of the oil and gas producers who explore and develop oil sands resources. These companies may or may not have involvement in conventional oil and gas exploration.

The natural gas industry is a subset of the oil and gas industry, which covers all activities related to exploration, development, and transportation of just natural gas from the resource pools to the city gate meter stations. This includes exploration, drilling, production, gathering, processing, and pipeline transportation. The report generated by America's Natural Gas Alliance, ANGA, in 2008, whereby it states that natural gas activities support more than 600,000 jobs and contribute \$100 billion to Canada's GDP, is an example of this portion of the oil and gas industry.

The oil and gas service sector is made up of the companies that offer products and services employed in direct support of oil and gas exploration and production activities for the oil and gas producers. These activities include exploration, drilling, completion, production, construction, processing, transportation, logistics, manufacturing, maintenance, and fabrication. This activity covers all conventional hydrocarbons, including oil, gas, and coalbed methane; all unconventional activities, including tight gas and shale gas; and all oil sands developments, but it does not include gas transmission in the form of pipelines.

On the oil and gas service sector, wells drilled, production rates, revenues, royalties, and taxes are replaced by words like casing, production strings, tubing strings, bits, wellheads, rig move, rig days, rig release, packers, plugs, fracing, cementing, coring, testing, and abandonment. Engineers, landmen, geologists, and geophysicists are replaced by surveyors, rig crew, drilling supervisor, trucker, loader operator, jug hound, mud man, snubber, well tester, tool push, well site geologist, and safety supervisor.

⏮ ⏪ (1210)

⏮ ⏪

**Hon. Denis Coderre:**

A point of order.

⏮ ⏪

**The Chair:**

A point of order, Monsieur Coderre.

⏮ ⏪

**Hon. Denis Coderre:**

I just see the fumes coming from the translator right now. Can he just slow it down a bit? That's another form of gas, but you don't want to go there.

⏮ ⏪

**The Chair:**

Could you slow down a little bit with your presentation? The interpreters have trouble keeping up.

⏮ ⏪

**Mr. Peter Howard:**

My apologies. I was trying to--

⏮ ⏪

**The Chair:**

Some of these things probably don't translate that well either. But go ahead.

⏮ ⏪

**Hon. Denis Coderre:**

The form of energy, you mean.

⏮ ⏪

**Mr. Peter Howard:**

Numerous other words and jobs describe the manufacturing and fabrication industries that develop products used by the oil and gas sector in the construction of thousands of field facilities that dot the western Canada landscape. At the end of the economic life for a field facility, the final word is "abandonment". The OGS sector also includes companies responsible for sealing, removing, and reclaiming the disturbed land footprint back to its original condition.

In order to estimate the economic contribution of the OGS sector, we utilize the Stats Canada 2006 P Input, modified base price of input-output tables at the "W" level of aggregation. These were examined. There are 38 industries that are either totally dedicated to the oil and gas services or partially dedicated with varying degrees of contribution. These 38 industries participate in manufacturing or utilizing 225 commodities that are employed by the OGS sector.

The many contributors to the OGS include industries that supply gravel for well-site road access, to the sands used for fracking, to engineers, designers, welders, carpenters, and electricians who manufacture

modular components for field installations, to drill pipe, concrete, chemicals, boilers, tanks, heaters, and compressors, and to the truckers and mail service that support the OGS activities. Also included were the local machine shops, portable welding trucks, warehousing, transportation facilities, communication systems, nuts, bolts, and wire that indirectly support the OGS sector. From the Alberta fabrication facilities in Leduc, Alberta, to the pipe manufacturing facilities in Regina, Saskatchewan, to the manufacturing industries in southern Ontario and Quebec, the OGS sector covers thousands of companies employing hundreds of thousands of people located in virtually every province and territory of Canada.

Based on this examination, we came up with the following results:

It was determined that Canada's GDP, at a specified basic price for the year 2006, was \$1.35 trillion.

The oil and gas service sector of the Canadian economy generated \$65 billion, or 4.8% of that GDP.

In 2006 the provincial and federal governments took in \$225 billion in government revenues over and above the oil and gas royalties.

The oil and gas service sector contributed \$9 billion, or 4.1%, of the taxes paid to the provincial and federal governments.

In 2006 the oil and gas producers paid \$12 billion in royalties from conventional resources, and an additional \$2.1 billion from oil sands, totalling \$15 billion.

In 2006 the Canadian economy employed 16.5 million people. The oil and gas service sector employed 800,000 people, or 4.8% of the total workforce.

Comparing these numbers against other industries, the oil and gas producers generate GDP of \$87 billion; the automotive sector, \$25 billion; the agriculture sector, \$26 billion; the mining sector, \$18 billion; the forestry sector, \$29 billion; residential construction, \$34 billion; non-residential construction, \$15 billion.

Stating the GDP contributions of OGS by industry type, we came to the conclusion that 48% of the OGS is classified as "direct impacts" and covers the activities in the province where the developments are occurring; 25% is in indirect manufacturing, and this covered industries that are manufacturing components for the oil and gas sector; and 27% is in other industries, made up of things like truck transportation, communication, engineering, warehousing, etc., which takes place all across Canada.

While the direct industries are specifically related to locations where oil and gas activities take place in western Canada, western Canada accounts for the majority. The other industries are located throughout the country. Breaking these numbers down, Alberta-based industries account for 67% of the oil and gas impact; Saskatchewan and British Columbia account for an additional 20%; Ontario and Quebec account for 12%; Manitoba and the Atlantic provinces account for 1%.

I would add one point: that the industries in Saskatchewan that generate pipe rely on the steel plate that is sourced from Ontario.

  (1215)

In 2009 international revenues from select Canadian-headquartered, Canadian-controlled OGS companies were \$12.8 billion. A selection of these companies included eight drilling companies, 25 oil and gas sectors, and three pipeline companies. These companies have Canadian head offices and Canadian finance; they file provincial and federal tax returns but they do activities outside the country.

In summary, the oil and gas service sector contributes \$65 billion to the Canadian economy, employs 800,000 workers, and pays \$9 billion a year in government income and corporate taxes. In one form or another this sector can be found in virtually every province in Canada, and trade between the provinces makes this industry what it is today.

Thank you very much.

**The Chair:**

Thank you very much, Mr. Howard.

We go now directly to questions, starting with Mr. Tonks, and if there's time left, Mr. Andrews.

Go ahead, please, Mr. Tonks.



**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you very much, Mr. Chairman.

And thank you to Professor Coulombe and Peter Howard for being with us.

It's an interesting juxtaposing of theory and practice, if you will. I'd like to follow up on some of the questions that have been asked by Mr. Cullen.

To Professor Coulombe, with respect to the Dutch disease, how can we compare 1960, and the rather insulated regional impacts of the North Sea resources opening, to 2010, when the movement of capital and investment is critical to multipliers, which you have just heard from Mr. Howard are absolutely critical to the future of all Canadians?

Pursuant to your thesis of the Dutch disease, how can we in a global economy allay the impacts you have outlined, which I acknowledge happened in the sixties? How can we apply those experiences and lessons to 2010 with respect to an energy strategy that is going to do the kinds of things we all want to do in terms of value added throughout the country, not just in regional pockets, as you have quite rightly pointed out?



**The Chair:**

Go ahead, Professor.



**Dr. Serge Coulombe:**

The big difference, as you pointed out, between 1960 and today is that we have much more movement of capital today than we had in the 1960s. But capital does not play an important role in the Dutch disease mechanism. The mechanism was operating probably in the 16th century, 50 years ago, and it is operating now and it will in the future.

Simply, when you have a very rich resource you are exploiting, that will increase the real exchange rate of the economy. It will make the other sectors of the economy that export on the international scene.... I am not talking about the same sector the other person was talking about; I'm talking about the exporter of goods and services in the rest of the world. With whatever we have—mobility of capital, labour mobility—the mechanism is operating.

I am not saying this is bad for Canada; I am saying this is bad for the sector of the economy that exports manufacturing goods to the rest of the world.



**Mr. Alan Tonks:**

Okay, thank you for that clarification.

Mr. Howard, when you talked about the impacts, economic value added, in a very wide spectrum of 67% in Alberta, and then it came down to 12% in Ontario, those statistics seem to give validity to the theory that the professor has put forward, that the value added is inequitably distributed across the country.

I have an observation from the Alberta's Industrial Heartland Association. I don't know whether you heard their presentation, but they were prior to you. They indicated it was absolutely critical to achieve the high value added: the jobs, the equity in terms of a national job strategy, if you will, to process and upgrade more bitumen, and to do more refining in Canada, as opposed to our dependence on piping across the United States and so on and so forth.

Could you respond to that? First, do you think there is an ongoing challenge that value added will not be equitably distributed as a result of the oil and gas sector? Second, do you think commensurate with that we

should be upgrading more of our bitumen, and refining, I guess in order to utilize the spinoffs? Do you think that should be part of a national strategy?



**The Chair:**

Mr. Howard, go ahead.



**Mr. Peter Howard:**

If you were to look at today's current differential between WTI pricing and Edmonton pricing as far as bitumen is concerned, the suggestion would be that upgrading does not make a lot of sense, primarily because there isn't enough value in that basis differential to support it.

However, historically, the basis has been in the \$15 to \$20 per barrel range. That by itself, if that were to be the case in the future, would support upgrading here in Alberta and sending refined petroleum products to the United States.

That definitely would add to a national strategy of employment. That is not just employment in Alberta. Since upgraders and refineries utilize components that are sourced from Ontario and Quebec, that would definitely assist in those businesses. Second, there are additional structural products; namely, steel, structural beams and stuff like that, which would have indirect and induced employment in Ontario and Quebec.

The thing I would be concerned about is the northern tier refiners in the United States. If they were not receiving Canadian bitumen, that means they would be looking for feedstocks out of the Gulf of Mexico, which then would put refined petroleum products on a very head-to-head competition in the northern tier states, and I'm not sure of the outcome of that.



**The Chair:**

You have 15 seconds left.



**Mr. Alan Tonks:**

No, I'm fine.



**Mr. Scott Andrews (Avalon, Lib.):**

If there are 15 seconds, I have one quick comment.

Dr. Coulombe, I'm glad you identified that Newfoundlanders have the most productivity. We're doing our best to make sure many of them go to work in Alberta to help the productivity in Alberta as well.



**The Chair:**

We do appreciate that.

Monsieur Pomerleau.

[*Translation*]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you, Mr. Chair.

Thank you, Mr. Coulombe. I very much enjoyed your presentation. I found it extremely scientific.

First of all, I would like to know if it was in the context of your study that you found that 275,000 jobs had been lost in the manufacturing sector. Since manufacturing jobs are mainly in Ontario and Quebec, I imagine that is where most of them were lost.

⏮ ⏪ (1225)

⏩ ⏭

**Dr. Serge Coulombe:**

Approximately 90% of the jobs lost during that period were lost in Ontario and Quebec, with about two-thirds of them lost in Ontario and one-third in Quebec.

⏩ ⏭

**Mr. Roger Pomerleau:**

So, when people tell us that the oil sector pays royalties, it also costs us jobs. People often use that argument. People say lots of money must be invested in oil and gas because it pays for equalization. It has made us poor, because the gas is there and it costs us jobs.

⏩ ⏭

**Dr. Serge Coulombe:**

That's right. Equalization has redistributed part of the surplus revenue the federal government has brought in with the oil and gas boom, but there have also been some job losses in the manufacturing sector mainly in Ontario and Quebec, of course.

⏩ ⏭

**Mr. Roger Pomerleau:**

I am not an economist. Can you explain to me more specifically how large-scale primary sector development affects rising exchange rates? Can you explain to me how that happens?

⏩ ⏭

**Dr. Serge Coulombe:**

Yes. Canada exports more natural resources than it imports. Therefore, when there is a natural resource boom or an increase in the price of natural resources, this increases the value of our exports, which automatically increases the value of the Canadian dollar.

Note that this increase in the value of the Canadian dollar helps stabilize the resources sector, because when the price of oil goes up from \$60 to \$80 and the Canadian dollar increases at the same time, oil revenues—in Canadian dollars in Canada—are stabilized. Thus, fluctuations in the Canadian dollar stabilize the natural resources sector, because they follow the cost of raw materials, but they destabilize the manufacturing sector, which exports products.

⏩ ⏭

**Mr. Roger Pomerleau:**

And that needs a lower price.

⏩ ⏭

**Dr. Serge Coulombe:**

That needs a much more stable currency.

⏩ ⏭

**Mr. Roger Pomerleau:**

Exactly.

Since I have heard this argument and I have an economist before me, I have another question. Because of the debate surrounding shale gas, all kinds of arguments have been invoked. One argument I've heard against the use of shale gas is that no one has looked at the impact it will have on electricity sales. If gas prices increase or push up the value of the currency, is there any chance we will have a hard time selling electricity and therefore do we risk losing on one side what some people claim we are gaining on the other side?

⏩ ⏭

**Dr. Serge Coulombe:**

I do not think that shale gas production in Canada will lead to an increase in the value of the Canadian dollar the same way that oil production has. The reason for that is because the profit, the surplus over the price on production costs, is much lower in the case of shale gas. That activity is going to have a relatively

minimal impact on the Canadian dollar. It will likely be comparable to softwood lumber or other primary resource production. Primary resource production is more likely to affect the value of our currency when the sale price and the production costs vary significantly. Such resources include oil, potash and those kinds of activities.



**Mr. Roger Pomerleau:**

Okay.

My next question has to do with Mr. Krugman's statement: "The worry seems to be that when the natural resources run out, the lost manufacturing sectors will not come back."

Although I am not an economist, I have often used this argument. Perhaps it is a little off track, but it seems to me that if we abandon our manufacturing industry for any reason at all, every year there are 600,000 Chinese engineering graduates who are ready to take them away from us, and the industry will never come back. That is my impression. And India will soon be doing the same thing. If we let the manufacturing sector die too quickly, I'm afraid it will never come back.

Is that what Mr. Krugman means?



**Dr. Serge Coulombe:**

Yes, exactly. What Mr. Krugman means is that in order to have a manufacturing sector in any country, a number of fixed costs must already be covered. Research and development need to be done and an international market needs to be developed. Once that sector shrinks or contracts because the national currency has appreciated, it is possible that the sector will be gone for good. There have been many examples throughout history when it became clear that a resources boom destroyed productivity and competitiveness in many other sectors. As a result, it is extremely difficult to have a competitive manufacturing base in an economy that has a strong manufacturing sector. This has been observed all over the world. Countries that have a strong manufacturing base are not generally major exporters of raw materials.



**Mr. Roger Pomerleau:**

Exactly.



**The Chair:**

Thank you, Mr. Pomerleau.

[English]

Mr. Cullen, for up to seven minutes.



**Mr. Nathan Cullen:**

Thank you, gentlemen, for your comments.

A brief question to you, Professor Coulombe. In global terms, do other economists and other countries regard the Canadian dollar as a petrodollar now? Is the relationship between the price of oil and gas directly correlated to what happens to our dollar, or is it too weak a correlation to say it is a true petrodollar?



**Dr. Serge Coulombe:**

No, there is a very strong correlation. I have myself estimated that around 50% of the evolution of the Canadian dollar is driven by the evolution of the price of natural resources, mainly oil and other energy sources. It is a well-accepted fact. It is even accepted by the Bank of Canada.



**Mr. Nathan Cullen:**

We've seen this from the IMF, *The Economist*, and others. Almost out of hand now they say "The Canadian dollar did this today, and that is because energy prices also did this."

The question we're trying to understand in the so-called Dutch disease is how much effect does that directly have on the manufacturing strength in Canada? Some folks have said that this only has a regional impact, that if there's a boom in the oil and gas sector, if the tar sands create another 10,000 jobs, then it only affects Ontario and Quebec. Is there also an effect within Alberta and B.C., or does it break out regionally that way?

**Dr. Serge Coulombe:**

The Canadian manufacturing sector that is exporting to the rest of the world is very concentrated in the Quebec-Windsor corridor. The rest of the manufacturing sector in Canada is intimately related to the natural resource industry. Consequently, it is supplying inputs to the natural resource industry and will generally benefit from an oil boom.

However, the province that will be the least able to export manufacturing goods to the rest of the world will be Alberta. It is extremely hard to export goods that are not related to the oil and gas sector in Alberta because the cost of production there is so high.

**Mr. Nathan Cullen:**

I think you were here during our previous testimony from Alberta's Industrial Heartland Association. They brought forward figures—and this is for both our witnesses—that showed that for the GDP derived from two million barrels per day, \$25 billion of value would come from the actual mining of raw bitumen, a further \$50 billion would be added if you upgraded to synthetic crude, and a further \$75 billion would be added to the GDP economy if you advanced up the supply chain to petrochemicals.

It seems to me that whether we're talking about the Alberta region's economy or the national economy, if a government were interested in the Canadian economy, they would encourage as much value-added production as possible.

We also heard that the Canadian government actually funded studies to arrive at these figures and to understand the value to Canada's economy. What confuses me is that the Canadian and Alberta governments are both promoting the export of raw materials, thereby forgoing the lion's share of the potential economic benefit in jobs.

Mr. Howard, you folks do research into energy. Is it sound energy security policy for Canada to be pursuing more raw bitumen exports?

 (1235)

**Mr. Peter Howard:**

I think what you may be looking at is some of the facts of life, I suppose you could say.

The biggest problem with upgrading and refining in Alberta is that the refining business in North America has very thin margins. It's difficult to get corporate interests to step forward and actually construct these types of capital-intensive facilities. The future may dictate or result in the development of further upgrading and further refining to RPPs, but unfortunately the economics of today do not support that idea.

**Mr. Nathan Cullen:**

You used the term "facts of life". What confuses me is that when this industry was first created and subsidized by both levels of government, the facts of life were that there was no money to be made in mining bitumen because it was too expensive to do, but the government set up a series of policies for tax incentives and research and development to enable the resource to be developed.

We now hear those inside the industry saying that we need a national energy security strategy because absent of one, we're losing this endowment and we're not maximizing the benefit, as the group from Alberta said. Now we're told that it's just the market.



It wasn't the market when we created this industry in the first place. We enhanced the market, we directed the market, and we gave subsidies to develop this product. Now we're exporting it at the lowest point of profit return for industry in Canada and Alberta. I don't understand why we suddenly say it's laissez-faire time now. We didn't say laissez-faire before: we said we'd like to develop this industry, which we did. That was taxpayer money from across the country.

We're now saying we're going to forgo the vast majority of the profit simply because there's a capacity available in the southern United States and now in China. How is it benefiting the Canadian economy to export raw bitumen to China, contrary to government policy?



**The Chair:**

Mr. Howard, go ahead.



**Mr. Peter Howard:**

The original research that went into the oil sands was to develop the production of bitumen. The secondary development, which came about as a result of declining conventional oil, was the upgrading of bitumen to synthetic crude oil to promote the transportation of that product.

I don't think the idea of further upgrading of bitumen to refined petroleum products in Alberta has been totally discounted. All I said was that the economics of today probably don't support it, but these types of projects are 30- and 40-year manufacturing systems; eventually the economics will change, and that will probably change as the price of crude moves up. The business sector will come to the conclusion that investing in this industry will in fact make sense.



**The Chair:**

Thank you, Mr. Howard.

Thank you, Mr. Cullen.

We go now to Mr. Allen for up to seven minutes.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Mr. Chair.

Before I start, I want to make sure I heard this right. I don't think Mr. Cullen was saying that he wants us to subsidize oil to build new refineries, but I might have heard that. I don't know that that's what his leader necessarily supports. Anyway, I just thought I would throw that in.

Professor, I have just a couple questions with respect to a study that was released on October 7, 2010. It was done by the Quebec Oil and Gas Association as well as SECOR Consulting. It talked about the potential economic benefits to the province of Quebec, for example, from the development of the shale gas. Are you familiar with that study at all?

**Dr. Serge Coulombe:** Yes.

**Mr. Mike Allen:** Okay. It talked about the benefits to Quebec. It said if 1,000 wells were in production at 150 sites, the Government of Quebec could receive \$150 million in royalties annually. Under a second scenario with 7,000 wells, that would translate to annual royalties of slightly above \$1 billion. The study of the benefits does not include expenses incurred for transportation, distribution of natural gas extracted, or corporate taxes paid by the industries and their suppliers, nor does it integrate the dynamic or structural effects for the economy of Quebec.

With regard to your comment on your C.D. Howe background that you're preparing, following Hibernia, Terra Nova, and White Rose, Newfoundland and Labrador saw the largest improvement in productivity. Doesn't that make the case, when you look at those numbers and this study, that Quebec should be looking at fostering this development of shale gas?



**Dr. Serge Coulombe:**

I am not a specialist in the production of gas in Quebec or anywhere in Canada, but I will try to answer the question the best I can.

Regarding this new source of natural gas, I think it is of relatively the same nature as what is going on in Alberta right now with the oil sands with regard to its potential effect on the rest of the economy in terms of stimulating productivity growth, simply because most of the expenditures are not offshore, as they are in Newfoundland. It is underground, and it is spread out in various geographical areas of the economy, and it would also be using inputs that are produced by the economy.

I expect this new source of gas to stimulate productivity at the regional level in Quebec and in Canada. However, the effect overall is not of the same magnitude as what is occurring with the oil sands exploitation in Alberta simply because the rent is not there.

The production of this new source of gas has already pushed the price of gas to a relatively low level, and I expect that it will remain low for a good period of time, as long as we don't know exactly which amount of gas can be produced with this new source. I expect some sort of a spillover at the regional level, but not of the same magnitude, really smaller than what we have in Alberta.

**Mr. Mike Allen:**

I mean, \$1 billion economically to....

**Dr. Serge Coulombe:**

Absolutely. There could be various spillovers.

**Mr. Mike Allen:**

Okay.

Mr. Howard, looking back, our previous witness, Mr. Ferguson, was talking about some of the development in B.C. and some of the huge volumes of natural gas that are out there. He talked about one reserve having 500 trillion cubic feet. The Business Council of New York had some information on the Marcellus and Utica shales, which are probably two or three times bigger than that actual reserve. They're talking about an economic uplift for the State of New York, somewhere in the area of \$92 billion to \$123 billion a year from that.

I'm looking at your numbers, where you talk about the oil and gas sector and the service sector. In the analysis you do, do you have any uplift numbers based on how many trillion cubic feet...? What does that mean for the economy and GDP, whether it be for a province or for Canada as a whole?

**Mr. Peter Howard:**

What I can do is perhaps give you some current numbers.


If you look at the entire oil and gas industry in Canada--this is everything from the producers through to the service through to the pipeliners--that contribution is in the order of \$165 billion, or 12.1% of Canada's GDP, and that was in 2006. In 2006 in Canada we generated or produced something approaching 17 billion cubic feet a day, and something approaching 1.75 million barrels a day of crude.

I'm not sure I can relate that to an uplift number. Actually I think that's all I can say about that. I'm not sure I can answer that one.

**Mr. Mike Allen:**

Just following on, but looking at the expansion now with the number of new natural gas reserves that we have, if it was 17 billion cubic feet in 2006, we're talking about tremendous reserves that we could be bringing online.

Of the \$165 billion, do you know what share is natural gas? And assuming that we have development of two to three times in the next few years, what would the impact of that development be?

 (1245)



**Mr. Peter Howard:**

In 2006 the share of natural gas probably would be something around three-quarters of that number.

Let me just throw out one comment.

In the old days when one talked about reserves, reserves were very important because they back-stopped contracts. In today's oil and gas industry, it's not reserves that are the critical issue, it's the number of holes in the ground or the number of wells that you can complete. So having 4,000, or 14,000 trillion cubic feet is a nice number, but what we need to do is drill something in.... Our forecast is now suggesting we will drill 5,000 natural gas wells per year in the coming years. We need to double that in order to regrow our market share in natural gas, and that development of wells is primarily focused on northeast B.C., and in Alberta.



**Mr. Mike Allen:**

That's helpful to link the two articles, so thank you.



**The Chair:**

Thank you, Mr. Allen.

And thank you very much to both panel members, to Professor Coulombe and to Mr. Howard. Thank you very much. Your input has been very helpful indeed to the committee, and I thank you very much for taking the time to come here today.

I will suspend the meeting. We'll go in camera to discuss future business for about 15 minutes.

The meeting is suspended.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 40

Tuesday, February 1, 2011

The Standing Committee on Natural Resources met by videoconference at 3:34 p.m. this day, in Room C-110, 1 Wellington Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Richard M. Harris, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Randy Hoback for Cheryl Gallant.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Fraser Institute:* Gerry Angevine, Senior Economist, Global Resource Centre. *As an individual:* Anthony R. Ingraffea, Dwight C. Baum Professor of Engineering, Cornell University. *Government of New Brunswick:* Bruce Northrup, Minister, Department of Natural Resources.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Gerry Angevine, Anthony R. Ingraffea, by videoconference from Ithaca, New York, and Bruce Northrup, by videoconference from Fredericton, New Brunswick, made statements and answered questions.

At 5:30 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/02 2:08 p.m.

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**Standing Committee on Natural Resources**

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**Tuesday, February 1, 2011**

**1535**



*The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*



*Dr. Gerry Angevine (Senior Economist, Global Resource Centre, Fraser Institute)*

**1540**

**1545**



*The Chair*



*Dr. Anthony R. Ingraffea (Dwight C. Baum Professor of Engineering, Cornell University, As an Individual)*

**1550**



*The Chair*



*Hon. Bruce Northrup (Minister, Department of Natural Resources, Government of New Brunswick)*

**1555**


**1600**




*The Chair*





*Hon. Denis Coderre (Bourassa, Lib.)*

 *Dr. Gerry Angevine*


**1605**


 *Hon. Denis Coderre*


 *Dr. Anthony R. Ingraffea*


 *Hon. Denis Coderre*

**1610**


 *Hon. Bruce Northrup*

 *Hon. Denis Coderre*


 *The Chair*

 *Ms. Paule Brunelle (Trois-Rivières, BQ)*


 *The Chair*

 *Hon. Bruce Northrup*

**1615**

 *Ms. Paule Brunelle*


 *Dr. Anthony R. Ingraffea*

 *Ms. Paule Brunelle*

 *The Chair*


 *Dr. Anthony R. Ingraffea*

 *The Chair*


 *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*

**1620**

 *Dr. Anthony R. Ingraffea*


 *Mr. Nathan Cullen*

 *Dr. Anthony R. Ingraffea*

 *Mr. Nathan Cullen*

 *Dr. Anthony R. Ingraffea*


**1625**

 *Mr. Nathan Cullen*


 *The Chair*

 *Dr. Gerry Angevine*


 *The Chair*

 *Mr. Mike Allen (Tobique—Mactaquac, CPC)*






**1630**

 *Hon. Bruce Northrup*

 *Mr. Mike Allen*

 *Hon. Bruce Northrup*





**1635**

-  *Mr. Mike Allen*
-  *Hon. Bruce Northrup*
-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
-  *Dr. Anthony R. Ingraffea*







**1640**

-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Scott Andrews (Avalon, Lib.)*
-  *Dr. Anthony R. Ingraffea*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Hon. Bruce Northrup*





**1645**

-  *Mr. David Anderson*
-  *Hon. Bruce Northrup*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*





**1650**

-  *Dr. Gerry Angevine*
-  *Mr. Roger Pomerleau*
-  *Dr. Gerry Angevine*
-  *Mr. Roger Pomerleau*
-  *Dr. Gerry Angevine*
-  *Mr. Roger Pomerleau*

**1655**

-  *Dr. Gerry Angevine*
-  *The Chair*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*
-  *Hon. Bruce Northrup*

**1700**

-  *Mr. Richard Harris*
-  *Dr. Anthony R. Ingraffea*
-  *Mr. Richard Harris*
-  *Dr. Anthony R. Ingraffea*



*The Chair*



*Hon. Denis Coderre*



*Dr. Anthony R. Ingraffea*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



**1705**



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Dr. Gerry Angevine*



*Hon. Denis Coderre*



*Mr. Alan Tonks*



*The Chair*



*Mr. Alan Tonks*



*Hon. Bruce Northrup*



*The Chair*



*Mr. David Anderson*

**1710**



*Dr. Anthony R. Ingraffea*



*Mr. David Anderson*



*Dr. Anthony R. Ingraffea*



*Mr. David Anderson*



*Hon. Denis Coderre*



*The Chair*



*Hon. Denis Coderre*



*The Chair*



*Mr. David Anderson*



*Hon. Denis Coderre*








*The Chair*



*Hon. Denis Coderre*




-  *The Chair*
-  *Mr. David Anderson*
-  *Dr. Gerry Angevine*
-  *Mr. David Anderson*
-  *Dr. Gerry Angevine*










**1715**

-  *Mr. David Anderson*
-  *Dr. Gerry Angevine*
-  *Mr. David Anderson*
-  *The Chair*
-  *Dr. Gerry Angevine*
-  *The Chair*
-  *Mr. Randy Hoback (Prince Albert, CPC)*
-  *Dr. Gerry Angevine*
-  *Mr. Randy Hoback*
-  *Dr. Gerry Angevine*

**1720**

-  *Mr. Randy Hoback*
-  *Dr. Gerry Angevine*
-  *Mr. Randy Hoback*
-  *Dr. Gerry Angevine*
-  *The Chair*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. David Anderson*

**1725**

-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Dr. Gerry Angevine*
-  *Mr. Nathan Cullen*
-  *Dr. Gerry Angevine*
-  *Mr. Nathan Cullen*
-  *Dr. Gerry Angevine*
-  *Mr. Nathan Cullen*
-  *Dr. Anthony R. Ingraffea*

**1730**

-  *The Chair*
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CANADA

## Standing Committee on Natural Resources

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NUMBER 040

• 3rd SESSION •

40th PARLIAMENT

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### EVIDENCE

**Tuesday, February 1, 2011**

*[Recorded by Electronic Apparatus]*

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 (1535)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good afternoon, everyone. It's good to see everybody back.

We are of course doing a study on energy security in Canada. The committee began the study a few months ago. We're looking at what the federal role is in unconventional oil and gas development, such as deepwater offshore drilling, shale gas exploration, and oil sands development. We're also looking at the regional economic impacts of the oil and gas development on conventional oil and gas, and at the National Energy Board's role in the development and export of unconventional resources. Today we are looking at the shale gas component.

We have with us today, on our one panel, three individuals. We have Dr. Gerry Angevine, a senior economist from the Fraser Institute, and Dr. Anthony Ingraffea, Dwight C. Baum Professor of Engineering from Cornell University.

Professor Ingraffea's flight was cancelled this morning, so he will be with us by video conference. If he isn't on...we'll have until the others have presented, so we'll have him last in the group.

As well, we have the Honourable Bruce Northrup, Minister of Natural Resources with the Government of New Brunswick. He's appearing by video conference from Fredericton.

Welcome, everyone. We'll get right to the panel. We have just one panel for the full two hours.

We'll start with Dr. Angevine, please, for up to ten minutes.



**Dr. Gerry Angevine (Senior Economist, Global Resource Centre, Fraser Institute):**

Thank you very much, Mr. Chairman.

Good afternoon, ladies and gentlemen. Thank you for the opportunity to speak about the Fraser Institute's research pertaining to energy security and how it relates to the committee's study.

I understand that the study includes reviewing the roles of the federal government and the National Energy Board with respect to the development and export of unconventional oil and gas resources, and this will be part of my focus.

I assume that, in the context of the study, energy security refers to an assured supply of energy for Canadians under normal market conditions. From this perspective, the greater the Canadian oil and gas production is and the more opportunities there are to freely export and import these resources, the less Canadians should be concerned about oil and gas supply difficulties.

Concern that North America's energy resources are not being developed as quickly and extensively as they could be in order to allow the citizens of Canada, the United States, and Mexico to reap the maximum employment income and social benefits led us to initiate a continental energy strategy project two years ago.

As explained in a 2008 Fraser Institute paper by former premiers Klein and Tobin, the envisaged strategy would require North American energy policies at the national, provincial, and state levels to be aligned in support of efficient and as rapid development of the continent's energy resources as possible in light of free market conditions, science-based environmental concerns, competition from oil and gas imports, and petroleum investment opportunities abroad.

Clearly, increased development and production of the continent's energy resources would bolster the security of oil and gas supplies as well as provide economic and social benefits. Because market forces will determine the most efficient allocation of North America's energy resources, development of a continental energy strategy does not encompass identifying energy investment, production, and trade targets. Rather, the focus is on ensuring that government policies and regulations pertaining to energy resource investment, development, and trade are stable, fair, and appropriate.

Governments must avoid intervening in energy investment decisions, as these are best left to those who are motivated by market forces, have an in-depth knowledge of the technologies involved, and are prepared to take risks based on their understanding of how energy requirements are likely to change.

In the continental energy strategy program, at the institute we recently released two papers, which are available on the institute's site, free of charge. One is *Towards North American Energy Security: Removing Barriers to Oil Industry Development*, and the second is *North American Natural Gas: Reducing Investment Barriers*.

These studies review the oil and gas supply potential and requirements in Canada, the U.S., and Mexico and prospects for national and continental supply-demand balances for both oil and gas.

One of the conclusions from this research is that, with continued technological improvements, there is potential to significantly increase the volume of oil liquids that is produced in North America relative to domestic demand. Along with continued development of the oil sands, increased offshore production, commercialization of gas to liquids, and coal gasification technologies will contribute to improvement in the continental oil liquids balance.

Eventually, when we get there, the technology that allows us to commercialize oil that's found in shale—the oil in the U.S. that's been indicated to exist in large quantities locked in the kerogen in oil shale—will also contribute.

With regard to natural gas, technological improvements have made the production of gas from shale formations viable. That has transformed the long-term outlook for continental gas supply and demand from one of increasing dependency on LNG imports to near self-sufficiency.

An indication of this is the plan to export gas to overseas destinations from Kitimat instead of importing gas at that location, as originally planned. Because of what's been termed the shale gas revolution, the security of gas

supply should not be a matter of concern for Canada in the foreseeable future.

With regard to the impact that shale gas is having on the outlook for U.S. gas supply, the upward revisions contained in the U.S. Energy Information Administration's 2011 long-term forecast are telling.

  (1540)

This is gas production from shale formations reaching almost 8 trillion cubic feet in 2020, compared with 4.5 trillion cubic feet in the administration's previous forecast just 13 months ago. That compares with actual 2009 production of 3.3 trillion cubic feet. More remarkably, the projected volume of U.S. shale gas production in 2035, when total gas production is forecast to reach 26 trillion cubic feet, has been doubled from 6 trillion cubic feet to 12 trillion cubic feet. As a consequence, U.S. gas production from other sources—not all other sources, but some, including coalbed methane—and imports of gas from Canada and abroad are projected to shrink.

The Fraser Institute studies that I referred to and the U.S. Energy Information Administration's most recent long-term outlook underscore the fact that the continent has a strong oil and gas resource position; however, non-market barriers stand in the way of achieving the goals and objectives of a continental oil and natural gas strategy. Because these obstacles prevent oil and gas production from increasing as rapidly as they could, they also impinge upon oil and gas security. There are a number of barriers that Canada is in a position to address because of its jurisdiction over oil and gas exploration in the north and in the Atlantic and west coast offshore regions, and also on account of responsibilities that Canada has with regard to environmental protection.

First, the government needs to ensure that royalties or production taxes on conventional oil and gas in the areas for which it has jurisdiction are competitive, not only with those in the provinces but with those in competing jurisdictions around the globe.

Second, it needs to ensure that royalties in relation to higher costs of production because of deep offshore or remote far north locations or other factors, as with some of the unconventional sources, reflect those higher costs. If royalties don't do this, investment will be allocated to regions promising more attractive returns.

Third, the government needs to remove the cloud of uncertainty overhanging the oil and gas industry in relation to the timing and specifics of environmental policy changes that could significantly impact the capital costs of oil and natural gas projects and energy pipeline construction. Necessary changes to environmental regulations need to be defined and implemented as quickly as possible. If potential investors don't know what changes will be made and can't estimate the cost of compliance with accuracy, major projects will be lost to other regions.

Fourth is the issue of moratoria on offshore exploration, which are standing in the way of development of petroleum resources—offshore British Columbia, for example. Moratoria on exploration and production in offshore areas should be lifted once the authorities are satisfied, having examined the cause of the disastrous oil leak in the U.S. Gulf of Mexico last year, that the environmental risk can be mitigated. This will open new areas for development and in turn contribute to Canada's energy security.

Fifth, regulatory process and procedures that threaten to delay the approval of oil and gas pipeline construction that will be required to transport new supplies of bitumen, shale gas, and other petroleum resources to market hubs need to be made more efficient. The National Energy Board has self-imposed standards regarding time schedules with regard to the release of decisions following the completion of public hearings. But these are arbitrary and serve only as guidelines, not hard and fast rules that must be achieved. Moreover, there are no such standards with respect to the time required from when an application is received until a public hearing commences or with the maximum time to be allowed for public hearings. To ensure a more rapid response to pipeline construction applications, more may be required than simply tightening the NEB's self-imposed service standards. In fact, the National Energy Board Act may need to be revamped to limit the board's involvement in the construction permitting process to non-commercial aspects such as safety, environmental impacts, and other matters of public importance.

Finally, there is the land claims issue. Means for settling aboriginal and other claims expeditiously and in a fair and appropriate manner need to be found to prevent unnecessary delays in the construction of pipelines required to transport oil and gas to markets. A matter that should be of concern to the federal government is that investors regard the Northwest Territories as relatively unattractive for investment in oil and gas exploration and development.

(1545)

According to the Fraser Institute's global petroleum survey, in 2010 the NWT ranked 74th of 133 jurisdictions worldwide. This was worse than any of the other Canadian jurisdictions that were ranked, other than Quebec. In fact, the NWT appears to be less attractive for investment than almost all of the U.S. states and offshore regions, all of the Australian states and territories, New Zealand, Chile, the United Kingdom, Norway, the Netherlands, and many other jurisdictions around the globe.

Now, according to survey respondents, the Northwest Territories' poor performance in the global ratings is due to a number of factors, but most important is the land claims dispute issue. On this factor, the NWT was deemed to be the least attractive for petroleum investment of all 133 jurisdictions around the globe that we were able to rank. The Northwest Territories also scored poorly in relation to the availability of infrastructure, regulatory duplication, and uncertainties in relation to protected areas. If the federal and NWT governments wish to attract petroleum investment to the north and thereby advance energy security, these matters need to be addressed.

As I've mentioned, Canadians are fortunate in not having to worry much about the security of oil and gas supplies given our fortunate position as a net exporter of both commodities. However, those parts of the country that are mainly dependent on imported crude oil and refined petroleum products would be disadvantaged by any lengthy interruption in the usual marine supply channels. The government may therefore wish to investigate the extent of the risk exposure of that sort and how it might be lessened.

The Canadian government has a role to play in ensuring that the laws and regulations that define the conditions within which the petroleum industry operates are conducive to free market competition, and also in working to lower non-market barriers to petroleum investment such as those that I've identified, so that development of Canada's oil and gas resources, including oil sands, bitumen, and shale gas, can proceed quickly where production is viable in light of the rigours of competition, free trade, and the costs of compliance with necessary environmental protection policies.

Thank you, Mr. Chairman.



**The Chair:**

Thank you, Dr. Angevine.

We have next Dr. Anthony Ingraffea. His flight was held up due to a snowstorm, and I want to thank our clerk for doing some stellar work to arrange the video conferencing. It just got completed in time. So thank you for that.

Go ahead, please, Dr. Ingraffea.



**Dr. Anthony R. Ingraffea (Dwight C. Baum Professor of Engineering, Cornell University, As an Individual):**

Good afternoon, and thank you very much for giving me this opportunity to present testimony to your committee. I do apologize for not being there, and I also compliment your staff for setting up this video conference on short notice.

I want to make it clear that all of my testimony this afternoon is on point, that is, unconventional natural gas development from shale formations. I'm going to limit my time to just a few comments right now, because I understand we have a whole two hours and I would rather spend my time with you answering your questions. But I am going to spend a few moments and suggest some lines of questions based on my reading of all the testimony on the issue of unconventional natural gas from shale formations that your committee has received to date from various speakers over the last few months.

As I've read that testimony, I've noted some inaccuracies and some misleading statements, so I hope today to help to clarify those for you. There are five main comments that I'd like to suggest right now that perhaps we could follow up on during Q and A.

The first is, don't make the same mistake that's been made in the U.S. by framing and naming the issue of unconventional natural gas production from shale fracking. It is not just fracking; it is the entire process, the whole system of producing unconventional gas from shale formations that you should be investigating. So don't develop too narrow a focus.

The second point is that the most important aspect of developing unconventional gas from a resource like shale is the scale of an operation. By that I mean two things. It takes between 50 and 100 times more fluids to develop a shale gas well than to develop a conventional gas well. That implies that a concomitant amount of waste products is produced in the stream. I emphasize 50 to 100 times the amount of fluid necessary over a conventional gas well. That's one aspect of what I refer to as scale. The second aspect is this. The nature of the geology of shale is such that to produce the vast quantities of gas that are being forecast by the industry will require a very high well density compared to conventional gas development. By that I mean on the order of three wells per square kilometre. Those two issues of scale need to be absorbed and digested: the large amounts of fluid necessary, which implies much transportation and much waste disposal; and many more wells per square kilometre than previously experienced.

The third point is that the technology to do this kind of unconventional development is, surprisingly, relatively new. There are four elements of that new technology, and they did not come together in the United States until about eight years ago. So this is not the hydraulic fracturing of the 1950s, 1960s, and 1970s. It's not conventional gas development of that era. It's a relatively new combined technology.

Fourth, because it's relatively new—in the U.S. certainly, and in the western provinces where it's going hot and heavy in Canada—regulations and the enforcement of the regulations have not kept pace with the technology in the U.S. I'll repeat that. The regulations and the enforcement of those regulations have not kept pace with this new technology. It is unlikely, based on the experience that we're seeing in the eastern part of the United States—Pennsylvania, Ohio, and West Virginia, where shale gas development is under way—that your eastern provinces are ready for similar development. I emphasize that it is unlikely because we have similar geologies, similar surface uses, and similar population densities, and, as I said previously, the regulations and the enforcement of those regulations in that kind of environment. Your eastern provinces, I claim, are not yet ready.

Finally, the fifth point I want to make is to follow the waste streams. If there's one lesson we have learned already in the eastern part of the United States where shale gas development is undergoing tremendously rapid expansion, it is that the ability to note how much waste is being produced in each well is important—and by waste I mean solids, liquids, and gases. It's important to know what's being produced, in what volume and when, and where every waste stream winds up in the environment.

  (1550)

Those are the five points I would like to make in my opening comments. I hope we have ample time during Q and A that you might want to ask me to expand on all of them.

Thank you very much for your attention.



#### **The Chair:**

Thank you, Dr. Ingraffea.

We go now to our final witness, the Honourable Bruce Northrup, Minister of Natural Resources from the Government of New Brunswick. Welcome, sir. Go ahead with your presentation for up to 10 minutes. Thank you for being with us.



#### **Hon. Bruce Northrup (Minister, Department of Natural Resources, Government of New Brunswick):**

Thank you very much, Chairman Benoit.

Good afternoon, everyone.

I want to thank you for the opportunity to appear before the committee today, and I appreciate that you have made it possible to do it via video conferencing.

The Government of New Brunswick is very pleased to present its views on the energy security in Canada and how our province can contribute to our country's energy needs.

I understand I have 10 minutes for my opening remarks, so I'll use this time to share where we are now and where we want to go.

Today we are in the very early stages of what could be a very substantial natural gas industry in our province. This is a very exciting prospect, and we are very optimistic that this could be a major part of the New Brunswick economy if managed in a responsible manner. In just the Sussex area where I live, there is an estimated 60 trillion cubic feet of natural gas trapped in shale formations deep underground. For comparison purposes, just one trillion cubic feet of gas could power 10,000 homes for 1,000 years. So you see there is enormous potential from an economic development and energy security perspective.

Today, 11 companies have rights to explore for oil and natural gas on almost 1.5 million hectares of land in New Brunswick. Two of these are large American companies with extensive experience in shale development in the United States and Canada. Exploration companies have invested \$350 million in our province over the past decade, looking for natural gas and oil, and they plan to spend at least another \$200 million over the next two years. So the exploration phase alone is creating employment and pumping significant dollars into the New Brunswick economy through the purchase of goods and services.

But it's the next stage that has the potential to substantially change our province's future. If shale gas is discovered in commercial quantities, then we're looking at a game changer for our great province. A large-scale natural gas industry would generate millions of dollars in royalties, create many new direct and indirect jobs, and expand our tax base to help fund services we all count on, such as health, education, and senior care.

Just last week I returned from a fact-finding mission to the State of Arkansas with my colleagues, the Minister of Energy and the Minister of Environment. We were joined on this trip by Stephanie Merrill from the Conservation Council of New Brunswick, who also appeared before this committee. During our visit we met with landowners, environmentalists, regulators, and politicians, including the Governor of Arkansas. It was a very eye-opening experience. What we saw is how the shale gas industry has ignited the economy of Arkansas. As Governor Beebe told us, the shale gas industry has transformed Arkansas from a have-not state to a have state. Thousands of new jobs have been created directly by the shale gas industry, or indirectly as companies have moved to Arkansas to take advantage of the secure and relatively inexpensive energy source.

We believe a significant natural gas industry would have the same positive economic impact in New Brunswick. What our government is determined to do is to realize the benefits of this resource without suffering any negative consequences—and I just want to repeat that: without suffering any negative consequences.

We know there have been environmental problems in some parts of the United States. While the impact sometimes can be exaggerated, we do not take these concerns lightly. That's why our government support is based on the responsible expansion of the natural gas sector. The development of this resource must be done right. It is imperative that the social and environmental fabric of our rural communities continues to be substantial in the future. We won't sacrifice the safety and security of homeowners and their groundwater supply to make this happen.

Today we are confident that our present legislative framework is more than adequate to deal with the current level of activity. This activity is primarily at the exploration stage with very few wells drilled. In addition to our existing legislation, we have introduced a phased environmental impact assessment, an EIA process, as a tool to enable the proper planning for what lies ahead. The phased EIA is unique in Canada, and we feel it will address many of the issues raised by concerned citizen groups and other groups.

We also realize that if this industry moves forward as hoped, we must adapt our legislation and human resources accordingly. We feel this can be done right and that we have the necessary time to ensure this happens.

 (1555)

We are in the fortunate position of being able to learn from other jurisdictions like Arkansas that are a decade or so ahead of us in developing shale gas reserves. In some states, development outpaced the regulatory regimes, and the environment was the big loser. In New Brunswick we believe we have a strong regulatory framework, and we're willing to make it even stronger if that's what it takes. Our objective is to be a leader in this area, and we feel we are in an ideal situation to achieve this goal. Consequently, our government is now re-examining legislation and regulations governing the exploration and extraction of minerals, oil, and natural gas. We see this as part of a continuous improvement process. We also believe in the close collaboration with people, communities, and interest groups to ensure they are engaged in the process.

It is the position of our government that we engage the public and conduct our business in a completely

transparent manner. Just this weekend I hosted an open house in my hometown of Sussex, so that anyone with questions on shale gas development could get the answers directly from government officials or industry representatives. This was the first of what I anticipate will be a series of information sessions in different parts of the province as exploration and development activity picks up in other areas.

We are planning at least one additional fact-finding mission. This time we plan to go to northern British Columbia to see first-hand shale gas development there and to meet with residents and regulators. I also believe the hearings this committee is holding will help focus public attention on shale gas development and what it could mean for Canada's energy security.

It is well understood that the natural resources of New Brunswick belong to the people of our province and the responsibility to manage those rests with us. I believe we are up for the task. But New Brunswick is a team player, and I recognize there may be areas where cooperation with the federal government and our sister provinces and territories may prove mutually beneficial. Areas of cooperation that come to mind include the environment, economic development opportunities, research and development, investigation of value-added opportunities, and human resource development. These are all the areas where cooperation may lead to enhancing opportunities this industry brings to New Brunswick and the rest of Canada. This ultimately may lead to a very secure energy future for us all.

Again, I appreciate the opportunity to appear here today, and I look forward to answering questions from committee members.

Thank you very much.

  (1600)



**The Chair:**

Thank you, Minister Northrup.

We'll go now directly to questions and comments, starting with Monsieur Coderre from the official opposition.

Go ahead, sir.

[*Translation*]



**Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chair. Good afternoon, gentlemen. I will start with you, Mr. Angevine.

The issues of energy security and economic impacts are certainly hot topics. Your comments gave me the impression that there need to be fewer barriers. But I did not sense that you felt the need for some kind of monitoring. Talking about energy security implies making sure that we are working with people because of the environmental situation and climate change.

With respect to balance, the Fraser Institute is talking about monitoring and regulation. What role does a government play when it comes to regulations to ensure that there are, in fact, fewer barriers to better economic functioning? Since there may be downsides, what can we do to protect the public as well?

[*English*]



**Dr. Gerry Angevine:**

The position of the Fraser Institute would be that regulation that is needed is important and protection of the environment is important. That's the bottom line. Regulation, however, needs to be as efficient as possible and needs to be changed in accordance with technologies and kept up to date. But in some cases there is a tendency for regulators to add functions to their roles that increase the cost of their organizations.

As I've mentioned, regulations sometimes need to be updated. If you look at the National Energy Board Act and why and when it was put into place, the world is different today, and some of the concerns that were



foremost at that time are not something, perhaps, the National Energy Board needs to be concerned about. For example, if we're looking into whether a proposed pipeline project is necessary from a commercial and economic point of view, certainly the proponents wouldn't be applying to construct a pipeline if it wasn't viable, and they're the risk takers, so that's something the National Energy Board likely doesn't need to spend much, if any, time on.

On the other hand, there are new developments and concerns as we get more into unconventional oil and gas recovery. The institute certainly is in support of necessary and continually updated regulation.

  (1605)



**Hon. Denis Coderre:**

Mr. Ingraffea, thanks for your five points.

I come from the province of Quebec. We are living right now with a situation with shale gas. Of course, I'm a federal politician, so I know that everything is a matter of jurisdiction there. It's a Quebec provincial issue, but I'm sensitive anyway to the situation in the field, and I believe the NEB has a role to play at a certain level, specifically on environmental assessment.

Because of the uncertainty, which you've been talking about in your five points, would you suggest to the Government of Quebec that they implement a moratorium first before going ahead on the situation of the shale gas?



**Dr. Anthony R. Ingraffea:**

My direct answer is yes, emphatically.

Let me support that by saying a few things about a moratorium that exists in my home state of New York. At the same time that Pennsylvania, a sister state, and Ohio, a sister state, and West Virginia, a near sister state, began full-scale development of their shale gas resources four or five years ago, New York State had the wisdom to stop and say, wait a minute, this is substantially different technology than has been used in the past, it's relatively new technology, and we do not have in place adequate environmental regulations, we do not have in place adequate numbers of regulators, and we do not have in place an adequate number of inspectors; therefore we need to study the problem some more, and not just in an academic sense, but we need to learn from the mistakes that are being made today in our sister states, and we would really like to wait until the federal government completes its study under the Environmental Protection Agency to determine, hopefully once and for all, what really are the risks.

No one is saying this is risk-free. No one is saying it's accident-free. No one is saying that one cannot develop an acceptable level of risk in the technologies. What New York State is saying with its moratorium is that we do not have adequate scientific information on which to base adequate regulation and enforcement.



**Hon. Denis Coderre:**

Thank you.

Minister Northrop, the reason I asked the first two questions of the other witnesses is because of course you're the politician and you're stuck with the decision-making process.

There is, I believe, the necessity in Canada to have a national energy strategy, because it seems that you have some problems at the regulation level on what the role of the NEB should be. For the sake of the people of New Brunswick, do you believe it is more appropriate, before taking a stand, to say to the enterprise, well, take a break, we'll go through all the processes first because of the technology issues and all that? Are you putting in place a kind of moratorium?

There is an issue with people, of course--the fear of the unknown, with all the information coming from everywhere. How do you manage your own decision-making process?

  (1610)



**Hon. Bruce Northrup:**

We have been very clear since we took government in October that the moratorium was not in place for the Province of New Brunswick. We felt, and we know and we have had time to explore and come up with.... We have good regulations in place now. Since taking over as government, we have phased in the EIA process, the environmental impact assessment process. There were a couple of wells that had been drilled by Apache in the Elgin area in New Brunswick. They've drilled the wells. They're finished, and they've taken all their criteria back to Calgary. They won't be drilling any wells for quite a while. Our other major one here, Southwestern Energy from Arkansas, is just in the preliminary stages.

That's why we went to Arkansas, to get the positives and negatives from that state. That's why we're going to Alberta and B.C., especially Horn River. They've been in operation there for quite a few years, so we want to go talk to the regulators there, the environmental people. Actually, when we went to Arkansas, we took a lady with us who was part of the Conservation Council of New Brunswick. She went to every meeting we went to with landowners, with regulators, and with environmental groups.

We feel we're in the early stages here right now, and as a minister and with my staff, we don't feel, working with the Department of Environment, that we have time to enforce our regulations more. In New Brunswick, that's the position we are in as of today.



**Hon. Denis Coderre:**

Thank you.



**The Chair:**

*Merci, monsieur Coderre.*

Madam Brunelle, you have up to seven minutes. Go ahead, please.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Thank you, Mr. Northrup. I'll continue with you.

I am from Quebec. I find it interesting that you spoke about consulting the public. It is clear that natural resource development is the responsibility of the Government of Quebec, and Mr. Coderre was perfectly correct in saying so. The Government of Quebec made a huge blunder by forgetting to inform the public and establishing with the public what could be called a social contract before starting any type of extraction or exploration. We are now in a situation where water use is a major issue.

When you said that you are going to consult people elsewhere in Canada and the United States, I wondered whether things would really compare. The scenarios are completely different. In Quebec, we want to extract shale gas in densely populated agricultural regions. This has a great impact on people's quality of life. It seems to me that an agricultural region is not the same as the northern reaches of a province where there are fewer inhabitants.

Certainly we are talking about energy security. That being said, in Quebec, where hydroelectricity is abundant, do we really need shale gas? That's why Quebecers are now agreeing to issue a moratorium while we are taking a closer look at the environmental consequences.

Do you think that you can draw from Quebec's experience and mistakes in this situation? Do you think that things in the United States, Quebec and elsewhere in Canada can be equally compared?

[English]



**The Chair:**

Go ahead.



**Hon. Bruce Northrup:**

What we are doing here in the province of New Brunswick is putting the best practices and standards in place.

You mentioned consulting with the public. We've done that since day one. I mentioned in my brief 10-minute spiel that we had an open house in my backyard in Sussex last weekend. We had over 400 people who came in and talked to three different industries. We had the Department of Environment there. We had the Department of Natural Resources there, with all the people who were experts in different fields, just to explain to them how the process works from A to Z.

We were quite happy with the outcome. At the very first part, we had the mayors and council people in, along with LSDs. In the next hour, we had concerned citizens groups come in for an hour to express their views. What we heard loud and clear was that while we accomplished what we did that last Saturday, they want a public forum so that they and the general public can come and make their views known to us. That's exactly what we'll do within the next month or so. We'll have industry there, we'll have government there, and people will be coming in, probably with a facilitator to make sure everything runs well.

We've been very up front with the people of New Brunswick. We've been very up front with the industry here. Just last week, the environmental impact assessment that we phased in was explained to industry. We met for over three hours. The environment people explained the EIA process. That's how we're being up front with industry, so that if this does go through, they know 100% where the Province of New Brunswick stands.

We feel that we have ample time to do that with industry and ample time to do that with the concerned citizens groups and the citizens. That's basically why we did not put a moratorium on here.

  (1615)

[Translation]



**Ms. Paule Brunelle:**

Thank you.

I want to move on to Professor Ingraffea.

[English]



**Dr. Anthony R. Ingraffea:**

Yes.

[Translation]



**Ms. Paule Brunelle:**

Good afternoon.

You talked to us about the importance of water use. The use of water on shale gas production sites has become a major environmental issue.

The city of Trois-Rivières, which is my constituency, had to treat water from shale gas generation at its water treatment plant. Now, the *ministère de l'Environnement* is giving a conflicting opinion, saying that it can no longer do this.

Has enough research been done to determine all the appropriate environmental measures that should be adopted? Are we not playing sorcerer's apprentice a little by trying to produce shale gas without really knowing all the ins and outs of producing it?

[English]



**The Chair:**

Go ahead, Dr. Ingraffea.



**Dr. Anthony R. Ingraffea:**

My answer is yes. I wouldn't exactly call it magic. I'd call it black magic, not in the sense that more scientific investigation needs to be done, but that more technology needs to be developed.

Let me be very specific. In regard to the liquid waste stream, the fluids, the flowback fluids and so-called brines and produced waters, which the industry uses interchangeably to describe the liquid waste--flowback water, brine, produced water--it is different from what is produced from an oil well or from a conventional well. It cannot be taken to a public waste water treatment plant and then dumped into a river. It contains something more than salt. It contains heavy metals. It contains some amount of naturally occurring radioactive materials, which are signatures of shale gas. Public waste water treatment plants are not equipped to remove those materials from the waste stream. There are no facilities in the State of New York currently licensed to remove such materials from the waste stream from an unconventional shale gas well. That is one of the reasons why we have a moratorium in New York.

New York will not issue a permit for the development using high-volume slick-water hydraulic fracturing of gas from shale in New York until the permit holder can show where the waste stream will be disposed of properly. So until the technologies are developed--and they are developing--where high volumes of this waste stream can be treated correctly for what's in it, we stand by our moratorium.

[Translation]



**The Chair:**

Thank you, Ms. Brunelle.

[English]

Mr. Cullen, go ahead, please, for up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thank you, Chair.

Thank you to our panellists today.

Mr. Ingraffea, I'll stay with you.

We've heard from industry people involved with this technology, and they tell us essentially to relax; they've been at it for years, and there should be no concerns over the fracking or the waste waters. I'm wondering why that assuages some within the industry. You say in New York it wasn't...but in Pennsylvania, West Virginia, and the western part of Canada, that seems to have worked.

What is so fundamentally different about what the industry is up to with this non-conventional source of natural gas compared with its other drilling operations in the oil and gas sector?

(1620)



**Dr. Anthony R. Ingraffea:**

That's an excellent question.

I'll amplify on the comment I made earlier. It's all about the scale of an operation. It takes upwards of 30,000 cubic metres of water to hydraulically fracture a shale gas well. That's 50 to 100 times more water than has traditionally been used in conventional wells. That also implies that the waste stream coming back from that well is going to be equally large.

When the industry says that they've had vast experience, 60 years of experience, with hydraulic fracturing, what they fail to say is that they've had fewer than 10 years of experience on a large scale using these unconventional methods to develop gas from shale.

It comes down to two things--one, the larger volume of fluids being used and fluid waste being produced, and two, the absolute necessity, because of the geological differences between gas distribution and shale and gas trapping in traditional wells, that it take a large number of wells per square kilometre, three wells per square kilometre. That means thousands and thousands, or tens of thousands, of wells for a particular place.



**Mr. Nathan Cullen:**

So the--



**Dr. Anthony R. Ingraffea:**

Multiply the tens of thousands of wells by the high volume per well and you get astronomically large numbers, which the industry hasn't shown it's able to dispose of yet.



**Mr. Nathan Cullen:**

So a two-part question with respect to the...because we've asked for what's in this fluid that they're putting down the well site to force the gas back out, and it ranges.

First, can you mention a few of the chemicals that are used in this compound that's sent down the well? And what percentage is typical for industry to recover back? If they put 30,000 cubic metres down a well, what is typical?

Second, we've heard from Minister Northrup that in New Brunswick at least---I'm not sure if you've necessarily studied New Brunswick in particular, but you get his points, I think, from his testimony--they're trying to incorporate different regulations that allow for more stringent observation of the industry so that the fears of landowners and people concerned about contaminated water will be assuaged by the way in which New Brunswick is setting up their industry. Does that not give you comfort?

First, then, can you talk about the fluids that are going down and what's in them, and what kind of recovery we likely will see in terms of the percentage? Lastly, is what New Brunswick is setting up, from what you've heard today at least, not moving the ball forward or progressive in terms of protecting the public and the environment?



**Dr. Anthony R. Ingraffea:**

I'll try to answer those three questions very quickly.

In a typical high-volume slick-water hydraulic fracturing operation in a shale gas formation, there are roughly five types of chemicals that are necessary. I won't give you their chemical names—one can look those up—but one needs to add a lubricant to the water so that pumping the high volume used under very high pressure over a very long distance can be done with a reasonable amount of horsepower at the surface. That lubricant is typically a hydrocarbon derivative. There is a biocide necessary to kill the bacteria that otherwise would grow in the well and clog the well. There is an anticorrosive to prevent rusting of the all-important steel casing—that's the first line of defence for the entire life of a well that's expected to last 20 to 50 years. There's an antifouling agent to stop scaling—that is, deposits of hard minerals on the inside of the casing in the well that would otherwise clog it. And there is an acid that is used to clean out perforations right before the hydraulic fracturing process and immediately after the start of it.

Those are the general categories of chemicals. Some of them are relatively benign, even though you would not want to be drinking them or having them in your trout streams. Others are known to be toxic, carcinogenic, and don't belong in the human environment. But I should also emphasize that once the fluid comes back—and

I'm trying to answer your second question now—it contains not only the chemicals that were put in on the way down but the material that was picked up from the shale. As I mentioned before, notably, in black shales, shales containing gas, the most dangerous of those are the heavy metals--strontium, barium, uranium, and radium--some of which are also naturally occurring radioactive materials.

The industry is fond of saying that most of what they pump down stays down. What they fail to talk about is the timeframe in which they're counting. Typically, the returned fluid, after the fracturing process, is counted as returned fracturing fluid only during about the first week or two of flowback operations. However, all shale gas wells continue to produce fracturing fluid and brine containing heavy metals for the entire life of the well. One has to be very careful. One cannot say that on average, 50% of the fluid comes back. One has to say under what timeframe one is making that measurement. Typically almost all of the fracturing fluid comes back during the life of the well.

In answer to the third question, whether I take comfort from my friends in New Brunswick saying they're trying to keep up with regulations, I don't know. I don't know what their starting point was for their regulations. I don't know what the current, perhaps modified, set of regulations looks like. I would only suggest that they go to perhaps the closest match to New Brunswick, which I would say is Pennsylvania, and take a look at the substantially revised regulations that have been put in place just in the last year as a result of only three years of substantial development.

  (1625)



**Mr. Nathan Cullen:**

Thank you for that.

In my remaining time, I'm sorry, I'm not going to get to you, Mr. Northrup, but I am curious about some questions, so hopefully I will get to you in round two.

Quickly to you, Mr. Angevine, with respect to the Fraser Institute, and I'm sorry you're here more on economic issues today than you are on necessarily the specifics we're talking about, which is this particular alternative oil and gas industry, various institutes in Washington have been calling on the President to remove subsidies from the oil and gas industry--heritage and other groups that are hardly tree huggers. I'm curious as to whether the Fraser Institute holds a similar view, in terms of the distortion of the market, of the current subsidies that go towards the oil and gas industry to enhance production and give them a leg up, if you will.

Secondly, why is there urgency to develop extremely large amounts of natural gas reserves at a time when prices are at near historical low levels? I don't understand. In your testimony, you talked about the need for speed. It seems to me that if prices are where they're at, if government doesn't offer up any subsidy to the industry, the market will simply decide that at \$3, this isn't worth doing.



**The Chair:**

Could you make your response brief, Dr. Angevine?



**Dr. Gerry Angevine:**

Yes.

On the question of subsidies, certainly the Fraser Institute position would be that subsidies on all forms of energy should be removed so that there's a level playing field and resources, including renewable resources, get developed on their economic merit. Is that sufficient at this point? To expand on that would really simply underscore the fact that there's no role that the institute sees, in general, for subsidizing oil and gas or any other form of energy resource development.

On the matter of urgency, the Continental Energy strategy research is being carried out on the premise that if market conditions, competitive forces, could lead to more rapid development of Canadian oil and gas resources, then anything that's non-market standing in the way of that development that cannot be justified and isn't necessary should be removed or reduced. That's why I spoke to the non-market barriers. Certainly we see the market today developing natural gas with some very low price levels, and we find that people who have looked

and compared the shale in different parts of the U.S. have noted that some shale development is more economic than others. They're speaking to prices, and in some cases our cost for a thousand cubic feet is below \$4, so this gas development may proceed, but other more costly sources will not.



**The Chair:**

Thank you.

Thank you, Mr. Cullen.

We go now to the government side. Mr. Allen, for up to seven minutes. Go ahead, please.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Chair, and thank you to our witnesses for being here. I especially want to note my friends from New Brunswick. It's always good to have New Brunswick folks here at the natural resources committee.

I want to start, Mr. Northrup, with one of your comments with respect to New Brunswick regulation at least keeping up with where we are at this point in time. You said you will continue to develop that regulation and that Apache has done some test drills in the Elgin area of New Brunswick. How far out, realistically, is your department seeing the actual development of these wells before, if everything goes well, we would see everything go into a production state to sync up with your comments about the regulation making sure it stays ahead of that?

(1630)



**Hon. Bruce Northrup:**

Thank you, Mike. It's always a pleasure to hear your lovely voice and see your half-body on TV.

It's a pleasure to be here.

We've done very well as far as the EIA process, phasing it in, in the Apache, in the Elgin area, as far as the process goes from beginning to end. They have drilled two wells there. They've completed two wells there, and they've been very up front with the people around the area as far as communication goes. They put flyers out to the people around that area as to what they're doing that day, what they're doing the next week, and what they're doing in the next two weeks. They've also gone into the community as far as hiring the local fire department to do security for them. This is all about community involvement, and Apache has done a great job there.

As far as a timeframe for Apache goes, we're probably looking at around 18 months, approximately a year and a half, and with Southwest Energy, which is at the very, very early stage, we're probably looking at about three years there.



**Mr. Mike Allen:**

I just have a couple of questions on your trip to Arkansas.

The first one is this. What did you learn about the regulatory environment down there? The Environmental Defense Fund and Southwest, of course, had a little bit of a meeting--I think it was at the University of New Brunswick--a couple of weeks ago, and it was actually quite productive. They were talking about the use of water. What did you see about Arkansas...? Was there any specific mention there of some states having a better regulatory environment than others?

The second question is this. What did you learn about the advances in technology with respect to chemicals and water usage and the recovery of those?



**Hon. Bruce Northrup:**

As soon as we landed in Arkansas, in Little Rock, as soon as we got to the motel, we had three or four

groups waiting for us there to have a meeting. These folks have been involved with the industry for probably 9 to 10 years, and we talked to them for a good two and a half hours. By the end of the conversation, we understood they weren't really against the industry itself, as far as industry goes; they were just a little upset with some of the things that had gone on in the past, and one of the things, Mike, was the sound of everything that was going on. We sat down in a lady's kitchen and they had six compressors about a half a mile from her house. And we all know how jets take off. It just sounded like a jet taking off, and that's 7 days a week, 24 hours a day, 365 days of the year.

We wanted to see the opposite of these compressors, so we went to a place where six compressors were housed inside a building, with four inches of insulation, and we stood outside that building and could hardly hear the compressors on the inside.

Southwestern promised the lady that they were in the process of putting a building over these compressors.

That's one of the things that we brought back to New Brunswick. Even before these compressors are turned on, they'll be inside a building and they'll be well insulated so that the noise is not heard by the neighbours around there. A lot of these compressors were not really out in remote areas; they were around different housing places. That was probably the number one concern, and we really appreciated the people talking to us and giving us their experiences, which we brought back to Canada. The sound was one of the main things.

As far as technology goes, it was interesting that Calfrac, from Calgary, Alberta, were there doing most of the fracking and drilling. So it was interesting to talk to them on a one-on-one basis.

They were happy employees. It was nice to see. They work seven days on, seven days off. We had some good conversations with Calgary-based Calfrac. What we want to do when we put this EIA process in--and we talked about chemicals before. We're going to make sure, Mike, that full disclosure of these chemicals is brought in. I know the doctor mentioned three or four of them, and that's exactly what Apache did. They disclosed. They had a really nice pamphlet made up and they disclosed exactly what they put into the ground. The recovered water is stored in storage tanks right around the area and then it's transported to an approved industrial water plant within a couple of hours of these wells.

  (1635)



**Mr. Mike Allen:**

Have there been any incidences about water and spills? One of the folks from the Environmental Defense Fund talked about that. One of the biggest challenges they have is not necessarily the fracking and the contamination of the aquifer, but spills and some contamination. Have they experienced anything like that in Arkansas, and if not, what principles have they used to prevent that?



**Hon. Bruce Northrup:**

We didn't experience any spills or anything in Arkansas. You can imagine in your mind where you have six or seven 18-wheelers in one spot with a drill rig, and it's all computerized, and they actually had tar ponds out on the ground so that if anything did happen they would recover it very quickly. That was very impressive.

Another thing we brought back for New Brunswick...we want to make sure that if anything does happen, if water does come up and leak outside this well, that it is contained for sure. I just want to emphasize that water is our number one priority here, along with the environment and the people around the area. And the "keep it simple" attitude is that if we can do this, we're going to do it and we're going to do it right. If we can't do it and it's going to be done wrong, we won't do it.



**The Chair:**

Thank you, Mr. Allen.

We go now to the second round, to five minutes of questions and comments, starting with Mr. Tonks, and Mr. Andrews, if there is some time left.





**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you very much, Mr. Chairman.

Again, thank you to our witnesses.

My first question is to Professor Ingraffea.

You've given us a really comprehensive characterization of both the flowback and the chemicals that remain in the ground, which are part of the hydraulic fracking process. I can only infer that the level of uncertainty about matching that issue--not to mention the propane, methane, and other chemicals and gases that are created--has given the State of New York cause to take a step back and have a look at it.

Can you give us any insights on the level of technology and the research that exists, in terms of now getting an opportunity from this moratorium to match the degree of uncertainty and risk with technology that can counterbalance that? Are you aware of what is happening, and can you share that with the committee?



**Dr. Anthony R. Ingraffea:**

I'll try to.

Accidental spills and discharges happen daily in Arkansas and Pennsylvania--not the blowouts experienced in the Gulf of Mexico, but truck accidents, valve failures, tank leaks, and pipeline failures. These are daily occurrences in shale development activities. Perhaps the most important area of technological development that could diminish those risks is recycling as much of the return fluids as possible so the total volume of waste fluids that need to be transported from a drilling pad to the ultimate site of disposal can be reduced. It's all a matter of risk. If you reduce the truck traffic, you reduce the total volume and the risk of accidents.

Recycling in the U.S. is in its infancy. There are two types of recycling. One can hopefully reuse some of the return fluids in subsequent wells. Very few of the companies operating in New York, Pennsylvania, Arkansas, and Texas are doing that right now because it's an enormous additional expense.

Recycling also takes the form of transporting the waste fluids away from the well pad to specially designed new technologies that can remove most of the waste from the fluid. What you're left with is a smaller volume of more highly concentrated waste that can then be transported for safe disposal to underground injection wells, for example--which by the way probably will not work in your eastern provinces, just like they won't work in Pennsylvania and New York. But they do work in Arkansas and Texas.

One has to be very careful what you compare your future to. Arkansas is not New Brunswick. Come to Pennsylvania.

(1640)



**Mr. Alan Tonks:**

Thank you, Mr. Chairman.

Do I have a little more time?



**The Chair:**

You have a minute and a half, Mr. Tonks.



**Mr. Alan Tonks:**

Perhaps Mr. Andrews can ask his question.



**The Chair:**

Go ahead, Mr. Andrews.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you.

My question is for Professor Ingraffea as well.

In your opening statement you talked about downstream environmental concerns. Outside of the water concerns, are there any other downstream environmental concerns? Do you want to elaborate on that, or when you made that statement were you just talking about the water?



**Dr. Anthony R. Ingraffea:**

No, I was not just talking about the water. I dropped the hint that there are solids and gases downstream, with potential impacts on the environment and human health. On a small scale, around a development near a compressor station, near a pad, in addition to sound there are gaseous emissions. Some of them are purposeful and some of them are accidental. You know now that most shale gas wells leak small amounts or large amounts of methane. That's the nature of the beast. It has always been that way and will always be that way. So there are leakages of gases on a small scale.

On a large scale, remember that natural gas is a non-renewable fossil fuel. When it is burned it produces carbon dioxide in the atmosphere. When you produce it, store it, and transport it through gathering lines, transmission lines, and distribution lines, in the United States--I'm not aware of the figure in Canada--somewhere between 3% and 5% of all the natural gas produced leaks into the atmosphere. Natural gas is a much more potent greenhouse gas than carbon dioxide, so even a relatively small percentage leak on a very large volume of gas results in a very significant impact on greenhouse gas emissions, and therefore potentially on climate change. So there are other effects one should consider on human health, the environment, and climate--not just from water, but also from solids and gases.



**The Chair:**

Thank you, Mr. Tonks and Mr. Andrews.

We'll go now to Mr. Anderson, for up to five minutes.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Hello, witnesses. Glad to have you here.

Minister Northrup, I'd like to actually invite you to come to southwestern Saskatchewan, instead of Pennsylvania, and you can actually see the benefits of oil and gas development.

I'm just wondering in your travels if you've focused on the significant benefits that come to local communities in terms of the local employment, the local service providers that are given opportunities, and those kinds of things. Have you spent some time looking at that? Are you inviting those folks, or folks who benefited from that, to come to your public meetings to explain the benefits to communities?



**Hon. Bruce Northrup:**

I guess that's why we had the open house last Saturday morning, because the first people who came in at 9 o'clock in the morning were the mayors, councillors, LSDs, and representatives from the area. We let them talk to industry. We had three industry representatives there: Southwestern, Apache, and Corridor. We had the government there, including Environment and the Department of Natural Resources.

This is something that we try to get out into the general public. When we were down in Arkansas, we saw the benefits of the areas down there. They were just opening up a brand new office down there. It was a "go green" office. We were there on Sunday and they were opening it up Monday morning. There were over 500 employees there with different areas of expertise. These are good paying jobs too.

Around the area you could see a lot of new houses going up and enerventures out in the rural part. Outside of Conway and outside of Little Rock you could see what had happened around that area because of that shale gas industry. They have 3,000 wells there, in the Arkansas area.

Obviously, there are other things that are attributed to the gas wells, as far as the shale gas goes, and the benefits are just overwhelming.

But at the end of the day, we just have to make sure that it's done right and done in the right way. Just one example: when we met with the governor on Sunday night, he was saying that in the educational system, where a lot of the money was put in, where they get the royalties from shale gas, they went from 40th to 6th in the 10-year program.

So we are trying to bring all the positive aspects back to the area in southern New Brunswick. Our biggest job is communication and educating the people on the benefits.

  (1645)



**Mr. David Anderson:**

Well, I'm glad you're seeing them. I think the further you go out into the rural areas where there is this activity, the more the impact is on it. Because you've got smaller companies of two or three or four people who are doing the welding, or the service industry, or checking the wells and those kinds of things, this actually keeps them in the rural communities, which we are all working hard to do.

I just wanted to ask you another question about the phased EIAs. Can you explain a little bit more about how that would work? How do you perceive that working? You also talked about re-examining your approval process. I'm just wondering, do you have any timeline on that—a timeline on your examination, not on the approvals, actually?



**Hon. Bruce Northrup:**

Even before they start drilling, they have to disclose everything, basically what they're doing from A to Z. That's even before they do anything. They're going to have to give full disclosure of all the chemicals they're going to use and what they're going to do day in and day out. That's what the EIA process is all about. It's well structured, as far as what they're going to use through the process. That's where communication has to come in, where government has to monitor that through the EIA process.

That's kind of where everything's going to go day in and day out. It takes approximately 30 days to do this review--about a month--and the objective is to approve a significant number of wells and sites beforehand, before they even get started. That's why when Apache was drilling two wells in the Elgin area, even before they started, we piloted and phased in the EIA process with Apache. There's an MLA down in that area and I contact him two or three times a week. He said that everything was going well down there and they didn't have any problems.

So it's a strategic EIA process that both government and industry have to work through. At the end of the day, if they're not doing it right, it's plain and simple, we'll shut them down.



**The Chair:**

Thank you, Mr. Anderson.

We go now to the Bloc Québécois, Monsieur Pomerleau, for five minutes.

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you very much, Mr. Chair.

Thank you to our three witnesses for your presentations and comments about the issue we're discussing.

Mr. Angevine, my first question is for you. One of the arguments we hear most often—and you made it like many others before you—to promote exploration and, eventually, extraction of shale gas is to tell us that we could get rid of a large part of our reliance on imported petroleum or natural gas. That's absolutely true in some

cases.

However, don't you think that, in Quebec, given that we produce electricity, we could get exactly the same economic effect by relying less on petroleum and more on electricity by, for example, deciding to replace our current automobiles with electric cars over 20 or 25 years?

  (1650)

[English]



**Dr. Gerry Angevine:**

To examine the benefits of increased hydroelectric development in Quebec and compare that to the benefits of shale gas development, the two options, two possibilities, for reducing the dependence on imported crude oil into eastern Canada, is not something we've done at the Fraser Institute. There would be economic benefits, of course, from both, but I'm sorry, I can't tell you an answer. I haven't compared the employment income and GDP impacts of both possibilities.

[Translation]



**Mr. Roger Pomerleau:**

That would be worth studying.

[English]



**Dr. Gerry Angevine:**

It would be an interesting study to do, yes.

[Translation]



**Mr. Roger Pomerleau:**

You talked about land claims and aboriginal land rights. You know that, in Quebec, to build the large hydroelectric networks in the far north, it was absolutely necessary to come to an agreement with First Nations, specifically, the Cree, Inuit and Attikamek. We were able to come to an agreement with these people, and the James Bay Agreement was created.

At that time, Mr. Bourrassa was premier of Quebec. He understood perfectly well that we could not build something belonging to us on a neighbour's land. So he had to establish very strict land ownership rules. He had to buy property rights.

When you say that Canada must come to an agreement with aboriginal nations for land claims, are you referring to something like that?

[English]



**Dr. Gerry Angevine:**

I think in my remarks looking at non-market barriers, I was simply observing that if we have, and where we have, land claims issues, we need to resolve those. I think a greater effort needs to be made to ensure that they are resolved in a reasonable amount of time; otherwise the cost benefits that could be had from the development may not occur, or may not occur for a long time. There's no easy solution.

We've seen, for example, in the Northwest Territories the great difficulty to get agreement with respect to the possibility of a pipeline coming from the Mackenzie Delta through the territories because of difficulties with

various local groups. We certainly wouldn't say that those rights that people have need to be disregarded, but there need to be solutions found to overcome these problems. It may be, for example, that one looks at the amount of land that's impacted and the amount of tax, so to speak, that would normally be levied by a municipality on that amount of land. If a generic formula of some sort could be found at least to start negotiations, that would help.

[Translation]



**Mr. Roger Pomerleau:**

But do you agree that we do not have the right to build something on a neighbour's land? We are trying to get pipelines through land that doesn't fully belong to us. Do we have to at least acknowledge that the land doesn't fully belong to us, and do we need to come to an agreement with the people who have claims on it?

  (1655)

[English]



**Dr. Gerry Angevine:**

I think if we have a group of individuals who oppose development, then it's up to the local government to determine the best way to go ahead and to try to get the parties together to resolve a solution.

We've seen different approaches in recent years. For example, with the Mackenzie pipeline, we see the Aboriginal Pipeline company being put in place and the aboriginal groups being given an equity position in the pipeline through that process. We see that Enbridge, I think, is looking at a similar approach with regard to their Northern Gateway pipeline proposal.

So there have been different versions of that approach, but again, it has to be something that the parties agree to.

[Translation]



**The Chair:**

Thank you, Mr. Pomerleau.

[English]

We go now to Mr. Harris, please, for up to five minutes.



**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chair.

Thank you, gentlemen.

In listening to the testimony today, I'm getting two distinct pictures of shale gas extraction. One is being given by Mr. Ingraffea, who describes it, as I understand him, as somewhat of a reckless endeavour that is fraught with the danger of spills, truck accidents, bursting valves, and every other kind of mishap you can imagine, and as something that we maybe shouldn't even be looking at up here because of all these potential hazards.

On the other hand, I'm hearing from Mr. Northrup, from New Brunswick, that prior to any development of shale gas extraction or exploration in his area, the regulatory people will set some standards and some criteria that must be.... After their study on how to do this safely and efficiently, the rules would be put in place so that this indeed would not be a fast and loose, reckless endeavour, but rather a very carefully monitored, efficient, safe, and environmentally friendly way of extracting shale gas.

So we have these two pictures. I wish we had more time to get an explanation from each one of you.

My question is this. Given the potential economic benefit to this type of gas development, I would assume that unless you have a fairly delinquent regulatory environmental body overseeing it, in fact there have to be prudent ways of extracting this, where all due diligence has been done, environmental safety has all been put in place, and we're good to go, providing all of this is adhered to. I think we do a pretty darn good job of that in Canada--maybe not in other jurisdictions outside our borders, but in Canada I think we have some of the toughest environmental regulations.

I'm wondering, Mr. Northrup, would you like to comment on my little dissertation there?



**Hon. Bruce Northrup:**

My first comment is that you're exactly right. I couldn't agree with you more. We here in New Brunswick cannot ignore the potential of what it could mean for this province, but at the end of the day, we have to make sure it's done right. I do take this personally. A lot of this activity is being done in my backyard. I represent the people around that area as their MLA. I take this very seriously, and I've said to many people that if we can't do this right, then we won't do it. But we just can't ignore the potential for this province to help pay down our \$9 billion debt, to help pay for education and health costs, which are a burden in all the provinces.

We want to make sure we do it right. We actually have a committee, with industry, first nations, and government, that meets all the time. We just want to make sure at the end of the day that we do this right. We feel we have time to do this right. That's why we're going to B.C., and we've also talked about going to Pennsylvania at the end of February or the first week in March, talking to the regulatory people down there, getting the regulations, seeing why they have a moratorium down there. They can always make a positive out of a negative. Maybe it's not a nice thing to say, but you learn from people's mistakes. That's what we want to do here in the province.

(1700)



**Mr. Richard Harris:**

Okay.

Mr. Ingraffea, given what Mr. Northrup has said and the map they intend to follow, notwithstanding what you saw south of the border, what issue can you take with the approach Mr. Northrup is suggesting?



**Dr. Anthony R. Ingraffea:**

What I've heard so far in your characterizing of the seemingly disparate viewpoints voiced by the three of us today is, to put it mildly, a somewhat pie-in-the-sky naive view of how everything is going to work out just fine, thank you.



**Mr. Richard Harris:**

Sorry, is Mr. Northrup being naive?



**Dr. Anthony R. Ingraffea:**

I don't think adequate background research has been done. There's a boom and bust cycle associated with resource developments, as you know.

I haven't heard anybody today say anything about the detrimental side in the social, economic, and infrastructure levels to what will be an overwhelming industrialization of your region.

In order to get this gas out effectively—I'm repeating myself again—using unconventional methods, a large number of wells per square kilometre is required. One or two test wells in New Brunswick should tell you absolutely nothing at this point. Talk to me in ten years when you have 50,000 wells in New Brunswick and your roads and bridges need to be reconstructed, the local cost of living has gone through the roof, you can't find a hotel room—



**The Chair:**

Mr. Harris, I'm sorry, your time is up.

Professor, thank you.

We do have to go to the next questioner, who is Monsieur Coderre, and Mr. Tonks, if there's time.



**Hon. Denis Coderre:**

Gentlemen, you realize that was from the Conservative side. We don't talk like that, necessarily. We believe in expertise.

Mr. Ingraffea, one of the issues, of course, is.... You're saying the technology is not accurate right now to address all those issues, and that we should take a break instead of going too fast. Is that what you're saying?



**Dr. Anthony R. Ingraffea:**

Yes.



**Hon. Denis Coderre:**

Mr. Angevine, what do you think of that? Another expert.



**Dr. Gerry Angevine:**

I'm not an engineer or a technologist, but if a jurisdiction decides that it needs to go more slowly than some of the neighbouring jurisdictions that have shale gas potential, the gas will stay in the ground, and someday it may be worth more money.



**Hon. Denis Coderre:**

Someday--like the oil sands.



**Dr. Gerry Angevine:**

Yes.



**Hon. Denis Coderre:**

I want to come back to royalties and maybe talk a little bit about the fiscal incentives regarding energy. Do you believe right now as an economist that we should invest more in R and D, instead of having those fiscal incentives? What would be the best, economically?



**Dr. Gerry Angevine:**

You're referring to shale gas in particular?



**Hon. Denis Coderre:**

Well, it can be shale, it can be oil sands, it can be unconventional.



**Dr. Gerry Angevine:**

When you say "we invest", do you mean government incentives?

(1705)



**Hon. Denis Coderre:**

I mean the government.



**Dr. Gerry Angevine:**

I don't think there's a role for government incentives. If, economically speaking, it should be developed, let the risk takers determine that.



**Hon. Denis Coderre:**

So it's the free market and that's it?



**Dr. Gerry Angevine:**

Yes. It's the government's role to set the framework, to ensure that if you want shale gas to go ahead, the royalties are competitive.

There will be, and there are, environmental concerns. If the government wants to have shale gas developed, then it's up to the government to determine that the people, the environment--



**Hon. Denis Coderre:**

I have a problem understanding, for two reasons. First, of course, when we're talking about energy sufficiency, that's also about a kind of ownership, right? The bottom line of monitoring is that we need to, of course, enhance the quality of life; we need to protect the quality of life. We don't want to be at the mercy...so that other countries can suck it up.

It's also a transformation. How can we have a more balanced way of protecting people's wealth while at the same time being for free enterprise? There is a balance there, but I have a feeling what I'm hearing from you is that it's a free market, enjoy yourself, and that's it.

In the 1950s, Duplessis was good at that, with iron, but I'm not sure that's the way in the 21st century. We can have the same result without necessarily saying no government at all.



**Dr. Gerry Angevine:**

Certainly, I wouldn't argue for no government at all. You need government. Governments have a role to play. But in terms of resource development, you have to listen to the people, to what's best for the people of Quebec and Canada, and have the regulations in place that are required.



**Hon. Denis Coderre:**

Okay.

You have a question?



**Mr. Alan Tonks:**

Yes. How much time is left?



**The Chair:**

You have a minute. We may have another round, though.



**Mr. Alan Tonks:**

Minister Northrup, you've heard the concerns that have been raised by Professor Ingraffea. You undoubtedly



will hear these concerns as you proceed in a more evidence-based way through what you've described as your EIA process.

Can you describe just a little more how that process differs from the environmental assessment process that conventionally we've been used to applying to these kinds of activities?



**Hon. Bruce Northrup:**

As far as our EIA process goes, it involves social issues and different other issues. I guess as the industry grows, the EIA process will also grow. Obviously, this is a very difficult decision we have to make here, and we have to take it seriously, but I just can't emphasize enough that our number one concern is the water and the environment.

I can't emphasize enough too that as the industry grows and more wells are being put through--and I don't know about 10,000 wells in 10 years; Arkansas has had 3,000 wells in 10 years. I can't emphasize enough that we are taking this slowly. We're not jumping into this overnight. We want to take logical and technological advice to go down this path. It's not easy. It's day in and day out of getting things right. As I said before, we're not going to do this unless we're going to do it right. So we do take it seriously.

When you talk about royalties, we're talking about a three-phase royalty system whereby a royalty will go to the landowner, a royalty will go to the province, and a royalty will go to infrastructure around the area. We've been in informal talks with industry as far as royalty rates to the province, to the landowner, and to infrastructure go.



**The Chair:**

Thank you, Mr. Tonks.

Mr. Anderson, go ahead for up to five minutes.



**Mr. David Anderson:**

Thank you, Mr. Chair. I appreciate it.

I might share my time with Mr. Hoback if I run out here.

Professor Ingraffea, I think it would be safe to say that you're not an unbiased participant in this discussion. If we go online, we see that you've been working on this issue politically for quite some time. Is that fair to say? From what I read of most of the presentations, when you've been giving them, they've been at political events, and then there has typically been an urge for the people who have attended them to write to their politicians to get them to ban unconventional drilling. Is that accurate?

(1710)



**Dr. Anthony R. Ingraffea:**

No, that's not accurate.



**Mr. David Anderson:**

This is more politics than science, I think. Is that accurate?



**Dr. Anthony R. Ingraffea:**

No, not at all. I'm not a politician. I don't have any conflict of interest here. I'm not running for office; I don't hold office. I'm a professor at Cornell University and a licensed professional engineer. I have tremendous experience in oil and gas well development, hydraulic fracturing, pipeline safety.

So when I make presentations in public—some of which you have probably seen on the Internet—they're in public fora, they're not in political fora, and I never say to anybody that they should write anybody to say to

stop something.

What I usually say—in fact what I always say in conclusion--is think, act, do what you think is right.



**Mr. David Anderson:**

Typically, the people who have been organizing the functions you've appeared at seem to be pretty seriously--



**Hon. Denis Coderre:**

A point of order.



**The Chair:**

A point of order, Mr. Coderre.

[*Translation*]



**Hon. Denis Coderre:**

Mr. Chair, the witnesses have shared with us their points of view and expertise. Just because someone doesn't agree with you, that doesn't mean you can intimidate them and try to make them see things your way.

When witnesses testify before us in good faith and give us their point of view, I find it absolutely unacceptable that some committee members crucify them publicly because they do not agree with them. I find it unacceptable, and I ask that you prevent such things from happening again.

[*English*]



**The Chair:**

Mr. Coderre, of course that is not a point of order.

It is up to each member of the committee to determine how they conduct their questioning, and Mr. Anderson is completely in order.

Go ahead, please, Mr. Anderson.



**Mr. David Anderson:**

Actually, this goes back to something maybe a little bit earlier. Mr. Coderre is a bit defensive on this because he was the one who asked a U.S. witness—a federal politician asking a U.S. witness—to tell the Quebec provincial government what they should do on shale gas. I don't think Mr. Coderre can give us any lectures. I think he should be minding provincial jurisdiction and paying a little bit of attention there--



**Hon. Denis Coderre:**

A point of order.



**The Chair:**

Mr. Coderre, is that on another--



**Hon. Denis Coderre:**

It's another point of order. My line of questioning was to ask an expert about his point of view on an issue that's important for every Canadian here. So I'm not going to let him--



**The Chair:**

Order, please. You've made the point before.

Mr. Anderson, carry on, please.



**Mr. David Anderson:**

Thank you.

I guess I understand now why Mr. Coderre is so defensive about this, but that's all right.

I'll go to Mr. Angevine. You talked about some of this--

**Hon. Denis Coderre:** [*Inaudible--Editor*]

**Mr. David Anderson:** Pardon? You have something else to say that's important? Everything you say is important, isn't it?

**The Chair:** Order, please.

**Mr. David Anderson:** Mr. Angevine, you talked earlier about some of the specific regulatory hurdles that you identified that stand in the way, and you mentioned the NEB and some of the things around them. I'm just wondering if you have some other things that you could identify that would be regulatory hurdles that this committee could address in our report later.



**Dr. Gerry Angevine:**

Those six that I identified were the main areas. Did you want me to drill down into the NEB situation a little more?



**Mr. David Anderson:**

Sure. You've talked about the NEB. I'm just wondering if there are other areas that you have concerns about. You could talk about that, if you have some specifics you'd like to mention.



**Dr. Gerry Angevine:**

Is it with respect to the NEB itself? Yes.

I think just as a casual observer, I see the NEB doing things like quarterly reviews of the energy outlook in Canada, for example, that are useful. Things like that are things really left to the marketplace, to consultants. I don't think the NEB needs to have a core of people providing reports on the energy outlook on a regular basis.

The NEB's role as a regulator under the NEB Act is to look at what is specified in the act. I alluded to the fact that the act itself calls on the NEB to determine if a project is feasible and to look at the economic impacts and things of that sort. I'm not sure that's something the NEB needs to worry about. I think its role should be to look at matters of public safety and environmental issues and things that are in that sort of area, not to be concerned with the viability of a project. That should be left to the risk-takers.

(1715)



**Mr. David Anderson:**

Natural resources, as most of us know, are under provincial jurisdiction. I'm just wondering if you see any complications in terms of jurisdictional issues faced in the development of this industry.

I guess exploration permits are the responsibility of the provinces....



**Dr. Gerry Angevine:**

Certainly, when you look at the moratoria on offshore drilling in British Columbia, there are two governments involved. In a way, there are more than two: there are the first nations, the Haida, who have a strong interest because of where they reside. In the north, the overlapping regulations between the different—



**Mr. David Anderson:**

Do you have any solutions for that?



**The Chair:**

Mr. Anderson, your time is up.

A short answer, please.



**Dr. Gerry Angevine:**

The governments have to work together from a single window that prospective investors can deal with, rather than from a maze of windows with many officials from several levels of government.



**The Chair:**

Thank you, Mr. Anderson.

Thank you, Mr. Angevine.

Mr. Hoback, welcome to our committee. It's great to see you here. Go ahead.



**Mr. Randy Hoback (Prince Albert, CPC):**

Thank you, Chair. I look forward to working with this committee. It looks like a great group of people here.

First of all, I want to welcome the witnesses to the committee. I appreciate your testimony and your interest in the topic we are discussing today.

This past year, I had the luxury of going to a fracking in process at the EnCana site just outside Dawson Creek. I talked to people in the community. We went to an opening of their local arena. EnCana had provided a substantial amount of money to build that arena in Dawson Creek. Without EnCana they wouldn't have been able to do it. We talked to some of the local people about the impacts and their concerns. There were concerns. There's no question about that.

There are concerns with everything we do. There are concerns when a farmer puts a seed in the ground, but you have to weigh that against the benefits. You talk to people about what they think and you move forward.

It was interesting to go to that fracking site to see the safety and security and the process. I get a little confused here today because I hear testimony about broken valves and stuff, as Mr. Harris talked about, and yet I never saw anything like that. In fact, what I saw was something that was very tightly controlled, very highly regulated; it is something where not just anybody is going to walk onto that site and not be accounted for. In fact, I looked at their safety systems and the monitoring, and it was very impressive.

That was my first site, so I'm not an expert on the topic. There might be more to it, I don't know, but I'd encourage the committee to at least look at these things before you start making judgments on what you're going to do in your own province.

Mr. Northrop, you're doing the right thing. You're actually going out and talking to the people in the field. You're going to the areas and getting the information first-hand and learning from other people's mistakes. That is a wise thing to do. I just hope you won't be scared away by extremists. When I look at what's happening in the communities and what they told us there, it is a very positive thing.

In Saskatchewan we had an NDP government for quite a few years, and they had this theory that we would let the gas stay in the ground. That was a good theory. We let the oil stay in the ground while the kids all got educated and moved off to Calgary, which became the biggest city of Saskatchewan people who weren't in Saskatchewan. You have to look at what's best for your communities and what's best for your province before

you start making decisions.

That is going to lead into where David stopped. When we look at provincial jurisdictions and what barriers are in place, Mr. Angevine, what are those barriers? Where are we overlapping? On the agriculture side, we see overlap all the time, and it's more than frustrating. There must be a tremendous amount of overlap that could be removed. Could you identify some of those overlaps?



**Dr. Gerry Angevine:**

You mean between provinces?



**Mr. Randy Hoback:**

I was thinking between the federal and the provincial.... You have the federal government coming in and doing a regulatory process, and then you see the province doing a regulatory process of their own. A lot of times, there are two different people doing the exact same thing.



**Dr. Gerry Angevine:**

It's worse than two different people. In some cases, you have different facets of the same government. You could have the Department of Fisheries and Oceans. You could have Environment Canada. You could have Natural Resources Canada. You could have Alberta Environment. You could have Alberta Energy. You can have five or six government departments involved in a particular project. In some provinces, at least, there has been an effort to reduce that by bringing the provincial parties together in a single window.

Today, we see more of an effort, because of the importance of environmental issues, to form joint panels, joint hearings, as we see now with regard to the Gateway project in British Columbia, with the province and the NEB coming together. You see joint panels with NEB and parties from the Canadian Environmental Assessment Agency, but we need to see more of that across the country to streamline the regulatory process and shorten the time it takes to get approval of a project if it's worthy of being approved.

  (1720)



**Mr. Randy Hoback:**

You said that within the province you'll even see different departments come to a site. Of course, they must have different issues. There must be a reason why they're doing that.

Do you know why?



**Dr. Gerry Angevine:**

They have different issues, but if they can come together through a single window kind of approach, it does make it easier, and sometimes I would think it would reduce the time and the cost of processing applications.



**Mr. Randy Hoback:**

So if you're giving advice to the Minister of Natural Resources from New Brunswick, who happens to be here today, how would you have him arrange his bureaucracy in such a way that you could see the systems or the technology move forward in an efficient manner, in a competitive manner? Any advice to give to him?



**Dr. Gerry Angevine:**

I think he's doing the right thing, certainly, going out and seeing what is taking place in Arkansas, B.C., and other jurisdictions, and learning from the mistakes that have been made and hoping to take a best practices approach. There certainly is a benefit in being able to see what has gone before. The difficulty for New Brunswick will be to find a market for that gas. How will that gas compete economically? But that's a bit off your question. That's another issue.

I think that most likely the regulatory apparatus in New Brunswick will need to be expanded to have the expertise to look at these new issues of shale gas. They'll have to have excellent, on-the-mark regulation, but they'll have to have regulators who are capable. They'll have to have inspectors and so on.

There'll be a number of changes, but I think industry welcomes good sensible regulation, and enforcement as well, because if people are allowed to violate regulations and get off the hook easily without much penalty, it damages the reputation of the industry and hurts the whole process.

So the industry is onside, I would think, ensuring that the regulations from square one are appropriate from a technical point of view, to protect people, to protect the environment, but also ensuring that enforcement is strong and realistic, in the sense that no one can get away with floating, so to speak.



**The Chair:**

Thank you, Mr. Hoback.

We go now, finally for today, to Mr. Cullen, for up to five minutes.



**Mr. Nathan Cullen:**

Thank you, Chair.

First, Mr. Ingraffea, I apologize on my colleague's behalf for the earlier line of questioning. I'm sure you're quite used to that with American-style politics. In Canada we're just growing accustomed to it, with a new direction from the current government.

The last thing Mr. Angevine said was with respect to--



**The Chair:**

A point of order, Mr. Anderson.



**Mr. David Anderson:**

Chair, if Nathan wants to apologize, he can apologize for himself. He doesn't need to apologize for me.

I just wanted to point out that Mr. Ingraffea has been involved politically on this issue for quite some time. He can check that on the Internet. I think we just needed to know that.

  (1725)



**The Chair:**

Okay, Mr. Anderson. That isn't a point of order.

Go ahead, please, Mr. Cullen.



**Mr. Nathan Cullen:**

Well, Mr. Ingraffea, I had some questions for you with respect to industry, so-called, being onside, according to Mr. Angevine, but let me change tack, just to follow-up on Mr. Anderson's comment.

Mr. Angevine, can you confirm whether the Fraser Institute receives any money from U.S. foundations?



**Dr. Gerry Angevine:**

The Fraser Institute, as you know, is a non-profit organization. It's not a consulting organization. It receives no money for consulting work. It's not a consultant and receives no money from government. It operates strictly from donations from individuals, companies, and foundations.



**Mr. Nathan Cullen:**

So just specifically to my question, do you receive money from U.S. foundations?



**Dr. Gerry Angevine:**

I believe it may...I think it does, but I'm not absolutely certain.



**Mr. Nathan Cullen:**

Let me apply some certainty. Are you familiar with the Koch Foundation?



**Dr. Gerry Angevine:**

I'm not familiar with them. I've heard of them.



**Mr. Nathan Cullen:**

They are the primary funders of the Tea Party in the U.S. They also help fund you folks.

The question I put to you is that nine of your directors who currently sit on the Fraser Institute board are involved in the oil and gas industry. They are also heavy contributors to your foundation. The government has raised its concerns about witnesses in the past to the effect that if they receive money from industry or if they receive money from across the border, that may taint any of their testimony or research in front of this committee. The government has seen that as a problem for anybody who ever raises a concern about the oil and gas industry, but it seems to have no problem with anyone who comes here to defend the oil and gas industry.

I find the lack of questioning by my Conservative colleagues with respect to any potential bias on the part of those who support the oil and gas industry somewhat troubling and a little weak on logic.

Mr. Ingraffea, the general fear raised by the public is with respect to water contamination and then the liability that follows any contamination that happens. We saw recently that Talisman--and this is for Mr. Hoback, who hasn't seen any incidence of spills--recently shut down continent-wide drilling for more than a week. Canbriam Energy is leaking in Quebec right now, and, according to the Quebec minister, "the industry is not in control of the situation", and I am quoting.

Am I typifying the concerns of the general public correctly, that is that it's both water contamination and supply, and then who's responsible, who's on the hook, if any contamination does occur, once it begins?




**Dr. Anthony R. Ingraffea:**

Yes, you are on both counts.

I hinted in my opening comments that I wanted to have the opportunity to correct some of the earlier testimony that your committee has received. In particular, I noted that during a previous meeting, the senior vice-president of Talisman was quoted as saying "We have been fined in Pennsylvania three times in the last three years a total of \$21,000. None of it was for contaminating surface water." With respect to your second point, about whether regulations are in place that are adequate, I should point out that he failed to point out that his company has been cited for violations of regulations in Pennsylvania 285 times in the last three years. The fine was only \$21,000 because the fines hadn't been assessed yet for the 285 regulation violations.

I should also quote someone that you would do well to invite to a future meeting, and this is the outgoing director of the department of environmental preservation in the State of Pennsylvania, John Hanger. Right now the department really has very questionable authority when telling a company that it operates so badly that the department is not going to give it permission to get any more permits. He's also quoted as saying "the maximum fines that environmental regulators can issue to violators of the state's oil and gas law are... 'scandalously low'". He goes on to say that currently a gas company like Talisman operating in Pennsylvania pays a \$25,000 bond to cover as many wells as that company would ever develop in the state, and that's one quarter of the cost to the state of plugging an abandoned well, of which there are 100,000 in Pennsylvania.

So the point I made before, to look before you leap, to go slowly, and to study what's already been done wrong in other places.... The gentleman from New Brunswick is right on target. He just needs to expand a little farther and ask more questions in more places. Don't count on hearing from just the industry people in one location as to how to proceed. Ask people like him, the director of environmental preservation in Pennsylvania. He'd be glad to come up and talk to you. By the way, he was charged with both promoting--which he did--and regulating shale gas development in Pennsylvania, and he did both jobs very well. But he is very realistic about the current state.

 (1730)



**The Chair:**

Thank you very much.

Thank you, Mr. Cullen.

Thank you all for your questions and comments today, members of the committee.

To all the witnesses, thank you very much for coming today and for giving information that's very helpful to the committee. Thank you very much for your input.

We are finished with the meeting for today.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 41

Thursday, February 3, 2011

The Standing Committee on Natural Resources met at 3:34 p.m. this day, in Room 7-52, 131 Queen Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Nathan Cullen, Richard M. Harris, Randy Hoback, Roger Pomerleau, Devinder Shory and Alan Tonks.

*Acting Members present:* Andrew Kania for Hon. Denis Coderre.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Canadian Gas Association:* Timothy M. Egan, President and Chief Executive Officer. *Association québécoise de lutte contre la pollution atmosphérique:* Patrick Bonin, Campaigner climate-energy; Thomas Welt, Co-lead Energy Committee, Nature Québec. *British Columbia Tap Water Alliance:* Will Koop, Coordinator. *Apache Canada Ltd:* Timothy Wall, President; Natalie Poole-Moffatt, Manager, Public and Government Affairs.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Timothy M. Egan, Patrick Bonin and Thomas Welt made statements and answered questions.

At 4:30 p.m., the sitting was suspended.

At 4:33 p.m., the sitting resumed.

Will Koop, Timothy Wall and Nathalie Poole-Moffatt made statements and answered questions.

At 5:24 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/08 2:34 p.m.

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**Standing Committee on Natural Resources**

**EVIDENCE**

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*The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*



*Mr. Timothy Egan (President and Chief Executive Officer, Canadian Gas Association)*

**1540**



*The Chair*



*Mr. Patrick Bonin (Campaigner climate-energy, Association Québécoise de lutte contre la pollution atmosphérique)*

**1545**



*The Chair*



*Mr. Thomas Welt (Co-lead Energy Committee, Nature Québec, Association Québécoise de lutte contre la pollution atmosphérique)*

**1550**



*The Chair*




*Mr. Alan Tonks (York South—Weston, Lib.)*


**1555**




*The Chair*

 *Mr. Patrick Bonin*


**1600**

 *Mr. Alan Tonks*


 *The Chair*

 *Ms. Paule Brunelle (Trois-Rivières, BQ)*


 *The Chair*

 *Mr. Thomas Welt*


**1605**

 *Mr. Patrick Bonin*

 *The Chair*


 *Mr. Patrick Bonin*


 *The Chair*


 *Mr. Timothy Egan*


**1610**


 *The Chair*


 *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*


 *Mr. Timothy Egan*


 *Mr. Nathan Cullen*


 *Mr. Timothy Egan*


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 *Mr. Timothy Egan*

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 *Mr. Patrick Bonin*

**1615**

 *Mr. Nathan Cullen*


 *Mr. Patrick Bonin*


 *The Chair*

 *Mr. Timothy Egan*


**1620**

 *The Chair*

 *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*


 *Mr. Timothy Egan*

 *Mr. David Anderson*


 *Mr. Timothy Egan*

**1625**


 *Mr. David Anderson*

 *Mr. Nathan Cullen*


 *Mr. David Anderson*

 *Mr. Nathan Cullen*

 *Mr. David Anderson*

 *Mr. Thomas Welt*


 *Mr. David Anderson*

 *Mr. Nathan Cullen*


 *The Chair*

 *Mr. David Anderson*

 *The Chair*


 *Mr. Thomas Welt*

 *Mr. David Anderson*

 *Mr. Thomas Welt*

 *Mr. David Anderson*


 *The Chair*

 *Mr. Thomas Welt*

**1630**


 *The Chair*


 *The Chair*

 *Mr. Will Koop (Coordinator, British Columbia Tap Water Alliance)*

**1635**


**1640**

 *The Chair*

 *Mr. Timothy Wall (President, Apache Canada Ltd)*

**1645**


 *Ms. Natalie Poole-Moffatt (Manager, Public and Government Affairs, Apache Canada Ltd)*

 *Mr. Timothy Wall*


**1650**

 *The Chair*

 *Mr. Alan Tonks*













 *Mr. Timothy Wall*

 *Ms. Natalie Poole-Moffatt*

 *Mr. Alan Tonks*

 *Mr. Will Koop*

**1655**

-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*
-  *Mr. Timothy Wall*
-  *Mr. Roger Pomerleau*
-  *Mr. Will Koop*
-  *Mr. Timothy Wall*
-  *Mr. Will Koop*
-  *Mr. Timothy Wall*
-  *Mr. Will Koop*
-  *Mr. Roger Pomerleau*
-  *Mr. Timothy Wall*
-  *Mr. Roger Pomerleau*

**1700**

-  *Mr. Will Koop*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Mr. Will Koop*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Ms. Natalie Poole-Moffatt*

**1705**

-  *The Chair*
-  *Mr. Timothy Wall*
-  *The Chair*
-  *Mr. Nathan Cullen*
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-  *Mr. Nathan Cullen*
-  *Ms. Natalie Poole-Moffatt*
-  *Mr. Nathan Cullen*

**1710**

-  *Ms. Natalie Poole-Moffatt*
-  *Mr. Nathan Cullen*
-  *Ms. Natalie Poole-Moffatt*
-  *Mr. Nathan Cullen*
-  *Mr. Timothy Wall*
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-  *Mr. Timothy Wall*
-  *Mr. Nathan Cullen*
-  *Mr. Will Koop*
-  *Mr. Nathan Cullen*
-  *Mr. Will Koop*

**1715**

-  *The Chair*
-  *Mr. David Anderson*
-  *Ms. Natalie Poole-Moffatt*
-  *Mr. David Anderson*
-  *Mr. Timothy Wall*
-  *Mr. David Anderson*
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-  *Mr. David Anderson*
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-  *The Chair*
-  *Mr. David Anderson*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*

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CANADA

## Standing Committee on Natural Resources

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NUMBER 041

• 3rd SESSION •

40th PARLIAMENT

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### EVIDENCE

**Thursday, February 3, 2011**

*[Recorded by Electronic Apparatus]*

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 (1535)

[English]





**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)) :**

Good afternoon, everyone.

We're here today to continue our study on energy security in Canada, and we're continuing on the topic of shale gas.

We have two panels of an hour each. We have on the first panel, from the Canadian Gas Association, Timothy Egan, president and chief executive officer; from the Association Québécoise de lutte contre la pollution atmosphérique, Patrick Bonin, campaigner, climate-energy; and from Nature Québec, Thomas Welt, co-lead, energy committee.

Welcome to all of you here today.

We will take your presentations of up to seven minutes in the order listed on the agenda. We will start with Mr. Timothy Egan, president and chief executive officer of the Canadian Gas Association, for up to seven minutes.

Go ahead, please, with your presentation.



**Mr. Timothy Egan (President and Chief Executive Officer, Canadian Gas Association):**

Thank you, Mr. Chairman, and thank you, honourable members.

It's a privilege to be here before you today. I appreciate the rescheduling. I was originally intended to appear before you in the fall.

A key focus of your deliberations is environmental issues surrounding shale gas extraction. As agreed with the clerk in advance, I'm not speaking to the substance of the environmental issues around shale gas extraction. There are many qualified experts to do that, and extraction of natural gas is not the primary focus of the member companies in my association. Our focus is on the delivery of natural gas and related energy services, which we thought would still be useful to you as you consider the big picture around natural gas. Committee staff assured us this would still be of interest, so that's how I intend to use my time today.

First, who are we? A presentation should have been handed out to you to give you a bit of an overview. One of the first pages in it is a map of Canada showing our member companies. We are a range of companies involved in the natural gas delivery system, such as manufacturers and transmitters, and at the heart of our membership are distribution companies delivering gas to approximately 6.2 million customers.

The map shows the companies and their franchise areas across the country. What it doesn't give a sense of is the fact that those 6.2 million customers translate to well over 20 million Canadians, people whose energy service needs we meet every day in homes, businesses, and industry. A meter isn't a person; a meter is the end point of delivery of the gas, but it represents people in a variety of walks of life. We believe it's an extraordinary reach and one that makes us think about the Canadian energy consumer every day in everything we do.

Note that I said "energy service needs". The member companies of CGA are focused on this, with the emphasis on "service". Canadians have come to expect a lot when it comes to their energy. They want it to be clean, reliably and safely delivered, affordable, and abundant. Canadian natural gas has met all of these demands for over a century. That's why we consider natural gas to be the foundation fuel of Canada's energy system. In fact, we meet approximately 30% of the end use needs of Canadians, and we think that justifies the title.

We also call natural gas "smart energy" because of all those attributes, and one other: its flexibility. Natural gas offers flexibility in a way few other energy sources can. When you want renewables like solar or wind, you also need an energy source to ensure their reliability, and natural gas can provide that. When you want to maximize efficiency at the end use of energy, natural gas comes right to your door and offers remarkable efficiency for heating and cooking needs. Our efficiency in its end use has only increased over time regularly year over year. When you need a source of energy that can work in tandem with a district heating or cooling system as part of a distributed generation system or for mainstream power generation, natural gas is available. When you want to think about adding a new fuel to the transportation energy mix for use by Canadians, natural gas is there and natural gas distribution companies are helping to drive the agenda.

The remarkable ever-expanding networks of natural gas infrastructure in Canada and the unique attributes of the fuel itself are key reasons for its flexibility, and we want to make sure that people appreciate it.

The second image you have before you speaks to some of the many uses of natural gas that justify this description. Canadians use energy in three ways: for mobility, for electricity, and for heating and cooling. It is roughly 30%, 20%, and 50% in terms of an overall split. Natural gas can play a role in all three.

Right now its overwhelming use is for heating. Increasingly, natural gas is used as a fuel for power generation to meet electric needs, and we're seeing the beginning of an interest in it as a transportation fuel, with growing interest in applications for heavy- and medium-duty trucks. I draw your attention to the recent NRCan report on natural gas use, the transportation road map, which speaks to these opportunities.

All these opportunities for new uses are significant, and we want to encourage them for the economic and environmental benefits they promise.

What does the future hold? For natural gas and the companies that are involved in its delivery, we believe the future holds opportunity, as long as we stay attuned to the needs of Canadians.

I described our member companies as energy service companies. By that I mean they are intent on ensuring that the Canadians who are their customers are getting the energy services they want and need.

Let me take my remaining time to highlight two initiatives we have that are intended to help meet those service needs going into the future. They speak to two major priorities for Canadians on energy issues. First is its efficient use, and second is a desire for new and more innovative applications.

 (1540)

The first of these is QUEST. There's a slide on QUEST in the package. QUEST stands for "Quality Urban Energy Systems of Tomorrow", and I think most of the members of this committee are familiar with the project and have been briefed on it.

Let me just point out that the idea behind it--integrated community energy systems--offers a real means to make Canadians much more efficient in their energy use. That translates to less energy consumed, fewer environmental impacts from that energy consumed, and, ultimately, lower costs to the energy consumer.

Now, how is this good for the gas industry? Well, we believe that gas is the logical foundation fuel for integrated community energy systems. It ensures maximum flexibility and reliability, assuring Canadians the level of service and satisfaction they want and have come to expect from their energy providers.

The second initiative I want to highlight is a newly created one. We're in the process of coming up with a name, but right now we're calling it the applied energy technology and innovation initiative. This has been agreed to by my board of directors only in the last few months. It's a new project and is focused on the deployment and commercialization of new technologies aimed at the more efficient use of natural gas in a host of applications.

One example is micro-CHP, or combined heat and power. Some of you may be familiar with that as an industrial application. Micro-CHP would involve the application in small units in the home that could generate both heat and electricity. The technology is well advanced, with numerous applications around the world, including some interesting emerging work being done right here in Canada. In fact, there's a small company outside of Ottawa working on this.

It offers a means to ensure a much more efficient use of energy while lessening the pressure on our electricity grid, with the consumer having a significant say over their own energy. This is the kind of technology we would like to see more of. Through the association, my member companies are defining cooperative means to pool their financial resources to drive new opportunities like micro-CHP for Canadians to be leaders in innovation and productivity in energy use.

I mention that as one example. There are others: water heaters, renewable natural gas, more efficient technologies for transportation, etc.

To wrap up, this means keeping Canadians on the cutting edge of energy innovation and productivity and a continuous effort over time to transform our system into a more efficient and effective one. Natural gas is a remarkable natural resource and Canada happens to be blessed with an abundant supply. My member companies are dedicated to delivering that resource to Canadians in the most efficient and environmentally sound way possible. We look forward to many opportunities to work with those in elected office in this effort.

Thank you, Mr. Chairman.



**The Chair:**

Thank you, Mr. Egan.

For the next group, we actually have two presenters. Please make sure that your presentation is around seven minutes between the two of you.

We'll start with Mr. Bonin, coordinator, climate energy. Go ahead, please.

[Translation]



**Mr. Patrick Bonin (Campaigner climate-energy, Association Québécoise de lutte contre la pollution atmosphérique):**

Thank you, Mr. Chair.

Good afternoon. I want to thank the members for having us here today. I am joined by Thomas Welt, from Nature Québec. I represent the Association québécoise de lutte contre la pollution atmosphérique (AQLPA). Nature Québec and the AQLPA are two of Quebec's oldest environmental groups. Both were founded in the early 1980s.

I would like to begin by giving you an overview of the shale gas situation in Quebec, a very real issue right now. It involves a natural gas development between Montreal and Quebec City, between the St. Lawrence and Highway 20, in an area that spans about 10,000 km<sup>2</sup> and that happens to make up the heart of Quebec, both from a population and an agricultural standpoint. The potential for gas production is quite significant, estimated at 40 quintillion cubic feet. Naturally, there are some doubts about the accuracy of that figure. Sometimes it is estimated at more than 15 quintillion cubic feet, which is equivalent to approximately 200 years of use, based on Quebec's current rate of consumption.

Twenty-nine wells have already been drilled in Quebec. There is talk of drilling a possible 10,000, 15,000 or 20,000 wells in order to make the industry in Quebec fully operational, with approximately 250 to 500 wells being drilled a year. That would mean 3 to 6 wells per square kilometre, putting a huge number of wells in a very populated area over a very short period of time. Right now, about 11% of Quebec's energy comes from natural gas. Quebec does not have any natural gas-based power generation. Clearly, one the reasons for that has to do with the large presence of hydroelectricity.

Now let's look at this from an international perspective. Shale gas use, production, exploration and development raise a number of environmental concerns, primarily with respect to greenhouse gases and air and water quality. Approximately 10% of Quebec's greenhouse gas emissions come from the use of gas. And Quebec's planned exploration and development activities will only increase those emissions. We are still lacking a multitude of data, figures and analyses on the possible emissions resulting from the gas exploration and development. Nevertheless, Quebec's greenhouse gas emissions are estimated to increase by approximately 5% to 10%, based on the anticipated rate of shale gas exploration and development. Keep in mind Quebec's target of a 20% reduction in greenhouse gas emissions below 1990 levels by 2020, and Canada's target of a 17% reduction below 2005 levels by 2020.

Even Quebec's environment minister does not have any studies on the entire gas life cycle related to shale gas exploration. So there is a clear lack of information. We do know, however, that the United States Environmental Protection Agency released a report in November stating that greenhouse gas emissions resulting from oil and gas production were going to double. In the U.S., most of the increase in emissions is due to gas production. The increase in greenhouse gas emissions entered in the U.S. inventory is equivalent to all of Quebec's emissions in one year. Just by changing the factors used to calculate these emissions, the U.S. added to its inventory an increase equivalent to all of Quebec's emissions, simply because it is now understood that there are more leaks, that they involve methane and that production generates even more emissions.

One of the AQLPA's biggest concerns is obviously air quality. Very few studies have been done on the topic. The Institut national de santé publique du Québec recently released a preliminary report identifying huge shortcomings with respect to the impact on air quality. From the little research that is available, including air quality modelling done by the U.S. in the Haynesville region, one thing is very clear: air quality is significantly

affected, as it relates to ozone, which is made up of nitrogen oxides (NOx) and volatile organic compounds. Air quality is significantly affected, not only in the region under shale gas exploration and development, but also in surrounding regions, given the movement of particles, as you may have gathered.

Water quality is another major concern. Well fracturing alone requires millions of litres of water, which are mixed with tons of chemicals. Approximately 50% of the water remains underground and 50% is removed. There is a risk of aquifer contamination as a result of these mixtures and the flow of water between strata. We filed a brief on this topic with the Bureau d'audiences publiques sur l'environnement. The document was prepared by Mr. Durand, a retired UQAM professor and geologist, who is concerned about these risks.

  (1545)

There are other risks associated with transportation, spills and obviously wastewater treatment, given that 50% of the water used and removed from the ground must be treated after the fracturing process. Most of the plants that will be treating this water and these chemicals do not have the necessary facilities to do so.

It should also be noted that the list of chemicals is not necessarily known, that some of the effects of these chemicals combining and interacting in this toxic soup are not known.

On that note, I will hand the floor over to Mr. Welt, who will discuss the economic and social effects of shale gas exploration.

[English]



**The Chair:**

Go ahead, please, Mr. Welt.

[Translation]



**Mr. Thomas Welt (Co-lead Energy Committee, Nature Québec, Association Québécoise de lutte contre la pollution atmosphérique):**

Good afternoon, Mr. Chair.

I will begin with the economic impact, which is always presented as being the most essential, when in fact, it is not.

In order for the industry to make money on this, the selling price must be \$6 per 1,000 cubic feet. It is currently at \$4 per cubic foot. So it is not at all profitable to develop shale gas. Nor is it beneficial as far as the people of Quebec are concerned, even at \$6 per 1,000 cubic feet. And in terms of improving the trade balance, the impact is insignificant. It represents a small fraction of 1% of all Quebec imports. So, in our view, this endeavour is not economically beneficial for the industry or Quebec society, as we speak.

In terms of obtaining social acceptability, one of the most important considerations, the fact that the shale gas is located in agricultural and populated areas in Quebec is a major, if not insurmountable, obstacle.

There is already huge opposition to the 30 wells that exist today. Just imagine the reaction when there are 5,000 or 10,000 such wells in a very small area in the heart of Quebec. That is the area where Quebec took shape over four centuries of colonization. So gaining society's acceptance of these activities will be extremely difficult.

Ever-growing numbers of wells in a very limited area, together with the constant comings and goings of trucks and numerous gas pipelines—thousands of small gas pipelines will also be necessary to connect all the wells—will make the public concerned increasingly hostile to this type of development.

Now, I would like to share with you our findings on all this. There are no clear economic benefits for the industry, or more importantly, Quebec society as a whole. Social acceptance of this development is lacking, and that will probably always be the case. The risks to people's health and quality of life, the threat to drinking water and the other possible risks of damage are too great to allow drilling and fracturing activities to continue, even

on a small scale.

There is no urgent need to proceed, none at all. Quebec has all the energy it needs right now. Nor is there an urgent need economically speaking, because the price of gas has to go up first, and that will take some time. It may hit \$6 or even \$10 in 20 or 30 years, but certainly not in the foreseeable future. So there is no urgent need to proceed.

Consequently, a moratorium is necessary. We should not rush into anything. We need to conduct a very careful analysis of the entire impact of this new energy industry, which seeks to establish itself in the St. Lawrence Valley, the cradle and jewel of Quebec. It is important to understand that this heavy industrial polluter wants to call the jewel and heart of Quebec home.

This region of Quebec, between Montreal and Quebec City, should be protected for the present and future generations. Authorities at every level, including the federal government, should support and promote this common-sense approach, a moratorium proposed on the basis of a rare consensus in Quebec society.

Thank you, Mr. Chair and honourable members.

  (1550)

[English]



**The Chair:**

Thank you all very much for your presentations.

We'll go directly to questioning, starting with Mr. Tonks for up to seven minutes.



**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you, Mr. Chair.

I'll just echo the chair's appreciation to the witnesses for being here.

I'm rather caught in an unusual situation. We heard yesterday that the Province of New Brunswick is looking very seriously at establishing a regime that would benefit New Brunswick. They cited the added value in the development of shale gas. The minister also indicated that they were establishing an environmental assessment regime that would look into the issue of balancing the community's concerns against the economic advantages.

In your presentation, Mr. Bonin, you referred to Quebec's Sustainable Development Act. If there is a moratorium, what approach would an environmental assessment take? What kinds of concerns would you be looking at balancing out, given the premise that this committee is charged with energy security for Canada, and Quebec has a huge role to play in that? In the environmental assessment in Quebec's Sustainable Development Act, what would you be looking at assessing from a Quebec perspective? To extrapolate that a little more, how do you see the development of shale gas and Quebec's hydro contributing to the national higher interest, if you will?

  (1555)



**The Chair:**

Go ahead, Mr. Bonin.

[Translation]



**Mr. Patrick Bonin:**

First of all, it is important to keep in mind that Quebec's reality in terms of electricity production is not the same as New Brunswick's. There is a major difference. New Brunswick uses coal to produce electricity, whereas

Quebec does not use fossil fuels, be they coal or natural gas, to generate electricity.

In terms of an environmental assessment, a number of questions about shale gas have yet to be answered. Something interesting is happening in Quebec right now. The Bureau d'audiences publiques sur l'environnement (BAPE) was given a mandate to study the issue of shale gas. But this commission of inquiry did not receive any environmental impact assessments prior to the project. That means that the BAPE is currently examining the matter when the developers were not required to submit any environmental impact assessments. It must start from scratch. The BAPE has just four months to examine the whole issue, in its entirety. Most of the analysts and former BAPE commissioners made it clear that the mandate was too limited and that the lack of prior environmental impact assessments was problematic. They also said that the mandate was much too short to deal with the shale gas issue in its entirety.

That being said, the Environmental Protection Agency in the U.S. is in the midst of a comprehensive study on the environmental impact of shale gas exploration and development. The results of that study will be released in March 2012. The U.S. has invested millions of dollars in this study. The province of Quebec does not necessarily have those kinds of resources, and I doubt that the other provinces, whether it be New Brunswick or someplace else, have the resources to undertake such an in-depth study of the matter, either.

Consequently, given the little bit of information we do have right now, we are concerned on a number of levels. I believe you mentioned Quebec's Sustainable Development Act. It sets out a number of principles, one of which being the precaution principle. Under that principle, when a threat exists and full scientific certainty does not, a project should not be allowed to proceed. And yet, the exact opposite is happening in the case of shale gas right now. There are indeed threats to water and air quality.

You also mentioned hydroelectric power generation in Quebec. We see what is happening around the world right now. Just last week, the International Energy Agency's chief economist gave a speech in England in which he said that countries would not be able to meet the commitments made at the climate change conference in Cancun—they had agreed to limit the increase in the world's temperature to 2°C—citing two reasons. The first reason was that key emitting countries were not serious about reducing their emissions, and the second had to do with the emergence of shale gas around the world.

Why is the emergence of shale gas problematic? Given the quintillion cubic metres on the market today and the sharp decline in gas prices, shale gas is threatening renewable energy development worldwide, not just in Quebec and Canada. In the U.S., investment in renewable energy has dropped by 50% from last year. According to the International Energy Agency's chief economist, that is directly related to the discovery and development of shale gas.

Clearly, Quebec produces hydroelectricity and exports it to the U.S., and it could export even more if only it could save energy and develop its wind energy potential. Today, we cannot even pursue that kind of development because the cost of producing electricity has dropped tremendously with the emergence and marketing of billions of cubic metres of gas. And in that respect, Quebec is hurting itself in terms of developing its own renewable energies and energy known as biogas, or biological methane. Quebec has invested in capturing methane emissions at landfills, in order to use what is known as biogas. Biogas is currently competing with other types of gas. Biogas derived from landfills is a source of renewable energy. It is important to remember that.

  (1600)

Thank you.

[English]



**Mr. Alan Tonks:**

That was a very comprehensive answer, and I'm sure the committee appreciates that.



**The Chair:**

Thank you, Mr. Tonks.

Madame Brunelle, you have up to seven minutes.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ) :**

Good morning, gentlemen. Thank you for being here.

To begin, I would like to congratulate the Association québécoise de lutte contre la pollution atmosphérique and Nature Québec for presenting this document, which seems to me to be particularly informative. In it you take the same position as my party, the Bloc Québécois, and you confirm what we understand about this situation in Quebec.

I would like to go back to the question Mr. Tonks asked. I heard the presentation by the New Brunswick Minister of Natural Resources on Tuesday, and I would like my colleagues to think back to that too. We have to realize that the situations are very different from one province to another, if only because of the places where these activities take place.

Mr. Welt, you talked about the places where this exploration is being done, near the St. Lawrence, in our beautiful and most densely populated agricultural areas. The problem is not the same as elsewhere, in western Canada, where material is extracted in places where there is no population and the risks and consequences are not the same.

Mr. Bonin, by making the connection between sustainable development and the precautionary principle, you get right to the heart of the matter. That is really what drives this committee: perhaps some day shale gas will be developed, but not at any price, not at the price of the environment, and not just any way.

We want to eliminate our dependency on oil, but we have to pay attention to how we get there. To us in the Bloc Québécois, it should be done as part of a truly green economy and with other resources, as you talked about a little, Mr. Bonin.

On Tuesday, Anthony R. Ingraffea of Cornell University in the United States told us that the technology does not seem to be advanced enough to guarantee that drilling for this resource, shale gas, can be done in a way that respects the environment. So that is the heart of the problem and what is worrying us.

I'm going to ask you three questions. Do you agree with us that exploration and exploitation are under sole provincial jurisdiction? So this debate has to be happening and the decisions have to be made in Quebec. We think the role of the Canadian government must be clear. It must pass on the information it has in its possession, but it is not up to it to impose standards or make uniform standards across Canada. We believe the federal government has to collaborate by investing massively in new technologies to develop greener energies.

[English]



**The Chair:**

Go ahead, Mr. Welt.

[Translation]



**Mr. Thomas Welt:**

I would however like to stress something important that is not talked about enough in the industry.

At the moment, there is no economic reason to exploit shale gas, because we are going to be exploiting it at a loss. It will be exploited when there are enormous government subsidies; without that, it isn't possible. So that is a fundamental aspect.

There is a second aspect that is just as fundamental: intergenerational equity. In Quebec, in Canada and elsewhere there is this potential energy. If we exploit it immediately, if we exploit it at a loss, we take away future generations' ability to exploit it under much better conditions.

The price of gas is going to rise inexorably because the resource is going to be exhausted at one point or

another, maybe in 20 years, maybe in 50 years, maybe in 100 years. That resource, if we exploit it not now, but later, will have far greater value and future generations will be able to use it much better than us, who still have conventional gas at a good price. And there is no economic reason. Forget for a moment all the environmental reasons. In economic terms, I don't see how we can exploit the gas at \$4 per 1,000 cubic feet when, and the industry itself gave us these figures, it has to be at least \$6 per 1,000 cubic feet to be profitable.

There is also another problem: knowing what has to be done. How should it be exploited, at what rate and at what time? All those studies would have to be done during the moratorium.

Your last argument is that the government has to promote renewable energies like wind power. In fact there was a federal windmill program, but it has been eliminated. It is absolutely desirable that the federal government subsidize renewable energies, emerging energies, like solar energy and especially windmills. Quebec is extremely rich in wind power. It has the largest potential in the world. Wind power is inexhaustible. If all the forms gas have been exhausted, in 100 or 200 or 300 years, wind power will be here for billions of years, as long as the Earth exists. So we have to put all our energy not into outdated energies, but into new energies. That is what our common objective should be.

  (1605)



**Mr. Patrick Bonin:**

To add to that, I will perhaps say that...

[English]



**The Chair:**

You have about 30 seconds left. Go ahead.

[Translation]



**Mr. Patrick Bonin:**

With respect to energy development, it is essentially under provincial jurisdiction. The federal government may have roles to play, however, when it comes to water, fish habitat and the Action Plan on Climate Change.

[English]

That was my 30 seconds.

Thank you.



**The Chair:**

Thank you, Mr. Bonin.

Mr. Egan, you wanted to give a short response?



**Mr. Timothy Egan:**

Yes. Perhaps I could just make one or two comments.

[Translation]

I apologize, Ms. Brunelle, but I will have to speak in English because my French is not very good.

[English]



Do we need to drill for shale gas in Quebec? That's a question for Quebecers to decide. I know they have a fierce patriot in Mr. Bouchard, who has added his voice to the debate. I think that will help make it a more fulsome debate in the province of Quebec. Obviously there will be differences of opinion on that.

We also know that a report is expected imminently from the Quebec government, and that will also shed more light, I think, on the situation. Each province should determine where and whether and how it wants to proceed, and we trust that Quebecers will take a balanced approach, addressing the need for responsible and environmental management and economic development.

Let me just raise one possible scenario. Yes, if it's not economic to develop, odds are that the market will not develop it. The opportunity will not be pursued if there isn't a perceived return on the market opportunity. That's a point that I think needs to be emphasized. Related to that, if I could just make a point about Quebec's energy mix, just think about this scenario. Quebec has extraordinary hydroelectric wealth: 40% of your energy generation is hydroelectric. You also have 10% of your energy needs met by natural gas. Envision a scenario where you export more hydro and you use natural gas for more domestic uses. You generate more revenue on the hydro you export. You generate tax revenue on the natural gas that you develop. That gives the province a bigger resource base with which to develop many of those renewables that we're all interested in seeing more of.

I think there's just a danger if we talk about an absolute shutdown of any one technology. Canada's energy wealth, the province of Quebec's energy wealth, is in its diversity. Yes, we need to be prudent in our development of those resources, but we should be pursuing the development of as many of them as possible.

  (1610)



**The Chair:**

We'll go to Mr. Cullen for up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Let me just follow up on that. Mr. Egan, I think you're making the case that natural gas is a good backstop to renewable energy, to wind or solar energy that's put into the grid. Is that essentially what you're saying?



**Mr. Timothy Egan:**

We prefer to call it not a backstop but a foundation fuel, because we think it's a logical partner for wind and solar and a host of others. So, yes.



**Mr. Nathan Cullen:**

This is no knock against natural gas, but I've not heard that other than from the natural gas associations. Hydro power, around the world, is considered the best backstop accompaniment to any source of what we can see as non-traditional or renewable sources of energy.

You also mentioned that if the market doesn't see a profit to be made, they simply won't exploit it. While generally true, is it not specifically the case that if a government is interested in having a resource exploited, then it can alter the market conditions? They can change the tax code. They can deregulate certain environmental restrictions.

Obviously there's a role government plays, whether one energy source is exposed or another. There is no pure market in the energy field. We all know that the so-called level playing field doesn't exist anywhere in Canada, if not in the world.



**Mr. Timothy Egan:**

I would agree with you. My point wasn't that there would be no public intervention.



**Mr. Nathan Cullen:**

There's obviously public intervention.



**Mr. Timothy Egan:**

I would make the point that there's public intervention with almost every energy source, and there has been over the course of Canadian history. Hydro-Québec assets were not developed without public intervention. Hydro assets across the country were not developed without public intervention. Renewables now are not being developed without public intervention.

As many of you will know, we have a proposal before the Government of Canada requesting a certain kind of public intervention to help natural gas vehicles get over a hurdle we perceive in the transportation market. We think those interventions have to be carefully constructed. They should be time limited and well designed.

So I'm not saying that it doesn't happen.



**Mr. Nathan Cullen:**

I think we're in agreement.

I have a question about confirmation of supply and access to ports.

You're familiar with the so-called Head Harbour controversy. There was an LNG plant proposed in the U.S. The Canadian government had our ambassador intervene, or the federal government intervene. Are you at all familiar with that LNG project?



**Mr. Timothy Egan:**

I'm afraid I'm not, no. I'd be happy to follow up.



**Mr. Nathan Cullen:**

I wouldn't mind, because there's an uncertainty of market conditions, if you're talking about the role of government. The government on the east coast rejected an American project for an LNG plant because it was unsafe. That's according to the ministers involved. But then on the other coast, they said it's fine.

We're trying to understand, from the natural gas point of view, where LNG is going to be applied and if it's going to be applied consistently. That's the point.



**Mr. Timothy Egan:**

Could I just make two points in response to that?

First, I'll take that to my upstream colleagues, who would be able to address it.

Second is that of course there are regulatory issues involved in this at the provincial level as well as at the federal level. There are various conditions affecting it.

[*Translation*]



**Mr. Nathan Cullen:**

Mr. Bonin, I'm going to try to address you in French. I apologize in advance for my mistakes.

The Minister, Mr. Paradis, has said that if we imposed a moratorium too quickly, it would be difficult to go back later. He is against a moratorium and thinks the idea of imposing a moratorium is dangerous.

You have asked for a moratorium to be ordered. I don't know the general feeling in Quebec at this time on that issue.

Should the Government of Canada play a role in protecting air and water or preventing the production of greenhouse gases, or is this something that is under the exclusive jurisdiction of the Government of Quebec and

Mr. Charest?



**Mr. Patrick Bonin:**

I would like to point out that AQLPA and Nature Québec are calling for a moratorium, and there is a consensus on this subject in Quebec. The Fédération québécoise des municipalités is calling for a moratorium, as is the Union of Quebec Municipalities and the cities primarily affected. So it is not just the environmental groups doing this. The trade unions are calling for it as well.

The call for a moratorium is widespread, and it is not necessarily because people are against drilling, it is because they don't have the information or the answers to the questions being asked.

  (1615)



**Mr. Nathan Cullen:**

You are talking about risks to water and air.



**Mr. Patrick Bonin:**

Certainly, the federal government has a certain role to play, if only in terms of tax policy. As you said, the market does not necessarily regulate everything on its own. Subsidies for oil and gas companies, in fact every kind of subsidy or tax relief can have an impact.

The federal government can also take action on air quality standards. A Canada-wide initiative to harmonize standards for air quality has been adopted by the Canadian Council of Ministers of the Environment. The first thing the Canadian Council of Ministers of the Environment will do will be to strengthen standards for fine particles and ozone precursors. By 2015, we want to adopt new Canada-wide standards in order to harmonize and to facilitate monitoring, to better target problem spots and to make sure that the provinces have action plans and are offering mutual assistance to achieve that objective.

At present, ozone exceedences have already been observed. We already have air quality problems, days when the air quality is poor or marginal. We now want to strengthen the standards and make them more stringent. If we keep the same level, we would have more poor air quality days.

As well, and this is clearly established in the Haynesville study you cited in the brief, researchers have done modelling on Haynesville based on a similar development in Quebec. In that study, we clearly see a significant increase in ozone, 16 parts per billion, when the Canadian standard is 65 parts per billion. If we add 16 parts per billion in some places, we will have more poor air quality days. It is inevitable, because we are adding pollution.

In Quebec alone, the health costs associated with poor air quality are estimated at \$2 billion. In fact, studies vary, because some talk about \$2 to \$9 billion. So this is a significant impact. Obviously, in terms of greenhouse gas emissions, it is the federal government that represents us at the international level. It is the official voice.

That being said, in the Cancún Agreement, Canada, like other countries, set targets to limit global warming to 2°C, to avert catastrophic climate change. Based on current targets of the developed countries, the increase in global warming would be 3.5°C. That clearly means that all of the developed countries will have to revise their targets and adopt more ambitious ones to avert catastrophic climate change. I'm not the one talking about catastrophic climate change, it's the IPCC. So it is very serious.

We can see on the Environment Canada site that the current Canadian target has not been met. With what is on the table for Canada, we are a long way from meeting that target. Since we aren't going to meet that target, we have to go a lot further. To go further, we will have to start making a U-turn and investments will have to be made in this. In my opinion, the federal government has a major role to play in this regard.

[English]



**The Chair:**

Mr. Cullen, your time is up.

Mr. Egan does want to give a short intervention.



**Mr. Timothy Egan:**

I just want to respond, Mr. Cullen, to your point on the relationship between gas renewables versus hydro and renewables.

Could I just give you a hypothetical about system efficiency? I don't have the graph with me, but there was a graph from the Independent Electricity System Operator of Ontario that showed 4 p.m. one day and 4 p.m. two days later. There was a 1,000 megawatt difference in the available power from wind because of its intermittency at the same time of day two days later. That's fine, wind is an intermittent power source, and there are ways to deal with that. But what you need to do, if you're using it as part of a reliable power system, is have firm backup readily available. So if it's hydro, which is the most logical partner—you're right, in my view—that means you have to set aside 1,000 megawatts of hydro as spinning reserve, ready to go immediately, to be available. That's 1,000 megawatts of hydro you're not using in the market.

It's better to be using hydro as electricity, sending it into the electricity system, and generating revenues in export markets or other provincial markets than holding it in reserve like that.

With natural gas it's a different scenario, because you tend to hold natural gas in power generation in facilities that are designed precisely for that sort of immediate backup opportunity. It's not as efficient to use natural gas for electricity in the long term for exports the way it is for hydro, so you want to be thinking about system efficiencies on these things at all times instead of having absolutes about what is all good and what is all bad.

  (1620)



**The Chair:**

Thank you very much, Mr. Egan and Mr. Cullen.

Finally, for this panel, we'll go to Mr. Anderson for up to seven minutes.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Thank you.

Mr. Egan, I was actually going to ask you about using natural gas as a foundation fuel. I don't know if you want to say anything more about that. I think you covered it fairly well.

I did want to give you an opportunity to talk a little bit more about new technologies. You talked a bit about the applied energy technology and innovation initiative that you find in some of the new technologies revolving around natural gas. I would like to hear a little bit more about that.

I may cut the witnesses off if the answers get too long, just because we have short time here.



**Mr. Timothy Egan:**

Sure.

I'll talk about a couple. First of all, I'll talk about renewable natural gas, which is biomethane. That's the opportunity to recover natural gas from waste facilities, from biowaste. There are significant quantities of this available across the country.

Our industry, right now, is looking at setting uniform standards in order to be able to bring this into the system easily and cleanly. Part of this new initiative will actually look at renewable natural gas and the applications there.

We think this could account for a good percentage of the natural gas needs of Canadians right now. It's also

available right across the country. So renewable natural gas is one area.

A second area is water heaters. If you look at the per capita use of natural gas, the demand curve is actually going down. Arguably, that's not in our interest as a gas industry. But we are, as I mentioned, energy service providers, and we want to meet the energy service needs of Canadians, and they want their energy needs to be more efficient all the time.

Water heaters are becoming more efficient all the time. We're looking at making sure that new technology for water heaters can be brought into the market in a straightforward and clear way and that there are the support mechanisms in place for that market, to meet the needs of Canadians. So water heaters is a second area.

A third area is vehicles. Our focus right now is on heavy- and medium-duty trucks. We're looking at opportunities to bring natural gas into the truck market.

If one in ten heavy- and medium-duty trucks in use in Canada right now were using natural gas, we would meet our 17% reduction target for the transportation sector for heavy- and medium-duty trucks. We think there's a significant delivery opportunity there. We want to make sure there's all the support necessary for that.

The fourth one is the one I mentioned before, which is combined heat and power. There are various industrial applications of combined heat and power across the country. Right now, micro combined heat and power is the real innovation. And the opportunity there, as I mentioned, is for a unit that could be as small as something for your household.

Right now, it's not affordable for most households. We're looking at what would need to be done to bring the price down. But imagine a unit about the size of the furnace in your home, which would bring 15% more natural gas into your home than you currently need but then supply all of your gas and all of your electricity needs. That's what micro CHP can do. It's a revolutionary technology. It's extraordinarily efficient at end use.

That's a significant opportunity but not necessarily one you would pursue everywhere in the country. You're going to look at the resource base that's available province by province. That resource base does differ province by province.

But again, I think we want to emphasize the point that you want to be maximizing the efficiency of the energy system. You want to be ensuring that all of the resources available to Canadians are being used in the most environmentally sound way, delivering the best economic return for Canadians for domestic needs as well as for export markets that want to use our products.



**Mr. David Anderson:**

A comment was made a little bit earlier that gas is driving down the cost of electricity. That may not be good for your industry, but that is good for consumers, isn't it?



**Mr. Timothy Egan:**

I'm on the distribution end of the spectrum, so I'll speak with two voices.

As a distributor, if my customers are happy with low-priced gas, then I'm happy. For the gas industry, if the prices of gas are low, people scratch their heads and ask if we're going to develop more gas or not. However, gas is an open market. If the price is really low, people will stop developing gas.

That may well be what happens in the province of Quebec. Maybe some of those projects won't go forward because they don't prove to be economic. So people stop drilling for gas for a while, and they work on other aspects of the energy mix. Demand goes up; prices change, and--boom--it suddenly becomes economic to develop gas again. It's a supply-and-demand relationship, which is active in the gas market and beyond the gas market, in the energy market.

If I can just take a minute to talk about this, we're the gas distribution industry, but it's not as though we see electricity as our opponent in any way. The fact is integration in the energy industry in Canada is happening more and more because that helps deliver efficiency.

If you look, for instance, in the province of British Columbia, my member is a company called Terasen, which is about to take the name Fortis. Fortis is a well-known Newfoundland company. It owns Terasen in the province of British Columbia, and it will become one of the most integrated distribution companies--gas and electric--in

the country.

I can go across the country and show you the working relationship between gas and electric industries, which is a good thing for Canadians because it's helping to deliver a better energy product--a more environmentally sound energy product--at the end of the day.

  (1625)





**Mr. David Anderson:**

Okay.

Mr. Welt, you made a comment earlier that you'd like to see this left in the ground for future generations. I'm from Saskatchewan, and one of our failed politicians actually used that same expression about 60 or 70 years ago in our province. The provincial government at that time chose to leave one of our natural resources in the ground, and by the time we were done, we were 50 years behind our neighbour in terms of economic development. I'm just wondering if you're prepared to do that.

Mr. Cullen knows who I'm talking about.





**Mr. Nathan Cullen:**

Seventeen balanced budgets are too much for you, I guess, eh?

**Voices:** Oh, oh!





**Mr. David Anderson:**

Well, it's funny; Mr. Cullen actually can laugh about this because he comes from British Columbia. The reality is very real, and that is that Saskatchewan--





**Mr. Nathan Cullen:**

We wish for your Saskatchewan politics sometimes.





**Mr. David Anderson:**

--was left far behind Alberta because of the choices. The primary choice was made by a premier who chose to leave the resource in the ground while those folks around us were developing.

I think Mr. Hoback would back that up.

The other thing I noticed--





**Mr. Thomas Welt:**

Would you like to have an answer?





**Mr. David Anderson:**

In a minute.

The other thing I would just like to mention....





**Mr. Nathan Cullen:**

You said you wanted them to be short, and you're taking 20 minutes of their time.





**The Chair:**

Mr. Cullen, order, please.

Go ahead, Mr. Anderson.



**Mr. David Anderson:**

I'm just.... My region has benefited from oil and gas development, and I keep saying it in here because we do have oil and gas development in rural areas, with rural people farming the lands, working on the land. We have gas pipelines across our land.

One of the things we have...or there are several things we have. We have jobs, and our young people are staying in the area because of them. We have a service industry that provides jobs for many people. We have local manufacturing that's taking advantage of this as well.

It's interesting to me that in none of your material here do I see you talking about any of those possible advantages. I do see you talking about the cost of wages going out of the area, dividends going out of the area, the cost of equipment coming in, and those kinds of things.

In your figures here, where you talk about \$230 million coming to the Quebec government per year, likely, out of this, I see no benefits included there. I'm just wondering, are you aware of those benefits? If so, why aren't they mentioned?



**The Chair:**

Go ahead, please, Mr. Welt.



**Mr. Thomas Welt:**

I heard two questions there. The first was in terms of keeping this for future generations. It is not only for future generations, but it's a general rule that if you think you can get much more later, why would you sell it at a loss? I don't really understand this.

Actually, if you sell it today, you will lose money. Normally you keep it for a time when the price is going up. It is a totally normal commercial approach.



**Mr. David Anderson:**

That's the same argument we heard, yes.



**Mr. Thomas Welt:**

Actually, first, Quebec does not need it. Quebec has all the power that is needed. The price is low and the risks are high. The benefits for Quebec in terms of just money are very little, and practically none if you take everything in consideration. It's only a small fraction of 1%; that's the best guess.



**Mr. David Anderson:**

But in your presentation you talk about \$230 million coming to the treasury and \$600 million coming off the trade deficit. That's substantial. And that's from your own presentation.

**Mr. Thomas Welt:** Yes--



**The Chair:**

Mr. Anderson, your time is up. We have to end the panel.

Give a very short response if you'd like, Mr. Welt, very short, because the time is up.



**Mr. Thomas Welt:**

Your second question was that we have not mentioned also the benefits. This was your question, yes? But I just answered the question of what the Quebec community would get: very little.

At \$6 per thousand cubic feet, they will get maybe \$200 million per year. But if you subtract all of the costs of what the Quebec community must provide, in terms of roads, contamination, and so forth, and the slew of actions that Quebec must take in order to obtain this small amount, in my view it is negative. In my view, nothing will go to the Quebec treasury.

  (1630)



**The Chair:**

Thank you.

Mr. Welt, Mr. Bonin, and Mr. Egan, thank you for being here before our committee, giving your presentations, and answering questions.

We will now suspend the meeting for a couple of minutes as we change panels.



**The Chair:**

Could I have the witnesses and the members take their places?

For our second panel, we have with us Will Koop, coordinator, British Columbia Tap Water Alliance. From Apache Canada, we have Timothy Wall, president, and Natalie Poole-Moffatt, manager, public and government affairs.

Welcome to all of you today. I'm looking very much forward to your presentations.

We'll take the presentations in the order on the agenda. We have first, from the British Columbia Tap Water Alliance, Will Koop, coordinator.

Go ahead, Mr. Koop, for up to seven minutes, please.



**Mr. Will Koop (Coordinator, British Columbia Tap Water Alliance):**

*Merci beaucoup.*

*Bonjour.* Thank you for the opportunity to appear before this committee.

My name is Will Koop. I'm a researcher and author of numerous reports and a book concerning the protection of public drinking water sources in British Columbia.

A year ago I created a website called "Stop Fracking British Columbia" when I began to investigate energy corporations in northeast B.C. mining enormous volumes of fresh water to hydraulically fracture or "frack" deep shale gas deposits. Although water is a fundamental component of fracking, it's only one of numerous other environmental and social concerns.

B.C. shale developments are far removed from where I live. An 18-hour vehicle journey from Vancouver just to get to the outer edge of the vast energy zones leads to the international energy companies. I visited the area twice, in May and September 2010.

As a result, I produced three reports that touch on some of the dynamics of these issues. The titles are: "The World's Biggest Experimental Frack Job!", which is about Apache Canada; "24/7 Less Peace in the Peace", which



is about Talisman Energy; and "Encana's Cabin Not So Homey", which is about the issue of cumulative effects. In addition, I produced two YouTube videos called "My Very First Frack" and "The Komie Commotion".

Quebeckers concerned about deep shale gas developments have translated my cumulative effects report and the videos into French on their website blogs.

Our provincial regulator, the B.C. oil and gas commissioner, stated to this committee on December 14 that the environmental and social consequences from deep shale gas developments in northeast B.C. are "responsible" and in order. I am here to tell you that they are not.

For instance, in my report "Encana's Cabin Not So Homey", I described how the rush to develop B.C.'s non-renewable deep shale gas is occurring without cumulative environmental effect studies: "Northeast British Columbia's shale gas race will undoubtedly become and remain one of the most significant environmental and public planning issues facing First Nations, the Province, Regional Districts, regulators, communities, and residents alike". Given the backdrop of ever more lax and non-existent legislation regulations, these developments can be understood as distinct social and political failures.

I included a quote from a 1986 Ministry of Environment report that aptly summarizes what the B.C. government has failed to undertake: "strategic planning precedes the sale of petroleum rights". This ensures that all parties involved are aware of the concerns and constraints associated with development in an area before development is proposed.

In 1991 the Ministry of Environment released a report urging the government to implement cumulative effect studies in the energy zone, which it failed to undertake. The concerns by ministry staff about the absence of cumulative effects studies continued with the creation of the BC Oil and Gas Commission of 1997. In 2003, the commission finally published a lengthy two-volume report on how to possibly implement cumulative effects studies in northeast B.C. However, the matter was ignored.

Since 2003 the government has leased thousands upon thousands of hectares of public lands to energy companies without conditions to conduct cumulative effect studies and without consulting the public. On November 23, when Canada's representative, Richard Dunn, was asked by this committee to comment on the state of cumulative effects studies in British Columbia, Mr. Dunn stated, "It would not make sense to do a cumulative effects assessment".

Mr. Dunn's response is not only an affirmation that cumulative effect studies have been ignored, but also a disturbing statement about the energy corporation's attitude and philosophy, including Mr. Dunn's comments about Canada being on "the forefront of environmental and economic stewardship". Encana has significant leased areas and corporate partnerships throughout northeast B.C. and elsewhere.

There is only one long-term cumulative environmental effect study in western Canada. It was conducted by Ernst Environmental Services on Pioneer Natural Resources Canada Inc.'s oil and gas operations in the Chinchaga area of B.C. and Alberta. Unfortunately, that ten-year study was terminated after the company was acquired in November 2007 by TAQA North, a Saudi Arabia company owned by the Abu Dhabi National Energy Company, with deep shale gas leases in northeast B.C.

In 2005 Jessica Ernst of Ernst Environmental Services had her well water in Rosebud, Alberta, contaminated with methane, ethane, and other hydrocarbons after Encana fractured there for coal bed methane gas.

As Monsieur Parfitt testified before this committee on December 2, the cumulative effects issue is further complicated by the fact that the B.C. Oil and Gas Commission has provided little accurate or comprehensive data on public resource issues by energy companies, such as the water withdrawals list he referred to.

 (1635)

This long list released by the B.C. Oil and Gas Commission regarding companies operating in the Horn River basin failed to provide accurate information, incorrectly suggesting that little water was needed for the fracking operations from 2009 to 2010.

I wrote in my last report that Encana had apparently conducted the world's largest fracking operation on multi-well pad 63-K, in the Horn River basin, next to Two Island Lake, doubling the resource figure that Apache Canada had given earlier, when it announced the world's largest fracking operation a few kilometres away.

I estimated that Encana used about 1.8 million cubic metres of fresh water, which is equal to 700 Olympic

swimming pools, about 78,000 tonnes of specially mined frack sand, which would be about 800 rail cars, and about 35,000 cubic metres of toxins. And I said that this operation might be a template or an indication of many more operations in the future.

The B.C. government does not mandate energy companies to publish this and related data, but it ought to. Encana's public relations officer in its Calgary headquarters later said to me in a telephone conversation that Encana was concerned about the information in my report. I responded that I was only too happy to change the information if Encana would provide me with its own final figures from pad 63-K. I then e-mailed a number of questions to Encana, which I have attached to this report and can release to you later. But I have not received a response. As I read from this committee's transcripts, Encana promised to provide this committee with the water and frack sand data on pad 63-K but has yet to do so.

The absence of long-term, integrated, strategic cumulative effects planning, the lack of accurate resource-use data by the Oil and Gas Commission, and little governmental oversight or monitoring of the energy developments in northeast B.C. are not the only concerns. Many landowners who are directly affected by the energy developments have told me of their concern that they seem to have few rights and stakeholder privileges. They state, for instance, that high-pressure toxic gas facilities should not be established so close to residences. Air quality standards are deficient. There are few or no air-monitoring systems. Water tables used for residents and agriculture are changing. B.C.'s mining legislation gives priority to developers to access and develop private property.

Dave Core, of the Canadian Association of Energy and Pipeline Landowner Associations, provided this committee with some of the concerns on November 25.

The concerns I have raised to this committee about legislative and regulatory deficiencies and monitoring oversight in British Columbia are not isolated. In our submission to the National Energy Board in June 2006 regarding Kinder Morgan's Anchor Loop project, I reported that the Alberta government failed to act on the recommendations of a special committee appointed by Alberta's executive cabinet in 1972. That committee recommended that the tar sands might be developed over a 750-year period, not over a 50-year period.

The Alberta government suppressed the report until it was leaked three years later to Mel Hurtig, who then released the study. The special governmental committee, headed by the Alberta Ministry of the Environment, understood the magnitude of the environmental consequences of energy companies proposing to mine the tar sands at that time. In that same report, the committee made strong statements of concern about multinational energy corporations and strong statements about Canada's energy security as it related both to protecting the environment and to providing long-term energy supplies found in Canada for the long-term use of Canadians.

Thank you.

  (1640)



**The Chair:**

Thank you, Mr. Koop, for your presentation.

We will go now to Mr. Wall. I don't know if you're going to split your presentation, Mr. Wall. You have up to seven minutes.



**Mr. Timothy Wall (President, Apache Canada Ltd):**

My name is Tim Wall. I am the president of Apache Canada. I've been with Apache for about 20 years, and I'm a petroleum engineer by background, so an engineer in my base.

I've been in Canada for about a year and a half, and many of the things Mr. Koop talked about are in our area of operations. The Encana things that he mentioned, we are a fifty-fifty partner in those things. We are big in British Columbia. We're a big gas producer there in the Horn River and several areas in British Columbia. We just purchased the assets of BP petroleum in Alberta. So we're in Alberta, British Columbia, and Saskatchewan. Those are our big producing assets. We're doing exploration work in shale over in the New Brunswick area.

Apache is a bit different. We go into the communities. We did this in New Brunswick and tried to get many groups together to talk about what we do and how we do it. We work with the communities as well as we can.

This really originated in the Fort Nelson area with the Horn River producer group and the first nations groups there. We worked with those guys and brought the producers together with the first nations and the community to try to get everybody to be on the same page and to understand what we do there.

There are a couple of things I would like to address that Mr. Koop talked about. He talked about water, and we do use water in our fracking operations. These are horizontal wells. It's amazing what's happened over time; as you get in and do these types of operations, how you optimize and get better every day. You're inventing things. One thing Mr. Koop didn't mention was a plant that we built just to produce saline water. There is a saline-producing zone at depth, and we actually produce water from the Debolt. It's salt water. It's non-potable. It has a little H<sub>2</sub>S, but we bring it to the surface, we clean it up, and we do our frack operations with it. It's a closed loop. We take the water back, we clean it up again, and pump it in the next frack, as much as we can.

It's an ongoing process. I think that's just an innovative idea. I think there will be lots of innovative ideas as industry gets better at it. The shale operations, as I said, are ongoing in the United States, they're ongoing in Canada, mostly in the Horn River and in Montney and some of those areas. You'll find that we'll get much better at what we do.

The water he talked about in 63-K, some of that was fresh water. I have to go with that. It was as we were commissioning our water plant. Toward the end, and in the frack jobs we're doing now, they're almost all water plant, using the water out of the Debolt water system, which is not fresh water by any stretch of the imagination.

There is a point about regulations. We are regulated in B.C. Natalie can talk a bit about that.

  (1645)



**Ms. Natalie Poole-Moffatt (Manager, Public and Government Affairs, Apache Canada Ltd):**

As we all know, British Columbia has some of the toughest regulations when it comes to oil and gas. It started the Oil and Gas Commission in 1998. It's world-renowned. People very much appreciate the hard work they do there. The Oil and Gas Activities Act was strengthened over the last two years and put through government in 2010. It has some of the toughest environmental regulations as well.

B.C. has just created the Ministry of Natural Resource Operations, which is streamlining to make sure all the regulations are going through one arm, so they don't have to worry, cross-government, about catching all the things they're doing. As well, there is the Ministry of Environment. British Columbia has great regulatory regimes and works with the environmentalists as well as the companies to ensure regulatory approval.



**Mr. Timothy Wall:**

In closing, as I pointed out before, I am a petroleum engineer. Designing frack jobs is what we did in college in the 1970s and the 1980s. Everybody wants to treat this as new technology. Pumping fracks have existed.... Thousands and thousands of fracks have been pumped all over North America, all over the world.

In the United States we pump them on a regular basis, especially in tighter rock in the central United States. It's not a new technology by any stretch of the imagination. We would call these "water fracks", high-volume water with sand. The water breaks open the formation, and the sand pops the formation. You create flow channels, and the sand holds the flow channels open. They are limited in extent; because of the energy you pump they tend to be somewhat localized.

On a pad right now, we've limited our footprint. Pad drilling is what we've gone through in Horn River, where one pad can drain 2,000 acres. We drill 16 wells or so on a pad and limit the size of the footprint we have in the areas. You space those wells. Right now, depending on the well pad, they're about 300 or 400 metres apart to get connectivity between wells. It's not as if the fracks go on forever. They're in a small, limited area, and that's how you effectively drain an area.

I have something about the well bores we've talked about before. They are at depth. These wells will be drilled to 3,000 metres at depth and then horizontals are laid out flat at a 90-degree angle into the reservoir. They're cased all the way down and they're pressure-tested. They have integrity. We would ensure that. We would not pump a frack job if they didn't. A lot of things industry does are common practice that we don't go out and tell people we do. It would be imprudent for us to do anything but do the best we can and get these

assets developed and try to improve the communities we're in.

That's it.

  (1650)



**The Chair:**

Thank you all very much for your presentations.

We'll go directly to questions now, starting with Mr. Tonks. You have up to seven minutes.



**Mr. Alan Tonks:**

Thank you, Mr. Chairman.

I got one question in last time. I didn't leave any time for me.

Anyway, thank you for being here. We've heard Mr. Koop, who has looked at what he believes is a deficiency in the cumulative effects with respect to the fracking processing. We had a professor from Cornell University yesterday who outlined the toxicity of not only the flowback, which comes as a result of the process of horizontal fracking or hydraulic fracking, but also 30% of the residue stays in the ground. He indicated he had a serious concern with respect to the water and water table implications and so on.

You have leaned heavily with respect to the rigours of the British Columbia environmental assessment process. Could you outline how that process relates to the cumulative effects? Because I take it that is where residents have a major degree of concern. It's not what they see now; it's what the overall long-term effects will be.



**Mr. Timothy Wall:**

In the Horn River area—I don't know if you've seen pictures—there aren't many people there. It's 60 kilometres away from Fort Nelson to the north, so there's nobody there.

In our little handout.... I don't know if you guys have a copy of the handout on addressing the environment. You can see that people who work for us in the areas.... We're part of the communities we're in. We'll be in the Fort Nelson community for 50 years, probably, developing these assets. We are part of that community, and we have to be able to walk into the community and understand what people's needs are. I think we need to understand the cumulative effects of that. We're doing the best we can and trying to be as prudent as we can to optimize our jobs, to be able to create innovative solutions with the water.

I guess the question was the regulatory effects on it.



**Ms. Natalie Poole-Moffatt:**

Of course all the way through we have to go to the Oil and Gas Commission and get permits, whether for tenure or lease. Throughout that process, we submit to the Oil and Gas Commission.

We've worked with Geoscience B.C., which is doing water impact studies up in northeastern B.C. We've been working closely with them for exactly these reasons. We opened an office in Fort Nelson a year ago. We've employed seven people up there—well, four, and we have three jobs out—because it's really important to us on the ground to ensure responsible ownership of the development we're creating.

The Debolt plant is one perfect example Tim talked of. We've also reduced our environmental footprint with our pad reductions. Each step of the way, we're looking to optimize all our productive abilities. We work with the Oil and Gas Commission continuously, as with the Department of Natural Resources, as we do with the Ministry of Environment.



**Mr. Alan Tonks:**

Okay.

Mr. Koop, you started off by characterizing British Columbia's environmental process as "ever more lax". You also indicated an historic chronology with respect to how the concepts of cumulative impacts in fact had been avoided, if you will. You're far better acquainted with the environmental assessment practices of British Columbia, then. You've heard the response. I saw that you stayed and listened to the witnesses who we had before. You know that there is a moratorium that has been requested in Quebec. You know that there is a moratorium in Pennsylvania, I think. Obviously, from those moratoriums in other jurisdictions there are concerns.

What would you be looking for with respect to changes in the environmental protection act that exists in the environmental assessment process in British Columbia?



**Mr. Will Koop:**

In British Columbia? The Environmental Assessment Act process and legislation was introduced in 1995. When the B.C. Liberal administration came in, they started to remove things and water it down. There was a tremendous amount of pressure by companies to do so, and they're sympathetic to that, so they started doing that. And they did it across the board. So we have an atmosphere in British Columbia where we've gone back in time. We've gone back to the 1980s with the Social Credit government. We're headed backwards--sorry about that.

What I'm saying is that this has become a problem. And there's a bigger problem. What we also see is we see the tar sands, we see the federal government allowing things to go on to the Fisheries Act, etc. The way I'm looking at it now is that the tar sands have lowered the environmental bars and are creating kind of a ripple across Canada. In British Columbia there's apparently very little that the public thinks it can do with the government to change these things. They're very concerned about what's going on, but they seem very powerless.

I don't know if that really answers your question. I don't know where we're going to be going, but what I'm trying to say is, listen, we see this in the United States, we see this in Quebec here right now. There's a big rush to develop all these things. Let's slow down, let's take a look. I've been up there to see things. I've heard some of the reports by the first nations in their presentation to the National Energy Board about new pipeline corridors, their concerns about what's going to happen to the wildlife. Sure, there are no people who live in this area. As Tim says, there's wildlife, there are fish, there are streams. This is wilderness full of wildlife.

(1655)



**Mr. Alan Tonks:**

Okay, thank you very much.

Thank you, Mr. Chairman.



**The Chair:**

Thank you, Mr. Tonks. You got two questions in that time; that's progress.

Monsieur Pomerleau, for up to seven minutes.

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you, Mr. Chair.

I would like to thank all three of you for the presentation you have given.

[English]

Are you okay?

**Voices:** No.

**Mr. Roger Pomerleau:** Push the button.



**Mr. Timothy Wall:**

Okay, there we go.

I didn't understand anything you said.



**Mr. Roger Pomerleau:**

Okay, I'll translate myself.

[*Translation*]

**Mr. Roger Pomerleau:** My first questions are for you, Mr. Koop. In Quebec, at present, one of the figures that is used most often...

[*English*]

It is okay? Okay.

[*Translation*]

In British Columbia, they say people are raking in billions of dollars from shale gas. Do you share that opinion? What is your answer?

[*English*]



**Mr. Will Koop:**

The government has reported that they've received well over \$2 billion in land lease sales. There are figures out on that. The question that we have about this, of course, is the way in which it was done. This was done so quickly, without public input. Even though the Oil and Gas Commission has its report about cumulative effects, when these land sales began in 2003, essentially, and I think Encana was one of the first companies that got prime areas in these leases—



**Mr. Timothy Wall:**

It was Apache, actually.



**Mr. Will Koop:**

Oh, okay.



**Mr. Timothy Wall:**

The partner.



**Mr. Will Koop:**

As these things evolve, sure we've got lots of money, but now we have to deal with the problems that should have been dealt with to begin with, as I pointed out in the quote from 1986 about trying to establish what's going to happen on the land before giving out these lease agreements.

[Translation]



**Mr. Roger Pomerleau:**

You can be happy because we have the same problems in Quebec, but we don't have the same money. It's rather odd.

[English]



**Mr. Timothy Wall:**

The B.C. government, after the land sales, also makes tax dollars, and things coming off those leases too. So there is additional revenue.



**Mr. Roger Pomerleau:**

Yes. That's what they promised, too, in Quebec.

[Translation]

You talked about strategic planning, which had to be more important than oil companies' rights. In Quebec, at present, it seems we are having the same problem you are criticizing in British Columbia. Things are being done in haste, with no strategic development, and we are embarking on absolutely unbelievable things.

I will use an example that Mr. Welt gave me during the break. He told me it was really quite extraordinary. He told me he had worked for the oil companies in Texas, for Texaco. He installed floating roofs in gas tanks in Beaumont, Texas. When he went to install the roofs, he arranged it so his first roof was done to perfection, because then he would sell more. If the others had little problems, it was less important, but the first one had to be perfect. So they drilled 30 wells. That was the first 30, and 20 of them produced, and they are asking us to trust them, they are asking us to believe that when there are 15,000 of them, it will all be fine.

Do you not think that people in Quebec are right to be afraid and to ask serious questions, given these circumstances?

  (1700)

[English]



**Mr. Will Koop:**

Absolutely. This is the process that's proceeding in the United States.

Tim from Apache mentioned that fracking is an old thing. Actually, fracking started off in a new kind of way in Alabama in the 1980s as coal bed methane areas, coal beds, were being fracked. This was new technology.

The interesting thing is that as I'm researching this history, I'm finding out what the impacts on the environment were at the time. Of course, these things were proceeding on private property lands owned by U.S. Steel. They had more of a say in what could happen on their lands, but they were polluting the streams and they were actually poisoning people's wells. As this process began in Alabama, the number of wells skyrocketed.

The interest came from the United States. It spread out in the United States in the 1990s. As it was doing so, I think there was a problem that occurred in the United States without enough oversight in terms of regulations and legislation under national acts, such as the Safe Drinking Water Act, and many other things.

These things are coming into play now. Everybody is wrestling with this right now.

[Translation]



**Mr. Roger Pomerleau:**

I have one last question for you. I may have a short question for Ms. Poole-Moffatt then.

The Americans are doing a study. In 12 months—not in 20 years—we would have a chance to get hold of a serious study, independent of everything that is going on in Canada and Quebec, and free of charge. Are people crazy to want to wait for that study before going ahead, in Quebec or anywhere else?

[English]



**The Chair:**

Mr. Koop.



**Mr. Will Koop:**

Yes, it is problematic because there are companies that have made investments.

The unfortunate thing now is that because they have done this, and the B.C. government has allowed this, as in British Columbia, it's going to become very difficult to say no to these things or to say to wait.

What are we going to do? There is no forum for public debate in British Columbia to solve these issues. This is probably the first time this kind of thing has been discussed in any forum on this issue. I haven't heard anything about this in British Columbia, people talking about these issues in an open manner.

[Translation]



**Mr. Roger Pomerleau:**

Ms. Poole-Moffatt, you talked about the fact that the regulations in British Columbia were extremely well done. In Quebec, we are also wondering what we are going to do later, if we should decide to drill for shale gas.

In British Columbia, do you have to give the chemical composition of the chemicals you use for fracking? That doesn't seem to be the case in Quebec, because of trade secrets.

[English]



**The Chair:**

Ms. Poole-Moffatt, go ahead.



**Ms. Natalie Poole-Moffatt:**

I'll speak to the first part, and then I'm going to let Tim speak to the second part.

In terms of British Columbia, they just created what was called the Oil and Gas Activities Act. In 2007 they did a B.C. energy plan that reviewed energy needs and security across the province. Then in 2010 they put out the Oil and Gas Activities Act. The act followed up on legislation, and toughened up the environmental standards that were created in the 1990s.

The Oil and Gas Commission was started in 1997, as Mr. Koop said. Of course, as all governments know, your regulations have to grow with the economy that's around them. Now there is a \$5 million price tag associated with not working within the regime of the Oil and Gas Commission.

All of these things are very favourable and positive. As far as fracking fluid goes, I'm going to let Tim discuss what Apache does. If you do get an opportunity, you should go on our website to <http://www.apachecorp.com/Operations/Canada/NewBrunswick.aspx>. I really think what we've done in New Brunswick is a template for good consultation.





(1705)



**The Chair:**

Go ahead, please, Mr. Wall.



**Mr. Timothy Wall:**

You have to remember, with regard to the fracking fluids.... And I don't know why the gentleman brought up coal bed fracking, because it's quite a bit different from the fracking here. These are water fracks. We called them water fracks 20 years ago, and we still call them water fracks. They're high water volumes--she's right--with some sand, again, to prop open the flow channels. That's what it's there for.

As for the chemicals involved, we actually don't mind giving you the chemicals. Most of the chemicals are what you have in the cleaners in your house. One of the chemicals we use is called a surfactant. A surfactant is basically soap. It reduces friction during pumping. Ninety-nine percent of the job is water, and we pump surfactant for that.

We pump what we call bactericide. Bactericide keeps bacteria from growing while you're pumping water down the hole. That is basically a bleach, with chlorine content.

The chemicals, a lot of times, are the same ones you'd see in your house. Apache doesn't have any problem with issuing them. Where some of the vendors have problems is with giving away their competitive advantage. They don't want to do that. Then they would have competitors jumping up and being able to replicate those since you had given them their chemical content. That's the problem they have.

Having a list of chemicals involved in a 99% water frack is not a problem for us.



**The Chair:**

Thank you. Your time is up.

Mr. Cullen, go ahead, please, for up to seven minutes.



**Mr. Nathan Cullen:**

Thanks, Chair.

Mr. Wall, you expressed some desire, I think, in part of your testimony to have better assessments or to do a better job of cumulative impacts. This is a question that comes up time and again.

The leasing process that you folks go through as an oil and gas company is one at a time. You seek a lease for a play. You say what you're going to do in that part of the area. Then there can be a lease right next door, in the same watershed, within eyesight, but the two leases don't overlap one another. There isn't any kind of a cumulative understanding of what the impacts may be.

That's how the system is designed right now, as we understand it at this committee. Is that right?



**Mr. Timothy Wall:**

That's correct.



**Mr. Nathan Cullen:**

If this committee is going to write a report on this and make recommendations, one of the recommendations we're going to be looking at is better ways to get at understanding—because it's just one watershed in some cases. It doesn't matter whether you've done one well or six wells, if there's this much water taken out and this much water put in and chemicals and what not. That's the impact. That's the net impact on that watershed.

That's a fair anecdotal assessment, right?



**Mr. Timothy Wall:**

But if you're pumping saline, non-potable water, then it's a different situation.



**Mr. Nathan Cullen:**

Sure. Regardless of the techniques, I guess what I'm driving at—



**Mr. Timothy Wall:**

But there is a differentiation, though, because it's not drinkable water. It's not runoff water. It's not water that could be used in a household. It's basically an old ocean deposit that's getting produced, cleaned up, and used as frack fluid that you could never use otherwise.



**Mr. Nathan Cullen:**

I understand the technique used in some cases. That's not the case in all fracking jobs. Sometimes they use water from municipal pits.



**Mr. Timothy Wall:**

No, it's not always the same. This is an innovative way we've used to solve the problem.



**Mr. Nathan Cullen:**

I understand, so let's get out of the specifics and into the general then, because that's what we're trying to drive at here.

With respect to the cumulative impacts of the oil and gas industry, if we're talking about energy security and which path Canada follows for energy security, this is an important thing to understand. It sounds as though Apache would be in favour of moves that would allow the cumulative impact to be better understood during the leasing requirement.

Ms. Poole-Moffatt might have something to add to that.



**Ms. Natalie Poole-Moffatt:**

I would just say that as with all things we do, we will work with government. Of course, that's why we're here. We wanted to be able to present to you.



**Mr. Nathan Cullen:**

In your testimony you referred a lot to the B.C. Oil and Gas Commission. Are you aware of the B.C. Auditor General's report of February 2010 that followed up on an earlier report from 2002 about the B.C. Oil and Gas Commission?

  (1710)



**Ms. Natalie Poole-Moffatt:**

Yes, and my understanding is there was a subsequent report put out after that one in which the British Columbia government was told that it was doing things in the right manner.



**Mr. Nathan Cullen:**

For the benefit of the committee, maybe we could add this report to our study, because often--



**Ms. Natalie Poole-Moffatt:**

And you should also add the one that followed up on it.



**Mr. Nathan Cullen:**

There is no one disclosing that. The one we have from February 2010 from the auditor of the province said that the B.C. Oil and Gas Commission had failed in its oversight of cleanup of contaminated areas, and failed in its promises of public disclosure.

To be fair, in 2002 the auditor had found the same thing and had come back eight years later and said himself that he thought things would have improved.

What's important for the oil and gas industry and for this committee in studying this is that if we're going to have regulators in place, they've got to be good. Right? You would agree with that.

**Ms. Natalie Poole-Moffatt:** Yes.

**Mr. Nathan Cullen:** They've got to be good in terms of their work with the public and follow the mandate they're meant to follow. If commissions fail, if the regulators fail, then we're relying more and more on industry to make sure nothing goes wrong. You seem like nice people, but there are some folks out there who are not going to do the right thing.

My question is about the contamination, because water contamination consistently comes up as a concern. Mr. Wall, I think you can appreciate the general public's concern when told about the amounts of water that are injected, particularly with the list of chemicals that are put in. You're not required by law to tell us what is in that suite of chemicals that goes in the fracking fluids. Is your company prepared to disclose those? Are you prepared to encourage governments to make that mandatory?



**Mr. Timothy Wall:**

We've already said we would tell you what's in it. It's not a problem for us. Again, the problem a lot of people have is that they don't want to give away their competitive advantage. We're just an operator. I can tell you what the chemicals are. Again, it's 99% water.



**Mr. Nathan Cullen:**

And I'm trying to understand the cumulative impact. If I said that some of these chemicals are in the water in those pitchers today, there wouldn't be a lot of people drinking it. They're pretty bad. They're carcinogenic. Some are definitely lethal, in certain quantities, to humans and animals.



**Mr. Timothy Wall:**

Again, a lot of them are cleaning chemicals. A lot of them you'd see in local stuff that you use in your house. Again, it's 99% water. I don't know where you're going with that, because you're pumping it in the formation and you're producing it out of the formation.



**Mr. Nathan Cullen:**

That's my question to you. What's your standard within Apache for recovery of water that goes in and chemicals that go in? Do you have a self-imposed standard? I know there isn't a regulatory standard that says that if you pump in one million litres, you must get 950,000 litres. What's your standard for recovery of the water?



**Mr. Timothy Wall:**

There is not a standard. Reservoirs are different. That's not the way it works.



**Mr. Nathan Cullen:**

So you have no standard.



**Mr. Timothy Wall:**

No, no, I didn't say that. I said that there is not a company standard.

The way reservoirs work in general is that you pump a fluid in, and because of interstitial pressures in places where things cannot come back out, they stay in place. If you pump a job and you have no other water in the reservoir, you'll produce as much water out of that reservoir over a period of time as the reservoir will give up. You don't just say that after so much you stop. That's not the way it works. You produce it back. Over many, many years you might produce that water back. At some point, it might not be produced back and it may stay in the reservoir over time.



**Mr. Nathan Cullen:**

Mr. Koop, on this cumulative impact question, you raised it in your testimony. Why is this so critical to the oversight and proper regulation of the oil and gas industry, particularly with respect to fracking and with respect to this type of technology?



**Mr. Will Koop:**

With the evolution of cumulative effect studies over the last 30 years, for instance, there has been a difficulty for scientists to undertake these things, understandably, because of the repercussions of the conclusions from these studies, which would limit development. There is politics about cumulative effects. It comes into play in British Columbia, and it comes into play in the tar sands.

**A voice:** Oil sands.

**Mr. Will Koop:** Oh, sorry, the oil sands. Sorry about that.



**Mr. Nathan Cullen:**

It's the company spin. You need to get it from government once in a while.



**Mr. Will Koop:**

It's even in the United States. With the Bush administration, for instance, a very serious thing occurred. The Bush-Cheney administration allowed the energy companies to enter public lands, public forest lands, forest reserves, and those areas were impacted and undermined. Lots of people rose up to say, "No planning is going on. What's going on? What's going to happen to the wildlife and all the things around these places?"

The whole theme of cumulative effects is politically laced. It's very difficult to get these things done because there isn't an atmosphere to tolerate them.

(1715)



**The Chair:**

Thank you, Mr. Cullen.

Mr. Anderson is next, for up to seven minutes.



**Mr. David Anderson:**

I'll share my time with Mr. Harris.

Ms. Poole-Moffatt, I don't know if Mr. Cullen is aware that there was a follow-up report. You seem to want to say something about the report you referred to. Is there anything you'd like to put on the record about that? We

would like a copy of it for the committee as well.



**Ms. Natalie Poole-Moffatt:**

Yes, the Oil and Gas Commission and the Auditor General did a follow-up. You should probably check with the B.C. government, but I believe the Auditor General's report came out while they were doing the Oil and Gas Activities Act. I'm not disputing that, but they did find out they were doing the Oil and Gas Activities Act, and many other things were addressed through that.

We can certainly help you obtain those documents, if you like.



**Mr. David Anderson:**

Mr. Wall, over the last couple of days we've heard concerns about the number of wells that need to be put in place to access this resource. You talked about multiple wells on one site. That seems to be a good use of a site. Is that accurate?



**Mr. Timothy Wall:**

It's a spectacular use, as opposed to the traditional way, where you put one well in a 360-acre lot, and then you go over 360 acres and drill another well, and you have a pad associated with each one of those wells at the drill location.

On the way we work now on these pads in Horn River, you drill 16 wells off one location. So you have one location, you drill 16 well bores in different directions, and you can drain 2,000 acres, whereas before you might drain a couple hundred acres with a well. Now this pad can drill 2,000 acres, so it's very efficient.



**Mr. David Anderson:**

Good.

I want you to tell me a little bit about community participation and how you fit into the communities. Your company has been involved in my part of the world, southwest Saskatchewan, for a while. Can you talk a little about your role in communities and how important that is to your company?



**Mr. Timothy Wall:**

I'll start with Saskatchewan. We operate the Midale Unit, which is a CO2 enhanced recovery injection unit. It's offset by the Weyburn Unit.

All the people in that area are local people, local guys. We're part of that community. We've been in that community for a long time. We see ourselves as trying to be the most responsible we can be, because we live there. Our people live there. The Apache people are from there.

In the new areas we go into, we understand there are people who don't understand what we do. I have to be honest with you, a lot of people have no idea what we actually do for a living and what we've done for a living for many years. In areas like New Brunswick, we were down there early on. We tried to talk to as many people as we could--environmental groups, community groups--to give them the data to understand what we do and who we are. We let them look us in the eyes and ask us questions, and we try to be a part of that community. We're going to live there for the next many years, and the people who will work for us will be in that community.

In Horn River we were a little bit innovative. I have to be honest with you that it didn't have anything to do with me; I wasn't there yet. I've only been there for a short while. But the guys created the Horn River group of producers. They got together our producers in the Horn River area and talked about issues. They talked to the community, the first nations, and anybody who would talk to them. They tried to explain what they did, how they did it, and what to expect with the activity there.



**Mr. David Anderson:**

Over the last couple of days we've heard a lot of strange accusations about the industry. I don't want to run through them, but the one we heard today is that it's your industry's fault that the globe won't be able to reach its two-degree climate change goal.

I thought you might have a reaction to that.



**Mr. Timothy Wall:**

No, I'll defer that one.



**Mr. David Anderson:**

The other one is about the technology. I'd like to hear a little more about that. Basically, over the last couple of days.... The question is, are you technological idiots?



**Mr. Timothy Wall:**

I don't think so. We've put a lot of money into technology. Being innovative gives you that competitive edge, trying to find out ways to do things differently that benefit not only your stakeholders but the people in the community and around you. We're always trying to improve what we do.



**The Chair:**

You still have three minutes.



**Mr. David Anderson:**

Go ahead.



**Mr. Richard Harris (Cariboo—Prince George, CPC) :**

All right, thank you, Mr. Chair, and thank you, guests.

Mr. Koop, actually I would appreciate some very short answers, as I have a number of questions.

Mr. Koop, listening to your testimony, it sounds to me like you don't have any trust at all in this industry, and you would prefer that the guys in the shale gas business would just maybe pack up their rigs and go home. Just a short yes or no. Am I seeing this right?

(1720)



**Mr. Will Koop:**

The title of the website is quite provocative, and there's a reason behind it, as I outlined in my testimony before you today.



**Mr. Richard Harris:**

A yes or no.



**Mr. Will Koop:**

No, it's not quite how you paint it. What I've said here is that things are proceeding on such a rapid scale in British Columbia, with the handout of these leases so quickly without understanding what the cumulative environmental repercussions are--I'm just repeating myself.



**Mr. Richard Harris:**

How many years do you think it would take in British Columbia to be able to adopt all of the things that you're looking for? Once they got there, would there be any interest in the industry at all from the stakeholders?



**Mr. Will Koop:**

There are two things involved here. Where is this gas going to be going in northeastern British Columbia?



**Mr. Richard Harris:**

We're talking about environmental things. We're not talking about where it's marketed, with all due respect. That's another story. We're talking about taking it out of the ground.

Anyway, I didn't want to get politics into it, but actually you brought it up. You put some blame on the old Social Credit Party--I'm glad you and I are old enough to remember those guys--and also the Liberal Party. I have to ask the question, is there any political organization in B.C. that you would have confidence in that would maybe curtail the activity for however long it takes to bring it up to your standards? Is there an organization there now? You mentioned the Liberals and Social Credit, so I'm just wondering if you've got a favourite one that you like that would do this sort of thing?



**Mr. Will Koop:**

I would say there's been difficulty in having good visionary concepts on land-use development in British Columbia.



**Mr. Richard Harris:**

So the only one left is the NDP, really. Do you have confidence in them?



**Mr. Will Koop:**

If I might, there was a proposal in November 1994 by the commission on resources and environment commissioner, and what he wanted to enact was legislation that allowed the public to get involved with land-use policy, and he said that they had a legislative right to do so.



**Mr. Richard Harris:**

Okay, so--



**Mr. Will Koop:**

That was his way of--



**Mr. Richard Harris:**

I was looking for a succinct answer, but I want to move on.



**The Chair:**

One more very short question, Mr. Harris.



**Mr. Richard Harris:**

Mr. Wall, you talked about recycling the water. I think that's an important thing, because technology is moving at breakneck speed, as I understand, in the oil and gas business. I do know of apparatuses now that can take the drilling mud, for example, and turn it into a solid waste, which is easier to dispose of, recapture the water, and then use it again. Where is the recycling technology? Have you got a long way to go, or do you figure you're just about there?



**Mr. Timothy Wall:**

You have to remember we're pumping this fluid, frack fluids, and we can take some contaminants. We can take high salt content; we don't have to have pure water. So we have the facility set there now that can actually knock out a little bit of the hydrogen sulfide, clean up the water a bit for solids, and it's pumpable water for us. We can use it in our frack fluids.

I think as far as the technology in what we need is concerned, we're there, or pretty close.



**Mr. Richard Harris:**

All right, great. You have a lot of confidence in that technology?



**Mr. Timothy Wall:**

We do.



**Mr. Richard Harris:**

Great. Thank you.

Thanks, Mr. Chair.



**The Chair:**

Thank you, Mr. Harris and Mr. Anderson.

Thank you very much to all three witnesses. It was a very interesting meeting and very helpful to us in our studies. Thank you all for coming.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 42

Tuesday, February 8, 2011

The Standing Committee on Natural Resources met by videoconference at 3:32 p.m. this day, in Room 7-52, 131 Queen Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Richard M. Harris, Randy Hoback, Roger Pomerleau, Devinder Shory and Alan Tonks.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: As an individual:* Elizabeth Dowdeswell, Former Chair, Oilsands Advisory Panel. *ConocoPhillips Canada:* Joe Marushack, President. *ARC Financial Corp.:* Peter Tertzakian, Chief Energy Economist and Managing Director.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Elizabeth Dowdeswell, Joe Marushack and Peter Tertzakian, by videoconference from Calgary, Alberta, made statements and answered questions.

At 5:04 p.m., the sitting was suspended.

At 5:07 p.m., the Committee proceeded to sit *in camera*.

The Committee proceeded to the consideration of matters related to Committee business.

It was agreed, — That, in relation to the study of energy security in Canada, members submit their additional prioritized lists of witnesses for biofuels, nuclear energy and renewable energy to the Clerk by Thursday, February 10, 2011, at 5:00 p.m.

It was agreed, — That the Committee meet on Thursday, March 3, 2011, to resume its study of energy security in Canada, with a focus on biofuels.

It was agreed, — That the Committee meet on Tuesday, March 8, 2011, to commence its study of the Canadian Nuclear Safety Commission's decision regarding the transport of decommissioned steam generators to Sweden.

It was agreed, — That the Committee meet on Thursday, March 10, 2011, to resume its study of the Canadian Nuclear Safety Commission's decision regarding the transport of decommissioned steam generators to Sweden.

It was agreed, — That the Committee meet on Tuesday, March 22, 2011, to resume its study of energy security in Canada, with a focus on renewable energy.

It was agreed, — That the Committee meet on Thursday, March 24, 2011, to resume its study of energy security in Canada, with a focus on nuclear energy.

It was agreed, — That the Committee meet on Tuesday, March 29, 2011, to study the Supplementary Estimates (C), for the fiscal year ending March 31, 2011.

At 5:31 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/14 12:32 p.m.

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**40th PARLIAMENT, 3rd SESSION**  
**Standing Committee on Natural Resources**

**EVIDENCE**

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**1530**



*The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*



*Ms. Elizabeth Dowdeswell (Former Chair, Oilsands Advisory Panel, As an Individual)*

**1535**

**1540**



*The Chair*



*Mr. Joe Marushack (President, ConocoPhillips Canada)*

**1545**



*Hon. Denis Coderre (Bourassa, Lib.)*



*The Chair*



*Hon. Denis Coderre*



*Mr. Joe Marushack*



*Hon. Denis Coderre*



*The Chair*







*Mr. Joe Marushack*

*The Chair*

  
 *Mr. Peter Tertzakian (Chief Energy Economist and Managing Director, ARC Financial Corp.)*

**1550**

**1555**

 *The Chair*  
 *Hon. Denis Coderre*  
 *The Chair*  
 *Ms. Elizabeth Dowdeswell*

**1600**










 *Hon. Denis Coderre*  
 *Ms. Elizabeth Dowdeswell*  
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 *Ms. Elizabeth Dowdeswell*  
 *Hon. Denis Coderre*  
 *Ms. Elizabeth Dowdeswell*  
 *Hon. Denis Coderre*  
 *The Chair*  
 *Mr. Peter Tertzakian*  
 *Hon. Denis Coderre*  
 *Mr. Peter Tertzakian*

**1605**


 *The Chair*  
 *Ms. Paule Brunelle (Trois-Rivières, BQ)*  
 *Ms. Elizabeth Dowdeswell*  
 *Ms. Paule Brunelle*  
 *Ms. Elizabeth Dowdeswell*  
 *Ms. Paule Brunelle*  
 *Ms. Elizabeth Dowdeswell*

**1610**

 *Ms. Paule Brunelle*  
 *The Chair*  
 *Mr. Joe Marushack*  
 *Ms. Paule Brunelle*  
 *The Chair*  
 *Ms. Paule Brunelle*  
 *Mr. Joe Marushack*  
 *The Chair*

-  *Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Nathan Cullen*
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**1615**

-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Nathan Cullen*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Nathan Cullen*
-  *Mr. Joe Marushack*
-  *Mr. Nathan Cullen*
-  *Mr. Joe Marushack*
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-  *Mr. Nathan Cullen*

**1620**











-  *The Chair*
-  *Mr. Joe Marushack*
-  *Mr. Nathan Cullen*
-  *Mr. Joe Marushack*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. David Anderson*
-  *Mr. Joe Marushack*
-  *Mr. David Anderson*
-  *Mr. Joe Marushack*
-  *Mr. David Anderson*
-  *The Chair*
-  *Mr. Peter Tertzakian*

**1625**










-  *Mr. David Anderson*
-  *Mr. Peter Tertzakian*
-  *Mr. David Anderson*

-  *Mr. Peter Tertzakian*
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-  *Mr. Peter Tertzakian*
-  *Mr. David Anderson*
-  *Mr. Peter Tertzakian*
-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*

**1630**

-  *The Chair*
-  *Mr. Peter Tertzakian*
-  *Mr. Alan Tonks*
-  *The Chair*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Alan Tonks*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Joe Marushack*

**1635**

-  *Mr. Alan Tonks*
-  *The Chair*
-  *Mr. Mike Allen (Tobique—Mactaquac, CPC)*
-  *Mr. Joe Marushack*
-  *Mr. Mike Allen*
-  *Mr. Joe Marushack*
-  *Mr. Mike Allen*
-  *The Chair*
-  *Mr. Joe Marushack*

**1640**

-  *The Chair*
-  *Mr. Peter Tertzakian*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Roger Pomerleau*
-  *Ms. Elizabeth Dowdeswell*


**1645**

-  *Mr. Roger Pomerleau*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Mr. Peter Tertzakian*
-  *The Chair*
-  *Mr. Devinder Shory (Calgary Northeast, CPC)*

**1650**











-  *Mr. Joe Marushack*
-  *Mr. Devinder Shory*
-  *The Chair*
-  *Mr. Joe Marushack*
-  *Mr. Devinder Shory*
-  *Mr. Joe Marushack*
-  *The Chair*
-  *Mr. Peter Tertzakian*
-  *The Chair*
-  *Mr. Randy Hoback (Prince Albert, CPC)*
-  *The Chair*
-  *Mr. Joe Marushack*
-  *The Chair*
-  *Mr. Scott Andrews (Avalon, Lib.)*

**1655**

-  *The Chair*
-  *Mr. Peter Tertzakian*
-  *Mr. Scott Andrews*
-  *Ms. Elizabeth Dowdeswell*
-  *Mr. Scott Andrews*
-  *Ms. Elizabeth Dowdeswell*
-  *The Chair*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*
-  *Mr. Joe Marushack*
-  *Mr. Richard Harris*
-  *The Chair*
-  *Mr. David Anderson*
-  *Mr. Joe Marushack*
-  *Mr. David Anderson*
-  *Mr. Peter Tertzakian*

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-  *Mr. Peter Tertzakian*
-  *Mr. David Anderson*
-  *The Chair*
-  *Mr. Joe Marushack*
-  *Mr. David Anderson*

**1700**

-  *The Chair*
  -  *Mr. Peter Tertzakian*
  -  *Mr. David Anderson*
  -  *Mr. Peter Tertzakian*
  -  *The Chair*
  -  *Mr. Nathan Cullen*
  -  *The Chair*
  -  *Mr. Peter Tertzakian*
  -  *Mr. Nathan Cullen*
  -  *The Chair*
  -  *Mr. Peter Tertzakian*
  -  *The Chair*
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CANADA

## Standing Committee on Natural Resources



## EVIDENCE

**Tuesday, February 8, 2011**

*[Recorded by Electronic Apparatus]*

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 (1530)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

Good afternoon, everyone. Welcome.

We are here today to continue our study on energy security in Canada, and we're back to the topic of the oil sands.

We have just one panel today, for an hour and a half. After that we go into future business of the committee.

The three witnesses we have today are Elizabeth Dowdeswell, former chair, Oilsands Advisory Panel. Welcome. We have, from ConocoPhillips Canada, Joe Marushack, president. Welcome. And by video conference from Calgary, we have Peter Tertzakian, chief energy economist and managing director, ARC Financial Corp. Welcome to you, sir.

We will have the presentations in the order listed on the agenda, and we'll start with Ms. Dowdeswell.

Please go ahead, for up to seven minutes, please.



**Ms. Elizabeth Dowdeswell (Former Chair, Oilsands Advisory Panel, As an Individual):**

Thank you very much, and good afternoon, everyone. It's a great pleasure to have been invited to speak with you today.

One of the most vexing challenges of our times is how to meet ever-increasing energy needs in a responsible and environmentally sustainable way. I think you'd agree that any analysis of the current state of geopolitics and economic development in a carbon-constrained world reveals a pervasive sense of insecurity about future energy supply. So your study is not only timely but of considerable importance.

I appreciate your acknowledgement that any discussion of Canada's oil sands could not take place without considering the scientific facts and evidence that must underpin any responsible development of this important resource. That certainly was the fundamental tenet that shaped the analysis and recommendation delivered in December by the independent advisory panel on monitoring the Athabasca River and surrounding waterways.

As you know, at the end of September 2010, the former Minister of the Environment, the Hon. Jim Prentice, asked a very straightforward question: does Canada have a world-class monitoring system in the oil sands area? And if not, what changes would we recommend to make it so? This was a 60-day charge, a very short time. But the charge to the panel was a direct response, I think, to serious concerns that had been raised by Dr. Schindler and his academic colleagues at the University of Alberta. Conflicting scientific opinions called into question the availability of credible data that are so essential to sound policy decisions and also to the enforcement of legislation and regulation. It was my privilege to chair that panel, to coordinate and oversee the work of five eminent scientists who comprised it.

In the short time we had, we reviewed an extensive catalogue of documentation, including key peer-reviewed scientific publications. The panel was made aware of but did not attempt to duplicate numerous studies of oil sands development that had been or were in various stages of completion. Nor did we undertake original research to validate the observations and conclusions contained in these studies. All of this documentation was supplemented with interviews and discussions with federal and provincial government experts, representatives of selected first nations, recognized academic experts, industry practitioners, and non-governmental organizations,

as well as of course a site visit.

The focus of our very brief study was to try to articulate the principles for design and implementation of an effective monitoring system. Then we wanted to determine whether or not the current system actually incorporated those principles. In other words, would the system help decision-makers make correct choices and sound trade-offs, both now and in the future?

The panel was unanimous in finding the current system wanting. We found fragmentation of effort. We found a lack of leadership and coordination. We found that activities were not integrated. We found that activities were not always credible because they lacked scientific rigour. We also found that raw data and information were not transparent and accessible in a timely manner in order to allow parties to draw their own conclusions and make their own basis for the judgments. We did not have confidence that the current approach was or would be sensitive to a very fast-paced, dynamic, and extensive oil sands sector or to changes either in technology or in climate, for example.

We believe that until these significant shortcomings are addressed, there's going to continue to be debate about the data, and about uncertainty and public distrust, both of industry's environmental performance but also of government's oversight.

So our principal recommendation, entirely accepted by the federal government through Minister John Baird, was that a shared vision for monitoring, which would align priorities, policies, and programs, be developed collaboratively among stakeholders, and that a holistic and integrated monitoring system and management framework be developed and implemented. Furthermore, we suggested some key elements of the approach.

  (1535)

We were not naive about the challenges of managing in a multi-jurisdictional setting, but it was our view as a panel that this ambitious vision of a very impressive socio-scientific project was simply too big, too complex, and too important to be undertaken by any one jurisdiction or sector. A new, credible, coherent, and collaborative governance model is required to build public trust. The pace and scope of change in the region and the growing expectations of stakeholders require no less.

The panel observed that Environment Canada has considerable credible science capacity and a mindset that recognizes the reality that environmental systems are integrated and holistic, and environmental media like water, air, and wildlife interact and affect each other. Any responsible monitoring system must reflect this reality.

We were pleased that when we delivered our report in December, the government pledged to respond immediately. Specifically, and appropriately, Environment Canada pledged to exercise the visionary leadership we called for to design the first component of a monitoring system with some urgency within the next 90 days, and to do so in collaboration with the Province of Alberta and other stakeholders. I don't claim to know the details of how Environment Canada is reacting, other than to say I understand that the project is well under way and on track to be completed on time.

It was a genuine privilege for the panel to contribute to this evolving dialogue and policy development about such an important issue. We believe that the establishment of a world-class system is absolutely fundamental to not only long-term environmental sustainability but to economic viability and, most importantly, building trust and confidence in the eyes of Albertans, Canadians, and the international community.

Thank you, Mr. Chairman.

  (1540)



#### **The Chair:**

Thank you very much, Ms. Dowdeswell, for agreeing to chair the panel and do that work, and for coming here today to talk about it.

Mr. Marushack, from ConocoPhillips Canada, please go ahead with your presentation for up to seven minutes.



**Mr. Joe Marushack (President, ConocoPhillips Canada):**

Thank you.

Good afternoon, Mr. Chair and members of the committee.

Thank you for the opportunity to be here today to share my company's views on energy security, particularly on the oil sands and the vital role they play in meeting future energy demand.

I know CAPP and others have been here to talk about global demand and that we'll need all forms of energy to meet it in the decades to come. ConocoPhillips shares that view.

Any vibrant and growing economy requires a secure and consistent energy supply. In order to meet our energy needs as a country and as a continent, supply diversity is critical and will entail the use of a combination of many energy sources. These sources must include conventional and unconventional, oil and natural gas, coal, nuclear power, as well as renewable resources.

The Canadian oil sands will play a vital role in helping meet the worldwide need for additional energy.

Because we believe we see increased demand in worldwide energy for the foreseeable future, we encourage governments to ensure a balanced energy policy approach. These energy policies should not discriminate against fuel sources, as all sources will be needed to meet significantly higher global energy demand in the coming decades.

I'd like to give a brief overview of my company. ConocoPhillips is an integrated energy company with interests around the world. We are active in exploration and production, as well as refining oil and gas into usable products.

With a global workforce of about 30,000 people, we operate in over 30 countries, including Canada. Our Canadian operations are headquartered in Calgary. In Calgary, we have a leading land position in the oil sands, and we are one of the country's top three producers of natural gas. We have substantial potential future developments in the Canadian Arctic region, as well as actively working on the Mackenzie gas pipeline project. We are also participating in the current NEB offshore Arctic drilling discussions.

In Canada, we have about 2,000 talented and committed employees. These employees are primarily based throughout Alberta, but with a presence in B.C. We invest significant capital in our Canadian asset base. We've invested between \$1 billion and \$2 billion in Canada every year for the past four years.

Occasionally, I'm asked what I see as my most important role as ConocoPhillips Canada's president. My most important role is the function that makes sure our employees and contractors recognize working safely as their most important day-to-day goal. We're committed to seeing that we minimize the risk of injury or environmental occurrence. We believe it is impossible to have a truly efficient operation if it isn't a safe place to work.

I also see my role as setting the tone for how we want to develop our oil sands and gas assets.

We're very proud of our Canadian operations. They're among the best in our global portfolio, and we see enormous potential here, especially for our oil sands business.

With regard to the oil sands developments, we're focused solely as an in situ development producer, using the steam-assisted gravity drainage, SAGD, process. We're likely the second-largest SAGD producer in Canada at the current time.

We currently produce about 60,000 barrels per day, net, from our oil sands assets, and we hold some 16 billion barrels of potential resource.

We're the operator of the Surmont developments, holding a 50% working interest in these. We're a 50% co-venturer as non-operator in the Foster Creek and Christina Lake projects, and in addition, we hold leases in the Athabasca region.

We acknowledge there are environmental challenges, and we believe technology is the key to mitigating them. We're investing in improving and applying technology across all aspects of our business.

There has been substantial discussion about the potential of the Canadian oil sands. The oil sands are one of the largest and most reliable long-term sources of energy in the world, second in size only to Saudi Arabia. They represent about 14% of the global oil reserves and about 51% of the world's accessible reserves. They are essential for Canada's energy security.

National security also has to include a view on how the resources will aid in the creation of jobs in Canada. We see the oil sands creating thousands of well-paid jobs for decades to come and adding billions of dollars to the national tax base.

One of the unique international aspects of our Canadian oil sands development is that the government approvals are subject to a rigorous regulatory regime that is open to scrutiny from the citizens of Canada.

I'd like to focus for a moment on the benefits of our local communities in the regions, because we spend a great deal of time and energy creating those direct and indirect opportunities.

We're very active in the local aboriginal communities nearest to our oil sands assets. We work to create capacity to ensure community members fully benefit from the oil sands developments.

In the development and construction of Surmont 1, more than \$60 million was spent on services provided by local and aboriginal businesses and contractors. For Surmont 2, we plan to spend \$175 million on services provided by local and aboriginal businesses and contractors.

  (1545)

We work to ensure that we have contracts and activities of a size and scope so that local communities can participate in the development of these assets. We believe that in doing so, over time, sustainable businesses will thrive in these communities and they will be able to add capacity and further participate in even larger ways on larger developments. We also provide substantial amounts of funding for community-level programs—



**Hon. Denis Coderre (Bourassa, Lib.):**

A point of order.



**The Chair:**

A point of order, Monsieur Coderre.



**Hon. Denis Coderre:**

It's a nice point of order.

Would you speak a little slower? There are some fumes coming out of the translation.



**Mr. Joe Marushack:**

I would be happy to.



**Hon. Denis Coderre:**

Thank you. That was a nice point of order.



**The Chair:**

Continue, please, Mr. Marushack.



**Mr. Joe Marushack:**

I will slow down, sorry.

We provide a substantial amount of funding for community-level programs. This includes important local community initiatives and training.

With regard to oil sands technology, we're planning to spend over \$300 million over the next five years to advance heavy oil technology for our worldwide operations. A significant portion of this will be spent in the oil

sands to improve environmental and economic performance of our projects.

Our technology development is focused on managing greenhouse gas emissions, reducing water use, and minimizing land disturbances. I could cite several examples, and would be happy to do so, but in general, each concept is either focused on reducing the steam-oil ratio, improving recovery, lowering our greenhouse gas emissions, or reducing the size of our oil sands footprint. Improving our environmental performance has a dual benefit in that less water, energy, or land almost always improves economic performance.

Our technology program is exciting, but we're also doing other work to reduce our impact through pioneering best practices. Faster forests is one example. We have planted 130,000 trees so far in this program for reclamation and will be expanding that effort. We have a comprehensive sustainable development portal on the web, and that has many more details about our programs. I invite you to visit it.

In addition to industry's role in the oil sands development, it is obvious that government plays a significant part in securing and delivering the value of these resources. Specifically, we believe governments should support the continuation of a world-class and cost-effective regulatory system and the establishment of fair policies for industry that encourage responsible and economically viable oil sands development.

One of the key attributes of the Canadian regulatory process is its transparency. We believe government policy must ensure access to markets and fair international competition for bitumen. We encourage maintaining competitive fiscal regimes that enable companies like mine to compete for capital within our global portfolios. We believe governments have responsibilities to develop coordinated climate and energy policies that promote energy efficiency. We're open to discussions about how governments can best support and facilitate technological developments.

In closing, ConocoPhillips believes oil sands developments will enhance Canada's economic energy security. Development of these assets can be achieved in a manner that powers our national economy, preserves and creates jobs, and ensures quality of life for Canadians. We're proud to be part of this exciting future. I'm honoured to be with you today and would be pleased to answer any questions you may ask.



#### **The Chair:**

Thank you very much for your presentation, Mr. Marushack, president of ConocoPhillips Canada.

We go now to our final presenter for this panel, by video conference, from ARC Financial Corp., Mr. Peter Tertzakian, chief energy economist and managing director.

Thank you very much for being with us today, and for your patience. Go ahead with your presentation, for up to seven minutes.



#### **Mr. Peter Tertzakian (Chief Energy Economist and Managing Director, ARC Financial Corp.):**

Thank you, Mr. Chairman and the committee, for inviting me to speak.

Just as a quick background, I am chief energy economist and managing director of ARC Financial. ARC Financial has been around for over 20 years. In the past 10 to 12 years, it has raised \$2.7 billion from domestic and foreign sources to invest in Canada's energy industry, predominantly the oil and gas business. We are investing mostly in oil and gas and oil and gas services, including the oil sands, and we continue to do so.

The topic today is energy security, in particular with respect to the oil sands. Energy security, as I think of it, has a number of different dimensions. It's a relatively nebulous term. We can think of security as either being our own Canadian security, continental security, or if the world feels secure in its energy needs that makes us all feel secure. To me, it's a rather difficult question or context to be speaking in.

I'm not an environmental expert on the oil sands. My expertise spans a couple of different dimensions. One is understanding how societies evolve with their energy needs and fulfill those energy needs on the supply side, and the changes that occur over time as unsustainable events occur. I translate those trends into investment theses, which my firm then takes and decides how to allocate capital into different types of energy systems and commodities.

I'm also following very closely the Canadian oil and gas business in terms of the financial flows, how it is that the Canadian oil and gas industry has evolved over the last 100 years, and what it is that makes it profitable or not profitable. The oil sands are indeed a very large part of that.

I will speak about the oil sands, but I have to tell you that speaking exclusively about the oil sands is a very limiting conversation. I do believe you really have to look at the hydrocarbon economy in general within Canada: conventional oil, oil sands, and natural gas all together. I don't really think you can disaggregate one of those commodities out of the other, because they all tap into the same labour pools and the same capital pools. So again, it's complex to be thinking about isolating just the oil sands out of the entire industry.

I am going to highlight two big issues that face us as Canadians and the industry. But as a backdrop to that, the sale of all upstream hydrocarbon products—oil, oil sands, and natural gas—amounts now to about \$100 billion a year, or \$270 million per day. The sale of oil sands products as a total of that \$100 billion is about \$36 billion per year. It is actually the largest product selling commodity in Canada.

The things that concern not only my firm but also me as a Canadian citizen are that we have made a conscious decision for almost a century to export our hydrocarbons. I'm very concerned that we are not maximizing the value of those hydrocarbons in a global context. In other words, we sell our hydrocarbons at a discount, and we, as Canadian citizens, are not optimizing the value. The principal issue is that we are selling into one market, the United States market, which now has a flat to declining demand. It is also not as wanting of our hydrocarbon commodities as other global players.

If we consider that the discount we are receiving, whether it's on the natural gas side or the oil side...we conservatively estimate that at 10%, that is a \$10 billion a year loss of revenue. Every Canadian should be very concerned about this and the royalties and taxes that are mitigated as a consequence of this. The discounts are not narrowing; they're actually widening.

  (1550)

The second big issue I'd like to highlight is that this \$100 billion a year that comes into our economy, in particular the \$36 billion from the oil sands, which is growing, is a very large sum of capital. And \$55 billion of that \$100 billion is reinvested back into the oil and gas economy.

We in Alberta in particular are a very small labour pool. That means we are very susceptible to wage and service inflation. And these inflationary pressures are building up again. That is a detriment not only to the oil sands, as costs go up and commodities are potentially priced out of the global market; it's also inflation that spills over into other segments of the economy and certainly into other segments of the hydrocarbon economy. The inflationary forces are something we need to be very concerned about. They spill over into issues such as human resources and how we are going to tap into skilled labour and labour pools going forward.

That's a backdrop to some of my thoughts. As I said, two big issues as they relate to the hydrocarbon economy, in particular the oil sands, are first, not maximizing the value--having widening discounts, which we are seeing for both natural gas and our oil products--and second, the cost inflation we see.

I'm going to leave it at that. If the discussion takes us into other areas of concern, I can highlight those as well. But in the context of the time I have, that's all I'd like to say.

  (1555)



**The Chair:**

Thank you very much, Mr. Tertzakian, for your presentation today from ARC Financial Corporation.

We'll go now directly to questions and comments, starting with the official opposition.

Monsieur Coderre, you have up to seven minutes.

[*Translation*]



**Hon. Denis Coderre:**

Thank you, Mr. Chair.

I am impressed, once again, by the quality of our witnesses today. Ms. Dowdeswell,

[English]

you spoke about lack of leadership and lack of scientific rigour. You talked about the lack of monitoring. And I agree. I myself went out in the field, and that's the first thing you realize. You have the federal government. You have the provincial government. Some in the industry are saying that we should get our act together. There's a role for both to play, of course, while respecting jurisdiction and conventions.

This will sound like a political question, but it's not. Since you feel that the monitoring process is not that accurate right now, if you were able to take a decision...? There is more and more productivity. There are more and more projects. I'm against a moratorium, for the record. Do you think we should slow down new projects and wait for those monitoring processes, for the sake of quality of life or for the sake of the industry itself, so that they might not have a bigger problem in the future? How do you perceive that? With your round table, with your panel, you had those kinds of issues to look at. If the scientific data is not all accurate, of course....

I also met Mr. Schindler, who had some of his data. Like him or not, he's scientific, and he has credentials. I think the best way to address credentials is with other credentials.

How do you perceive monitoring versus new projects?



**The Chair:**

Ms. Dowdeswell, go ahead.



**Ms. Elizabeth Dowdeswell:**

I believe the panel's approach was to say that there are some fundamental principles that should guide a world-class monitoring system, and while we said the current situation was lacking, we also were very quick to say it could be fixed.

In my mind the primary issue is not one of time but one of willingness to come together in a comprehensive and coherent way so that individual jurisdictions can do what they are mandated to do, but they do so within a framework and with a common vision about what direction they're headed in. That way everyone knows what the ground rules are, and they can also harness the best resources they have. In some cases, on some elements of monitoring in some geographic locations, industry is vital, and the contribution it makes to the development of technology is crucial.

On the other hand, you may in fact want to effectively use the resources you have in a local community, not in an ad hoc way and not as part of a patchwork quilt, but rather with a coherence so that people know what vision they have, what they're working toward, and what part they play in achieving that.

Some of the kinds of principles we suggested had to do with transparency and accessibility, so that in fact each person knows what the others are doing. They don't know now, and consequently there are gaps not only in what we are monitoring but in people's understanding. Consequently, I think the fundamental part, the fundamental premise of our work, was that if we want effective policy for the environment and for the economy and for the well-being of our citizens, we need to make sure we're all operating with good data. You are going to have that data only if you have a sound monitoring system in place.

(1600)



**Hon. Denis Coderre:**

Who should be in charge?



**Ms. Elizabeth Dowdeswell:**

I think, as we said in our report, this is a question of multi-jurisdictional complexity and challenge. That's the nature of Canada, and certainly in the environmental field.



**Hon. Denis Coderre:**

I'm from Quebec. I understand.



**Ms. Elizabeth Dowdeswell:**

We described this as a socio-scientific project that actually does require visionary leadership by all parties involved, and that's why establishing that vision and then deciding who does what part of it best, who has the mandate to do which part of it best, is really the conversation that needs to take place.



**Hon. Denis Coderre:**

Would it be accurate to say that you need a process--monitoring--and you need good principles attached to it through your grid--transparency and accountability? There is kind of a vacuum between some of the jurisdictions.

Do you think you can manage all those issues by having a Canadian national strategy?



**Ms. Elizabeth Dowdeswell:**

I believe if there is a wish to have a world-class system for the purposes of ensuring we are stewards of our environment, ensuring we are economically viable as a country, and ensuring there is equity for citizens of Canada, then surely, with a common vision, we can in fact design a program, use what we already have, and really build on the resources that are available.



**Hon. Denis Coderre:**

Thank you.

Mr. Tertzakian, regarding competitiveness, do you believe the federal government should get rid of tax breaks and subsidies to the industry and instead reinvest in innovations in the technology? Do you think that with all the money they're making right now, those tax breaks are a necessity?



**The Chair:**

Go ahead, please.



**Mr. Peter Tertzakian:**

Thank you.

With respect to your phrase "with all the money they're making", actually, I can demonstrate to you that the oil and gas industry over the long term achieves its cost of capital and just a little bit more. There are periods in the history of the oil and gas business where they achieve returns above normal and plenty of periods where it's below normal. So I don't believe that any change--



**Hon. Denis Coderre:**

No, I agree with that. I understand that.



**Mr. Peter Tertzakian:**

In terms of innovation, the business over the last 150 years has demonstrated a great ability to innovate and become more productive. I think the issue I'm pointing out is the access to skilled people to be able to effectively develop these resources that are such a vital part of our economy. I think the federal government needs to be thinking about how it is that this industry is going to be able to attract--and from where--skilled people, because we probably don't have enough in this country to be able to fulfill the needs of the business, which is only going to breed potentially more.



Although you don't feel the inflation in other parts of the country, I should remind you that the last time we saw this sort of activity in this area--between 2005 and 2008--the inflation rate within the business was running at around 14% per year. The conditions for that kind of inflation are brewing again if you look at the labour statistics and the service statistics. I think in terms of competitiveness, what the government can do is try to address how it is we're going to attract people to keep our costs contained so that we remain globally competitive with these commodities going forward.

  (1605)



**The Chair:**

Thank you, Mr. Coderre.

We go now to the Bloc Québécois.

Madam Brunelle, you have up to seven minutes. Go ahead, please.

[*Translation*]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Good afternoon, madam and gentlemen. I thank you for coming here today.

Ms. Dowdeswell, you chaired an advisory panel on tar sands. I would like to know who appointed the members of the panel. Were you been appointed by the government? Were you supposed to submit your report to the Minister of the Environment or to the Minister of Natural Resources?

[*English*]



**Ms. Elizabeth Dowdeswell:**

We were asked to undertake this task by the former environment minister, the Hon. Jim Prentice, and we were appointed directly by him.

[*Translation*]



**Ms. Paule Brunelle:**

Alright.

In your statement, you said that the monitoring system was insufficient, that scientific data were unreliable and that you suggested some key elements to improve the situation.

We received, from the Commissioner of the Environment and Sustainable Development, a letter concerning the impact of climate change. It says:

The lack of a federal strategy and action plan has hindered departments' efforts in coordinating actions to address the effects of climate change. The audit found that for the most part, the departments examined have identified and assessed the potential impacts of climate change on their assets and program activities, but that they have taken few concrete steps, such as adjusting or developing policies and programs, to respond to these impacts.

Thus, we are told that few concrete steps have been taken. I link this with what you tell us about the need for new governance models. If there is no strategy or government action plan and if we need new governance models, who is going to come up with a solution to this situation?

[*English*]



**Ms. Elizabeth Dowdeswell:**

Well, I would hope that one of the results of our brief study was to put the issue on the table and to actually make some suggestions. I think there is evidence that it was taken seriously by the minister on behalf of the government, and certainly tackling the first phase of it...we have yet to see what those results will be.

But I think it's safe to say that the panel would very much concur with the Commissioner of the Environment and Sustainable Development that there are gaps in the system now, and we question whether or not we have the basic data that's going to allow us to adapt to future change, and such fast-paced change as will exist.

[Translation]



**Ms. Paule Brunelle:**

Your answer, nevertheless, leads me to believe that this remains worrisome. You mentioned the Athabaska River, you mentioned Dr. Schindler's report which has been criticized by some but supported by others. Nevertheless, we seem to be late in our response to environmental impacts.

With vague comments like yours, can we expect concrete results or, 10 years from now, will we find ourselves at this same table, talking about the same situation, with an environment even more deteriorated and native people more and more desperate?

[English]



**Ms. Elizabeth Dowdeswell:**

I believe our report would give the reader the understanding that there is an urgency in dealing with this and, as importantly, a need to deal with it in a systemic way. Right now we deal with things in bits and pieces, in fragmentation. We don't link the water quality to groundwater. We don't make the link, or at least there are gaps in our understanding of groundwater.

There are gaps in our understanding of the cumulative effects over time across all media, and certainly the impact you're having on neighbouring jurisdictions. We're saying that until you have a sound monitoring system in place, you're always going to have debates about the quality of the data. Consequently, people will be hesitant to actually use the data in developing good policy.

So there are a lot of gaps. There is a lot of opportunity for technological developments. There are all kinds of opportunities for bringing this together if there is a system and the will to do that.

(1610)

[Translation]



**Ms. Paule Brunelle:**

Mr. Marushack, you said that you were going to invest 300 million dollars to develop technologies for oil sands. What type of technologies are we dealing with? Is it to increase production levels? Is it for carbon capture and sequestration? What do you want to do?

[English]



**The Chair:**

Go ahead, please.



**Mr. Joe Marushack:**

What we do with the technology is really based on a number of different factors, all of which are related. For instance, right now we're testing ceramic membranes in order to separate the oil and water more efficiently.

We're investing in vacuum-insulated tubing in order to reduce our emissions.

On everything we're trying to do in all of our technology, there are really three phases, and they come together. They're intended to reduce our steam-oil ratio, which reduces our greenhouse gas emissions. They're intended to reduce our water consumption, which makes good economic, environmental, and business sense. Finally, we're trying to reduce our footprint as well. All of those things are environmentally sound, good from a safety standpoint, and good business decisions.

[Translation]



**Ms. Paule Brunelle:**

Do I have time left?

[English]



**The Chair:**

Make it a very short question.

[Translation]



**Ms. Paule Brunelle:**

So, you want to reduce your ecological footprint.

Do you think that you are doing enough research to progress rapidly?

We know that governments and companies have counted largely on carbon capture and sequestration projects, which some scientists do not judge really useful, necessary or performing.

Do you think that you are doing enough?

[English]



**Mr. Joe Marushack:**

On whether we think we're doing enough on research and development, I guess my answer is that we're doing a lot. We're doing what we think is appropriate at this time. We believe we're putting a substantial amount of commitment into this and a substantial amount of people into it. Whether we're doing enough, I don't know, but we are doing a lot, and we're very committed to what we're doing to improve our environmental and safety footprints.

[Translation]



**The Chair:**

Thank you, Ms. Brunelle.

[English]

Mr. Cullen, you have up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Thanks, Chair, and thank you to our witnesses.

Ms. Dowdeswell, some have commented that the concern about the impact on water quality--that was the focus of your work--by the oil sands was simply a public relations concern rather than an actual concern; it was just a matter of getting the message out about the impact of the projects, more than understanding the impacts themselves. I've heard this from a number of industry leaders and various ministers of government.

Let me ask you that question directly. Do you think this is simply a public relations exercise to get better at the water quality monitoring around the oil sands?



**Ms. Elizabeth Dowdeswell:**

May I ask a question in return?



**Mr. Nathan Cullen:**

Sure.



**Ms. Elizabeth Dowdeswell:**

On the part of whom is it a public relations exercise?



**Mr. Nathan Cullen:**

It's on the part of both industry and the Government of Canada. The only task needing to be done is to make the public relations exercise better and clearer. That will alleviate concerns of the public, and everything will be tickety-boo.



**Ms. Elizabeth Dowdeswell:**

Certainly those witnesses, those people with whom we interacted for that brief 60 days, were absolutely consistent in saying that we need a better system.



**Mr. Nathan Cullen:**

Full stop.

**Ms. Elizabeth Dowdeswell:** Full Stop.

**Mr. Nathan Cullen:** So it's more than just the way it's communicated; it's the system itself.



**Ms. Elizabeth Dowdeswell:**

That's right. We need a better system.



**Mr. Nathan Cullen:**

You sound quite optimistic about the potential to improve the system. You say the working parts are there.

What's concerning to me is that when Dr. Schindler or others raised concerns, those concerns were often dismissed, not just by oil companies but also by the current government, as being crackpot science or not legitimate. But in your report, and I'm quoting, it says that "a statistically sound decision-making process that can allow for adaptive management in a rapidly changing oil sands environment does not exist". The report goes on to say, "It is not producing world-class scientific output in a transparent, peer-reviewed format and it is not adequately communicating its results to the scientific community or the public."

You sound as if you confirmed that the monitoring of the projects was not sufficient, was not transparent, and was not statistically accurate. There is not just a perception of doubts; there are legitimate doubts over the numbers coming in over the water quality.

With respect to the pace of development, which you also recognized, your committee didn't make a recommendation on whether projects should continue to be approved without an adequate means of monitoring

them. You say that projects are overrunning sites that are being set up to monitor the water quality. The sites are being destroyed by new projects that weren't even envisioned when you set up the site in the first place. Is that true?

  (1615)



**Ms. Elizabeth Dowdeswell:**

I think the view of the panel would be that it was not their mandate to determine the future of the oil sands.



**Mr. Nathan Cullen:**

Right.



**Ms. Elizabeth Dowdeswell:**

We were asked to look at what would make a world-class monitoring system, and to assess whether or not we had one. It was our judgment that we do not.



**Mr. Nathan Cullen:**

That's helpful.

Mr. Marushack, we've heard from a number of energy companies, oil companies, that there is a need for a Canadian energy security strategy. There isn't one strategy governing this country in energy development, use, or export. Does your company confirm that need?



**Mr. Joe Marushack:**

I can only tell you what we're doing. We're trying to provide information. We're trying to participate on panels. We're trying to put our message out that we think we need a system that encourages lots of different developments, and we think we need a system that's transparent and competitive between this country and other countries.

I would say that we're participating in providing the information so that energy strategies can be made by those governments.



**Mr. Nathan Cullen:**

Certainty is a big thing to your company. You're a large company. You've got \$152 billion in assets, \$142 billion in revenue this past year. You make long-term plans.

The minister recently confirmed a policy statement by the Prime Minister saying that Canada's policy is not to export raw bitumen to jurisdictions with lower environmental standards.

Are you aware of this policy?



**Mr. Joe Marushack:**

I am aware of the actual amount of production that is upgraded in this country, and I'm aware of the amount that goes to the U.S. and is upgraded there, or refined there. Those are the things I'm primarily aware of.



**Mr. Nathan Cullen:**

My question is specific. The Prime Minister himself, and his minister in charge of this file, has said it is Canadian policy not to export raw bitumen.

We had the Alberta Heartlands Industrial Group in front of us. They had a report commissioned by the federal and provincial governments that showed a loss of revenue to government and a loss of jobs resulting from

refining outside Canada, taking raw bitumen and exporting it, whether it's to the United States or to other countries.

So there is the economic loss to Canada and the apparent policy that we are not exporting to anywhere with lower standards, which, I assume, includes China, Korea, and the Asian states. I would think this would have an influence on whether you involve yourselves in an oil sands project that has raw bitumen exports. These are major investments your company is making.



**Mr. Joe Marushack:**

Yes, and I believe that 75% of the bitumen is upgraded right now in this country. The rest goes to the U.S.

There is extra capacity in many of those refineries right now. They're not at full rate. They're capable of processing heavy crudes, much like we produce here. So it makes sense to have some of the bitumen go down to be processed in those facilities, at least until the others are fully up to speed.

My concern with labour is that there's not enough labour right now. In the projects we're working on in the oil sands, there is much opportunity, a lot of aboriginal opportunity. We actually have trouble getting enough skilled labour.



**Mr. Nathan Cullen:**

Then I'm confused why.... One would imagine that in an energy security strategy for Canada, labour would be one of the questions and environment would be one of the questions that would be built into such a strategy. I'm surprised that you're not more enthusiastic, as some of your competitors are, about having a Canadian energy security strategy that would include some of the concerns that you're.... It just doesn't feel as if there's much of a plan.

Former Premier Lougheed and others have said, "We lament that we didn't have much a plan for this, that it was too rushed." Now we're hearing that the environmental monitoring that's meant to be put in place doesn't meet the capacity of what already exists, let alone what is proposed; that you're running out of workers and don't have enough workers to get the job done.

All of these pieces seem to be in want of some sort of coherent leadership from the federal and provincial governments.

I'm surprised that you didn't just answer yes to my question about the need for such a strategy.

  (1620)



**The Chair:**

Go ahead, please.



**Mr. Joe Marushack:**

All over the world we live within the regimes that are put into place. The government puts in the regulatory regime, the environmental regimes, the requirements. We evaluate those and then we develop the projects accordingly under those plans. So we will—



**Mr. Nathan Cullen:**

If there were one, you'd work under it; that is essentially what you're saying.



**Mr. Joe Marushack:**

We will provide information to it, we'll try to provide what we think is the right direction on some of those things that help with the developments, and then we will live under the existing laws, yes.



**The Chair:**

Thank you, Mr. Cullen.

We go now to the government side, to Mr. Anderson, for up to seven minutes.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Thank you, Mr. Chair.

I always find it a little ironic that my NDP colleagues oppose oil sands development but then really want to protect the jobs that are there, apparently. They think they need to support both, if they're going to support one.

Ms. Dowdeswell, you said that you had strong support for a better system from everyone.

Do you get the feeling that there's a sense of willingness to improve? Was that genuine, that there is a real interest in improving?



**Ms. Elizabeth Dowdeswell:**

Yes.

We had, first of all, absolute cooperation from anyone we asked to speak with or receive information from. In most of the sessions, when I was talking to people, I ended by asking, "So how can I help you?" This rather surprised them, but the point of my message was to know what it was I could recommend that would help them either remove roadblocks or pave the way for a more certain future, either economically or environmentally. We didn't differentiate; we didn't put one against the other. That wasn't our view at all.

Many people felt damaged by the lack of trust and confidence of their citizens, and they particularly felt angry at the view that was being held in many places internationally. They genuinely asked how they might deal with that, saying that it might be wrong and they might not believe it, but wondering what it is that is actually going to allow them to be proud and stand up and say, we have a world-class system in place.

When I hear that discussion and debate, I see that there is a genuine desire for people to be part of it. Now, when it comes to the specifics of any program or plan or design, certainly there will be argumentation; there will be debate back and forth.

But if you ask me the straightforward question—were people genuine?—I would have to say yes.



**Mr. David Anderson:**

Thank you.

Mr. Marushack, Mr. Cullen was just talking a little about exporting bitumen and the products from the oil sands.

Is there a need for a pipeline to the west coast, in your company's opinion?



**Mr. Joe Marushack:**

I believe it would be helpful to have more outlets for the product we make here, yes.



**Mr. David Anderson:**

I assume that means both expansion and/or a new pipeline?



**Mr. Joe Marushack:**

Yes.



**Mr. David Anderson:**

Mr. Tertzakian, I wanted to ask you a couple questions about.... You said you felt we weren't optimizing the value of our resource. I'm wondering whether you have a couple of suggestions for how we might do that. We're looking at energy security, and certainly optimizing the value of the resource should be of concern to us.

I think my colleague is later going to talk a little more about the labour market, but I'd like to focus on this. Then I have a couple of specific questions, if I can get to them, about shale gas. I assume you've done some work on that as well in your estimates for the future.



**The Chair:**

Go ahead, please, Mr. Tertzakian.



**Mr. Peter Tertzakian:**

Optimizing the value of our resources, given that we have made a conscious decision to be exporters of meaningful quantity, means that we need market diversification.

I certainly support access to the west coast for both oil and natural gas, to be able to export these global commodities to other markets, whether it's in Asia or beyond. That would certainly help us get away from being hostage to the weather in Chicago, or pipeline breakages, or refinery fires, or just lack of capacity in a market—the United States—that, as I have mentioned before, is now flat to declining in overall energy demand.

(1625)



**Mr. David Anderson:**

Your main call is to try to diversify our markets, you're saying.



**Mr. Peter Tertzakian:**

Yes, absolutely. The global prices are higher than the continental prices.



**Mr. David Anderson:**

Okay. Good.

I want to talk a little about the value of investment in shale gas. We've spent a couple of weeks talking about it. I know today is not specifically about that, but do you have any idea of the potential values of investment in New Brunswick, Quebec, and British Columbia?



**Mr. Peter Tertzakian:**

I can speak to British Columbia. It's pretty high. The natural gas business—I have the numbers here—is substantial. It's about 37% of the \$100 billion in revenues, so it's \$37 billion. A large fraction of that is in Alberta, but it's expanding more into B.C.

The important thing to remember about the oil and gas business is that it re-invests almost every dollar of cashflow back into the ground. That is unlike most other industries in Canada. So the dollar value in Quebec and New Brunswick, as the production grows, is very substantial.



**Mr. David Anderson:**

Let's talk a little about foreign investment, in particular in the oil sands. I'm wondering whether there are things you want to say about that. What is the level of foreign investment there? Is this something for which we should be looking for larger foreign investment? Do you have any thoughts on that?





**Mr. Peter Tertzakian:**

Sure. It's already coming. In the last 18 months, \$17 billion worth of foreign capital has come into Canada that is not from the United States or Europe. In 2010 alone, there was \$10 billion, most of which was directed toward the oil sands.

The oil and gas industry, because it is so capital-intensive, has always historically been very dependent upon access to foreign capital, because we don't have enough of a capital base here in Canada to develop these resources ourselves. The balance of where that capital comes from is shifting. Historically it has come from the United States and to a certain degree from Europe, but now the large quantum of capital are coming from Asia, and I believe we are going to need more, if we want to maintain the level of investment and prosperity that we derive from this industry.



**Mr. David Anderson:**

Do you see the majority of new money, then, coming from that Asian area? I wonder whether you could talk a little about some of the benefits and drawbacks of that shift in investment.



**Mr. Peter Tertzakian:**

The debt and equity that come in under normal circumstances is not all going to come from there. It's still about \$10 billion per year that comes in.

Actually, no; debt plus equity is closer to \$15 billion to \$20 billion per year. I can get you the numbers.

It is going to become increasingly important that we be amenable to having investment from other parts of the world come in, as we cannot always count on the capital being there from traditional western sources. We're going to need more and we have to be open to it.



**Mr. David Anderson:**

Are you comfortable, then, with investment from foreign state-trading enterprises in our national economy?



**Mr. Peter Tertzakian:**

Yes.



**The Chair:**

Okay.

Thank you, Mr. Anderson.

We go now to the second round, starting with Mr. Tonks, for up to five minutes.



**Mr. Alan Tonks (York South—Weston, Lib.):**

I'd like to follow up on that last question that Mr. Anderson asked.

Mr. Tertzakian, when we were talking about Ontario and the acquisition of natural resources assets there, the issue of Chinese capital through state-owned corporations came up. What is the difference between private capital coming from Asia—in particular, China—and the issues related, I guess, to the value and culture system and interests of Chinese state-owned corporations? And does that source have implications with respect to whether we should tie that capital investment to a different protective regime, if you will?

(1630)



**The Chair:**

Mr. Tertzakian.



**Mr. Peter Tertzakian:**

I'm not an expert on cross-cultural issues. I can just tell you that the world is becoming more global. Other countries in the world--like Australia, which is also very resource-rich--are very active in dealing with the Chinese and other countries. It's not exclusively the Chinese; it's Indian capital, Thailand capital, Korean, and Japanese.

If we are going to isolate ourselves and be scared of accepting capital from these sorts of countries, competitively we are going to be left behind.



**Mr. Alan Tonks:**

Yes. I think it was in relation to fair trading practices and fair state issues with respect to labour standards and that kind of thing, and there were concerns raised. But we'll leave that for the moment.

My question is to Ms. Dowdeswell.

Ms. Dowdeswell, in the Royal Society of Canada report there were a couple of recommendations on which I'd like to get your response. When we were talking about shale gas, we were talking about the cumulative effects and the lack in the environmental regime of establishing clear assessment of cumulative effects for flowback water and the content of that water in terms of the impact on the water tables, and so on.

I notice in the Royal Society of Canada report there are two flags that have been raised. The first one is in terms of the regional cumulative impact on groundwater quantity and quality, which has not been assessed, and they're transposing that to the environmental assessment process.

And the second is the last recommendation--at least that we have before us--that environmental data access for cumulative impact assessment needs to be improved. That is a general statement with respect to the general regulatory regime in Alberta.

My question to you is, given those caveats and those concerns, how do you see the public's confidence, especially on new applications, being guaranteed if there isn't any immediate response to those kinds of concerns that have been raised through the Royal Society of Canada's report?



**The Chair:**

Ms. Dowdeswell.



**Ms. Elizabeth Dowdeswell:**

First of all, the panel would concur with what the Royal Society, in its report, said about cumulative effects. We raised that ourselves, and I think it is important that that be done.

I cannot speak to the motives of Environment Canada, but I can say that the minister's commitment to immediately starting work on the kind of coherent monitoring plan that would address those issues is under way, to the best of my knowledge.



**Mr. Alan Tonks:**

And how rigorous is the reporting back with respect to that? Is there a targeted date?



**Ms. Elizabeth Dowdeswell:**

The minister committed to releasing a plan within 90 days, and depending on whether or not you count weekends or just work days, that should be toward the end of March, I believe.



**Mr. Alan Tonks:**

Okay.

Do I have time for just one short one to Mr. Marushack?

Mr. Marushack, just in terms of the point that was raised on capital, if you were to prioritize the reinvestment strategies with respect to in situ mining--and I understand you're not involved in open mining--where would the technology priority be that would assuage the concerns the public has that the footprint is not being narrowed? In fact, application after application seems to be just widening that footprint, perhaps unnecessarily. Where would it be that you would tactically suggest the maximum return could be made on an investment in technology?



**The Chair:**

Briefly, Mr. Marushack.



**Mr. Joe Marushack:**

I'll answer only from the in situ standpoint here. Right now I believe we're making great strides in this. Roughly 95% of the water we use is recycled water. We don't take any water from open sources and none from the Athabasca River. We're using non-potable water; effectively it's not quite saline, but it's non-potable water.

So I really think that the technology we're using right now... When I came over to this particular job from Australia, I was very impressed with the level of technology that's being used right now.

The next major step that we need to do, in my view, is getting that steam-oil ratio down, and we're looking at that by... If you use less natural gas, you could have less steam, you could have fewer greenhouse emissions, and that's a real focus area for us, as well as the water usage.

(1635)



**Mr. Alan Tonks:**

Thank you.

Thanks, Mr. Chairman.



**The Chair:**

Thank you, Mr. Tonks.

Mr. Allen, up to five minutes, please.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Chair, and I thank our witnesses for being here today.

Mr. Marushack and Mr. Tertzakian, I want to follow up on some of the labour issues and the inflationary pressures.

Mr. Marushack, what are the types of skills...? Obviously, it's a different skill base in situ as opposed to the open pit, in terms of the profile of people you're actually going to need. I'm assuming there is a little less resource profile on the in situ side than the open pit as well, but what are the kinds of skills that you are looking for? Is it a broad range from skilled trades? Is it a combination? You said you had 2,000 employees in Canada today. What is the anticipated demand that you're looking at over the next five to ten years?



**Mr. Joe Marushack:**

Mr. Chair, in short, just about everything. To be specific, we're looking at how we, first of all, employ people who have our safety culture. That's the most important thing to us, to make sure we don't have a number of safety issues. We're training people on that. That goes all the way from engineers to the people who actually do the grubbing and construction work out on the field.

The second thing is we're looking at how we make these contracts small enough so that aboriginal people and people in the local communities can actually participate. Those would be things like clearing the ground, reclaiming the ground, ditching, pipeline work.

Then we go to the next level of work. We need everything from pipefitters to welders, to construction people, to mechanics. We need operators. We need skilled people all the way up to the engineers and geologists, so that we know how to best reclaim, how to best produce this product, and how to do it to get the most recovery, get the best technologies out there. It goes all the way up to scientists looking at how we take that new technology and make a step change in how we're producing this. It goes all the way from unskilled to very, very skilled people. We need more of everything.



**Mr. Mike Allen:**

What are the types of things you're doing at ConocoPhillips to actually build that workforce? I know we've got a significant number of people from Atlantic Canada who are working out west right now. As development proceeds in Atlantic Canada on shale gas, potentially, on the development of the Lower Churchill and other developments, we're going to require a bunch of people back in eastern Canada, which will probably draw on that labour pool. What are you doing as a company to actually get people? What do you see as key success factors? Is immigration going to solve the problem? Are there other incentives to get people in the workforce? What is it?



**Mr. Joe Marushack:**

Mr. Chair, we're working with universities. We spend quite a bit of time working with the universities on various programs. We are talking to engineers, to geologists. We spend quite a bit of time working with a lot of the aboriginal communities to try to describe what our projects are and what kind of skill level we need. We try to provide training and educational assistance.

It is a very, very large issue. We try to do relatively smart things with our development. A lot of times you'll have a project and you'll have a lot of labour at the end. We're trying to level out those things so that we can better match up.

I don't have huge numbers of solutions. I think it's a wonderful opportunity for Canada to have this many jobs, relatively high-paying, long-term jobs. I'd also like to make the point that this isn't a five-year phenomenon; this is going to go on for 50 years. We have time to train folks, and then they can expect long-term employment on these particular activities.



**Mr. Mike Allen:**

I was intrigued by some of the numbers. At the dip in the economic downturn, we had an unemployment rate of slightly over 8%, which is masking a bigger problem that we have in the economy from a resource pool standpoint. I agree. I'm a little concerned with that side of it.

You commented about a competitive fiscal regime. Maybe you and Mr. Tertzakian could both comment on this. What are some of the key things you see as part of the fiscal regime for you to be able to attract capital?



**The Chair:**

Mr. Marushack, if you could answer in about 30 seconds so we could give Mr. Tertzakian an opportunity to answer as well....



**Mr. Joe Marushack:**

Yes, sir.

I look for predictability. I look for sustainability. I look for whether the economy right there has a good regulatory regime, a good government regime and a stable government. What I'm saying is, if we're going to invest several billions of dollars, we'll invest it up front, but we need to get that back over time. I look to make sure there aren't ups and down in the tax policies and fiscal policies and that we have faith the government we're investing in is going to remain true to form, if you will.

  (1640)





**The Chair:**

Mr. Tertzakian.





**Mr. Peter Tertzakian:**

I agree with everything Mr. Marushack said about the fiscal regime. I also agree with him about the labour, except for one thing, and that is that I think it's an immediate problem. I don't think this is a solved problem that spans 50 years. I think you're going to see inflation within this business creep up.

You mentioned that at the dip, the unemployment rate was 8% in Alberta. Now it's down to 5.5% to 6%, but that's for the province as a whole. Within this business, I would suggest to you, the unemployment rate is about 0%. In the next month or two we will probably be above 155,000 workers in the oil and gas business, which was where we were when it peaked in early 2008.

So I think the people issue is acute. The thing that happens is that wages start going up, services start going up, and they're sticky on the way down. So we progressively price ourselves out of the global market. What I mean by that is we become the highest-cost producer of oil in the world and we become progressively more vulnerable to any weakness in price, any volatility in price.

So to me, it's a much more urgent issue. I personally am a believer in figuring out immigration, intelligent immigration policies that are streamlined to be able to ward off the potential inflationary problems that we saw between 2005 and 2008.





**The Chair:**

Thank you, Mr. Allen.

Monsieur Pomerleau, up to five minutes.

[*Translation*]





**Mr. Roger Pomerleau (Drummond, BO):**

Thank you, Mr. Chair.

I thank the three of you for coming here today to share with us such interesting experiences.

My first question is for you, Ms. Dowdeswell. You have chaired the Advisory Panel on Oil Sands. I don't know you and I only ask you this question to know who you are. You seem to have a very good knowledge of the subject and related matters. What was your experience and why have you been chosen to chair that panel?

[*English*]





**Ms. Elizabeth Dowdeswell:**

I think I was chosen because of experience in chairing a wide variety of panels on a wide variety of issues.

However, I also spent five years as Under-Secretary General and head of the United Nations Environment Programme. I also had experience working with industry on the question of nuclear waste and working with government, both in Environment Canada and other departments.

I was not the physical scientist on the team; the other five were, and they covered the range of expertise from geology to biology--the full range of expertise. I was the person who had the experience in managing panels and bringing them together to arrive at some consensus. I would say that my work experience has primarily been around issues of governance and organizational development.

[Translation]



**Mr. Roger Pomerleau:**

Then, choosing you was a good decision.

You have been working at the international level. Earlier, you used the term “geopolitical”. Nowadays, when we talk about energy, we can no longer do so in isolation; it is always geopolitical.

In spite of the fact that we talk a lot about it and make a lot of efforts, how do you explain Canada's current poor reputation on the world scene? Do some people hold a grudge against us? Are some groups jealous of us? Have we really done something that was not quite correct? What is the problem and what is the solution if you see one?

[English]



**Ms. Elizabeth Dowdeswell:**

I'm not sure I can answer as to the motivations of other nations and other people.

**Voices:** Oh, oh!

**Ms. Elizabeth Dowdeswell:** I can say that certainly in the environmental field, increasingly we are under a microscope. Most countries are under a microscope.

  (1645)



**Mr. Roger Pomerleau:**

Even here.



**Ms. Elizabeth Dowdeswell:**

Even here, because we're so interconnected these days. It's not only an interconnection in the environmental field, where what you do with water in one jurisdiction affects another downstream or upstream. What you do with respect to air, obviously, affects other jurisdictions, so there's that environmental relationship.

But it also relates to trading regimes and economic regimes. We now have international regimes, a significant body of law, certainly on the environmental front, that is built on the premise that we're all in this together. We are all interconnected, and we need to be able to rely on people, so when they negotiate agreements that are in the best interests of the international community, including Canada, they want to see us at the table. They want to see us meeting our commitments that we've made, and I think now more than ever, that is the climate in which we are actually operating. So we are so interdependent and interconnected that people have expectations of us, rightly or wrongly. I think that drives them—as well as, of course, the self-interests of countries. So it's a whole range of reasons, I suspect.

[Translation]



**Mr. Roger Pomerleau:**

Alright. I thank you very much.

My next question will be for you, Mr. Tertzakian.

I entirely agree with you when you say that having a sole client is not a good thing. It is not very good either to have a sole source supplier. In any enterprise, the first thing to do is to diversify your activities to avoid future problems.

When you speak about diversifying, you say that we are not maximizing the value of our oil products. Do you mean that we do not transform enough our production locally or do you only mean that we do not have enough access to international markets other than the U.S.?

[English]



**The Chair:**

A short response, please, Mr. Tertzakian.



**Mr. Peter Tertzakian:**

I presume you're also talking about the upgrading and refining into higher-value products. We do quite a bit of that, but that is a much more complex question because there are issues of being close to market. I only highlight it at the very upstream end. Just to give you a couple of outlines, the world oil price is \$100 today, but we are only getting \$90 here in North America. The world price for natural gas is above \$9 per thousand cubic feet; we, in Canada, are only getting \$3.50 or maybe \$4, generally speaking. These are all a consequence of lack of diversity of markets.

Whether or not we should be adding value by processing and refining further, that is a much more complicated question that I can't answer.



**The Chair:**

Thank you.

[Translation]

Thank you, Mr. Pomerleau.

[English]

We go now to Mr. Shory and, if there's time left, Mr. Hoback.



**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair.

It's actually very interesting to listen to all the witnesses in this committee, because some of the witnesses take a position that these explorations or expansions should be shut down immediately and some tell us the benefits of this industry. I, being from Calgary, Alberta, definitely see all the benefits every day. Those benefits are not for Albertans only; they are for the other provinces and territories also. I have seen workers from all over, and as a matter of fact, from overseas as well.

My first question is to Mr. Marushack. Mr. Marushack, your firm is listed as having interests in both natural gas and oil sands. With your oil sands operation, you must have seen the benefits to the local communities. In your opinion, what sorts of economic benefits for local communities can be expected if Canadian firms continue with that development of gas reserves?

  (1650)



**Mr. Joe Marushack:**

Thank you, Mr. Chair.

First and foremost, many of the communities where we have not only our oil sands but also our gas operations are aboriginal communities. They are communities that don't have a lot of industry right now. So the biggest immediate benefit is to provide those particular jobs to the local communities. That requires training;

that's the second thing. Generally, when we go up and we're in a new area, we do try to provide some education support, some community support, some training support. In addition to that, then, we take large contracts and we break them down into a small size so that an individual can buy a tractor and then do some clearing, or buy a welding machine and do some welding. We try to figure out how we can best provide the most amount of legitimate work in those communities where we operate. And it's not just the oil sands; it's all the gas properties as well.



**Mr. Devinder Shory:**

The second question is to you, and maybe Mr. Tertzakian can answer as well.

We are expanding all our trade relations with numerous countries, specifically in the Asian markets. Given that, give us an idea of what the Asian markets mean to our oil sands.



**The Chair:**

Mr. Marushack, go ahead.



**Mr. Joe Marushack:**

I'm sorry, the question again was what does...?



**Mr. Devinder Shory:**

What does it mean to the oil sands when we are expanding our trade relations with the Asian markets?



**Mr. Joe Marushack:**

I think, as Mr. Tertzakian said, generally when foreign investors come in they bring capital with them. A lot of the Canadian companies have the expertise right now to develop these, so the foreign companies are coming in trying to develop.... First of all, we've got a great asset base. We've got a secure government system. We've got rule of law. In a lot of places, this doesn't happen.

We've got a lot to build on, so they're wanting to invest in those assets. Then in the long term I think they would probably like to see access to those resources coming into their countries, to shore up and provide some energy security to their countries as well.



**The Chair:**

Mr. Tertzakian, would you like to answer that as well?



**Mr. Peter Tertzakian:**

I don't have much to add; I think Mr. Marushack answered it.



**The Chair:**

Mr. Hoback.



**Mr. Randy Hoback (Prince Albert, CPC):**

Thank you, Mr. Chair.

I want to welcome everybody here again, on behalf of my riding of Prince Albert. Believe it or not, even though we're in Saskatchewan, the oil sands impact us hugely.

The city of Prince Albert had its pulp mill shut down a few years ago. I think most of those employees were absorbed into the oil sands, but their families stayed in my riding. They stayed in Prince Albert; they wanted to raise their families there. They do the week in or two weeks out.



You've been very flexible in allowing employees to create a structure that works for their family needs plus their employment needs.

You talked about education and employment and getting skilled workers. One of the things we're doing out of Cumberland College is just that. We're doing it with aboriginal workers, bringing in the kids who are coming out of the reserves of the north and teaching them construction tools. By tools, I mean the big trucks, the graders—the heavy equipment stuff.

What type of other training are you providing or looking at for skills as new developments come forward? Are we going to see the proper type of education coming out of the universities? Are we seeing the proper kind of education coming out of the trade schools? As we go forward, we're going to see more and more complex ideas possibly being formulated. Do we have the skill sets to handle that?



**The Chair:**

Mr. Marushack.



**Mr. Joe Marushack:**

Yes, I believe we do. I think we need more of everything. The basic education system we've got in Canada—all the way from grade school to the trade schools, the unions, the colleges—provides lots of opportunities for folks. We just need more of those.

I will say, though, that I have a son who's in college right now, and I've tried to stress this to him. They don't teach this in college very well. The most important thing I believe we need to stress, to any level, is safety—safety culture, making sure you're not doing anything that puts you or a fellow worker at risk—and protection of the environment. That is our licence to operate.

If you join ConocoPhillips, we spend a lot of time working on those. When we go out to the communities, we talk about how important those things are as well.



**The Chair:**

Thank you, Mr. Hoback.

We can go for about two minutes in the final round, so if you could just have short snappers....

Mr. Andrews, up to two minutes.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you very much, Mr. Chair.

My question is for you, Mr. Tertzakian. In your opening statement you talked about maximizing benefits and how we're not doing a very good job of that, and I think in the last question from Mr. Pomerleau you alluded to it.

Could you expand on where you see us maximizing benefits and how we can do that? If you were to write a recommendation from this committee for government, what action will we have to take so we can maximize our benefits from the oil sands?

(1655)



**The Chair:**

Mr. Tertzakian, go ahead.



**Mr. Peter Tertzakian:**

It's just a simple recommendation. The federal and provincial governments and industry together I think have

to work at a fairly quick pace to expand market access to our oil and gas commodities off the west coast to international markets.

I'll repeat the number. We generate \$100 billion of revenue a year from these products. If we're losing even 10%, it's \$10 billion a year. If you multiply that by a 20% royalty rate, that's \$2 billion a year right there. And that doesn't include the taxes and all the derivative benefits.



**Mr. Scott Andrews:**

I have a quick question for Elizabeth. Did your advisory panel make any recommendations regarding the Athabasca River and the water monitoring there, and what were the specific recommendations on how we can improve that situation?



**Ms. Elizabeth Dowdeswell:**

No, we did not look at specific monitoring sites and make recommendations specific to them. We were designing the overarching system, and I believe Environment Canada is now looking at a plan to look at specific sites.



**Mr. Scott Andrews:**

So you didn't look at the river specifically at all?



**Ms. Elizabeth Dowdeswell:**

Oh yes, we certainly visited. We did not, however, get into the detail. We could not get into the detail of the specific technology that was being used or the specific locations where the monitoring was being done, and we did not undertake to design the details of the monitoring system.



**The Chair:**

Thank you, Mr. Andrews.

Mr. Harris, you have two minutes.



**Mr. Richard Harris (Cariboo—Prince George, CPC) :**

Thank you, Mr. Chair.

Mr. Marushack, there's a reasonable amount of criticism from activist groups that would just prefer to see the oil sands shut down for reasons of their own. I just can't imagine being able to operate in a country like Canada without paying particular attention to the environmental regulations that our country has, and Ms. Dowdeswell probably shares that view. But what I need to know is whether in your company, ConocoPhillips, your environmental people are working, on an active day-to-day basis, with the regulatory people, not only to try to make sure you're in compliance all the time, but to even strengthen the environmental regulations so that they lessen the impact of the footprint and the environmental impact.



**Mr. Joe Marushack:**

We have something like 12,000 gas wells in western Canada in all of our operations in the oil sands. We have a small army of folks who work on a day-to-day basis to make sure we're environmentally compliant in what we're doing. We're also working on trying to make sure the laws and regulations that are passed do make sense. We believe in transparency. We believe in providing data that is clear. We actually believe that the better the information that comes out, the better it will be for the industry. So, yes, we're very supportive of that. We also work with CAPP and all the other different groups out there on better regulatory environments.



**Mr. Richard Harris:**

Thank you very much.



**The Chair:**

Thank you, Mr. Harris.

Mr. Anderson, you have two minutes.



**Mr. David Anderson:**

Thank you, Mr. Chair.

I guess this is for both Mr. Marushack and Mr. Tertzakian. Would it help the oil sands industry to have your corporate tax rates hiked to where they were in the past?



**Mr. Joe Marushack:**

No.



**Mr. David Anderson:**

Mr. Tertzakian, do you see any advantage in raising your tax rates?



**Mr. Peter Tertzakian:**

No.



**Mr. David Anderson:**

Would it affect jobs?



**Mr. Peter Tertzakian:**

Yes.



**Mr. David Anderson:**

What would it affect?



**Mr. Peter Tertzakian:**

It would affect the returns, which would affect the ability to bring capital in, which would affect growth, which would affect jobs.



**Mr. David Anderson:**

Is that a pretty good summary, Mr. Marushack?



**The Chair:**

Mr. Marushack, go ahead.



**Mr. Joe Marushack:**


It affects your economic viability, and it goes right into the economics when you decide what projects to invest in. Yes, sir.



**Mr. David Anderson:**

It would be a tragedy if something like that would happen then. I can hear that.

Mr. Tertzakian, you've been talking about labour issues and those kinds of things. I just want to ask you something. There is a very active oil and gas industry in my area. With inflation at 14% per year, do you have any comments on whether some of that is self-inflicted? Do the prices that are being paid for--I don't want to call them unskilled workers--entry-level workers in your industry not contribute to some of the problems you're talking about in terms of inflation? I'm not sure those wages need to be paid in order to get workers. Our problem right now is that we don't have enough labour, not that people won't work.

 (1700)





**The Chair:**

Mr. Tertzakian.





**Mr. Peter Tertzakian:**

That's correct. Just think of it this way. The industry--oil sands plus conventional oil and gas--is investing \$55 billion a year now, and there are 3.3 million people in Alberta. So that number of dollars coming into a province with such a little labour pool drives inflation. That \$55 billion doesn't include the \$10 billion from Asian sources and the \$20 billion from debt and equity.





**Mr. David Anderson:**

Those are some of the investment opportunities that are available to the other provinces. Things like shale gas have developed as well. There are both positives and negatives to that, but the positive is the scale of the investment.





**Mr. Peter Tertzakian:**

Oh, absolutely. Just look to Newfoundland and, I would say, Saskatchewan--and Manitoba now. Their investment is growing quite dramatically in both of those provinces as well.





**The Chair:**

Thank you.

Finally, Mr. Cullen, for two minutes.





**Mr. Nathan Cullen:**

I have just a very brief question. I'll stay with where we were with our friend from ARC.

Have you or any of your colleagues done any research as to how much of the current valuation of the Canadian dollar is in part due to our export and sale of petrochemicals? I was just looking over the amount of transport that's made up of our foreign investment, as well as how much we're exporting in valuation dollars.

I was just reading an article in *The Economist* that was talking about the Canadian dollar increasingly becoming a petro dollar. Have you done any research into this? Has anyone attempted to assign a value of so many cents on the dollar currently at our trading rates?





**The Chair:**

Mr. Tertzakian.





**Mr. Peter Tertzakian:**

We have done some research. There is a relationship between the price of oil and the Canadian dollar, but we

should not forget that Canada has a resource-heavy economy, including agriculture, in which prices are up. Metals and all of those things have a contributing factor for the dollar as well.



**Mr. Nathan Cullen:**

As economists, though, you make an effort to parse out some of these contributing factors, and there has been a consistent and strong correlation between the price of oil and the Canadian dollar over the last 25 years. The same can't be said for wheat or even for some of the metals--for copper, gold, etc.

The question we're looking at is.... You're familiar with the Dutch disease, in terms of the effect on other parts of the economy. You've been mostly describing the benefits. Those are easy to assign because we can look at revenues coming into government, or taxes paid, but there's also a counter-effect, which I'm sure you're aware of as an economist, in pricing the dollar higher and having some impact on the manufacturing value-added sectors in our economy. I'm talking about forestry, auto manufacturing, aerospace, etc.

Have you bothered to look into that impact on the Canadian economy as well and on the Alberta economy specifically?



**The Chair:**

A very short answer, please, Mr. Tertzakian.



**Mr. Peter Tertzakian:**

The answer is yes. That's why I'm concerned about the inflation issue.



**The Chair:**

Thank you.

Thank you, Mr. Cullen.

Thanks to all of you for your questions and comments.

Thank you very much to Ms. Dowdeswell, Mr. Marushack, and Mr. Tertzakian for excellent presentations and great answers to our questions. They will be very helpful to the committee.

I will suspend for about two minutes as we move in camera and as the room is cleared of those who are not allowed to be here for an in camera meeting.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 43

Thursday, February 10, 2011

The Standing Committee on Natural Resources met at 3:33 p.m. this day, in Room 7-52, 131 Queen Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Nathan Cullen, Richard M. Harris, Randy Hoback, Roger Pomerleau and Devinder Shory.

*Acting Members present:* Bruce Hyer for Nathan Cullen, Massimo Pacetti for Alan Tonks and Bruce Stanton for David Anderson.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Équiterre:* Steven Guilbeault, Co-founder and Deputy Executive Director. *Laricina Energy Ltd.:* Glen C. Schmidt, President and Chief Executive Officer. *Indigenous Environmental Network:* Clayton Thomas-Muller, Tar Sands Campaigner.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

The witnesses made statements and answered questions.

At 4:58 p.m., the sitting was suspended.

At 5:00 p.m., the Committee proceeded to sit *in camera*.

The Committee proceeded to the consideration of matters related to Committee business.

It was agreed, — That the meeting of Tuesday, March 29, 2011, on the study of the Supplementary Estimates (C), for the fiscal year ending March 31, 2011, be rescheduled for Thursday, March 3, 2011; and that the Minister of Natural Resources, departmental officials and representatives from Atomic Energy of Canada Limited be invited to appear before the Committee at that time.

It was agreed, — That the Committee's meeting of Thursday, March 3, 2011, on the study of energy security in

Canada, with a focus on biofuels, be rescheduled for Tuesday, March 29, 2011.

At 5:13 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/16 3:14 p.m.

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**Standing Committee on Natural Resources**

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*Mr. Richard Harris (Cariboo—Prince George, CPC)*



*The Chair*



*Mr. Steven Guilbeault (Co-founder and Deputy Executive Director, Équiterre)*

**1540**



*The Chair*



*Mr. Glen Schmidt (President and Chief Executive Officer, Laricina Energy Ltd.)*

**1545**

**1550**



*The Chair*



*Mr. Clayton Thomas-Muller (Tar Sands Campaigner, Indigenous Environmental Network)*

**1555**



*The Chair*



*Mr. Clayton Thomas-Muller*



-  *The Chair*
-  *Mr. Clayton Thomas-Muller*
-  *The Chair*
-  *Mr. Scott Andrews (Avalon, Lib.)*
-  *Mr. Glen Schmidt*

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-  *Mr. Scott Andrews*
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-  *Mr. Massimo Pacetti (Saint-Léonard—Saint-Michel, Lib.)*
-  *Mr. Steven Guilbeault*
-  *Mr. Massimo Pacetti*
-  *Mr. Steven Guilbeault*
-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*
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-  *Mr. Clayton Thomas-Muller*
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-  *Mr. Steven Guilbeault*
-  *The Chair*
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**1615**

-  *Mr. Glen Schmidt*
-  *Mr. Nathan Cullen*
-  *Mr. Steven Guilbeault*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Mr. Bruce Hyer (Thunder Bay—Superior North, NDP)*

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-  *The Chair*
-  *Mr. Steven Guilbeault*
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-  *Mr. Mike Allen (Tobique—Mactaquac, CPC)*
-  *Mr. Glen Schmidt*

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-  *Mr. Mike Allen*
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-  *Mr. Mike Allen*
-  *Mr. Bruce Stanton (Simcoe North, CPC)*
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**1630**



-  *Mr. Clayton Thomas-Muller*
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**1635**

-  *Mr. Clayton Thomas-Muller*
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-  *Mr. Richard Harris*
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**1640**

-  *Mr. Glen Schmidt*
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-  *Mr. Glen Schmidt*
-  *The Chair*
-  *Ms. Paule Brunelle*








**1645**

-  *Mr. Glen Schmidt*
-  *Ms. Paule Brunelle*
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**1650**

-  *The Chair*
-  *Mr. Roger Pomerleau*
-  *The Chair*
-  *Mr. Clayton Thomas-Muller*
-  *The Chair*
-  *Mr. Devinder Shory (Calgary Northeast, CPC)*
-  *Mr. Glen Schmidt*
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-  *Mr. Devinder Shory*
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CANADA

## Standing Committee on Natural Resources

NUMBER 043

• 3rd SESSION •

40th PARLIAMENT

### EVIDENCE

Thursday, February 10, 2011

*[Recorded by Electronic Apparatus]*

\* \* \*

 (1535)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)) :**

Good afternoon, everyone.

We're here today to continue our meetings on energy security in Canada. We're focusing on the oil sands today.

We welcome three witnesses. Steven Guilbeault is co-founder and deputy executive director of Équiterre. Glen Schmidt is president and chief executive officer of Laricina Energy. Clayton Thomas-Muller is a tar sands campaigner from the Indigenous Environmental Network.

We'll proceed in our usual fashion with a presentation of up to seven minutes. Then we'll go to questions. We will end the meeting today at 5 o'clock. At least two of our panellists have to leave to catch flights, I believe. Then we will have a very brief meeting on future business to pick a date to deal with the supplementary estimates. The date we chose last time was too late in the cycle.

Mr. Harris, go ahead on a point of order.



**Mr. Richard Harris (Cariboo—Prince George, CPC) :**

On a point of order, I see on the sheet produced by the clerk that Mr. Thomas-Muller is described as a tar sands campaigner. You mentioned that we were going to deal with the oil sands. Is this Mr. Thomas-Muller's official title, or is it an error in print?



**The Chair:**

I'll just confer with the clerk.

That is the title he goes by. You can certainly ask him about that later. You know the procedure here. But that was very smooth, Mr. Harris.

We'll start in the order that the panellists are listed on the agenda.

Monsieur Guilbeault, go ahead for up to seven minutes, please.

[Translation]



**Mr. Steven Guilbeault (Co-founder and Deputy Executive Director, Équiterre):**

Thank you very much, Mr. Chairman.

Members of the committee, thank you for inviting me to appear today to discuss such important issues as energy security and the oil sands.

In French, we are not engaged in the same discussion that you seem to be having with respect to the name of the oil sands. In French, the term is "*sables bitumineux*" and it's the same for everyone and everyone seems quite willing to accept it.

For us at Équiterre, issues such as energy security and the oil sands are both crucial for the energy, economic, environmental and social future of the country. We have prepared a report which suggests how Quebec could eliminate its dependency on oil by 2030. We sent you copies of that report, but only in French. We will be forwarding an English version which can then be distributed.

In light of the scientific data that we have received over the last decade with respect to climate change, and various reports, be they from NASA, Environment Canada or the Department of Natural Resources, or places around the planet, it is clear that in the coming decades, we will pretty well have to stop using fossil fuels.

It is clear that the starting point is fossil fuels, which have the highest rate of greenhouse gas emissions, in terms of either units of energy or units of GDP—whichever. As we were reminded again the day before yesterday, by a report tabled in the European Parliament by the European Commission, the oil sands have a GHE content which is 25 times higher than traditional oil fuels.

As we see it, that means one of two things: either we have to quickly reduce greenhouse gas emissions associated with the oil sands—which, I remind you, emit two to four times more greenhouse gases than traditional fuels—or, if we are unable to do that, reduce our use, and therefore our production of oil from the oil sands.

In the report that we will be tabling with the committee, we show that we are well aware that humans will continue to use oil for quite some time to come. However, we believe that it is necessary, on the one hand, to reduce our dependency on oil, and also to move away from fossil fuels, conventional or otherwise, as quickly as possible, since they emit high levels of greenhouse gases. In that regard, the oil sands are clearly in a category by themselves.

In the report we will be forwarding to you, we have information from a study we conducted of the economic cost of this for a province like Quebec. And, what we did for Quebec can be done for other provinces. Indeed, it would be a good idea for the committee to look at that.

The economic cost of our dependency on oil is \$74 a barrel of oil. The exodus of capital from a province like Quebec amounts to approximately \$10 billion a year. If a barrel of oil costs \$105, the loss of capital amounts to almost \$15 billion. If a barrel costs \$150—as was the case in 2007—the loss of capital outside Quebec is almost \$20 billion. In budgetary terms, that corresponds to the second largest budget item for the Government of Quebec, which is the Ministry of Education.

Yet we believe there are many other things we can do with our money—public money—than use it to boost other world economies. We think we should be boosting our own economy instead.

You may say that it is impossible to reduce our dependency on oil—that it's unthinkable. And yet some

countries have made a commitment not to import any more oil between now and 2025. Those countries, such as Sweden, are comparable to ours in terms of their climate, their economy, their social programs and education systems. But 2025 is coming quickly. If Sweden is able to do it, I don't see why a country like Canada could not do the same if, of course, it has the political will to do so.

I am one of those who believes that there is no lack of solutions, either technical or technological. We have enough creativity and intelligence to be able to deal with the issues.

In Sweden, they are now building houses that don't need a heating system. They still put heating systems in these houses, simply for psychological reasons, because the people who live there do not believe it is possible to live in Sweden in a house without heating. However, these houses are so energy efficient that the only heat that is produced is the heat loss from the people who live in them.

  (1540)

There are a great many things that we should be doing in Canada—for example, in terms of electrifying our transportation system, particularly transportation over long distances, both passenger transportation and shipping. That would allow us to greatly reduce our consumption of oil in this country.

You may ask whether we will gain something if the electricity used to power these transportation systems is produced using fossil fuels. But there will clearly be very significant gains if one considers the fact that the rate of efficiency of an electrical device in converting energy—in this case, moving electricity—is between 75% and 95%. In comparison, an internal combustion engine has an efficiency rate of between 20% and 25%. For every vehicle that is electrified, the energy efficiency would triple, which would represent a very significant gain.

There are many different things that should be done with respect to energy efficiency. Alas, Stephen Harper's government has abolished pretty well all the energy efficiency programs that were in place, particularly those aimed at low-income Canadians. Équiterre is an organization which, like many others across the country, has for years now provided energy efficiency services to low-income households, to help them reduce their energy bill.

However, the Harper government cut \$500 million from energy efficiency programs for low-income households. Hundreds of jobs were lost across the country. In that sector, jobs were being created all across Canada, in small and large municipalities alike, from north to south, and from east to west. It was not only one part of the country which was benefiting from that.

We must focus on renewable energy. Wind energy is an obvious example. On behalf of the Quebec Minister of Natural Resources, I was in charge of a special team on renewable energy. The mandate of our team was to look at the development of emerging renewable energy sources, such as photovoltaic solar, thermal solar, biogas and second-generation biofuels.

In closing, there is huge potential for Quebec, Ontario and the country as a whole. Unfortunately, we are one of the only OECD countries to no longer have an incentive program for renewable energy development.

Thank you very much.



### **The Chair:**

Thank you, Mr. Guilbeault.

[English]

I understand that you have to leave by 4:30. Is that correct? Okay, just a bit of a correction.

We go now to the second panellist today, Mr. Glen Schmidt, president and chief executive officer of Laricina Energy.

Go ahead, Mr. Schmidt, please, for up to seven minutes.



### **Mr. Glen Schmidt (President and Chief Executive Officer, Laricina Energy Ltd.):**

Thank you, Mr. Chairman.

Good afternoon. Thank you for the opportunity to share, with some pride, some news on the development on the in situ side.

Laricina is an example of a Canadian-founded in situ company, leading in innovation to support the goals of all Canadians: responsibly developing resources, having the needed energy, and providing economic support while also balancing environmental performance.

In situ is the future of oil production in Canada, and it will produce for a long period of time. The International Energy Agency identifies this resource as the largest outside of OPEC.

Think of in situ oil sands or drillable oil sands as the cousin of conventional oil. The footprint of a horizontal well in drillable oil sands is very similar to that of a conventional well. For example, there is the same land surface impact as the resource is drawn upon. However, in return, up to 10 times more energy will be produced.

Unlike the case for many conventional oil and gas projects, given the scale, we can operate using non-potable, non-drinkable water, and we recycle that.

What is exciting, with regard to the question of innovation, is that in the field today we're testing steam and solvent combinations for enhanced recovery that would decrease the carbon footprint per barrel on a full-cycle basis to less than what it is for much of the crude oil imported to the United States.

You might have seen or heard about the recent CBC documentary on oil sands. What this program did not discuss is what drillable oil sands are doing to meet the needs for economic prosperity, energy supply, and responsible environmental performance. I would like to emphasize just how proud you should be of Canadian companies because we are achieving this today. There is more progress ahead, and we are but one example of that.

Laricina is a private company. It was founded by Albertans. I was born in Calgary and educated at the University of Calgary in chemistry, engineering, and business.

In a little more than five years we have positioned projects for development to recover more than 4.5 billion barrels of oil. While that's part of a larger in situ development, the project we're bringing on stream is focused on carbonate oil sands, in addition to innovating both economically and environmentally. With respect to the community, we do look at it as jobs, but we do make contributions beyond simply jobs.

Laricina began steaming at our first SAGD, or steam-assisted gravity drainage, project in December 2010 after five years of delineation, studies, and research. The Grosmont formation is a carbonate reservoir that is dolomite. This is unlike the sand reservoirs that are mined in Fort McMurray and is more like the large carbonate oil reservoirs of the Middle East.

The ERCB has identified more than 400 billion barrels of bitumen-in-place, or 25% of the bitumen resources for Canada. It is a material growth opportunity for Canada. We estimate that in the project area we're focused on, up to 150 billion barrels are recoverable, and that would be incremental to what's considered now.

Carbonate reservoirs have yielded the largest conventional oil fields, and the projects are on the same scale as is Ghawar.

The oil sands are changing. More than 50% of production is from in situ or drillable techniques, and that is the growth area of the future. But just as in the case of unlocking the carbonates, we don't look at just what has been done in the combination of steam and the draining of the reservoir; we look at new opportunities. By adding light hydrocarbons to steam, as I said, we can reduce the potential carbon impacts and at the same time improve the economics.

Laricina has partnered extensively with the University of Calgary as part of our fundamental approach to research and innovation. The technology for drillable oil sands was initiated by Dr. Butler at the University of Calgary in the 1980s. He can be considered the father of SAGD.

We are pushing this further. Laricina chairs a consortium of 16 companies doing fundamental research on solvent-enhanced recovery. Adding light hydrocarbons to steam is nothing new. Thirty years ago, Alberta was leading EOR development in light oil pools using similar additions of propane and ethane in the West Pembina region.

Our focus, notwithstanding we had neither cashflow nor production, has included donations and research of up to a million dollars committed to the University of Calgary. This summer we will have 15 co-op and intern



students, which will represent about 10% of our staff complement.

In Wabasca, where our operations are located, we try to play a positive role in the community across the spectrum, from donations and staff time to economic development. We work closely with the Bigstone Cree Nation, Métis Local 1935, and the MD of Opportunity. We chair the local business development group, and we've initiated our first business development plan. That first business, which will be locally owned, will be launched shortly.

This is in addition to nearly \$10 million of locally awarded contracts in our construction and operations in the field.

  (1545)

We translate our information. We use newsletters. We have that information presented both in print and visually in Cree.

I believe Laricina is doing what Canada has asked us to do in developing the resources. In return, we look for stability of regulation. We need effective regulation, not more regulation. For illustration, this is the pilot that is 1,800 barrels a day with respect to the Grosmont carbonate, more than two years worth of work in a regulatory environment.

This is directly offsetting a conventional polymer flood of 30,000 barrels a day. This is a code of practice. The in situ is not underregulated in terms of its development. Water management is an important issue. Our projects do not use potable or drinking water. We are in areas where there is no shortage of information. The data is mapped. We have tested, monitored, and put our wells in place prior to production.

Now, like all companies, we must focus on selling our product, and access to Asian markets is an important consideration for the industry. It protects our sovereignty in terms of energy. Market diversity is a very important issue to western Canadian oil producers to offset the single market in the U.S.

I believe Laricina is doing what is asked and needed—investing in innovation and technology, collaborating with researchers, universities, and peers to improve methods of production and environmental performance—and we are proud of the work we do in leading the development of one of the newer emerging assets within the Grosmont carbonate.

Thank you, Mr. Chairman and members of the committee. I would be pleased to speak to you today and answer any questions.

  (1550)



### **The Chair:**

Thank you very much, Mr. Schmidt, for your presentation.

We will open up to questions right after we hear from our next panellist, who is Clayton Thomas-Muller, a tar sands campaigner from the Indigenous Environmental Network.

Go ahead, please, with your presentation, for up to seven minutes.



### **Mr. Clayton Thomas-Muller (Tar Sands Campaigner, Indigenous Environmental Network):**

*[Witness speaks in Cree]*

My name is Clayton Thomas-Muller. I'm the tar sands campaigner with the Indigenous Environmental Network.

IEN is a non-governmental indigenous organization formed in 1990 addressing indigenous rights and environmental and economic justice issues.

IEN has become a leading voice within Canada and the U.S. on climate and energy policy locally, nationally, and globally. IEN implements the Canadian indigenous tar sands campaign and is working with leadership of

both first nations and Métis in the region affected by the Alberta tar sands development.

Aboriginal title encompasses large areas of land throughout Canada. It is a treaty and legal term that recognizes aboriginal interests in the land. First nations are not mere stakeholders or the public but are political and legal entities that have treaty rights with Canada.

Despite the concerns of first nations, the Governments of Alberta and Canada are not listening. The areas of concern are under aboriginal Treaties 6 and 8. These are treaties that ensure the lands of first nations should not be taken away from them by massive, uncontrolled development that threatens culture and the traditional way of life. The dewatering of rivers and streams to support the tar sands operation is a threat to the cultural survival of these communities, and the battle over tar sands extraction and concerns of who invests in this development comes down to the fundamental human rights of first nations to exist and to have a future with a safe, clean, healthy environment.

Fort Chipewyan is approximately 250 kilometres north or downstream of the Athabasca River from all tar sands projects. Fort Chipewyan, also known as Fort Chip, is a small settlement. It is the oldest continuously inhabited community in Alberta, Canada. Access to the community is by air and riverboat in the summer months. It is accessible in winter by driving over ice bridges. The Fort Chipewyan population is composed of about 1,200 people, primarily aboriginal. The Athabasca Chipewyan First Nation, Mikisew Cree First Nation, and Métis all make up this beautiful community.

Fort Chip is situated in the Peace–Athabasca Delta on the boundaries of Wood Buffalo National Park, which is our largest park here in Canada and is a UNESCO-designated world heritage site.

The encroachment of tar sands development from the south and its impacts have surfaced in the community of Fort Chip. Spills of the tailings ponds onto the Athabasca River have alarmed Fort Chipewyan residents. Fort Chipewyan is downstream of the tar sands and the Athabasca River.

For about four decades the aboriginal people in this community have observed noticeable differences in the environment, water quantity, water quality, change in bird migrations, deformities, cancerous tumours, and blisters and mutations in the fish, a critical food resource, and, more recently, an increase in health conditions and a confirmed number of unusual and rare and aggressive cancers to the tune of 30%.

The tar sands are the biggest industrial development in the world and the second-fastest source of deforestation, next to the Amazon. Alberta's vast deposits of bitumen, an unconventional hydrocarbon trapped under the boreal forest, is a source of one of the world's most energy- and carbon-intensive fossil fuels, and it has made Canada the Saudi Arabia of the western world. Canada is one of the world's highest per capita greenhouse gas emitters.

The Alberta tar sands are an environmental justice issue affecting treaty rights and human rights of aboriginal first nations at Fort Chipewyan and other first nations communities in the region. As one tactic to halt the tar sands development, first nations are using a rights-based approach to participate in the formal application process of the multitude of billion-dollar project expansions taking place. First nations are demanding the capacity to conduct their own environmental assessments, looking at cumulative and cultural impacts. With their assertion of rights, first nations at Fort Chipewyan have raised the standard for the regulatory process, including the quality of the Athabasca River, compelling the Government of Alberta to develop a water management framework for the Athabasca River. Since 2006, first nations have demanded a moratorium on any new expansion of existing applications.

Tar sands infrastructure and transport routes. Shipping lanes are represented by half a dozen major pipelines: B.C.'s northern gateway, Keystone XL, and others, including two massive natural gas projects--the Alaska natural gas pipeline and the Mackenzie Valley gas pipeline. Dozens of refineries in the lower 48 are impacting Alaskan first nations and American Indian nations across the continent. These infrastructure projects represent the hard-wiring of the fossil fuel economy here in North America at a time when we should be transitioning away from fossil fuels to zero carbon energy technological forms.

  (1555)



#### **The Chair:**

You have about two minutes left.



**Mr. Clayton Thomas-Muller:**

Forgive me. I'm aware of the timeframe, hence my fast speaking.

As we move closer to a decision by the U.S. State Department on the Keystone XL pipeline, a few overlooked aspects of the debate emerge. The Keystone XL pipeline is not needed. There is an overcapacity of pipelines for tar sands oil. The Keystone XL will raise gas prices at the pump in the United States, and consumers will pay for the waste caused by the overcapacity. It will raise the price of heavy crude in the Midwest in the U.S. by spreading supply to the gulf. It could facilitate the exports of Canadian tar sands to Europe and other markets as well, thus undermining the argument for an American energy security supply, which has been a very close conversation with the Canadian discourse on energy security within the North American context.

Against this lack of benefit to energy security, let's weigh the clear negatives. These pipelines and the tar sands in general will increase greenhouse gas emissions and oil dependence; encourage the reckless expansion of a dirty industry; put clean water and public safety at risk in six states; lead to further degradation of the Athabasca watershed and air quality and the rights of first nations peoples via the massive expansion of current operations in the Athabasca region that this and other infrastructure projects like the Enbridge gateway will lead to.

So what do first nations people want? Well, they want a moratorium on any new or any expansion of existing applications until the environmental, cultural, social, human health, ecological health, and treaty rights impacts have been assessed and mitigated. They want a separate, non-industry, comprehensive, long-term, robust monitoring program for fish and water in the lower Athabasca River and the Peace-Athabasca Delta established to replace existing industry-funded bodies like RAMP. This program must incorporate both western experts and first nations traditional knowledge experts. First nations people also want a peer-reviewed epidemiological and toxicological study of cancer rates and levels of exposure to environmental toxins in communities of the lower Athabasca River.

Canada must take the ecological debt that is owed by the state to communities that have suffered disproportionately as a result of the current economic paradigm governed by the fossil fuel regime, while developing a just transition model that allocates revenues generated by public sector climate policy mechanisms-- such as penalties against emitters that violate laws on emissions caps--as well as financing programs set up by other programs that would include, for example, the re-diversion of military spending and oil and coal subsidies to zero-carbon energy investments.

Canada and Alberta should adhere to and respect--



**The Chair:**

Mr. Thomas-Muller, could you wrap up quite quickly, please?



**Mr. Clayton Thomas-Muller:**

I'm done right now, right here.

**The Chair:** Great.

**Mr. Clayton Thomas-Muller:** The final point I'll make in conclusion is that an independent, comprehensive assessment on the total footprint of tar sands operations must take place. This would focus on the cumulative environmental effects of these operations on the land, air, water, and health of first nations people and on culture and treaty rights impacts.

Thank you very much. I look forward to answering any questions.



**The Chair:**

Thank you very much for your presentation.

We go now directly to questions and comments.

Mr. Andrews, you have up to seven minutes, please.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you, Mr. Chair. I'll be sharing my time with my colleague.

I have a couple of questions for you, Mr. Schmidt, on innovation. Your company has done a lot of innovation. We've had a small discussion here at the committee, and we hear how government should be investing in more innovation versus tax credits and that kind of thing.

Could you give us some sense of where the government should go, where we should go, when we invest in innovation? What forms of investment should we recommend to invest in more innovation in the oil sands?



**Mr. Glen Schmidt:**

In terms of areas, our relationship with the University of Calgary has been a strong one. Federal or provincial support for the research institutions at any of the universities that are focused on these areas is important. The fundamental work on solvents and their application is common to all companies, so support of the fundamental research is important.

In addition, there is direct support for innovations that are addressing the questions directly. I'll give you an example that I didn't talk about in the presentation. We partnered with a communications company called Harris, and Nexen and Suncor, and received CCEMC funding from Alberta focused directly on carbon, and directly on carbon in utilizing radio frequency. So the comment of electrical energy displacing hydrocarbon in its production-- that's one we're doing research on now, and one where we had been the beneficiary of support from the provincial government.

  (1600)



**Mr. Scott Andrews:**

How long would you have to do the research on that to come to some concrete solutions and to make changes? Is it simple? Is it a long process?



**Mr. Glen Schmidt:**

With regard to the cycle time on innovation, if we go back to how SAGD started, these are five- to ten-year programs. Concepts are tested in the field and then moved to commercialization.

On the issue of solvents, while solvents have been used in the past for conventional recovery, the applications in the field have been under way for between five and eight years, I guess, in a variety of pilots. It's not only us, but there are a number of others who are now moving to commercialization.

On radio frequency, we're right at the generation of the tool level, and it will then move to the next phases of development. I would expect it will be five to seven years before we see that opportunity potentially going into commercial development.



**Mr. Scott Andrews:**

In your statement you talked about effective regulation. Did you say we need to make changes to have effective regulation? Are you insinuating that the industry is overregulated? What changes will we have to make for effective regulation?



**Mr. Glen Schmidt:**

I think it occurs at two levels. One, and I did hold this up, is that this is a 30,000-barrel-a-day conventional heavy oil project that is directly south of ours. This follows a code of practice, much the same way that if you were to build a deck at the back of your house and you have a code of practice, you follow it.

There's a high degree of similarity. These are horizontal wells. This is actually in an oil sand, and this project

is 1,800 barrels a day. We're building the code of practice. So with the shift to a code of practice that allows us to move, efficiency is important.

The second level would be with respect to changes the federal government made recently. It has investigated the adequacy of the provincial regulation so the review is adequate for purposes of meeting federal requirements.

With Navigable Waters, for example, their reviews on bridges and access to the various projects have been modified so that as part of the review provincially it's not also done federally. That would be a clear example of the efficacy of seeing that the right things are being done. But there is efficiency, in that it isn't done twice.



**Mr. Scott Andrews:**

Thank you.

I have a question for Mr. Thomas-Muller.

Near the end of your presentation you talked about some of what you're asking for. I'd like to expand a little on the Athabasca River and more monitoring. We've heard a few examples that we need to do more monitoring; we need to expand what the Canadian government is doing.

Could you expand on that a bit as to exactly how we can improve the monitoring in the Athabasca?



**Mr. Clayton Thomas-Muller:**

I think transparency is a big issue in the concerns of first nations peoples. I think the recent response by the federal government and the Government of Alberta to some of these concerns regarding water quality and contaminants within the Athabasca is a step in the right direction.

That said, the lack of any first nations experts on the recent panel that was set up to do such monitoring, leading to the resignation of some of the panel members, I think is a sign that we need to do more. I think the inclusion of traditional ecological knowledge within the analysis of how water management is done is really critical.

I also think there could be more done to support bottom-up methods of community-based water monitoring in local communities. That doesn't exist at this point.

From the federal perspective and its relations with first nations, given that first nations' concerns are federal jurisdiction, I think resourcing should be made available for first nations to do their own community-based water monitoring programs, aside from the other responses the Government of Canada is putting forward.

  (1605)



**Mr. Scott Andrews:**

Massimo?



**Mr. Massimo Pacetti (Saint-Léonard—Saint-Michel, Lib.):**

Thank you, Scott.

[Translation]

I have several questions for Mr. Guilbeault.

Is there an opportune time when it would be advantageous and efficient to explore the oil sands? If so, is it based on a specific amount of greenhouse gas emissions? Is there a return? Will there ever be a point where the price of a barrel of oil--



**Mr. Steven Guilbeault:**

Are you wondering whether this is something that can be done more efficiently?



**Mr. Massimo Pacetti:**

Yes, or if not, should we suspend oil sands development?



**Mr. Steven Guilbeault:**

We are increasingly moving in the direction of reduced greenhouse gas emissions. According to the United Nations Intergovernmental Expert Panel on Climate Change—which won the Nobel Peace Prize in 2007, as you may recall—all the large emitters of greenhouse gas emissions around the world, including China, India, Canada, the United States and Europe, will have to cap their greenhouse gas emissions by 2020 and then reduce them.

Earlier, I was saying that, as regards the oil sands—which are responsible for a much larger number of greenhouse gas emissions than conventional fuels—there are two choices: either we quickly establish emission caps and impose significant reductions to at least bring them down to the level of conventional fuels, or we stop increasing production because we have no idea what to do at this point in terms of greenhouse gas emissions. They are one of the most significant sources of increased greenhouse gas emissions in Canada and have been since 1990. The sky is the limit. This cannot continue.



**The Chair:**

Thank you, Mr. Pacetti.

[English]

and Mr. Andrews.

Madame Brunelle.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Mr. Chairman, I will be sharing my speaking time with my colleague, Mr. Pomerleau, since we are short of time.

Good afternoon and welcome. Thank you for being with us today.

I don't want to forget to congratulate Équiterre. Mr. Guilbeault, I commend you on the quality of your work, and especially your effectiveness and tremendous tenacity. We rely on you a great deal to help us on environment-related issues.

You talk about reducing our dependency on oil. Everyone wants to do that. We have been hammering away at that message in the Bloc Québécois. You say that it will require political will, and that is something that is difficult to obtain. You have also presented several potential solutions: better insulated homes, electrified transportation, and first-generation biofuels. I'm sure you have others that you can suggest. I will read your report with interest. If you were a politician, where would you start?



**Mr. Steven Guilbeault:**

Certainly at the federal level. We are one of the only countries—and certainly one of the rare OECD countries—not to have a national public transit policy, unlike France, Great Britain and the Scandinavian countries. As for the transportation sector which, I should point out, produces approximately 25% of Canada's greenhouse gas emissions, we have no national vision there. In some provinces and municipalities—like Vancouver, which is doing fantastic work, and Montreal, which is doing fairly well—some interesting initiatives are underway. In Alberta, municipalities like Calgary and Edmonton have launched very innovative projects. However, there is no national strategy or vision in that area. We need to reform the federal tax system. Why? Because at the present time, the tax system provides a much greater incentive for investments in fossil fuels—traditional, conventional

or non-conventional fuels, such as the oil sands—than in renewable energy.

As I said earlier at the end of my opening statement, we are one of the rare countries, if not the only OECD country, not to have a renewable energy incentive program. Canada was offering a wind energy credit that was only one third of what was available in the United States under George Bush. We're not talking about Barack Obama; we're talking about George W. Bush, that leading light of the socialist left wing.

**Voices:** Oh, oh!

**Mr. Steven Guilbeault:** At the time, it was one third of what was offered under George Bush, and now, we have nothing at all in Canada. If we took action in the public transit sector, by developing a strategy and providing the means to implement it, if we reviewed our tax system and incentives for the production of renewable energy, those would be three major components of a very attractive national policy.



**Ms. Paule Brunelle:**

Thank you.

Mr. Thomas-Muller, I very much appreciate your comments with respect to the Athabasca River. We have seen the news items and read the Schindler report.

We have seen the news report about the Athabasca River, and it is a real disaster. Some people wasted no time challenging the Schindler report, but we are aware of the impact on wildlife, fauna and flora, the forest and your way of life.

As I listen to you, I wonder what kind of pressure tactics are available to you to ensure that people respect your rights? Do you feel isolated? If not, are there ways you ensure that your rights are respected, either aboriginal rights or treaty rights? Is your only recourse to testify before committees of the House of Commons to defend your rights?

  (1610)

[English]



**Mr. Clayton Thomas-Muller:**

On my personal history in participating in standing committees, this is the first.

I think that first nations in Alberta have been very effective in working with allies here in Canada and various champions within government and civil society to elevate their issues both domestically and internationally. That ongoing work will continue until there is a policy shift on the part of the federal government and the Alberta government in addressing the rights question that first nations have been presenting for quite a substantial amount of time.

I think ongoing access to important bodies like this, where unique perspectives from first nations can be presented, is most appreciated. We look forward to being a conduit for more communication between mechanisms like the standing committee and the work we're doing in elevating the concerns of first nations about the tar sands.

[Translation]



**Ms. Paule Brunelle:**

Thank you.



**Mr. Roger Pomerleau (Drummond, BO):**

Thank you, Mr. Chairman.

I would like to thank all three of you for appearing today.

I will only have time to ask one question, since I have just two minutes. My question is addressed to you, Mr. Guilbeault. It is strictly political; so don't answer it if you don't feel comfortable doing so.

I fully endorsed everything you have said about the way things should work. That is the way things should work in Quebec, but that will never happen, because in Canada, where we live, there is another opinion in the West, which is that things have to be done completely differently. I understand that opinion. Out West, people have natural resources, like gas, and that is important to them. They are making money from it and investing millions, if not billions of dollars in the infrastructure and everything else that is needed to develop it.

I really don't see how it is possible that, at some point, they might decide to suspend that development to get involved in something that we would like to do. The money is concentrated in Ottawa. The laws, regulations, by-laws and treaties are all designed to develop that resource—not for what we would like to develop. Do you realize that within Canada, it is impossible for Quebec to do what it wants?

It doesn't work.



**Mr. Steven Guilbeault:**

You're right; it's a political question.

Équiterre is a non-partisan organization. We work at both the provincial and federal levels, and even at the international level. I am co-chair of the Climate Action Network International, which is a group of NGOs--

**Mr. Roger Pomerleau:** We have to get somewhere with this at some point.

**Mr. Steven Guilbeault:** -- that work together on climate change issues.

I'm one of those who believes that we could have an international strategy on energy and public transit which would mean that not just one industry or economic sector would benefit. Unfortunately, that is not the case now, but I happen to believe that things could be different.

Thank you.

[English]



**The Chair:**

*Merci*, Madame Brunelle and Monsieur Pomerleau.

Mr. Cullen, you have up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

I thought you were going to call me Monsieur Cullen for a second. I was getting excited. That would have been a special day.

Mr. Schmidt, we've heard from a number of energy executives before this committee, and you've highlighted in your testimony the need for certainty and reliability in the framework in which you have to work.

Canada is the only energy-exporting country in the world that doesn't have any kind of a national energy security strategy, or any strategy at all when it comes to energy. Part of it is due to the way we're set up as a country, with energy being the domain of the provinces. But other countries have been able to get at this question, and energy companies are calling more and more for it--a price on carbon and policies around raw exports.

Do you have an opinion one way or the other on whether Canada should develop such a policy, or are you comfortable with the situation as it is?

(1615)





**Mr. Glen Schmidt:**

I think having a comprehensive policy where the rules are well defined is important for all business. It supports our ability to raise the capital we need to develop the projects. We need a federal policy that engages with all provinces, not only on their needs but on the rules of development, whether it's the price of carbon, how it's transported, the safety practices, or the extraction itself.

The question I would add, as part of that process, is that the federal policy required to do that should engage in and have strong communication with each province, so if a particular province is doing an excellent job-- whether it's Quebec in hydro or B.C. with gas development--that engagement ties together so it's not double the regulation; it's focused within a framework that's defined.



**Mr. Nathan Cullen:**

I get from your answer that your company would be opposed to the manner in which it's done and if it's properly engaging with industry and the stakeholders, provinces and other groups.

Mr. Guilbeault, a question to you. This committee is studying energy security, which doesn't have necessarily a unified or consensus definition but has something to do with affordable, sustainable, and reliable sources of energy for a country. Some would argue that the tar sands, the oil sands--whatever term we are going to use here today--are an important part of Canada's energy security. They are a large source of hydrocarbon energy and are critical to Canada's future, both economically and as a position, as the Prime Minister has called it, as the energy superpower.

Is there anything contrary in that statement, or is that just something that groups like yours have come to accept or must accept as their current reality?



**Mr. Steven Guilbeault:**

As I said in my testimony, we understand that oil has been around for a while and will continue to be. That being said, we know that internationally things are changing, and rapidly. We've seen very rapid increases in the price of oil over the last decade, something no one predicted, or very few predicted, only 10 years ago.

What is good for part of the country may not be good for the entire country. One of the things we have been looking at, as have others in Quebec and around Canada, is the Dutch syndrome. It's not well documented yet in Canada. It is in certain countries. We think this committee should be paying close attention to that. It doesn't mean we have to close down parts of the country to the benefit of the others.

Basically, right now, in terms of greenhouse gas legislation or incentives, the only game in town is the tar sands carbon capture and storage, which no one believes will be able to help us reduce greenhouse gas emissions in the foreseeable future. We have existing technologies, proven technologies, that could help us meet the emissions reduction requirements that we have internationally, which various provinces have taken with current and existing technologies.



**Mr. Nathan Cullen:**

Thank you for that.

Chair, I am going to pass the remaining time over to my colleague, Mr. Hyer.



**The Chair:**

Go ahead, please, Mr. Hyer.



**Mr. Bruce Hyer (Thunder Bay—Superior North, NDP):**

Thanks, Mr. Chair.

My name is Bruce Hyer. Before I was an MP I was, among other things, a terrestrial ecologist, a biologist, and a scientist.

When I was reviewing the notes of Elizabeth Dowdeswell's testimony at the last meeting, things really jumped

out at me, primarily this question from Mr. Guilbeault.

I will just quickly review a couple of them.

...a statistically sound decision-making process that can allow for adaptive management in a rapidly changing oil sands environment does not exist.

The industry-funded RAMP program, the regional aquatic and monitoring program:

...is not producing world-class scientific output in a transparent, peer-reviewed format and is not adequately communicating its results to the scientific community or the public.

Then the last one is:

...development is proceeding so quickly that it is actually destroying water sampling locations designed to establish what an undisturbed area looks like.

In other words, the controls in the experiment.

As I scientist, this is worrying to me; as the water critic for the NDP, it's worrying to me.

Would any of you, starting with Mr. Guilbeault, like to comment on whether you share my concerns that this is an acceptable situation where we not only have serious problems but we can't even document those problems because we don't have a baseline or a good scientific experiment going on?

  (1620)



**The Chair:**

Monsieur Guilbeault, go ahead.



**Mr. Steven Guilbeault:**

Thank you for the question. It should probably be pointed out--I guess everybody knows that around this table--that the committee that produced that report was hand-picked by the government to do the study.

I find it unbelievable that in a country like Canada we would have a report like that being produced. This is something you would expect from a poor, developing nation, and yet we're in Canada, one of the richest nations in the world. We have all the technologies, all the know-how to do these things, and yet we don't even know what's happening. We're destroying the information or the capability to have the information that would help us understand what is happening while expanding new production.

I don't know what to say. It baffles my mind that in a country like Canada we would allow things like that to happen.



**Mr. Bruce Hyer:**

Thank you. I think I will go on to my next question because we are short on time.

I'm the water critic for the NDP. Several of you have commented on a lack of a national strategy on energy, a national strategy on greenhouse gases, a national strategy on climate change. But we also don't have a national water quality standard or strategy. Indeed, our federal government has national standards on just about nothing except seat belts in buses, in cars.

How are we going to move forward? Can we move forward, should we move forward, on developing a national water quality standard so that when we get better science we'll know where we want to go and how we're going to get there?



**The Chair:**

And the answer will have to be about 15 seconds. We're over time already.

Go ahead.



**Mr. Steven Guilbeault:**

Well, we should definitely look at the last few reports of the Auditor General. They showed us how ignorant we are about water and how the federal government has not been doing its homework. While we don't know what's happening, we're allowing all kinds of projects that stand to have dramatic impact on our water resources. We talked about tar sands. We could be talking about shale gas development. I don't understand how we can do this. Obviously, oil and gas are important for the economic development of this country, but without water there's no life. It's as simple as that.



**The Chair:**

Thank you, Mr. Cullen and Mr. Hyer.

Mr. Allen.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Mr. Chair.

I think Mr. Stanton has a question. I'll split my time with him.

I guess you don't get much credit for spending infrastructure money on water and waste water and cleaning up water in first nations communities.

Mr. Schmidt, you spoke about the research you're doing with the University of Calgary, about reducing the energy needs and the production costs on a per-barrel basis, and about hydrocarbons and the steam.

Can you tell us a little more about that? What is that process, and have you done any preliminary testing? Have you seen any reductions in energy, and by how much?



**Mr. Glen Schmidt:**

It's the principle of leaving less oil behind. When people talk about enhanced oil recovery, it's really accessing the oil that's left underground. The fracking technology that's opened up a number of the resources is very much based on using a well to reach out, if you will, to contact and produce more oil.

The addition of light hydrocarbon creates a miscibility with the oil itself. If you had a bit of tar on the side of your car, you might use some Varsol or gasoline to clean it off. Water won't do the job. Propane, ethane, and butane are natural constituents of natural gas. When added to steam, they leave less oil behind and improve the geometry of production so that the recovery factors increase. We have two drivers in the reservoir, like in a hybrid car, where you have a natural gasoline engine in addition to a battery. The light hydrocarbon will reflux or recycle within the reservoir. We can recycle it, and it will reduce steam-oil ratios by up to half.

It's at a commercial stage at Imperial Oil in Cold Lake, which really began in situ development. They have already gone commercial with a project they call LASER. At LASER, the program uses condensate, and they've seen reductions in steam-oil ratios of 25% as well as an increase in recovery by a little better than 40% overall. Their recovery factor went from 25% up to 35%. Probably most important, they've seen an increase in the rate of recovery. If things move more quickly, you waste less energy, and it's a much more efficient process.

(1625)



**Mr. Mike Allen:**

How's that partnership? I see you've put \$1 million into the University of Calgary, and you also have employment for your co-op students and summer engineering students. The ConocoPhillips people were in the other day and were talking about this. One of the major challenges they expected to face was going to be the resource issues, and trying to get human resources into these developments.

Are you seeing the same thing? Do you see that a partnership with the University of Calgary would help you

address some of that?



**Mr. Glen Schmidt:**

I think it will be all the universities throughout Canada. Being local to Calgary, we're focused there right now. What we have to do is build as well as expand from experienced staff in other companies that have grown their businesses. Hiring and developing young people is absolutely critical to the growth of the industry.

It's also similar to the development within the community. This past year, we hired two young people, new graduates, within the community of Wabasca, to build out the local operators. Over time, our goal is not to have operators from other communities fly into that region, but to have local employment. It takes time, and we have to grow it.



**Mr. Mike Allen:**

You talked about the Wabasca area and your relationship with the Bigstone Cree Nation, the Métis Local 1935. You said you completed your first business development project in 2010, which will be owned locally.

What was that business development? Do you see economic opportunity for your first nations communities as a result of these business developments?



**Mr. Glen Schmidt:**

Our work with the community is very much like our development as a company. We have to crawl, walk, and then run. As we build our business, what we try to focus on are the local businesses. So we start with the construction businesses that are owned locally. They do the bulk of our work, and they do an excellent job.

A laundry service at camps, where people fly in and do the work for us, becomes a natural business for development in the community. We've supported the business development work so that it could be done locally within Wabasca. What we try to do, working with the community, is identify a niche that's a natural business and then help to support building it.



**Mr. Mike Allen:**

Mr. Chair, I'll turn my time over to Mr. Stanton.



**Mr. Bruce Stanton (Simcoe North, CPC):**

Thank you to our witnesses this afternoon for your presentations.

I just have a quick question for Mr. Thomas-Muller. In your presentation, you talked about some of the damaging effects, both environmentally and healthwise, for the local communities, particularly Fort Chipewyan.

You talked about deformities and the health effects on the fish. You went on to some comments in regard to cancer and so on. I assume they related to the human population, but it was pretty quick.

Could you point us to what sorts of scientific evaluations actually support those kinds of claims? I've done some reading on this in the past, and I've seen that there have been different conclusions drawn. I wonder if you could comment on what the basis of those claims are.



**Mr. Clayton Thomas-Muller:**

Do you mean specifically around the issue of cancer in human populations?



**Mr. Bruce Stanton:**

There was cancer. You mentioned deformities.



**Mr. Clayton Thomas-Muller:**

The deformities and tumours referred specifically to the fish within the Athabasca watershed.

On the topic of cancer within human populations--



**Mr. Bruce Stanton:**

Just before you go on, with respect to the fish, was there a study done that actually drew those conclusions?



**Mr. Clayton Thomas-Muller:**

If you look at the research of Dr. Schindler and Dr. Timoney, a lot of their research points towards the fact that the fish are stressed by industry contaminants within the Athabasca watershed. There will be further studies emerging on this matter in the very near future.



**Mr. Bruce Stanton:**

What about the cancer and the tumours?



**Mr. Clayton Thomas-Muller:**

Do you mean in the fish or in the human population?



**Mr. Bruce Stanton:**

I interrupted you before you went on. On the human population, could you...?

(1630)



**Mr. Clayton Thomas-Muller:**

The Alberta government recently came out with their own study that proved, in some cases, a sevenfold increase in cancers within populations in Fort Chip. There was a 30% increase right across the board compared to the rest of the population in Alberta.

That said, they gave themselves five years to further follow up on their conclusions.



**Mr. Bruce Stanton:**

That was the Ministry of Health.



**Mr. Clayton Thomas-Muller:**

That's correct, it was Alberta Health.



**Mr. Bruce Stanton:**

Is it recent? I'd be interested in having a look, that's all.



**Mr. Clayton Thomas-Muller:**

It was in 2009. If you give me your card, I'd be happy to e-mail you all the documentation I'm referring to.



**The Chair:**

Go ahead, Mr. Allen.



**Mr. Mike Allen:**

Could we have that actually submitted to the clerk of the committee?



**Mr. Clayton Thomas-Muller:**

Yes, I'd be happy to do that.



**Mr. Bruce Stanton:**

Thank you very much.



**The Chair:**

We'll go to the second round, starting with the official opposition.

Mr. Pacetti, you have up to five minutes.



**Mr. Massimo Pacetti:**

Thank you, Mr. Chair.

[*Translation*]

Mr. Guilbeault, I have two other quick questions.

You said that when the cost of a barrel of oil hits \$150, there is a capital exodus of \$20 billion. What does that mean? Could you repeat that?



**Mr. Steven Guilbeault:**

That is basically part of the document we will be tabling. It's a study we carried out in cooperation with the Quebec Ministry of Natural Resources and the Department of Finance.

Because Quebec does not have an oil industry, with the exception of two and a half refineries—one of which will soon be shutting down—very little money spent on oil-related issues in Quebec actually remains in Quebec. So, that money is crossing provincial borders. It's used to buy oil from the North Sea, Angola, Venezuela--



**Mr. Massimo Pacetti:**

It's used mainly to purchase product.



**Mr. Steven Guilbeault:**

Yes, that's right.



**Mr. Massimo Pacetti:**

So we're not talking about investments.



**Mr. Steven Guilbeault:**

No, not at all.



**Mr. Massimo Pacetti:**

I see. So, the idea is to use that \$20 billion differently.

It's to try and reinvest that \$20 billion in Quebec. We are working with the government on the electrification of public transit systems, but also on--

The challenge is that, at the same time as we are spending \$20 billion, if we spend that money on oil, we don't have it to invest in new technologies. That is the challenge.



**Mr. Steven Guilbeault:**

Or to buy electricity from Hydro-Quebec, rather than buying oil, which is increasingly sourced from countries like Algeria or Angola. That is the strategy we're pursuing.



**Mr. Massimo Pacetti:**

I didn't follow you on one of the points you were making.

You referred to an OECD study and mentioned Canada. I didn't understand what you said at the end.



**Mr. Steven Guilbeault:**

I was referring to the fact that we have no incentives in place for the production of renewable energy and that this has been noted in several studies, particularly the OECD study. We are one of the rare industrialized countries, if not the only one, not to have a strategy and funding in place to encourage the production of renewable energy. We used to have a fund—the ecoENERGY Fund—which gave about 1¢ per kilowatt-hour to producers of renewable energy. However, the Harper government decided not to renew the funding for that program. Technically, the fund still exists, but there is no more money available. The infrastructure of the fund is still there. There are still a few public servants attached to it, but there is no longer any money to invest in renewable energy and other forms of energy.



**Mr. Massimo Pacetti:**

Of all the OECD countries, Canada is the only one not to have a fund?



**Mr. Steven Guilbeault:**

If we are not the only one, we are certainly one of the only countries not to have one. From memory, I would say we are the only one. I could forward to you the documentation on that. Several OECD studies have been done on this, but I can tell you that the United States has one, the European Union obviously has one, as do Japan and Australia. To my knowledge, all the industrialized countries have policies and incentives in place. We have none. There are some for first-generation biofuels—basically corn ethanol—but not for renewable energy sources such as solar, wind and geothermal energy.

Équiterre is currently building an environmental construction project in Montreal—a platinum LEED project—that will be one of the most efficient in North America in terms of energy consumption per square foot. We received no federal money for this project, even though the federal government funded a similar project in Toronto. I personally worked on a green housing cooperative project—social housing, in other words—aimed particularly at low-income households. We did receive money from Quebec, the Quebec Housing Corporation and the City of Montreal, but we received no federal government grant.



**Mr. Massimo Pacetti:**

I'm not surprised. Thank you, Mr. Guilbeault.

[English]

Mr. Muller, for a lot of the projects that are happening in the first nations, whether in the territories or in the tribes, wouldn't there have to be some type of a joint venture? The companies wouldn't be able to just come through and dig a pipeline or explore the natural resources, would they?

(1635)



**Mr. Clayton Thomas-Muller:**

Of course, within the Athabasca region in and around Fort McMurray, there is an industry-funded group called the IRC, Industry Relations Corporation, for the five tribes of the Athabasca Tribal Council: Athabasca Chipewyan First Nation, Chipewyan Prairie First Nation, Fort McKay First Nation, Fort McMurray No. 468 First Nation, and Mikisew Cree First Nation.

These industry-funded bodies are set up to do a couple of things, one being dealing with the consultation of industry. This is a highly problematic system, however, that does contribute to the erosion of the trust relationship between the federal government and first nations. It is significantly underfunded. The number of applications for new projects that the IRC, who has a handful of staff, has to deal with and respond to within a certain timeframe, which is usually a couple of months, is in the tens of thousands, almost nearly 100,000, so--



**Mr. Massimo Pacetti:**

Sorry to interrupt. Your argument is almost in reverse to what Mr. Schmidt is saying. He's saying there's overregulation; you're saying there's not enough.



**Mr. Clayton Thomas-Muller:**

That may be the case. What I am saying, though, is that the current situation for consultation is in no way adequate. Actually, it's an erosion of first nations sovereignty because of where consultations within new project applications exactly occur. It doesn't happen at the very inception of an idea. It happens near the end, right before the project goes to the energy and conservation.... I can't remember...Alberta Energy always changes its name. But, yes, there are some significant inadequacies right now.

With regard to other regions, for example, Peace River, Beaver Lake, I'm not too sure how their consultation is set up with regard to new project applications.



**The Chair:**

Thank you, Mr. Pacetti.

Mr. Harris, for up to five minutes. Go ahead, please.



**Mr. Richard Harris:**

Thank you, Mr. Chair.

Mr. Thomas-Muller, I want to give you a couple of short questions and we'll try to do short answers because we have a short time.

I understand from your testimony that you're not satisfied with the monitoring of the water quality in and around the communities. Is that correct?



**Mr. Clayton Thomas-Muller:**

Yes.



**Mr. Richard Harris:**

Okay. Who is doing the water monitoring now?



**Mr. Clayton Thomas-Muller:**

There is a transition that's happening with RAMP. I'm not too sure what phase it's in.



**Mr. Richard Harris:**

Is it the Alberta government? Is it a regulatory body? Is it the companies themselves? Who is it?





**Mr. Clayton Thomas-Muller:**

This is the inherent problem of jurisdiction in Canada. If it's the fish in the water, then it's the feds who are responsible. If it's the actual water itself, then it is the provincial entities that are responsible.



**Mr. Richard Harris:**

Okay, but somebody is doing it.



**Mr. Clayton Thomas-Muller:**

Well, that's what's being debated at this point.



**Mr. Richard Harris:**

This is important, because if you're telling me that you don't know if anybody is doing it, that's a real concern to me. They're either doing it or they're not. If no one is monitoring the water, I can accept your valid claim that —



**Mr. Clayton Thomas-Muller:**

Let me put it this way: RAMP has not been doing their job.

**Mr. Richard Harris:** RAMP. Okay.

**Mr. Clayton Thomas-Muller:** And that is why first nations have acquired their own independent research, led by Dr. Schindler and Dr. Timoney, to basically prove or to validate the concerns of elevated levels of contaminants within the watershed and to link those elevated levels to industry's footprint.



**Mr. Richard Harris:**

I wonder, could you do us a favour and send the committee members a list of your specific concerns about RAMP insofar as their not doing their job? Specifically, not rhetorically. I'd really appreciate that.

If that's a real problem, then we should be looking at that.



**Mr. Clayton Thomas-Muller:**

I will say that I did read the protocols for submissions, and just to respect the point of order, I don't know if I have the capacity for translation on that. That would be on your end.



**Mr. Richard Harris:**

Well, we can do that. If we get them in English, we can translate them.



**Mr. Clayton Thomas-Muller:**

Then I'd be happy to do that for you.



**Mr. Richard Harris:**

I'd appreciate that, because I'm interested in that.

**Mr. Clayton Thomas-Muller:** Great.

**Mr. Richard Harris:** Mr. Schmidt, could you just tell the committee a little bit about your company's role as corporate citizen, some of the things you are involved in, in the communities in which you operate?

  (1640)





**Mr. Glen Schmidt:**

We do what is expected, I think, of every company, and every company does their best to meet those goals. In Calgary, for example, in particular we focused on research in the University of Calgary. In the community of Wabasca, we've been active in working with the community and its areas of focus.

The areas we've focused on begin with sport, because it's an opportunity to work with the kids, and access to schools, like career days and opportunities to create job-shadowing, to show people not only what the opportunity is but what it's really about. I know when I started in engineering I actually didn't know. We provide that opportunity physically with time but also with capital.

So there are specific initiatives. The community guides us. We don't tell them. They tell us what makes the most sense and then we make those investments.





**Mr. Richard Harris:**

Many resource companies, of course, like to share their profits, their revenue, with worthy charities. I'm assuming your company is counted among those.





**Mr. Glen Schmidt:**

When we have profit.

The interesting thing—and we have this discussion with the board as part of our program—is we have no production. We're like an R and D company, notwithstanding the amount of capital. But we look at investment not just as hard dollars in a project, but in people, the discussion about how we invest in and grow our staff, but also in the community, what can we do. So we answer it with investments, whether it's scholarships, whether it's supportive research, or whether it's investment in charitable donations in different programs.





**Mr. Richard Harris:**

All right. Thank you.

Mr. Chair, could I just take a moment to address Mr. Thomas-Muller again?

The question I asked you was a sincere question, because I am concerned about that. I wasn't trying to trip you up or anything like that. Could you really clarify that for me...? If it's as you say it is, then we, as a committee, should be taking note of that.





**Mr. Clayton Thomas-Muller:**

Sure, and I think things got rather confused by the recent release of the Royal Society of Canada report, which disputed a lot of this and really made the discourse a very polarized one. So for sure, we'd be happy to provide some clarification on our plan.





**Mr. Richard Harris:**

Yes. We want to get that and have a good, close scrutiny of it. And we'll go from there.





**Mr. Clayton Thomas-Muller:**

Great.





**Mr. Richard Harris:**

Mr. Schmidt, again, could you tell me why the light hydrocarbons are added into the SAGD process?



**Mr. Glen Schmidt:**

It thins out the oil. The oil is viscous, and the way to reduce viscosity is.... There are two methods. Heat it up; temperature will thin the oil, so that it can be produced. The other method is to add a component that reduces the viscosity naturally, and light hydrocarbons will do that.



**Mr. Richard Harris:**

Right. And you say you don't use any potable water at all in....



**Mr. Glen Schmidt:**

As we started, we had some surface water that we used for drilling. But we use subsurface or non-potable water for our operations, and then move to recycle when we go commercial.



**Mr. Richard Harris:**

Then you'll be recycling the water that you....



**Mr. Glen Schmidt:**

That's correct.



**Mr. Richard Harris:**

Interesting.

About a month ago I saw an apparatus that took the liquid drilling mud and actually turned it from a liquid waste to a solid waste and kept the water aside. They could dump the solid waste much easier. Have you seen that? It was quite a rig.



**Mr. Glen Schmidt:**

I haven't seen that one directly. But I do know, in certain areas, that we also, through the drilling programs.... In the areas that have oil sands, they'll clean the sand from drilling so that it can be construction material. People are very much focused on using all the pieces as best they can.



**The Chair:**

Thank you, Mr. Harris. Your time is up.

Madame Brunelle.

[*Translation*]



**Ms. Paule Brunelle:**

Thank you, Mr. Chairman. Good afternoon, Mr. Schmidt.

In your presentation, you focused a great deal on the fact that you want to meet energy needs while providing positive economic impacts balanced with environmental performance. So, you are doing research. You also talked a lot about the University of Alberta.

I myself met academics in Alberta last summer who are doing research. It focuses to a large extent on carbon capture and storage projects. We know that the federal government has invested a lot of money in that area and has provided considerable assistance to companies. Some are of the view that these projects have not really proven themselves. So, people are doing research and trying to do their best. I believe that is also your intention.

However, what concerns me is that we are taking action at a time when the damage has already been done. Are you doing this research to try and find new ways of extracting fuel, to develop a different extraction method which will have less of an environmental footprint and cause less environmental damage?

  (1645)

[English]



**Mr. Glen Schmidt:**

Sorry, could you repeat the last part of your question? It cut out.

[Translation]



**Ms. Paule Brunelle:**

You are taking action to set up carbon capture and storage programs—in other words, to reduce greenhouse gas emissions; but is your research focused primarily on extraction, on the stage when you are actually extracting the gas? Are you able to do that differently so that process causes less pollution?

[English]



**Mr. Glen Schmidt:**

Yes. CCS, or carbon capture and storage, is at an early stage, and it is an expensive technology. You're seeing the testing of that development now under way through a number of operations. So you're right.

Can we be more efficient? I think the discussion this afternoon was around whether we could be more efficient so that we're not creating...or the amount of carbon is reduced. That's the focus where we are. If we can apply the addition of solvent to steam effectively, we will produce less CO<sub>2</sub> right at the beginning. And that is our objective. We think it is an approach that will allow us to have an impact sooner. CCS is an area that is clearly under development. But for us as a company we are very much focused on producing less.

[Translation]



**Ms. Paule Brunelle:**

Separating the tar from the sand requires a great deal of energy. According to what I have been told, the choice that has been made in Alberta is very much focused on nuclear energy. Is that true?

[English]



**Mr. Glen Schmidt:**

Nuclear energy would be challenging if you were to use it for steam. It is very hard to transport steam over large distances. It's a possibility for delivering electricity to the grid, but that's certainly at a scale I've never looked at or can give much of an opinion on.

[Translation]



**Ms. Paule Brunelle:**

I see.

We have heard a lot about oil refining. Some workers told us that it's too bad that refineries in Canada are

being shut down, because the refining operations...

Are you not receiving the translation? Is it all right now? Do you have the sound?

[English]



**Mr. Glen Schmidt:**

Yes, please.

[Translation]



**Ms. Paule Brunelle:**

Workers told us that oil refining is now being carried out in the United States. We are building big pipelines and sending oil to the United States. We aren't processing it in Canada. Is that true?

Do you see anything wrong with that? In any area, it seems to me that having a finished product is more profitable for the country than having someone else do the refining and seeing refineries shut down their operations here.

[English]



**Mr. Glen Schmidt:**

The value of a refinery is driven by its location. Refineries that are close to consumption generate good returns.

The challenge in Alberta, for example, is that we are so remote from the consumer in delivering the product. We export the crude to the U.S. rather than finished products because they are more efficient and it's more cost effective to do it there. There are more refineries in eastern Canada because they are close to the consumer, and that's when you have a competitive advantage.

  (1650)



**The Chair:**

Monsieur Pomerleau.

[Translation]



**Mr. Roger Pomerleau:**

Mr. Thomas-Muller, as you know, we had the same relationship problem in Quebec with the Aboriginal people that you are currently experiencing with respect to all of this.

In order to build the large hydroelectric power grids we have in the Far North, we had to sign very specific treaties with the Aboriginal people, called the James Bay Agreement. We signed that agreement with the Crees, the Attikamek and the Inuit.

The main principle behind that is that we are aware that you can't do anything on your neighbour's land. So, to begin with, the Government of Quebec and the other nations sat down together and recognized each other as nations. So, four nations signed the agreement together. Since then, we've slowly been able to build what we wanted to build after discussions—in other words, how everything would be divided up and what we would do with it.

Based on what you said in your introduction, is it your sense that you are being treated the same way and that there is recognition of your specific territorial rights?

[English]



**The Chair:**

Give a very short answer, please.



**Mr. Clayton Thomas-Muller:**

On a point of correction, I think Quebec was successful in building one-tenth of what was originally proposed under the leadership of Ted Moses. That was hardly reflective of where the plans were going back in the day, when the big fight ensued between James Bay and the Province of Quebec.

Quebec is a very different government from the Province of Alberta. They don't even respect first nations jurisdiction or recognize it. This is one of the reasons you have a situation in Athabasca where consultation is happening by the companies versus the federal government. There is virtually no consultation between the Province of Alberta and first nations.



**The Chair:**

Thank you.

Mr. Shory, you have up to five minutes.



**Mr. Devinder Shory (Calgary Northeast, CPC):**

Thank you, Mr. Chair.

Even though Mr. Thomas-Muller chose to use the words "tar sands" instead of "oil sands", I am pleased to see that all witnesses today realize that energy security in Canada is very important. They also realize the important role that oil and gas play in this. I thank them very much for realizing that.

My question is to Mr. Schmidt from Calgary, Alberta.

First of all, I welcome you to Ottawa.

What are some of the elements of Canada's fiscal regime that you see have been helpful for companies like yours that are looking to attract capital? What can be done to improve Canada's oil sands as an attractive place to invest?



**Mr. Glen Schmidt:**

I think the discussion earlier was on stability within the tax structure. Change always causes a challenge with respect to maintaining competitiveness within the tax structure that exists. The support the government gives for minerals, whether it's mineral exploration or oil and gas exploration, provides an opportunity for companies such as ours to drill and explore. We talked about the Grosmont project. The support, through the tax structure, for those developments, whether it's minerals or oil and gas, is important during the exploration phase of development.



**Mr. Devinder Shory:**

Do you see foreign investment as helpful to the oil sands? How does this capital help projects like yours?



**Mr. Glen Schmidt:**

Flow of capital is important because of the size of the programs. What might surprise in 2011 is that the increased expenditures will actually be larger in conventional oil and gas. On the theme of technology, horizontal drilling and fracturing technology will see an addition of about \$10 billion in incremental capital expended in 2011, whereas oil sands will only grow by \$5 billion in investment.

Flow of capital to meet that growth is important, and as a country, but also as a company, so does ensuring that you have competition for capital. Competition for capital means that whether they are investors from Asia, the United States, or Europe, they are competing for a secure jurisdiction where they can have a good return. Canada offers a secure jurisdiction and an effective tax structure, and they seek that return. The flow of joint ventures, whether it's the recent announcement of Encana on gas or other projects, means that those various sources of capital compete, which allows companies like ours to attract that capital to not just develop production but to do our research.

 (1655)



**Mr. Devinder Shory:**

Mr. Thomas-Müller raised the issue of first nations concerns. I wonder if your company engages, and how actively you engage, the Bigstone Cree Nation, which falls within your project.



**Mr. Glen Schmidt:**

I think we did what Clayton suggested. We should start the discussion before we have any operations, so we did, about four years ago. We opened an office in the community, notwithstanding that there are larger companies in the region. It is staffed by people from the community. And we talk. We understand what their needs are. We've completed the traditional studies with respect to the chief and council. They have two councillors who are focused on us as a company. We try to respond to both to understand the questions they have, the business development they are seeking, and how effective we are in developing a project or in bringing it forward to application.

I think it really comes back to working within the community, and listening, before you launch an application or a program.



**Mr. Devinder Shory:**

Would it be fair to say--would you agree with this comment--that it is a general principle among the industries to work with local aboriginal communities?



**Mr. Glen Schmidt:**

I think every responsible company is focused on working within the communities they're in. The aboriginal communities in northern Alberta are the communities we're actively working with. Establishing a relationship of mutual respect is absolutely critical to a development.

I don't know of a responsible company that doesn't see that as an objective.



**Mr. Devinder Shory:**

I have another concern. Quite a few witnesses have raised their concerns about the amount of water from the Athabasca River being used. I'd like you to clarify whether there are any regulations on water use and the Athabasca River itself.



**Mr. Glen Schmidt:**

We're not in the mining sector, which is the historical oil sands. There are a large number of regulations with respect to utilization of water from the Athabasca River.

What I know is that there are limitations with respect to low-flow periods. There are a number of areas with very specific regulations.

On the in situ side, where we are, there really is a prohibition, for commercial purposes, on drawing surface water. We are really going below to non-potable sources so that we don't have the impacts, which people are seeking to mitigate, with respect to withdrawals from the Athabasca.



**The Chair:**

Mr. Shory, your time is up.

We will end this part of our meeting and suspend for a while. Then we will come back to future business, which I don't think will take very long, but we'll see.

Before we suspend the meeting, I want to recognize that we have a couple of journalism students at the back of the room.

It's really good to have you here.

Thank you to all the witnesses for their presentations and for the answers to the questions today.

The meeting is suspended.

*[Proceedings continue in camera]*

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## MINUTES OF PROCEEDINGS

Meeting No. 44

Tuesday, February 15, 2011

The Standing Committee on Natural Resources met by videoconference at 3:31 p.m. this day, in Room 7-52, 131 Queen Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Richard M. Harris, Randy Hoback, Roger Pomerleau, Devinder Shory and Alan Tonks.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Athabasca Chipewyan First Nation Business Group:* Garry Flett, Vice-President and Chief Operating Officer. *Spectra Energy Transmission West:* Douglas P. Bloom, President. *Cenovus Energy Inc.:* Jim Campbell, Vice-President, Government Affairs and Corporate Responsibility; Jon Mitchell, Team Lead, Environment Policy and Strategy.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

At 3:34 p.m., the sitting was suspended.

At 3:36 p.m., the sitting resumed.

Garry Flett made a statement.

At 3:50 p.m., the sitting was suspended.

At 3:52 p.m., the sitting resumed.

Douglas P. Bloom and Jim Campbell, by videoconference from Calgary, Alberta, made statements and, with Garry Flett and Jon Mitchell, answered questions.

At 5:18 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/16 1:05 p.m.

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**40th PARLIAMENT, 3rd SESSION**  
**Standing Committee on Natural Resources**

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 *The Chair*

 *Mr. Garry Flett (Vice-President and Chief Operating Officer, Athabasca Chipewyan First Nation Business Group)*


**1540**

**1545**

 *The Chair*



 *The Chair*

 *Mr. Douglas P. Bloom (President, Spectra Energy Transmission West)*

 *The Chair*





 *Mr. Douglas P. Bloom*

**1555**





-  *The Chair*
-  *Mr. Douglas P. Bloom*

**1600**

**1605**

-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
-  *The Chair*
-  *Mr. Douglas P. Bloom*



**1610**

-  *Mr. Alan Tonks*
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-  *Mr. Alan Tonks*
-  *Mr. Garry Flett*


**1615**









-  *The Chair*
-  *Ms. Paule Brunelle (Trois-Rivières, BQ)*
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-  *Mr. Garry Flett*
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**1620**







-  *Ms. Paule Brunelle*
-  *Mr. Douglas P. Bloom*
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-  *Mr. Garry Flett*

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**1630**









-  *The Chair*
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**1635**

**1640**








-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Mr. Garry Flett*
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-  *Mr. Douglas P. Bloom*

**1645**











-  *Ms. Paule Brunelle*
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-  *The Vice-Chair (Mr. Alan Tonks)*
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-  *The Chair*
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

**1650**

-  *Mr. David Anderson*
-  *The Chair*
-  *Mr. Jim Campbell*
-  *The Chair*
-  *Hon. Denis Coderre (Bourassa, Lib.)*
-  *Mr. Douglas P. Bloom*
-  *Hon. Denis Coderre*

**1655**

-  *The Chair*
-  *Mr. Jim Campbell*
-  *Hon. Denis Coderre*
-  *Mr. Douglas P. Bloom*
-  *Hon. Denis Coderre*
-  *Mr. Douglas P. Bloom*
-  *The Chair*
-  *Mr. Randy Hoback (Prince Albert, CPC)*
-  *Mr. Douglas P. Bloom*
-  *Mr. Randy Hoback*

**1700**

-  *Mr. Douglas P. Bloom*
-  *Mr. Randy Hoback*
-  *Mr. Jim Campbell*
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-  *The Chair*

**1705**

- ▶ *Mr. Roger Pomerleau (Drummond, BQ)*
- ▶ *Mr. Douglas P. Bloom*
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**1710**

- ▶ *Mr. Jim Campbell*
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- ▶ *Mr. Mike Allen (Tobique—Mactaquac, CPC)*
- ▶ *Mr. Douglas P. Bloom*
- ▶ *Mr. Mike Allen*
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- ▶ *Mr. Mike Allen*

**1715**

- ▶ *Mr. Jim Campbell*
  - ▶ *Mr. Jon Mitchell (Team Lead, Environment Policy and Strategy, Cenovus Energy Inc.)*
  - ▶ *Mr. Mike Allen*
  - ▶ *Mr. Jim Campbell*
  - ▶ *The Chair*
- 



CANADA

## Standing Committee on Natural Resources

## EVIDENCE

**Tuesday, February 15, 2011**

*[Recorded by Electronic Apparatus]*

\* \* \*

 (1530)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):**

I call the meeting to order.

Good afternoon, everyone.

Welcome to another meeting on energy security in Canada. Today we are dealing with the topic of regional economic impacts and we have three groups of witnesses here today.

First of all we have Gary Flett, vice-president and chief operating officer with the Athabasca Chipewyan First Nation Business Group. Welcome.

We also have Douglas Bloom, president of Spectra Energy Transmission West. Welcome.

Is there no translation? We'll suspend for about two minutes until we get this fixed.

[Technical Difficulty--Editor]

  (1535)



**The Chair:**

Can you hear me now? Is the mike working?

**Some hon. members:** Yes.

**The Chair:** We will start the meeting. The technical people can try to straighten things out.

We'll just get directly to the witnesses. I started to name the witnesses we have here today. We have Gary Flett, vice-president and chief operating officer with the Athabasca Chipewyan First Nation Business Group. We also have Douglas Bloom, president of Spectra Energy Transmission West. Welcome, gentlemen, here in the room.

By video conference from Cenovus Energy Inc., we have Jim Campbell, vice-president of government affairs and corporate responsibility; Alan Reid, vice-president for regulatory, local community, and military areas; and Jon Mitchell, team lead for environment policy and strategy.

We will start the presentations, for up to seven minutes, in the order listed on the agenda.

We'll start with Gary Flett from the Athabasca Chipewyan First Nation Business Group.

Go ahead please, sir, for up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Mr. Chair, I have a quick question. I was wondering when the video conference would be coming on.





**The Chair:**

Cenovus will probably be coming on. They tested it earlier and it was working. We'll do what we can.

Mr. Flett, please go ahead.



**Mr. Garry Flett (Vice-President and Chief Operating Officer, Athabasca Chipewyan First Nation Business Group):**

First of all, thanks for having me. It's a pleasure to be here.

During a committee question period on December 7, 2010, Mr. David Anderson asked questions of Lionel Lepine relative to the ACFN Business Group on employment statistics of the Athabasca Chipewyan First Nation membership.

I wish to submit some of the statistics on the ACFN Business Group as well as some supporting documentation and comments.

The Athabasca Chipewyan First Nation Business Group consists of five companies that are 100% owned by the Athabasca Chipewyan First Nation, and another seven joint ventures and partnerships. The ACFN Business Group employs a moving number of employees, depending on industrial demand. At peak industrial requirement of resources during industrial maintenance turnarounds and/or shutdowns, we employ approximately 1,400 people. During the non-industrial maintenance turnarounds, the business group maintains employment numbers of approximately 1,200 employees.

Employment opportunities for ACFN band members are also a moving number depending on industrial demand. During these turnarounds, industry may ask the business group to provide additional labour resources of 300 to 400 personnel. Out of these numbers, we attempt to provide temporary employment for band members living on-reserve. These employees are then transported from Fort Chipewyan to other communities, directly to the plant site, and are provided with accommodation for the period required by the industrial companies.

For questions pertaining to permanent employee levels, I will provide you with some of the demographics of band membership employed with the business group.

The reasons for ACFN band members being at a suggested low level are listed as follows: in the regional municipality of Wood Buffalo, based on the 2010 census, the population of Fort Chipewyan was 1,261 people. ACFN's total membership population out of that is 920. The number of Athabasca Chipewyan First Nation members living in Fort Chipewyan is 236. This equates to 19% of the total population in Fort Chipewyan which are ACFN members in all ages.

Of the ACFN membership, 26% reside in Fort Chipewyan. The ACFN working-age population, between 18 and 55, as of May 2010, is as follows: in Fort Chipewyan there are 135, in Fort McMurray there are 99, and in Edmonton there are 57.

With regard to the Athabasca Chipewyan First Nation Business Group joint ventures employees, based on January 2011 stats, the ACFN Business Group consists of five companies that are 100% owned by the Athabasca Chipewyan First Nation. These include Chip Manufacturing, manufacturers of Kevlar wristolets and safety products; Denesoline Environment, our waste division; Denesoline Janitorial, our janitorial division; Denesoline Maintenance, for highway mechanical repairs; and Tech Sonic Services, an ultrasonic cleaning company.

Our seven joint ventures and partnerships consist of ACFN Allnorth Consulting, our civil engineering firm; AC&T, our heavy equipment earth moving company; ACE Industrial, where we do all the welding and machining; Cutting Edge, where we shred all sizes of tires, on highway and off highway; Dene West Catering; Lemax Machining and Welding; and Poplar Point, another camp catering service.

Our current combined workforce is 1,250 employees with ACFN business and joint ventures. On our website, we stated we had over 1,400 valued employees. Although that was accurate at the time, we must also take into account the attrition and recession in our business group and joint ventures during 2010.

ACFN Business Group employees, in our 100%-owned companies, total 585.

(1540)

In the ACFN Business Group, 9% of our total employees are of aboriginal descent, at 54 out of 585 employees. Of our total employees, 4% of them are ACFN members. Thirty-nine per cent of our aboriginal employees are ACFN members, at 21 out of 54. The number of working-age ACFN members living in Fort McMurray and Fort Chipewyan combined is 234, with ACFN employees at almost 9% of that population. You will need to consider other employees who work directly for the industrial energy groups such as Syncrude, Shell, and Suncor.

Of the ACFN members who are employees--21 of them--there are 11 in Fort Chipewyan who hold managerial positions and positions as factory workers. In Fort McMurray, we have 10. These employees are in executive management and senior management, are accountant personnel, and are in administrative support, trades, and janitorial positions.

Our joint venture employees total 665. Seven per cent of the total employees of the joint ventures are of aboriginal descent, at 47 out of 665. Two per cent of the total employees of the joint ventures are ACFN members, at 11 out of 665. Twenty per cent of the joint venture aboriginal employees are ACFN members. The types of positions held by ACFN employees in our joint ventures and partnerships include supervisory positions, heavy equipment operators, camp attendants, accounting and administrative support people, and labourers.

The ACFN Business Group supports continuing education and development. We currently have four ACFN members who are employees as well as students. One is on educational leave, pursuing her studies in native studies; one is working part time towards her accounting degree; one is full time, completing an associate certificate, and has her Bachelor of Management degree and a certified human resources professional designation; and one is a heavy equipment apprentice.

On ACFN students in general--as a whole nation, not the ACFN Business Group--during the last few years, we've had many graduates. They have certificates, diplomas, degrees, master's degrees, and doctorates. They are in range of disciplines, such as environment, management, law, numerous trades, nursing, education, and sciences, to name just a few. Within the last few years, ACFN has a very good number of students registered with our education department for post-secondary studies.

Now I will go on to some barriers to employment opportunities. Employment opportunities for ACFN band members are also a moving number, depending on industrial demand. The business group caters to industry in services such as our janitorial division, waste management, and recycling, and also to very specific sectors.

We do have a large number of graduates, but their field of expertise is not in the sectors that we work in. For example, there are ACFN members who are nurses, but we do not hire nurses. We have no positions for them.

Although we have had success in some areas, there are some areas that need special attention. There are other factors that contribute to barriers, such as, for example, a lack of education among band members. A study done in 2006 said that 74% left high school in grade 10 or earlier.

Also, some band members cannot achieve employment because they do not have a driver's licence.

There is also a lack of employability skills and training.

Transportation is a very critical area. People living in Fort Chipewyan want to work for industry, but they reside in Fort Chip, and when they move to Fort McMurray, they must seek accommodation on their own.

Also, like the total population of the municipality, we have alcohol and drug testing, which is mandatory with us, and some people cannot pass it.

There are 78 houses in Fort Chipewyan, 53 of which are band owned, and 25 are mortgaged. Currently there are ten families, four singles, and two elders on the waiting list for housing.

 (1545)

The average wait for a home is three years. There are homes with more than one family living in them because of the housing shortage.

Housing in Fort McMurray is at an extremely high cost. If an ACFN member decides to leave Fort Chip and move to Fort McMurray, the following is what he or she can expect to pay: a bachelor suite in Fort McMurray is \$1,492 per month, a one-bedroom apartment is \$1,524, a two-bedroom is \$1,879, and a three-bedroom

apartment is \$2,093. The average single detached home costs \$704,000; a multi-family home--a condominium, and that sort of thing--is \$429,000; a duplex is about \$508,000; and a mobile home on its own property sells for about \$410,000. On top of this, there are child care costs. At the YMCA in Fort McMurray, daycare is \$1,225 a month per child and after-school care is \$450. For a family of four, with two adults and two children, the cost of living in Fort McMurray is \$3,000 a month with housing and child care.

I hope I have provided you with some answers to the questions that were asked of me.

Thank you.



**The Chair:**

Thank you.

We are going to suspend while the system is rebooted, and then we'll go to Mr. Bloom.

(1550)

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(1550)



**The Chair:**

We will resume the meeting with a presentation from Mr. Bloom, President of Spectra Energy Transmission West.

Go ahead, please.



**Mr. Douglas P. Bloom (President, Spectra Energy Transmission West):**

Thank you, Mr. Chairman, and thank you for allowing me the opportunity to appear before the committee.

If there's anything you need for the committee's work that I'm unable to provide today, we'd be happy to follow up afterwards and make sure we get you the information you need.

I hope my remarks are of assistance as you study various aspects of energy security.



**The Chair:**

Hang on for a second, please, Mr. Bloom. Apparently there are problems with the translation now. They're not getting the feed.

Mr. Bloom, could you try it again? I hope we won't have to interrupt you again, but we might.

Go ahead, please.



**Mr. Douglas P. Bloom:**

Do you want me to start with testing?

**Mr. Chair:** Sure.

**Mr. Douglas P. Bloom:** Are you able to hear me now?

Thank you for the opportunity to appear before the committee....

(1555)



**The Chair:**

This is the responsibility of the parliamentary secretary. Everybody knows that.

Okay, I'm doing a test here. I'm just seeing if this works. I'll just keep talking until it's working.

Okay, I think we have it fixed.

Mr. Bloom, could you go ahead and start your presentation from the top? Thank you.



**Mr. Douglas P. Bloom:**

Thank you, Mr. Chairman, and thank you for allowing me the opportunity to appear before the committee. Let me just say from the outset that if there's anything that you need for the committee's work that I'm unable to provide today, we'd be happy to follow up separately and make sure you have the information you need.

I hope my remarks are of assistance as you study various aspects of energy security. Spectra Energy is one of the largest natural gas gathering, processing, transportation, and delivery systems in North America. We operate in seven Canadian provincial jurisdictions, with a significant presence in British Columbia, Ontario, and Atlantic Canada and 3,400 Canadian employees coast to coast. Our operations have deep roots in Canada, more than 50 years of history in B.C., and this year we celebrate 100 years of operations at Union Gas. My written testimony highlights our Canadian and North American footprint and operations in more detail.

Let me first take a moment to talk about our cultural commitment to safety. Our employees live and work in hundreds of Canadian communities, and we're committed to their safety and the safety of the public. We operate and maintain our facilities using thoroughly tested procedures and standards, while adhering to and surpassing strict regulations. With respect to safety, we have a relentless commitment to a zero work-related injury and illness culture. In support of these efforts we ask provincial and federal governments across Canada to work together to support the creation of a national "Call Before You Dig" program. Third party excavation damage continues to be the leading cause of pipeline incidents in Canada.

Given the scope, scale, and geographic diversity of our businesses, Spectra Energy is well positioned to speak to regional economic impacts of energy development throughout Canada. What I hope you take away from my presentation is that the ripple effect from activities in one particular jurisdiction extends widely across our sector and delivers benefits for Canada as a whole.

Let me start with northeast British Columbia. Spectra Energy's assets in B.C. are significant by any measure. Our pipeline and gas processing assets form the backbone of the natural gas sector in B.C. We connect B.C.'s natural gas exploration and production industry with millions of customers who rely on natural gas as a feedstock for manufacturing, as a boiler fuel for electric generation, or as a means to heat their homes and businesses. We process and transport 60% of the natural gas produced in the province, with growth under way. Our system supplies all of the natural gas needs for B.C. and 50% of the natural gas demand in the states of Washington, Oregon, and Idaho, and it is interconnected with the North American pipeline grid.

I recognize this committee has heard testimony about the emergence of new technology and how it's vastly changed the supply picture in North America. In response to this supply growth in the Horn River and Montney/Doig resource areas, Spectra Energy is investing heavily in B.C.'s future. We're expanding our infrastructure to carry these new shale natural gas supplies to markets in western Canada and beyond. Our expansion program is targeted to invest about \$1.5 billion in our B.C. assets between 2009 and 2012. To give you a sense of the importance of western Canada in our company, that \$1.5 billion represents almost a half of our company's current capital expansion program.

Our expansion program to respond to the ramp-up in production means boots on the ground in northeast B.C. and resulting direct and indirect benefits across the country, spread much more broadly than just in the northern communities, B.C., and western Canada. In total, our regional expansion activities now under way include an estimated incremental 1,350 direct construction and inspection jobs over the next three years and close to two million person-hours of work, with additional jobs related to the many engineering, design, procurement, trucking, and logistics services that are required during an expansion of this scale.

The multiplier effect of these incremental jobs, in addition to the \$1.5 billion in capital investment, extends right across Canada and ultimately North America. For example, we're also sourcing equipment from across the continent—pumps from Ontario, process control systems and valves from Alberta, and structural steel from Quebec. All this equipment comes together in collaboration with resources from northeast B.C., along with state-of-the-art engineering, transportation logistics, and millions of dollars in road and bridge upgrades along the

way--and this is just Spectra Energy's contribution.

  (1600)

British Columbia's natural gas industry royalty revenues totalled \$406 million in 2010, and the property taxes that Spectra Energy paid, \$60 million, made a significant contribution to the provincial economy. Our industry also invests in local communities across B.C. in the form of money and time. In 2010 our employees donated more than 700 hours to volunteer projects in B.C., and annual charitable contributions in the west were nearly a million dollars.

We believe that robust natural gas supplies will provide energy security for Canada and our U.S. neighbours, and natural gas will continue to underpin local, provincial, regional, and federal economies well into the future.

That covers two of the three "E"s in our continental energy equation. The third "E"—our environment—is also a natural fit for natural gas. With a carbon profile that is 45% cleaner than that of coal and 30% cleaner than that of oil, natural gas is available right here and right now to fuel our environmental objectives. Our U.S. neighbours are recognizing this. During his State of the Union address to Congress last month, United States President Barack Obama voiced support for the role of natural gas in a forward-looking clean energy policy.

Alternative sources of energy are essential, and an important part of the overall energy mix, but the reality is that natural gas will continue to provide a significant share of energy for generations to come, and will provide backup to renewables when the wind doesn't blow and the sun doesn't shine. In Ontario, natural gas is displacing coal-fired electric generation and delivering immediate emission reductions. Spectra Energy is transporting this natural gas through our Union Gas subsidiary, a company serving 1.3 million customers in Ontario's energy market, and in the maritime provinces, Nova Scotia and New Brunswick are exploring opportunities to further diversify their energy portfolio with increased utilization of clean-burning natural gas and renewables.

Beyond near-term emissions reductions that can be achieved, the economic benefits associated with greater utilization of natural gas are essential to the host communities that are benefiting from today's natural gas technology and development boom. We must take advantage of the fuel before us today: a clean, domestic, abundant, efficient, and versatile fuel. This important step will set the stage for economic benefits at the local, regional, and national level.

As Spectra Energy undertakes the large natural gas infrastructure investments across Canada to take advantage of today's cleanest conventional fuel and support our energy security, environmental, and economic objectives, we offer the committee the recommendations that follow.

First, continue to recognize and support the energy industry's role in providing essential services to Canadians and stimulating economic growth. Amidst a significant worldwide economic downturn, Spectra Energy added jobs. Our contributions to economic growth can be bolstered by continuing to provide a competitive tax environment; support for infrastructure, research, and development as our industry expands; and a harmonized, efficient, and stable national and North American regulatory environment.

Second, build homegrown demand for natural gas and diversify access to our resources through offshore markets. With more than 100 years of domestic natural gas supply, commodity prices are also expected to remain modest for the foreseeable future. If Canada is unable to build domestic demand for natural gas use and develop offshore market outlets, it will impede the growth of exploration and production across Canada, a major source of revenue and economic benefits for regions across the country.

Third, ramp up efforts that support investments under way in Canada's natural gas infrastructure. Spectra Energy strongly supports the positive direction taken by the National Energy Board to encourage and attract investment in key energy infrastructure in Canada. Initiatives to encourage regulatory efficiency bode well for long-term investment in our sector.

  (1605)

Fourth, continue to recognize the role that Canadian natural gas resources play in North American energy security. A clear national energy strategy would be helpful to support growth in the energy sector and regional advantages.

I'd like to thank you for the opportunity to speak today. I hope these remarks and our brief are helpful to your deliberations and I look forward to your questions.



**The Chair:**

Thank you, Mr. Bloom.

The witnesses we had hoped to hear from by video conference aren't connected as of right now, so we'll go to questions and comments, and if they become available, we will stop at some point and hear from them and then carry on. As well, Mr. Flett has to leave before five o'clock, so please keep that in mind while you're asking questions.

I will go first to the official opposition. Go ahead, Mr. Tonks, for up to seven minutes.



**Mr. Alan Tonks (York South—Weston, Lib.):**

Thank you very much, Mr. Chairman.

Mr. Flett, Mr. Bloom, welcome. I appreciate your being here.

My first question is to Mr. Bloom. Mr. Bloom, you've made several references to a projection of regulatory clarity. Also, you finished by saying that the whole opportunity for investment perhaps hinges on that preciseness of regulatory clarity and excellence. Could you expand on what you believe to be that regulatory framework?

You also talked about a clear national energy strategy. Could you expand on that a little bit in terms of the regulatory regime that you would like to see in place and whether there are problems with the existing regime? As well, what do you mean in terms of an energy strategy?



**The Chair:**

Mr. Bloom, go ahead.



**Mr. Douglas P. Bloom:**

Thank you. Let me start with the regulatory efficiency point that I wanted to make.

The issue here, sir, is that investment decisions really are advantaged when we have greater certainty of the process, so we encourage any steps on the regulatory side that help us provide clarity and certainty of the process. The outcome, of course, is left to the regulators, but what's important to private sector investors is the timeliness and certainty of the process, and those are probably among the more important things that we could ask of any regulator.

(1610)



**Mr. Alan Tonks:**

On the national energy strategy, could you expand on that a bit? We've gone down that path before, and I think you can appreciate that we want to be very careful in terms of provincial sensitivities and so on. What do you see a national strategy encompassing?



**Mr. Douglas P. Bloom:**

In short, we feel that there's a tremendous opportunity in Canada at this point. We're blessed in this country with abundant resources. We've been also very fortunate to sit next to the largest market in the world, but we're also accessible to many other very large and emerging world economies. We feel there's a tremendous opportunity now for Canada to pause and think about what goals we want to establish for the energy sector and the jobs and incomes that it can support. I think now is an opportunity for us to assess how we best can maximize the value of the resources that we have in this country--respecting the provincial jurisdiction over those resources, but nevertheless assessing the goals that we aspire to as a country and the things that we need

to do in order to achieve them. That would encompass all levels of government, as well as the private sector participants.



**Mr. Alan Tonks:**

We might come back to the point you made in terms of investment, where that investment comes from, and the terms and conditions that would be part of that national strategy.

I'd like to go to Mr. Flett. Mr. Flett, thank you very much for the statistics. This is very excellent, and I think the committee would be interested in terms of the accessibility, if you will, to the benefits of the tar sands, the development that's going on into shale gas and so on--sorry, I meant the oil sands. I just wanted to make sure they are awake over on the other side there. There's a sensitive issue there.

Mr. Flett, the success of your own companies that you have nurtured and developed is very admirable, but are you satisfied that you're getting the reinvestment in educational opportunities and in child care?

You mentioned the housing issues. We have been up to Fort McMurray. We've seen the tremendous overcrowding that's happening. Are some of those benefits equitably coming back to the local populations, and in particular to the first nations that you represent?



**Mr. Garry Flett:**

The answer, I think, is no, but is there long-term relief? Possibly. There needs to be more input, more development done by industry itself, maybe in conjunction with the provincial government, to relieve some of the pressures on the housing issues.

The reason I provided those stats was the question on behalf of the ACFN employment numbers, the membership numbers. A lot of the members live out of the Fort McMurray area but still within the regional municipality of Wood Buffalo. A lot of the members have limited skills to enter the market, so the positions that they can fill are entry-level, low-skilled, or unskilled positions, which of course attract a low salary or income and hinder their ability to access the local housing market in Fort McMurray.

When industry provides accommodations for them—and mostly it's temporary—they can come into or fly into Fort McMurray or into the area, live in the camps, make an income, and provide it back to their families in the remote regions in which they live, but there really is no incentive shown yet by industry or by the government to provide a long-term solution to the housing issue.

**Mr. Alan Tonks:** I see.

How is my time?

(1615)



**The Chair:**

Your time is up, Mr. Tonks.

**Mr. Alan Tonks:** Thank you very much for that, Mr. Flett.

**The Chair:** We now go to Madame Brunelle for seven minutes. Go ahead, please.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Good afternoon, gentlemen.

Mr. Flett...

[English]



**The Chair:**

Madame Brunelle, just wait a minute while we make sure the gentlemen get their translation devices working.

Okay, carry on.

[Translation]



**Ms. Paule Brunelle:**

The ACFN Business Group is made up of five companies that belong entirely to the Athabasca Chipewyan First Nation. I thought most of your employees had to be aboriginal to work in your company. But I see that's not the case. What percentage of aboriginals work for you? Could you also tell me the percentage of aboriginals in administrative or executive roles?

[English]



**Mr. Garry Flett:**

Thank you. Maybe I could answer that.

Within the ACFN Business Group, 9% of our total employees are of aboriginal descent. That is our core business, of which we own 100%, and 54 employees out of a total number of 585 are of aboriginal descent.

Four per cent of our total employees are ACFN members, so that's 21 out of 585 employees. Some 39% of our aboriginal employees are ACFN members. That's in all of the businesses, all 11 businesses. The number of working-age ACFN members living in Fort McMurray and Fort Chipewyan combined is 234. ACFN employees number almost 9% of that population.

I hope that provides you with the right....?

[Translation]



**Ms. Paule Brunelle:**

I will take my question a little further. You will see what I am trying to get at.

You told us that 74% of aboriginals left school in grade 10. So the aboriginals are experiencing a significant school drop-out rate. I told myself that, under those conditions, perhaps none of them could be administrators or executives in the companies that belong to a First Nation. I was wondering whether you felt that it was your responsibility to do something about the drop-out rate problem facing aboriginals, or you felt it was the federal government's job to take action, so that some might be able to get a good salary and an executive position in one of your companies.

[English]



**Mr. Garry Flett:**

Thank you.

The numbers I provided are correct on the high school dropout rate for grade 10 or below grade 10. I provide employment for people of different educational levels, but I'm not at a political level to encourage them within their community to continue with their education. That is mostly in the community of Fort Chipewyan, where I don't live or reside. I just provide employment for those people when they do come to Fort McMurray.

As far as administrative positions go, if an ACFN band member qualifies, I have a sense of priority for that person to get the position applied for, but they must qualify like everybody else.



Do I feel that it's the federal government's responsibility to push or provide encouragement to these people to continue with their education? To me, it's an individual responsibility. I think the federal government and the provincial governments do provide the resources for these people to succeed or to go back to seek an education, but it's an individual thing. The higher your qualifications are, the better position you can land with me, and the higher the salary.

Does that answer your question?

  (1620)

[Translation]



**Ms. Paule Brunelle:**

Yes, thank you.

Mr. Bloom, you are telling us that natural gas is cleaner than oil, in terms of the carbon footprint. So I wonder why it is not used as much in Quebec, for example. Is it just because of the widespread use of hydroelectricity?

[English]



**Mr. Douglas P. Bloom:**

Thank you.

We see in Quebec as well as in several other jurisdictions, Manitoba and British Columbia among them, that we have an abundant hydroelectric supply. Those two are very clean sources of energy, and as a result, between the clean and abundant nature of the supplies and the relatively competitive prices, we see that hydroelectric energy captures a large area of the energy market in jurisdictions such as Quebec and British Columbia.

[Translation]



**The Chair:**

Thank you, Ms. Brunelle.

[English]

Mr. Cullen, you have up to seven minutes. Go ahead, please.



**Mr. Nathan Cullen:**

Thank you, gentlemen, for being here today.

I just want to get some context first.

Thank you, Mr. Flett, for the numbers and for your thoroughness.



**The Chair:**

Wait for the translation again.



**Mr. Nathan Cullen:**

Are we good?



**The Chair:**

Go ahead, Mr. Cullen.



**Mr. Nathan Cullen:**

The statistics were about ACFN members. About 2% of the employees in your joint ventures and 4% in the ACFN solely owned companies are ACFN members. Is that right?



**Mr. Garry Flett:**

Yes, that's correct.



**Mr. Nathan Cullen:**

Does your organization set targets? Is there a goal you hope to achieve? I understand all the factors that you presented, the educational levels and costs. I think that was the context of the presentation. Does your group seek to set any targets for what the employment numbers would be like? They seem pretty low if 96% of the employees are not ACFN members.



**Mr. Garry Flett:**

The total number of band members is around 920. Out of the working age, the percentage gets lower, and there are professionals and technical people who go into different arenas for employment, so that leaves a limited few to pick up. A lot of them are for unskilled positions, and I employ a lot of those.

To answer the question on whether I provide incentives—



**Mr. Nathan Cullen:**

I was asking if you or any of your companies set targets. For example, you're at 2% right now, but you'd like to get to 10%, or you're at 4% and you'd like to get to 8%. Does anything like that go on for you?

(1625)



**Mr. Garry Flett:**

Thanks for clarifying. No, I do not set targets. I can only wish to increase my numbers.

As I stated earlier, if, across the board, everyone has equivalent skills and one is an ACFN member, I will give the ACFN member the advantage. However, you need to have all the other qualifications.



**Mr. Nathan Cullen:**

In your joint ventures, are the companies that you joint venture with comfortable with that policy, the policy that if there are two equal candidates, you're going to give preference?



**Mr. Garry Flett:**

We discuss it in our quarterly and semi-annual updates. Yes, there's a comfort level with it.



**Mr. Nathan Cullen:**

Mr. Bloom, a number of oil and gas companies have mentioned the need to establish a Canadian energy security strategy. They have spoken of a need to begin a national conversation on energy security, which many see as generally absent. I don't know if it is attributable to just having a lot of energy.

Does Spectra have any opinion on that?



**Mr. Douglas P. Bloom:**

We believe that establishing a national energy strategy is a good idea and that now is a good time to address that issue. We're fortunate that we have abundant resources. We've had abundant market opportunities as well. However, on the natural gas side, we're in an increasingly competitive situation. While we in Canada have abundant shale resources, so does the United States, and we're seeing vigorous competition for existing markets. As a result of that, I think we need to start looking at a longer-term strategy to develop the resource, to develop the markets, and to maximize the value that energy can provide to the economy.



**Mr. Nathan Cullen:**

It's an interesting thing. I'll quote from one of your recommendations here:

Spectra Energy strongly supports the positive direction taken by the National Energy Board to encourage and attract investment in key energy infrastructure in Canada.

What did you mean by that?



**Mr. Douglas P. Bloom:**

We think the National Energy Board has done a good job of establishing a regulatory framework that's clear and understandable and relatively dependable in terms of the timelines for handling regulatory applications. That's a very important and sometimes under-appreciated part of what they do, and frankly it's an important part of energy investment and ultimately of the delivery chain. We think the work they have undertaken to try to provide as much regulatory clarity and certainty of process as possible is important and should be recognized.



**Mr. Nathan Cullen:**

At this committee, I think we might interpret energy security in slightly different ways. You spoke earlier in the question to security of market and the global competitiveness, particularly in your industry, because there is so much natural gas and prices are incredibly depressed right now. They are very low, relatively speaking.

Something that confuses some of us is that the east-west connections in our energy profile in this country are very weak, whereas north-south avenues have been the historical and predominant ones. As you're a Texas-based company, you have an encouragement to have that north-south supply continue, and under NAFTA we have certain treaty obligations, but you talked about encouraging the Canadian market. Why is there a lack of investment from companies to this point, whether it be in electricity, gas, oil, or any of the things we want to use in the Canadian market, and why has there been no leadership from government to enhance our security—and I'm talking about the supply for consumers side of things—from an east-west profile, rather than importing Middle East oil into eastern Canada while exporting Canadian oil from western Canada to the United States and other markets? Why has there been so little infrastructure built between the provinces on oil, gas, or electricity?



**Mr. Douglas P. Bloom:**

Let me comment on natural gas, for starters.

There is a pretty substantial east-west infrastructure in place right now, and in fact it has been in place for decades now. There are pipeline systems that extend from Alberta and western Canada—and you could extend that back to British Columbia, because of the interconnected nature of the pipeline systems—to eastern Canadian markets, including Quebec. In the natural gas sector there has been a pretty substantial infrastructure put in place.

I think on the oil side there has been as well. A lot of western Canadian oil is transported east, not only to Canada but to markets in the U.S. midwest and beyond. At least in those two sectors there has been a pretty sizeable west-east infrastructure put in place.

(1630)



**The Chair:**

Thank you, Mr. Cullen

We will now go to the witnesses from Cenovus Energy: Jim Campbell, vice-president of government affairs and corporate responsibility; Alan Reid, vice-president for regulatory, local community, and military areas; and Jon Mitchell, team lead, environmental policy and strategy.

You have, combined, up to seven minutes for your presentation. Go ahead, please, with your presentation.



**Mr. Jim Campbell (Vice-President, Government Affairs and Corporate Responsibility, Cenovus Energy Inc.):**

Thank you, Mr. Chair.

Good afternoon, and thank you for the invitation to join you here today. My name is Jim Campbell, and I am vice-president for government affairs and corporate responsibility at Cenovus Energy Inc. I'm joined by Jon Mitchell, team lead, environmental policy and strategy.

We're very proud to represent our 3,000-plus staff to share information with you about Cenovus, including information on our contribution to the Canadian economy and our commitment to safely and responsibly produce energy resources that the world needs.

Cenovus is a Canadian oil company based in Calgary, Alberta--



**The Chair:**

Excuse me, Mr. Campbell; you're going to have to slow down a bit. The interpreters can't keep up if you go that fast. You're going to have to convince yourself to deliver it slowly.

Go ahead, please.



**Mr. Jim Campbell:**

My apologies, Mr. Chair.



**The Chair:**

Go ahead.



**Mr. Jim Campbell:**

Cenovus is a Canadian oil company based in Calgary, Alberta. Our roots date to the 1880s, the earliest days of the oil and gas industry in western Canada. Today we have oil and natural gas production across Alberta and southern Saskatchewan; however, the growth of our business will be within our oil sands properties in northeast Alberta.

The oil on Cenovus's oil sands leases is deep underground and cannot be mined. In fact, as the committee has likely heard, 80% of the oil in the oil sands region in Alberta cannot be mined. These deep oil sands reservoirs require specialized methods to drill and pump the oil to the surface. We produce this oil by injecting steam into the reservoir to soften the oil deposits so that they can separate from the sand and be pumped to the surface. This is a production method known as steam-assisted gravity drainage, or SAGD, a technology we helped pioneer at Foster Creek in 1996.

A single well pad, with nine well pairs, covers about four to six acres on the surface, but accesses approximately 185 acres underground.

In 2010, we produced about 116,000 barrels of oil a day from 177 wells at our oil sands projects, and by 2019 we expect that the gross production capacity at our two major producing projects, Foster Creek and Christina Lake--both of which are also 50% owned by ConocoPhillips--could reach 493,000 barrels per day.

As we grow our business, we consult with local stakeholders. Where we can, we train and hire locally and use local businesses and services. We also work with many aboriginal communities and organizations in our operating areas.

In the Christina Lake area, for example, about 120 kilometres south of Fort McMurray, we have worked closely with Chipewyan Prairie Dene First Nation, which is our closest first nation neighbour. We have worked with this community to identify preferred vendors from among their joint venture companies. Overall, in 2008 and 2009 we spent \$186 million with aboriginal businesses that provide oil field services and help to keep our camps running smoothly.

Wherever we can't source materials locally, we expand our reach. Many of the materials used by our company and our industry require the skills of Canadians beyond Alberta's borders. In 2010, we procured services and materials from all 10 provinces. In Ontario, our spend was almost \$57 million. More than 130 Ontario-based businesses benefited, including BlueSky Process Solutions in Stoney Creek, which provided us with pipe connectors and fittings. East of Ontario, our spend was more than \$6.6 million. We bought environmental cleaners from suppliers such as West Penetone in Montreal, and commissioning and startup services from suppliers such as OTS in Sydney, Nova Scotia.

But within the industry we are just one of many companies that have contributed to the wealth of Canadians. A July 2009 report by the Canadian Energy Research Institute, CERI, indicated that oil and gas businesses paid \$58 billion to Canadian governments in 2007. Further, the report anticipates that over the next 25 years the industry will add about \$3.6 trillion to Canadian GDP, 25 million person-years of employment, and over one trillion dollars in net revenues for Canadian governments.

Those are significant numbers, but I'd like to shift now to the economic impacts of in situ development. Another CERI report, from January 2010, found that a 30,000-barrel-per-day SAGD project, with a lifespan of roughly 30 years, generates economic benefits throughout Canada. Over its lifetime, that single project would support more than 5,500 direct jobs, generate more than \$9.5 billion in royalty revenues, more than \$2 billion in federal tax revenues, and more than \$3 billion in GDP nationally, and would contribute \$35 million and \$15 million to the GDPs of Ontario and Quebec respectively.

However, we don't believe that economics is the only thing we should consider. Like every human activity, energy development has an impact on the environment. One of our ongoing objectives is to advance technologies that increase oil production while using the smallest amount of water, natural gas, electricity, and land possible.

 (1635)

Since our first oil sands well in 1996, we have taken a measured approach to our growth in the area. We develop our projects in phases, increasing production in 30,000-40,000 barrel-per-day increments, applying what we learn from one phase to the next in a process of continuous improvement.

The key measure of efficiency for SAGD operations is the amount of steam needed to produce a barrel of oil. Our steam-to-oil ratio is less than 2.3, which is among the lowest in the industry. A lower steam-to-oil ratio translates to lower energy usage, lower water usage, lower emissions, and a smaller surface footprint.

I'd like to share with you a few examples of innovations that have allowed us to steadily reduce our steam-to-oil ratio.

Recently, we introduced a new technology that taps into zones of previously inaccessible melted bitumen near our producing well pairs. This technology is a Cenovus innovation that allows us to access that wedge of bitumen and pump the oil to the surface using only single wells and little or no incremental steam. We call these "wedge wells". They increase the amount of oil recovered while lowering our environmental impact.

We are also pilot-testing another technological improvement in our SAGD operations. It involves combining the injected steam with solvents, such as butane, to help bring the oil to the surface. Using the solvent also reduces the amount of steam required in the SAGD process.

These and other technologies come from our significant investment in research and development. We recently announced that we would increase our budget for research and development to \$65 million. At any one time we have approximately 50 research projects under way, each designed to improve processes, protect the environment, or improve the energy efficiency of our operations.

Thanks to the hard work of our people, we increased our oil sands production 190% from 2004 to 2009. During that same period we lowered our sulphur dioxide intensity by 77%, reduced our well pad footprint by 23%, improved our greenhouse gas intensity by 17%, and improved our fresh water-to-bitumen ratio by 91%.

The majority of the water we use is saline water, which is not suitable for animal or human consumption or agriculture and is not taken from rivers, lakes, or streams. We use less than 5% fresh water in our oil sands operations. This water comes from wells in the area and not from surface sources. Fresh groundwater is used mostly for domestic purposes, such as drinking water and sanitation at our camps and facilities; wastewater is reused in our operations whenever possible.

In 2009, Cenovus produced enough oil that, refined into gasoline and diesel, it would fuel 2.8 million cars for one year, but oil is more than a source of fuel. Oil and natural gas are essential materials needed to develop cutting-edge technologies that make a positive difference in our lives. Indeed, nearly everything we use is either made from oil and natural gas byproducts, made by machinery or in facilities powered by oil and natural gas, or transported by fuels refined from oil, such as gasoline or diesel.

We are a company that prides itself on its innovative spirit. Since 2003, Cenovus has committed \$14 million towards early-stage technologies through our environmental opportunities fund. We have funded 11 projects spearheaded by internal teams, external entrepreneurial firms, and academic researchers, all of whom are developing technologies focused on renewable and alternative energy, as well as environmentally driven improvements for the oil and gas sector.

In closing, I would like to assure the committee and Canadians that the people at Cenovus are committed to applying new ideas and new approaches to develop energy resources safely and responsibly. We are committed to making smart decisions, advancing technology, and continuously improving.

Thank you. We'd be pleased to answer your questions, sir.

  (1640)



**The Chair:**

Thank you very much, Mr. Campbell, for your presentation.

We will carry on with questioning.

We'll go now to Mr. Anderson, who will have up to seven minutes.

Mr. Flett, if you feel you have to leave partway through, just go ahead. We understand.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Mr. Flett, I will start with you, in case you do have to leave.

I heard in your response to Nathan's questions what sounds like a little bit of frustration that you haven't been able to employ more of your own people.

You refer to Syncrude, Shell, and Suncor in your presentation as employing folks in your area. Do you have any idea how many people they employ? Is it a fairly large number?



**Mr. Garry Flett:**

Do you mean in the aboriginal community?



**Mr. David Anderson:**

Yes, I do, out of your communities.



**Mr. Garry Flett:**

No, I don't know the number offhand.



**Mr. David Anderson:**

Then that's fine.

You have 1,300 employees in both your business and joint ventures there. Can you talk a little about the change that you feel you're bringing to your community, then, from providing employment? Has it made a significant difference in your community for you to have these dozen businesses operating in the area?



**Mr. Garry Flett:**

Thank you.

The home community for the ACFN, the Athabasca Chipewyan First Nation, is in Fort Chipewyan, which is not their reserve. Do I feel that I'm providing a local benefit for them? For the ones who are living in Fort McMurray, yes, I do. We have one business that's within the community of Fort Chipewyan. It's Chip Manufacturing, which produces Kevlar material out of Kevlar yarn. There we employ 15 or 16 people in a factory. It's a great business and great for the community. It provides employment for working-age mothers who drop their children off at school, go to work, and then pick up their children and go home.

Do I feel that it brings benefit to that community? I do, definitely. Do I wish I could expand it? Definitely, and I probably will be doing that, providing there is industrial demand for the product.



**Mr. David Anderson:**

Mr. Bloom, we had a Quebec witness here last week who suggested that it would be best if the natural gas stayed in the ground. His rationale was that the prices are low now and that the gas should stay there until the prices rise.

I have a couple of questions. You folks have added employees through these low prices. Can you tell us why you've done that and how you've been able to do that? Is this a good time to be expanding?



**Mr. Douglas P. Bloom:**

Thanks--



**Mr. David Anderson:**

Why are you expanding now?



**Mr. Douglas P. Bloom:**

What's driving our expansion is the rapid increase in production that we're seeing in the shale gas and unconventional plays, particularly in northeast B.C. The Horn River Basin is a shale play in the Fort Nelson area. We have a very large infrastructure in place, and by infrastructure I mean extensive gathering pipelines and a very large gas processing plant at Fort Nelson, which has given us a very good foundation.

  (1645)

[Translation]



**Ms. Paule Brunelle:**

There are some technical problems.

[English]

There are some problems about mikes.



**The Vice-Chair (Mr. Alan Tonks):**

The microphones apparently are in bad shape. The translation part isn't working.

Madam Brunelle, could you just...?



**Ms. Paule Brunelle:**

It's not mine. It's the interpreter.



**The Vice-Chair (Mr. Alan Tonks):**

So it's between the witnesses, then.

**Ms. Paule Brunelle:** Yes.

**The Vice-Chair (Mr. Alan Tonks):** To our witnesses on video, we've had problems with our translation, so if we could just wait a moment....



**The Chair:**

Okay, where were we?

Mr. Bloom, would you like to complete your answer?



**Mr. Douglas P. Bloom:**

Okay, let me try to....



**The Chair:**

If you remember the question.



**Mr. Douglas P. Bloom:**

I'll give you an answer. Hopefully it matches up with the question.

**Voices:** Oh, oh!



**The Chair:**

You can kind of talk about whatever you want here.

Go ahead.



**Mr. David Anderson:**

The question was on whether a good time to develop the resource is when the prices are low.



**Mr. Douglas P. Bloom:**

Thank you. We've seen what's really been driving the expansion of our business. Our business is a gas gathering, processing, and transportation business, so we are the connection to the supply--which in our case is in northeastern B.C. and northwestern Alberta--and markets. What's driving us is really the rapid increase in production growth that we're seeing in these unconventional gas plays.

In response to your question about low prices and whether this is the right time to develop, I suppose you'd really have to ask a producer to get their perspective on it. However, what we've seen in our producer customers--and we deal with many--is that they have applied some very advanced technologies that are helping to substantially reduce the cost of developing natural gas, especially in these unconventional plays. Even though prices are probably lower than they'd like them to be, they're nevertheless able to support and sanction their projects, which in turn creates a demand for the infrastructure that we provide.



At the end of the day, their cost competitiveness is critical to them, as it is with us, and it's really advances in technology that have allowed them to reduce their costs and operate within what we would generally perceive as a relatively low price environment.



**Mr. David Anderson:**

Is shale gas more cost-competitive now than conventional gas? Is that what you're implying?



**Mr. Douglas P. Bloom:**

In some basins it is more cost-competitive than conventional gas. It's hard to make a generalization like that, because each basin and each producer has a different cost situation, and supply basins are different.

That said, what we've seen, not only in the basins that we connect customers in in northeast B.C. but also in the other supply basins in which Spectra Energy is active in North America, is that these unconventional gas plays have become among the more leading and most cost-competitive regions to produce gas from. In some cases we're still seeing continued development of conventional gas, but in other areas we're seeing declines in conventional gas production. From that, I think you could make the assumption that in those areas, additional conventional gas production isn't as cost-competitive.

(1650)



**Mr. David Anderson:**

To the folks at Cenovus, I'm just wondering if you can give us a bit of an explanation of your involvement with the Chipewyan Prairie Dene First Nation and the aboriginal folks around your developments. We've talked about that a bit today. I'm just wondering about your perspective on that.



**The Chair:**

Go ahead, Mr. Campbell.



**Mr. Jim Campbell:**

Thank you.

We're very interested in ensuring that aboriginal communities share in the benefits associated with our operations. I can't speak to specific commercial arrangements we've made with the first nations, but as I mentioned in my remarks, in 2009 we spent \$187 million with aboriginal businesses. The number I got this morning was that in 2010 we spent \$125 million with aboriginal businesses in procuring either services or materials.

For example, one of the aboriginal businesses that provides services to us started out a few years ago providing catering services in one of our camps. That year, 2007, we paid them \$177,000. Last year, they had grown their business with us to \$12 million. We think that's great for them. They're building capacity, they're employing people, and we're proud to be associated with that.



**The Chair:**

Thank you, Mr. Anderson. Your time is up.

Mr. Coderre, you have up to five minutes. We're in the second round.

[Translation]



**Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chair.

[English]

Thank you very much.

Mr. Bloom, the first thing I was impressed with is that you have a program called "Call Before You Dig". Maybe if you come to Quebec for shale gas, it might be appropriate to have the industry calling people before they dig.

It's a joke, but it's pretty serious, in a sense, that you have that cultural principle to be inclusive. What's your view? We saw there is shale gas and it might be the future, but it seems there was a major problem, specifically in Quebec, in the relationship with the industry and the population. Some of the people want to be aware of a situation before having to see what's going on in the field.

What advice would you give to our committee about what the relationship should be with new energy? I'm asking because it's new for us, although it's not new in western Canada.



**Mr. Douglas P. Bloom:**

Thank you.

I'll start by saying I'm not personally familiar with the situation in Quebec and some of the issues you refer to. I can speak about the kinds of things we do in our business.

In many cases we expand our infrastructure in areas where we haven't had natural gas gathering and processing infrastructure before. In those areas it's very important for us to get into the local communities and begin consultation early. We consult with communities, we consult with landowners who could be in areas where we would situate pipelines or other facilities, we consult with first nations communities, and we try to take their input and reflect it in the development plan that we arrive at when we apply for new facilities.



**Hon. Denis Coderre:**

This is a question for Mr. Campbell and Mr. Bloom. We had a person who was in charge of the round table for the future of energy, and we were talking about the problems regarding what I call the regulatory process or the monitoring process. Now I'm pleased to see, Mr. Campbell, that you have new technology, but it seems that at some level, the right hand doesn't know what the left hand is doing at the government level, or at least there is a perception there.

So Mr. Bloom, since you've been involved with the regulatory affairs since the beginning in 1987--and Mr. Campbell, you're living it too--what would be your recommendation for that purpose? I believe there is a problem with the monitoring process. I agree with the panel and what they were talking about, but you live it every day. We can talk about smart regulation or whatever. What's your position on that?

Mr. Campbell can go first, and then Mr. Bloom.

  (1655)



**The Chair:**

Go ahead, Mr. Campbell.



**Mr. Jim Campbell:**

Thank you, Mr. Chair.

I think a number of the panels that have reported recently have pointed out issues concerning monitoring. I think from Cenovus' perspective, we want to ensure that the communities where we live and work are better off, so we want to ensure that our operations are safe. We want to ensure that the monitoring of our operations is as good as it can be and makes our stakeholders more comfortable that we're doing the right things.

From Cenovus' perspective, we would hope that the various levels of government--federal, provincial, and

sometimes municipal--and the industry would work together to design the best possible monitoring system we can have. I think that's what has begun now, and we'll work with those organizations to ensure it happens.



**Hon. Denis Coderre:**

Mr. Bloom, do you believe that when we talk about a national strategy with regard to the issue of monitoring, we should probably take a look at the provincial and federal levels more specifically?



**Mr. Douglas P. Bloom:**

Could you help me with what you mean by monitoring? I'm just not sure I'm following.



**Hon. Denis Coderre:**

Monitoring might refer to issues with the water, the environment, or the air, or to the relationship between government and industries. You made the point that the regulatory process was okay. The last panel of several panels said we might have a situation at the National Energy Board that we should take a look at.

I'd like to hear from you on this, because you have industry perspective. You're living it.

If there's no problem, there's no problem, but I believe that specifically when you look at what Dr. Schindler said regarding some of the monitoring processes, specifically those for the water, the fish, and all that....

I'm not an expert and I'm not a scientist, and that's why we have witnesses. From your own perspective, do you believe that the monitoring process right now for oil sands or natural gas is accurate?



**Mr. Douglas P. Bloom:**

I'll just speak to my own experience here. I'm not familiar with the report you're referring to, but we have a pretty demanding regulator in the National Energy Board in terms of the regulations that we're held to. On the pipeline side, there are the onshore pipeline regulations, and we operate to those standards. The National Energy Board holds us to those standards, and they regularly audit us to make sure that we are complying with those standards.



**The Chair:**

Thank you, Mr. Bloom, and Mr. Coderre.

Mr. Hoback, go ahead. You have up to five minutes.



**Mr. Randy Hoback (Prince Albert, CPC):**

First of all, thank you for being here to testify.

Mr. Bloom, I'll start off with you on the gas line. Over this last year we've been hearing from the industry that we're seeing a lot of the drilling rigs moving south and that the natural gas is being developed more south of the border instead of up here in Canada.

Is that still happening, and are we at risk of seeing that capacity moving somewhere else and not coming back?



**Mr. Douglas P. Bloom:**

Well, there's always a risk that we become uncompetitive or that rigs and capital move elsewhere. As we know and as we often say, capital is ultimately very mobile, so investment decisions really track the opportunities that are in front of companies. Over the last couple of years, among other things, we've seen producers drive increasingly toward natural gas plays that have a high natural gas liquid content that can enhance the value of the production. We have some of those plays in Canada, but of course we see those plays in many regions of the United States. They include the Eagle Ford and the Marcellus plays, among others.



**Mr. Randy Hoback:**

Of course, if we raise corporate taxes by 2%, as the opposition members proposed, that's just going to escalate that movement across the line.

  (1700)



**Mr. Douglas P. Bloom:**

Well, corporate taxes are an important part of any company's investment decisions. Higher taxes reduce the economics of investing in a given play. Our view is that it's very important to ensure that in Canada we have a very stable and competitive fiscal environment, as well as ensuring that we have a very competitive and responsive regulatory environment.



**Mr. Randy Hoback:**

Of course. I agree with you 100% on that.

Cenovus is also in the refining sector. What's the advantage of refining down in the States versus refining up here in Canada? Why wouldn't we look at increasing capacity in refineries here in Canada versus the U.S.?



**Mr. Jim Campbell:**

Well, Mr. Chairman, I can only speak on behalf of Cenovus. When we were considering this investment, we looked at the economics of refining and upgrading in Alberta and at existing refineries in the United States, and we found that the economics were better there.

We also found that there is an environmental benefit to refining only once. Upgrading in Canada, moving the product to the United States, and then refining there means you have to heat it twice. There's actually an environmental benefit in not doing that.

I should also point out the deal we made with our partners on the refineries. We own 50% of two U.S. refineries with ConocoPhillips, and Conoco operates them. Conoco then made a corollary investment in our Foster Creek and Christina Lake projects, which enabled us to expand those projects and provide more jobs and economic benefits for Canadians.



**Mr. Randy Hoback:**

A criticism that comes up is that here's another example of exporting a raw product instead of exporting a finished product.



**Mr. Jim Campbell:**

I'm sorry, but I didn't get all of that, sir.



**Mr. Randy Hoback:**

How do you answer the critics when they come out and say we're exporting the raw product all the time instead of exporting a finished product?



**Mr. Jim Campbell:**

Well, again, thanks to our commercial arrangement with ConocoPhillips, we've managed to expand our Foster Creek and Christina Lake operations perhaps more quickly than we could have alone, which has also provided economic benefits and jobs for Canadians.



**Mr. Randy Hoback:**

Okay.

It's too bad Mr. Flett has left, but when we look at capacity, I'm curious about the aboriginal content of your organization. How do you see that? Is it growing? Has it been steady?

Up in my riding we have a place out at James Smith that does training for aboriginals so that they can learn how to run the graders, the Cats, the Euclids, and stuff like that. Are you seeing that coming into the sector more all the time?



**Mr. Jim Campbell:**

Well, we do want aboriginal communities to share in the benefits of our operations, and sometimes that means helping them out. In the one example I referred to earlier, we started out at \$177,000 a year. They're now at \$12 million. We worked with them to help them build capacity.

Specifically, our spend by year over the last four years has gone from \$64 million in 2007 to \$110 million in 2008, about \$86 million in 2009, and \$125 million in 2010. I think that's really good performance. You have to keep in mind that we've only been operating a commercial project for the last 10 years.



**Mr. Randy Hoback:**

Yes, I'd agreed with you that those are nice numbers. I think anybody can be proud to see the increase. I encourage you to keep increasing it as you're able to.

If you had any advice for us here when we look at security going forward, is there one thing that you would say that needs to be changed or addressed?



**Mr. Jim Campbell:**

Cenovus is a Canadian oil sands company. We think we're very fortunate to be operating in Canada. If we had one piece of advice for anybody, it would be that there is some overlap of jurisdiction. The work the Energy Policy Institute of Canada is doing to define what a national energy strategy might look like, so that all parties—the federal government, provincial and territorial and municipal governments, the industry, and other stakeholders—work together to ensure that we have a competitive world-class industry would be what we think would ensure that Canada continues to be a leader in the oil and gas industry.



**The Chair:**

Thank you, Mr. Hoback.

We go now to Monsieur Pomerleau for up to five minutes.

(1705)

[Translation]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you, Mr. Chair.

Thank you both, especially today when communication has been making our lives really difficult.

Mr. Bloom, my first question will be short and strictly technical. Are the pipelines used for conventional gas the same as those used for shale gas? Is there a need for modifications or will the same pipeline work for both types of gas?

[English]



**Mr. Douglas P. Bloom:**

Thank you.

Pipelines are designed based on the properties of the natural gas they transport. In other words, a different type of pipeline will be required, or a different type of pipeline design will be required, if the pipeline has liquids associated with the natural gas or if it has sour gas constituents such as carbon dioxide or hydrogen sulfide within the natural gas. Those are the things that really determine whether a pipeline can be used to transport gas from a different supplier.

It's not necessarily a distinction between unconventional gas and conventional gas, because we certainly have examples of conventional gas that is as relatively sweet and free of carbon dioxide and hydrogen sulfide as an unconventional play. We have other examples in which conventional and unconventional plays have very different raw gas composition characteristics. There's nothing one can really generalize about the gas compositions from conventional and unconventional plays.

[Translation]



**Mr. Roger Pomerleau:**

You talked about three or four places in Canada that are rich in both gas and water resources, meaning the potential for hydroelectricity.

When there is an abundance of both resources in a particular place and they are both usable, don't you think there could be a conflict between the two? Wouldn't it be difficult to use them at the same time, because of the significant amounts of money that would have to be invested, the people who would have to be trained and the market that might not be able to absorb the various new types of energy right away?

Do you think that having those two resources in the same place could create a conflict between them?

[English]



**Mr. Douglas P. Bloom:**

It's a good question.

We certainly see circumstances in which natural gas and electricity from hydroelectric resources compete. For example, in heating applications, just to name one example, you can use either natural gas or electricity. I think in other circumstances, as we look more broadly at the energy resources we have--and in many regions, we're very fortunate to have an abundance of both hydroelectricity and natural gas--I think we can rise above looking at them as two competing sources of energy and see them as sources of energy that can create new market opportunities for us, whether it's within our own country or exported outside of our country.

They compete in certain end-use markets, but in other circumstances, we can see them as complementary, and frankly, as good opportunities for the country.

[Translation]



**Mr. Roger Pomerleau:**

Mr. Campbell, you work a lot with aboriginals in the places where you are developing tar sands. Tar sands could be a great opportunity for aboriginals to increase their own wealth, because of the work that you would allow them to do through subcontracts, through the operations of companies that are connected to your operations.

Notwithstanding this source of revenue, do your companies or the government of the province where you are, have a projected amount in mind for the value of what you are taking from the aboriginal lands?

(1710)

[English]



**Mr. Jim Campbell:**

If I understand the question correctly, I'm being asked whether we're paying a royalty to the aboriginal peoples.

We pay a royalty to the province, which is the resource owner. We work closely with the aboriginal communities to make sure they share in the benefits associated with our operations. We provide them with opportunities to work in our operations and to supply services to us, and we look to find out what they need in their communities and how we can help. Cenovus is committed to making sure our communities are stronger and better because we're there. We're an Imagine Canada Caring Company, which means we provide 1% of pretax profits to community initiatives. We look to see where the needs are and how we can help.

[Translation]



**The Chair:**

Thank you, Mr. Pomerleau.

[English]

We go now to Mr. Allen.



**Mr. Mike Allen (Tobique—Mactaquac, CPC):**

Thank you, Chair, and I want to say thanks to our witnesses for being here today.

Mr. Bloom, when you were responding to the questions from Mr. Tonks, you talked about the regulatory environment and timeliness and certainty. What do you mean by timeliness? Can you put a number on timeliness? Is it six months, a year? In your investment horizon, what do you see as the key timeline for regulatory certainty?



**Mr. Douglas P. Bloom:**

I can't give you a specific timeline that we could generalize across all regulatory applications. Some are more complex than others. At the National Energy Board, we've seen that simpler and smaller regulatory applications can be decided within a certain timeframe. Larger, more complex ones could require a little longer timeline, perhaps with a public hearing.

The important things are that the timeline be competitive from the standpoint of other jurisdictions with which we're competing, and that the process be certain within that timeline.



**Mr. Mike Allen:**

So more certainty in determining the simple ones would be helpful to you.



**Mr. Douglas P. Bloom:**

More certainty and shorter timelines are important, but the most important thing is to establish a regulatory process that accurately and effectively brings in the input from the applicant as well as the various stakeholders, deals with it efficiently, and is known and certain to the applicant in advance. The outcome is a function of the process and is up to the regulator, but the certainty of the process is what's important for investment decisions.



**Mr. Mike Allen:**

You also talked about \$60 million in estimates of royalties in B.C. from natural gas. Where do you see these royalties going with the development of shale gas in the Horn River Basin?



**Mr. Douglas P. Bloom:**

The \$60 million I referred to was the annual property tax payment that Spectra Energy makes in British Columbia. Those property tax payments generally find their way back into the communities through which our facilities run. As a result, those moneys go back into local infrastructure and running the local governments and meeting the local needs.



**Mr. Mike Allen:**

Thanks for clarifying.

This question is for the Cenovus people. You talked about a 30,000-barrel-a-day in situ, which would have a ratio of perhaps four acres to about 185 acres as a ratio of drill pad size to the area. Would that typical four-acre size bring in the 30,000 barrels, or can that vary by drill pad size?

(1715)



**Mr. Jim Campbell:**

That's referring to two different things. We build our projects in increments of 30,000 to 40,000 barrels per day. With our well pads, which are four to six acres of surface footprint, seeing 185 acres underground, there would typically be about nine well pairs on one of those well pads. Each of those pairs of wells, depending on where it might be—Foster Creek, Christina Lake—might produce between 1,000 and 2,000 barrels of oil per day, so you could have anywhere from 9,000 to 18,000 barrels per well pad.

John, would you like to supplement?



**Mr. Jon Mitchell (Team Lead, Environment Policy and Strategy, Cenovus Energy Inc.):**

Sure. There's a rule of thumb that we tend to use from our production perspective, and that's about an acre of land for each hundred barrels of production.



**Mr. Mike Allen:**

Thank you.

I have one more quick question. What are you seeing with respect to some of the new technological development that you're doing? What increases have you seen in the recovery rates? You have the steam-oil ratio of 2.3:1. Are you seeing any better utilization of steam, or are you seeing better recovery rates for the wells you're actually drilling?



**Mr. Jim Campbell:**

We have two examples of actually lowering the steam-oil ratio.

I referred earlier to wedge well. I believe we have about 36 of these wedge wells now working in Foster Creek. Each of these wedge wells is producing about 800 barrels per day of incremental oil with little or no incremental steam, so that helps to reduce the amount of steam we produce as we're producing oil.

I also referenced in my remarks our solvent-aided process. We have one test well operating right now, I believe. We think we can get the steam-oil ratio down below 2 by using butane in place of some steam.



**The Chair:**

Thank you very much.

We have the bells going for votes now, so we have to end the meeting a little bit early.

I want to once again thank all of the witnesses: Garry Flett, from the Athabasca Chipewyan First Nation Business Group; Douglas Bloom, from Spectra Energy Transmission West; and by video conference, Jim Campbell



and Jon Mitchell, from Cenovus.

I apologize for the technical difficulties. Hopefully we won't see those in the future.

Your input today has been very helpful indeed. I thank you for that.

Thank you, members of the committee.

The meeting is adjourned.

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## MINUTES OF PROCEEDINGS

Meeting No. 45

Thursday, February 17, 2011

The Standing Committee on Natural Resources met at 3:29 p.m. this day, in Room 7-52, 131 Queen Street, the Chair, Leon Benoit, presiding.

*Members of the Committee present:* Mike Allen, David Anderson, Scott Andrews, Leon Benoit, Paule Brunelle, Hon. Denis Coderre, Nathan Cullen, Richard M. Harris, Roger Pomerleau and Alan Tonks.

*Acting Members present:* Paul Calandra for Devinder Shory, LaVar Payne for Devinder Shory and Kevin Sorenson for Randy Hoback.

*In attendance: Library of Parliament:* Jean-Luc Bourdages, Analyst; Mohamed Zakzouk, Analyst.

*Witnesses: Alberta Innovates - Energy and Environment Solutions:* Eddy Isaacs, Chief Executive Officer. *Mackenzie Valley Aboriginal Pipeline LP:* Robert Reid, President. *Alberta Chamber of Resources:* Brad Anderson, Executive Director; Larry Staples, Project Manager, Task Force on Resource Development and the Economy. *Town of Bay Bulls:* Harold Mallowney, Mayor; Ted Lomond, Executive Director, Newfoundland and Labrador Regional Economic Development Association.

Pursuant to Standing Order 108(2) and the motion adopted by the Committee on Thursday, October 7, 2010, the Committee resumed its study of energy security in Canada.

Eddy Isaacs and Robert Reid made statements and answered questions.

At 4:27 p.m., the sitting was suspended.

At 4:30 p.m., the sitting resumed.

Larry Staples and Harold Mallowney made statements and, with Brad Anderson and Ted Lomond, answered questions.

At 5:24 p.m., the Committee adjourned to the call of the Chair.

Andrew Lauzon  
Clerk of the Committee

2011/02/18 1:51 p.m.

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**40th PARLIAMENT, 3rd SESSION**  
**Standing Committee on Natural Resources**

**EVIDENCE**



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-  *The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC))*
-  *Dr. Eddy Isaacs (Chief Executive Officer, Alberta Innovates - Energy and Environment Solutions)*







**1535**

-  *The Chair*
-  *Mr. Robert Reid (President, Mackenzie Valley Aboriginal Pipeline LP)*

**1540**

-  *The Chair*
-  *Hon. Denis Coderre (Bourassa, Lib.)*

**1545**

-  *The Chair*
-  *Dr. Eddy Isaacs*
-  *Hon. Denis Coderre*
-  *Dr. Eddy Isaacs*
-  *Hon. Denis Coderre*
-  *Dr. Eddy Isaacs*



*Hon. Denis Coderre*



*Dr. Eddy Isaacs*

#### 1550



*Hon. Denis Coderre*



*Dr. Eddy Isaacs*



*Hon. Denis Coderre*



*Dr. Eddy Isaacs*



*Hon. Denis Coderre*



*Dr. Eddy Isaacs*



*Hon. Denis Coderre*



*Mr. Robert Reid*



*The Chair*



*Ms. Paule Brunelle (Trois-Rivières, BQ)*



*Dr. Eddy Isaacs*

#### 1555



*Ms. Paule Brunelle*



*Dr. Eddy Isaacs*



*Ms. Paule Brunelle*



*Mr. Robert Reid*



*Ms. Paule Brunelle*



*Mr. Robert Reid*



*Ms. Paule Brunelle*



*Mr. Robert Reid*



*Ms. Paule Brunelle*

#### 1600



*Mr. Robert Reid*



*Ms. Paule Brunelle*



*Mr. Robert Reid*



*The Chair*



*Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP)*



*Mr. Robert Reid*



*Mr. Nathan Cullen*



*Mr. Robert Reid*



*Mr. Nathan Cullen*



*Mr. Robert Reid*







*Mr. Nathan Cullen*



















*Mr. Robert Reid*



*Mr. Nathan Cullen*

-  *Mr. Robert Reid*
-  *Mr. Nathan Cullen*
-  *The Chair*
-  *Dr. Eddy Isaacs*

**1605**

-  *Mr. Nathan Cullen*
-  *Dr. Eddy Isaacs*
-  *Mr. Nathan Cullen*
-  *Mr. Robert Reid*
-  *Mr. Nathan Cullen*
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-  *Mr. Nathan Cullen*
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-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Dr. Eddy Isaacs*
-  *The Chair*
-  *Mr. Robert Reid*
-  *The Chair*
-  *Mr. Richard Harris (Cariboo—Prince George, CPC)*

**1610**

-  *Mr. Robert Reid*
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**1615**



-  *Mr. Richard Harris*
-  *Mr. Robert Reid*
-  *Mr. Richard Harris*
-  *The Chair*
-  *Mr. Richard Harris*
-  *Mr. Robert Reid*

-  *Mr. Richard Harris*
-  *The Chair*
-  *Mr. Alan Tonks (York South—Weston, Lib.)*
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-  *Mr. Robert Reid*
-  *Mr. Alan Tonks*
-  *Dr. Eddy Isaacs*
-  *The Chair*
-  *Mr. David Anderson (Cypress Hills—Grasslands, CPC)*
-  *Mr. Robert Reid*
-  *Mr. David Anderson*
-  *Mr. Robert Reid*









**1620**






















-  *Mr. David Anderson*
-  *Mr. Robert Reid*
-  *Mr. David Anderson*
-  *Dr. Eddy Isaacs*
-  *The Chair*
-  *Mr. Roger Pomerleau (Drummond, BQ)*

**1625**



-  *Hon. Denis Coderre*
-  *Ms. Paule Brunelle*

**1700**

-  *Hon. Denis Coderre*
-  *The Chair*
-  *Mr. Roger Pomerleau*
-  *Ms. Paule Brunelle*
-  *The Chair*
-  *Mr. Robert Reid*
-  *The Chair*
-  *The Chair*
-  *Mr. Larry Staples (Project Manager, Task Force on Resource Development and the Economy, Alberta Chamber of Resources)*
-  *The Chair*
-  *Mr. Harold Mullowney (Mayor, Town of Bay Bulls)*
-  *The Chair*
-  *Mr. Harold Mullowney*
-  *The Chair*

-  *Mr. Harold Mullowney*
-  *The Chair*
-  *Mr. Scott Andrews (Avalon, Lib.)*
-  *Mr. Larry Staples*
-  *Mr. Scott Andrews*
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-  *Mr. Brad Anderson (Executive Director, Alberta Chamber of Resources)*
-  *The Chair*
-  *Mr. Brad Anderson*
-  *Ms. Paule Brunelle*
-  *Mr. Harold Mullowney*

**1705**


-  *The Chair*
-  *Mr. Nathan Cullen*
-  *Mr. Brad Anderson*
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-  *The Chair*
-  *Mr. Brad Anderson*



**1710**

-  *Mr. Nathan Cullen*
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-  *Mr. Brad Anderson*
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-  *Mr. Nathan Cullen*
-  *Mr. Brad Anderson*
-  *The Chair*
-  *Mr. Jack Harris (St. John's East, NDP)*
-  *Mr. Harold Mallowney*
-  *The Chair*
-  *Mr. David Anderson*
-  *Mr. Harold Mallowney*

**1715**

-  *Mr. Ted Lomond (Executive Director, Newfoundland and Labrador Regional Economic Development Association, Town of Bay Bulls)*
-  *Mr. David Anderson*
-  *The Chair*
-  *Mr. Larry Staples*
-  *Mr. David Anderson*
-  *Mr. Harold Mallowney*
-  *Mr. David Anderson*
-  *The Chair*
-  *Mr. Larry Staples*

**1720**

-  *The Chair*
  -  *Mr. Harold Mallowney*
  -  *The Chair*
  -  *Mr. Kevin Sorenson (Crowfoot, CPC)*
  -  *Mr. Larry Staples*
  -  *The Chair*
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CANADA

## Standing Committee on Natural Resources

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NUMBER 045

• 3rd SESSION •

40th PARLIAMENT

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### EVIDENCE

**Thursday, February 17, 2011**

*[Recorded by Electronic Apparatus]*

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 (1530)

[English]



**The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)) :**

I call the meeting to order.

Good afternoon, everyone. We're here today to continue our study on energy security in Canada and we're continuing on the topic of regional economic impacts.

We have two panels with us today. At the first panel, we welcome from Alberta Innovates - Energy and Environment Solutions, Dr. Eddy Isaacs, chief executive officer. From the Mackenzie Valley Aboriginal Pipeline LP, we welcome Robert Reid, president.

We will go to your presentations in the order you are listed on the agenda, for up to five minutes each, starting with Dr. Isaacs.



**Dr. Eddy Isaacs (Chief Executive Officer, Alberta Innovates - Energy and Environment Solutions):**

Thank you for the opportunity to address your committee and also to answer your questions. I hope I can add some value to the work of the committee. I have submitted a short brief to the committee on what I wanted to address, so I'll keep my comments fairly brief.

I'll introduce my organization, mention the importance of diversifying our markets, and then speak to responsible action on the environment and climate change, the critical importance of innovation, and how all of this ties into energy security.

First, our organization, Alberta Innovates - Energy and Environment Solutions, is one of four new provincial corporations launched by the Alberta government in January 2010 under the Alberta Innovates banner. We serve as the technology arm of the Alberta government in energy and environment. We're a successor to two previous organizations stretching for over 36 years. We've had a big presence in the area of energy and environment for some time now.

Our mandate is to position Alberta for the future in energy and environment. We do that by identifying, evaluating and selecting technologies and partners, and that's important. We've built the domain expertise and the competitive intelligence tools to be able to do that. We invest in or fund research and technology with industry, the federal government, and international collaborators.

A recent supplement in *The Globe and Mail* provides an example of the work we've been advancing. I'm going to table that supplement; I know it needs to be translated.

As well, I'm tabling our annual report, more than anything else to provide you with some idea of the work we're doing and further details on the impact of our work.

I want to discuss broader energy markets. I'll use the example of the forestry industry in B.C., which for a decade has been trying to move away from just the North American market. It has recently achieved a big breakthrough in penetrating the Chinese market. The demand in China was always there, but one had to be persistent and overcome the cultural barriers of using wood for building houses.

In Canada we have growing oil resources. In fact, we are the only developed country that can dramatically increase its oil production, not only from oil sands, but also increasingly from tight conventional oils, the so-called shale oil that's found in Manitoba, Saskatchewan, and Alberta. Production has already started in Manitoba and Saskatchewan, and in Alberta to some degree.

Unfortunately our only market is the United States. That market is reaching a saturation point and is forecast to stagnate as we move forward. It is crucial for Canada that we focus our efforts on diversifying our markets, with special emphasis on Asia, China, Korea, and Japan. Not only is this important; it is also becoming very urgent.

The second point I want to make is about responsible action for the environment. Societal expectations are such that when we're considering economic development, we do that with what is best for the environment. It's no longer just companies wanting that: society expects us to do it. In the oil sands, Canada is most vulnerable on the environment, and there are many organizations working hard to balance environmental stewardship with economic reality. For example, the Alberta Chamber of Resources, which I believe is next on your agenda, has led a comprehensive land use initiative that allows forestry companies and energy companies to work together side by side to integrate their operations so as to minimize the footprint on the land.

If we are to be successful on the environmental front, technology will be a key. I believe our future successes will come from what our past successes have come from, and that is a strong government and industry partnership based on a clear business case and a well-articulated implementation strategy.

  (1535)

New technology creates risks for companies in financial markets. I've provided a graphic representation showing the length of time—20 to 30 years—that it takes to bring new technology to market in the resource sector, much longer than in any other sectors. The time lag does create a high risk profile, and the financial commitment required to overcome these long periods is quite substantial.

We believe that the role of government is to work with industry to reduce the risk of adapting new technology, especially next-generation technology.

The final point on technology is that there is a need for significant investments in sectors where Canada has a natural advantage. These investments need to be focused and sustained over long periods of time because of the length of time it takes to bring what I've called "game-changing technologies" to market. We cannot achieve our environmental targets without changing the game.

My final point is on energy security. My bias, if you like, is that energy security cannot be separated from our energy resources, which are vast; our economy, which is heavily dependent on the energy sector and the resource sector; and our environment, which gives us the social licence to operate.

In all of these—energy, economy, and environment—technology is the glue if we are to be competitive, maximize the value of our resources, and mitigate environmental issues. I believe the government's role is to set the boundary condition and to intervene to ensure the technology is available in an acceptable and affordable manner.

Thank you.



**The Chair:**

Thank you very much for your presentation, Dr. Isaacs.

The second member of the panel here today is Robert Reid, president of the Mackenzie Valley Aboriginal Pipeline LP.

Go ahead, Mr. Reid, with your presentation. You have up to seven minutes.



**Mr. Robert Reid (President, Mackenzie Valley Aboriginal Pipeline LP):**

Thank you, Mr. Chairman, and honourable members.

We appreciate the opportunity to appear before you today to highlight the importance of the Mackenzie gas project, not only to our northern stakeholders but to Canada as a whole.

There are two points that I want to leave with you today: first, the Mackenzie gas project is a vital component of Canada's energy mix; second, the project will provide an economic base for the aboriginal people of the Mackenzie Valley, allowing them to take a big step forward toward economic independence and self-sufficiency.

After a thorough six-year regulatory review, the project now awaits the release of the final step in the regulatory process, and that's the order in council. This is now critical in allowing us to move forward with the detailed engineering and preparatory field work in order to start construction before the expiry of the recently issued NEB certificate in December of 2015.

The first two slides in the handout provide you with an overview of the project. I'll allow you to read those at your leisure.

I'll start on the third slide.

APG is a unique alignment of aboriginal groups in the Mackenzie Valley, not only to support construction of the Mackenzie Valley pipeline but to be a part of it. Our mandate is to maximize the long-term financial return to the aboriginal groups of the Northwest Territories through ownership in the pipeline.

Our shareholders are the Inuvialuit Regional Corporation, the Gwich'in Tribal Council, and the Sahtu Pipeline Trust. The Mackenzie Valley pipeline is owned by APG, the Aboriginal Pipeline Group—we have a one-third share in the project—and our partners at the table are Imperial Oil, ConocoPhillips Canada, Shell Canada, and ExxonMobil Canada. Together they hold the remaining two-thirds.

A question I get asked frequently is whether we need northern gas. The short answer is, "Yes, but not today". We will need northern gas by the latter part of this decade.

On the supply side of the equation, conventional production in North America is mature, with decline rates approaching 20% per year. In Canada alone, over three billion cubic feet a day of new production must be attached each and every year just to maintain current production, and we haven't been doing that.

On the demand side of the equation, natural gas is the most environmentally preferred of the fossil fuels, with emission rates one-third less than oil and fully one-half less than coal.

The power generation market is the fastest-growing market segment for natural gas. Last year, former minister Prentice announced that there were 33 coal-fired generating plants in Canada that will reach the end of their economic life by the year 2020. If those plants are fueled by natural gas, that will create an incremental demand of 1.2 Bcf/d, exactly equal to the throughput of the Mackenzie Valley pipeline.

The next slide is a chart that shows that even with the addition of shale gas and other unconventional gas, our total production in Canada continues to decline, and will continue to decline through to the year 2020.

Shale gas is an important addition to the supply mix, but is it sustainable? We know there are very high decline rates in the early years, up to 65%; there's a significant amount of water consumption associated with the production of shale gas, typically about 100 times that for a conventional well; and there are some environmental concerns that are cropping up, such as groundwater contamination.

The conclusion reached by Ziff Energy, the company we engaged to undertake a supply-demand study for us, is that shale gas and both northern pipelines will be required to meet the forecast demand requirements by the latter part of this decade.

The next slide shows the overall project schedule for the Mackenzie gas project. We just concluded a rather lengthy regulatory process last December.

  (1540)

We expect to resume our discussions on a fiscal framework with the federal government in the first quarter of this year, following receipt of the actual NEB certificate. That will allow us to restart the project, restaff the engineering team, and proceed with the detailed engineering field programs and about 7,000 site-specific permits. We hope to reach an owner's decision to construct by the year 2013, and the first gas will flow in the year 2018.

This is truly a nation-building project determined to be in the public interest by the National Energy Board. Other nation-building projects have received federal support. Examples include the St. Lawrence Seaway, Hibernia, the original TransCanada Pipeline, and, of course, the Trans-Canada Highway.

The United States government is providing an \$18 billion loan guarantee for the Alaska Highway pipeline. There is a possible role for the federal government to offset regulatory costs and infrastructure costs and to provide a guarantee to lower the cost of capital. The cost of capital is the largest single component of the shipping toll.

This project provides huge economic benefits for the Mackenzie Valley, and they're outlined in this particular slide. There will be over 7,000 jobs at the peak of construction. It generates economic independence and self-sufficiency, displacing the present dependence of aboriginal communities on government programs.

The final slide highlights the significant benefits of this project to Canada as a whole, including the creation of over 100,000 jobs right across Canada. This is truly an all-Canadian project that will deliver the clean energy we need in an environmentally responsible manner while creating jobs and economic opportunities for all of Canada.

Thank you.



**The Chair:**

Thank you very much, Mr. Reid. Again, those were very helpful presentations for the committee.

We'll go directly to questioning now, starting with Mr. Coderre from the official opposition. You have up to seven minutes.

Go ahead, please.



**Hon. Denis Coderre (Bourassa, Lib.):**

Thank you, Mr. Chair. Thank you, gentlemen.

These are, of course, very important issues. We're talking about diversity. We're talking about governance. Our role is to put up some recommendations for the future, and I think you are truly an asset to that future report.

Let me ask you first, Dr. Isaacs, a question. I want to talk about three issues. I'd like to talk about governance, I'd like to talk about perception, and I'd like to talk about partnership.

Regarding governance, it seems that there are some holes in the relationship between the federal government and the provincial government, whether it's a perception or not. Whatever the case, we have a role to play. There's a convention that has been signed between Alberta and the Government of Canada. How do you perceive

our role? Do you feel that we should get more involved in the monitoring process, and is the environmental assessment sufficient? This is probably one of the key issues. Of course, I'm from Quebec, so by definition I'm respectful of jurisdictions.

I'd like to understand how we can be a counterbalance and be part of the solution for a better quality of life for our people.

  (1545)



**The Chair:**

Go ahead, Dr. Isaacs.



**Dr. Eddy Isaacs:**

Thank you very much.

I think it's a very important question. The way I look at it is that the federal government does have a very important role to play. Monitoring is one. The federal scientists are world renowned, some of them, in this whole area, and they can certainly contribute to the overall game plan in terms of monitoring and making sure that we're doing the right things on the environment. We work very closely with the Devon lab of National Resources Canada, as an example. From a scientific basis and in terms of wanting to make the resources more environmentally sustainable, I think that the federal government has a very important role to play, because this is a strategic asset for all of Canada.

I think my perception of the people I work with in the federal government is a very positive one. They are certainly partners in the work we're doing on technology.



**Hon. Denis Coderre:**

Our role would be to have more input into Canadian partnerships regarding R and D and innovation. Our role should be more in science, but on the governance level we switched from Environment Canada to NEB regarding environmental assessments.

If there's a perception problem, it's because some people feel there is a problem with the quality of the air and water, and there is the issue with the fish. We saw pictures. It might be just a perception, but science is important, so do you believe that's the kind of counterbalance role that the federal government should play?



**Dr. Eddy Isaacs:**

The federal government needs to be there because of the science it provides and the credibility required to make sure the monitoring is done properly.



**Hon. Denis Coderre:**

What about smart regulations?



**Dr. Eddy Isaacs:**

Do you mean in terms of renewable energy or a smart grid?



**Hon. Denis Coderre:**

Yes.



**Dr. Eddy Isaacs:**

These things need to happen. My organization has been looking at the whole issue of renewable energy and

how to make the connections happen. This is an important aspect for the whole country.

I was a co-chair of the working group for the ministers of energy. In that capacity we looked at smart technologies for renewable energy quite broadly. Everybody was of the opinion that this needs a lot of work, and it is actually one of the things that can be done jointly because it is important for all provinces.

  (1550)



**Hon. Denis Coderre:**

In our partnership with industry, instead of putting in some tax breaks on capital, should we put more emphasis on R and D and green energy? Should that be our relationship with industry regarding technology?



**Dr. Eddy Isaacs:**

You can have many relationships with industry, but I think it is important to be able to work with industry to make sure that the right technologies are taking place.

The type of work that needs to be done will require what I'll call next-generation technologies. That takes a long time to bring into the marketplace. Industry is very good at current technology and making it more efficient. They are not good at planning ahead for 20 or 30 years down the road for new generations of technology that are going to be required from an environmental standpoint. Government can play a role in helping us move away from just the incremental to the higher-level, more sustainable technologies.



**Hon. Denis Coderre:**

Science is the key issue that will address the perception problem, but we need more accountability, of course. Do you believe that energy security has to be linked to climate security?



**Dr. Eddy Isaacs:**

Yes. When I was speaking about environment, I really meant to include climate change. If I didn't, that's an oversight on my part.



**Hon. Denis Coderre:**

Regarding monitoring, would cap and trade be in order?



**Dr. Eddy Isaacs:**

That is beyond my level of understanding, but people have been saying that a carbon tax could be made to work. It's already working in Alberta.



**Hon. Denis Coderre:**

Thank you.

Mr. Reid, inclusiveness is the name of the game, and I think that in a way you proved that. When you say that one-third is owned by the aboriginals, are we talking also about sharing governance? It's a bit philosophical, but one of the main problems we face regarding any energy issues and all that, specifically in your area, is the relationship with the aboriginals. I think first nations deserve to be full partners.

How do you address that issue?



**Mr. Robert Reid:**

It is important to note that we're an alignment of three aboriginal groups in the Mackenzie Valley. The aboriginal groups actually approached our other partners--Imperial Oil, ConocoPhillips, Shell, and ExxonMobil--

prior to an application even being filed for the pipeline project.

The genesis of APG goes back to the 1980s and the settlement of the land claims up there that allowed the aboriginal groups to put a priority on economic development. In January 2000, Chief Harry Deneron called a meeting in Fort Liard of the aboriginal leaders in the Northwest Territories. He declared that if there was another pipeline built in the Mackenzie Valley, the aboriginal people would want to have a part in it. That meeting and subsequent negotiations with our partners led to us having a full one-third partnership in the Mackenzie Valley pipeline.



**The Chair:**

*Merci, monsieur Coderre.*

Now we'll move to the Bloc Québécois.

Madame Brunelle, you have up to seven minutes.

[Translation]



**Ms. Paule Brunelle (Trois-Rivières, BQ):**

Good afternoon, Mr. Isaacs, and thank you for being here. In your presentation, you said that technology development was costly because it was a 20- to 30-year process to take an idea from the lab to commercialization, and I can understand that. You also said that the government's role was to create the conditions necessary for investment.

What are those conditions? To me, that means you want money. Have you received federal or provincial funding in the past? If so, how much?

[English]



**Dr. Eddy Isaacs:**

Thank you very much. It's a good question.

You're correct in assuming that we will need a large amount of investment to make sure that we can achieve the goals we set. We are a provincial organization, and all of our funding comes from the provincial government. We do not receive any federal support. We work jointly with the federal government in areas of importance to the federal organizations.

We also support some of the research that goes on in federal labs. We actually have an agreement that we've had for a long time with regard to the National Centre for Upgrading Technology in Devon, to support some of the work they carry out there. They're important for what I'll call the "next-generation" upgrading technologies, looking at conversion technologies that have a footprint that's much less than what it is today.

We also work closely with Natural Resources Canada in other areas, both in Bells Corners and Quebec.

  (1555)

[Translation]



**Ms. Paule Brunelle:**

Do you work on carbon capture and storage projects? If so, what do you think of those technologies? Have you thought of other possible technologies? As you know, there has not been much progress in that area, and we are still only at the exploration stage. Can we expect to see any other initiatives, other technologies that would help reduce the impact on the environment?

[English]





**Dr. Eddy Isaacs:**

I hope I understood your question. Am I correct that it has to do with carbon capture and storage, the sequestration project?

It does; okay.

We've been very active in this area. With regard to the investments that have happened between Alberta with the \$2 billion that Alberta has invested and the federal government with the \$800 million or so that the federal government has invested, many of the projects have come through our shop, in the sense that we have piloted some of these projects. We still have this project with Shell to look at and delineate the wells that are going in, and the rate at which you can inject carbon dioxide into the formation. These are saline formations that are deeply buried. We're looking at what the rates are at which you can do this. We have been looking at making sure that the technology is safe and that it can be applied securely.

You're right, though, that it will take a long time to make these technologies commercial, just because of the cost of doing this. Most of the cost is associated with capture of the carbon dioxide and making sure that you have the carbon dioxide. There's also the compression cost; to put it under high pressure is very expensive. It will require new technology to make this whole technology viable, but if we don't start now, it's not likely that we will achieve success in the next 20 years or so.

I think there's been a good start, but this will require a long period of time. Fortunately we're working very closely with international collaboration in this area. There is a lot of interest internationally.

[Translation]



**Ms. Paule Brunelle:**

Mr. Reid, in your presentation, you talked about shale gas. As you know, that is a big concern for us in Quebec. You mentioned something very important, the very high decline rates in early years. That is the first time I have heard about that. What does it mean?

[English]



**Mr. Robert Reid:**

What I meant by that is when you first commence operations for a shale gas well, there's a large initial output from the well; then it declines as much as 65% in the first year, and then it continues on out.

There's not a great deal of experience with shale gas. It's a relatively new phenomenon regarding the length of the tail and the overall supply from a given well.

[Translation]



**Ms. Paule Brunelle:**

Is the decline still noticeable when there is a similar well and other horizontal wells? Is there still a decline then?

[English]



**Mr. Robert Reid:**

Yes, that's correct.

As you're aware, a shale well is drilled vertically, and then there's horizontal drilling that can go out for a kilometre or so. That's done because they have to fracture the shale rock to release the gas. Once they've done that, the output from the well is very high in the initial year, and then declines rapidly in the first year and then

tails off. The rate of decline tapers off after the first year.

[Translation]



**Ms. Paule Brunelle:**

Thank you. I understand now. You also said that the extraction of shale gas required a significant quantity water, typically a hundred times more than the gas.

Is that figure based on scientific data? Is it reliable? Is it really a hundred times more? If I include that figure in one of my speeches in Quebec, will they laugh at me?

[English]



**Mr. Robert Reid:**

No, there are published numbers to support those data. That's for a typical well. Some are higher and some are lower, of course.

[Translation]



**Ms. Paule Brunelle:**

I have another quick question.

I want to come back to your pipeline. Have you received any federal or provincial funding for the project?

  (1600)

[English]



**Mr. Robert Reid:**

We haven't, not at this point in time.

[Translation]



**Ms. Paule Brunelle:**

Would you like some?



**Mr. Robert Reid:**

Of course!

[English]



**The Chair:**

Thank you, Madame Brunelle.

Go ahead, Mr. Cullen, for up to seven minutes.



**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):**

Because this is recorded by audio and not video, I want to point out for the committee that Mr. Anderson was

in fact signing a cheque, so it should be done by the time we're done this meeting.

Thank you, gentlemen.

It was in 1974 that Justice Tom Berger started his inquiry into the Mackenzie Valley pipeline. Now, 37 years later, here we are with the government issuing their order in December.

Mr. Reid, you were saying today that essentially the order from the NEB is sitting on the cabinet's table, and you folks are waiting for that. Is this the final sign-off? If cabinet signs off on this final piece of paper, have you got all the regulatory things in place in order to proceed with the project?



**Mr. Robert Reid:**

That's correct. The order in council is usually a procedural matter that follows any NEB decision. It gives effect to the NEB decision.



**Mr. Nathan Cullen:**

Would it be unusual for an order in council to overturn an NEB ruling like this?



**Mr. Robert Reid:**

Yes, it would be very unusual.



**Mr. Nathan Cullen:**

Do you know why there's a delay? I'm sure you're in conversation with the government. I'm sure your partner members--Imperial Oil, ConocoPhillips, Exxon, and Shell--have good connections with this government as well. Do we have any notion as to why it's taking this long?



**Mr. Robert Reid:**

Typically an order in council would take four to six weeks following the NEB decision. This decision occurred right before Christmas, so I would expect it could be longer. We're right at the eight-week point now, so we're right at the tail end of what would be normal.

I have not been able to find out any reason for a delay, or even if there is a delay.



**Mr. Nathan Cullen:**

We're essentially at the eight-week mark after the decision came in, given the Christmas holidays as well, and maybe we'll hear an answer today, but I doubt it.

I hesitate to ask this question. One of the money reports after this announcement was made was questioning whether this project was dying of old age. Being around for 40 years is a long time for a project to be proposed in anyone's world. These large companies have equity that they can move around the planet for different projects. Holding money up and holding engineers up, etc., is very difficult.

I got no sense from your testimony today that you fear that the delay we're under right now, waiting for the order in council, jeopardizes the project. Is there, in fact, a so-called drop-dead date with this project? If you don't have an answer by spring, late spring, or summer, are you in a lot of trouble?



**Mr. Robert Reid:**

The concern is that the NEB certificate contained a number of conditions, one of which was a sunset date that indicated we must commence construction no later than December 31, 2015. We have about three years of detailed engineering work and permitting, as I mentioned—about 7,000 site-specific permits, etc.—that we need to undertake before we commence construction. That's about three years' worth of work.



**Mr. Nathan Cullen:**

To sum up, with the building season being what it is in the north, you're starting to bump up against the early limits of when you could complete this project in order for your NEB certificate not to expire.



**Mr. Robert Reid:**

That's correct. It's unusual in this circumstance, because it's winter-only construction; the tundra will not support heavy equipment.



**Mr. Nathan Cullen:**

Yes, of course.

To both of you, a number of the energy companies--both traditional oil and gas companies and some of the so-called alternative-energy folks--have come before us and said that one of the things lacking in Canada is any notion of an energy security strategy, or an energy strategy at all. It creates uncertainty in the marketplace. We're the only energy-exporting nation in the world not to have a plan of this type, essentially. When I look at 37 years of Mackenzie experience, I see uncertainties around things like native land claims and whether or not there will be a price on carbon, and if so, how much it will be.

Do you have any opinion on whether there's a need, or are these other companies in fact wrong?



**The Chair:**

Dr. Isaacs, go ahead.



**Dr. Eddy Isaacs:**

Thank you.

My opinion is that this country needs an energy strategy. We need to know what the future looks like so that we can plan ahead. I understand the difficulty in developing one, because of our patchwork of different energy resources across the country. Western Canada is fossil-based and eastern Canada is more nuclear- and hydro-based, so this does create difficulties, but I think it's important--

  (1605)



**Mr. Nathan Cullen:**

It's both possible and necessary, I think.



**Dr. Eddy Isaacs:**

--that we do that. Otherwise, it's difficult to plan for the future.



**Mr. Nathan Cullen:**

Mr. Reid, would you comment?



**Mr. Robert Reid:**

I agree 100% that we need an energy strategy for Canada—absolutely.



**Mr. Nathan Cullen:**

There's been a notion put forward, and I'm wondering if your group has considered this aspect for a number of the communities along the route. It's always a question of risk and benefit and what benefits will be seen. One of the benefits that's been proposed is to develop the use of waste heat from the compressor stations to

generate electricity for communities. A lot of these communities are sitting on diesel. They are very remote, and it's very expensive.

Has your group, or the group at large, looked into this as part of your proposal, or would you consider it?



**Mr. Robert Reid:**

We haven't looked specifically at using waste heat to generate electricity. I'm aware that has been done on the TransCanada Pipeline system. It could be looked at in this case as well. The plan at the moment is to utilize the natural gas from the pipeline to replace diesel in the communities along the route.



**Mr. Nathan Cullen:**

When Justice Berger came out with his report 34 years ago, it was much criticized by industry at the time, and it was a shock to the then Liberal government. He was supposed to go up there, look around, and approve the Mackenzie in its state at that time. There was much opposition, in particular from first nations communities along the way—members of your group.

Has Justice Berger been proven right in a sense? If so, what are the implications for Canada going forward with other energy projects, energy plays, that go on right across the country?



**Mr. Robert Reid:**

In hindsight, there's no question that Justice Berger was correct in deferring this project back then. The aboriginal communities were simply not in a position at that time to take advantage of the huge benefits that could accrue to them. The big difference was the land claim settlements, and that's what Justice Berger recommended.



**Mr. Nathan Cullen:**

Am I out of time, Chair?



**The Chair:**

You have a minute.



**Mr. Nathan Cullen:**

I want to extrapolate this a bit for both of you, then. With the particular attention given to Mackenzie and settling some of the land claims along the way, thus making equity available, we're seeing more and more mining companies and oil and gas companies setting up economic arms that are then available to first nations to participate in.

Some of them are good and some are a bit more thin, yet we don't necessarily see a lot of leadership coming from the federal government in settling that uncertainty. Companies are constantly talking to us about certainty; if there isn't certainty in the market, if there isn't certainty on the land, it's very hard to go to the market and attract sometimes billions of dollars.

Mr. Isaacs or Mr. Reid, how critical is having that question settled around first nations rights? I assume there is an obvious role of the federal government in doing that, but it seems to me that industry is doing it right now. They're not necessarily obligated to do it, while the federal government is constitutionally obligated to do it.



**Dr. Eddy Isaacs:**

I'll let Mr. Reid handle this one.



**The Chair:**

Go ahead, Mr. Reid.



**Mr. Robert Reid:**

Absolutely fundamental to the whole process is the settlement of the land claims. That was the key that unlocked the Mackenzie Valley and turned the aboriginal groups around from absolute opposition back in the 1970s to being partners in the project today. It really introduced the aboriginal communities to the wage economy and to the importance of economic development.

Today in the north, the aboriginal youth have access to satellite television, digital cell phones, and things like that. They see how the rest of the world lives. They don't want to go out and chop wood to keep warm; they want to turn up the thermostat. Living off the land is moving away from being the prime mover in the north.

Of course, the land is still very important to aboriginal people, and it becomes very important for recreation, but the mainstream there is now more wage oriented. They have to have dollars to fill up their ATVs, snowmobiles, and so on. We've moved a long way since the 1970s.



**The Chair:**

Thank you, Mr. Cullen.

We'll go to the government side. Mr. Harris, you have up to seven minutes.



**Mr. Richard Harris (Cariboo—Prince George, CPC):**

Thank you, Mr. Chair, and gentlemen, I thank you.

Mr. Reid, there have been some announcements from the Chinese folks that natural gas is their target in the future. They can see their purchases of oil and coal declining as a result of switching over to natural gas. I would imagine that Asia has to be a real market for you down the road.

I see in your deck that the line will run down to the northern Alberta border. If you are to tap into the Asian market, what would be the route for your gas?

(1610)



**Mr. Robert Reid:**

There's currently a proposal to construct a pipeline from the Spectra system in British Columbia over to Kitimat, convert the natural gas to LNG, and export it to the Asian market.

To get northern gas into that system, our system interconnects with TransCanada. TransCanada actually has a leg that goes into southeastern B.C., and there is a connection between the TransCanada system and the Spectra system at that point. By exchanges, you could get Mackenzie gas up to Kitimat and sold in the export market.



**Mr. Richard Harris:**

Given the capacity that you'd need, it would mean constructing a new pipeline out to the Kitimat area.



**Mr. Robert Reid:**

Yes, and there is a proposal to do that at this time.



**Mr. Richard Harris:**

Right, and then they would liquefy it there and ship it by freighter over to Asia.

I'm sure you're aware of the problems we have out in the northwest part of British Columbia. We have a tremendous amount of concern from the energy companies over the anti-freighter, anti-pipeline groups that are

out there. As a matter of fact, Mr. Cullen, who is not here, plays a leadership role in that effort out there to stop any type of line going out to the northwest to Kitimat.

I'm encouraged by how you've managed to get the first nations groups on board up in the Northwest Territories, but out in the northwest Mr. Cullen and his friends have managed to inflame the groups out there to the point that they're saying no to everything, to every effort. That surely has to cause you some problems with the future vision of the Asian market.



**Mr. Robert Reid:**

We're not targeting the Asian market at this point. I really can't comment on the aboriginal situation in southern Canada.

As I said earlier, it's important to note that it was our aboriginal regions that came together and established a priority for themselves to participate in the pipeline and seek a better way of life.



**Mr. Richard Harris:**

I appreciate that.

With regard to tapping into the Asian market, the shale gas people tell us that down in the United States the fields are so big that the dependence on Canadian gas will decline over the next 10 years as they develop this huge Marcellus basin, etc., so all eyes seem to be turning west to Asia as a good market to move into.

Of course, the port at Kitimat is the ideal loading point, given the facilities they've got there. As I said, the anti-freighter, anti-pipeline groups are very active out there, and there appears to be no reconciliation as long as they stay in the mood they are in, so I see that as a problem.

I had a question here. You said it was going to create 7,000 jobs over the construction period. That's amazing. There are three first nations in the area that are part of your group. How will that affect the unemployment in those first nations? What's the current unemployment rate, and how would that change with the construction?



**Mr. Robert Reid:**

The current unemployment rate in the Northwest Territories is very high. It's a real concern. In the Mackenzie Valley itself there is simply no economic base.



**Mr. Richard Harris:**

Do you have a number when you say "very high"?



**Mr. Robert Reid:**

I don't have a number with me, sorry.

The pipeline will obviously significantly help the employment situation in the Northwest Territories. At the peak of construction there will be 7,000 jobs. There is \$1 billion in what is called "set-aside" work that's been negotiated under the access and benefits agreements between the aboriginal groups and our project managers.

  (1615)



**Mr. Richard Harris:**

So there's going to be some guaranteed employment for that project.



**Mr. Robert Reid:**

That's absolutely correct.



**Mr. Richard Harris:**

That's great. That's great.

Do I have a little more time, Mr. Chair?



**The Chair:**

You have about a minute and a half.



**Mr. Richard Harris:**

That's great.

I have another question. What did you mean in your presentation by, in the section dealing with quarter one of 2011, "fiscal framework concluded; financeable for APG"?

What does that mean?



**Mr. Robert Reid:**

We commenced discussions with the federal government a couple of years ago, with Minister Prentice, on what we call a fiscal framework. Just about one year ago, Minister Prentice put those discussions on hold and told us to come back for serious discussions once we got our certificate.

The purpose of those discussions was to do two things: one, create a shipping toll that's attractive to get more shippers on the pipeline; two, to actually make sure the shipping fee is the same for everybody. To have a user-friendly pipeline is, I suppose, a good way to word it.

We want to reduce the cost of capital. That's the key to reducing the shipping toll, so some kind of guarantee would be what would be on the table.



**Mr. Richard Harris:**

Thank you very much. I appreciate that. I wish you a huge success in getting the capacity that you need out to the west coast and over to Asia. I think that's where the market lies in the future.



**The Chair:**

Thank you, Mr. Harris.

We actually have very little time left. We have about two minutes for each party in the next round.

Mr. Tonks, please ask a short question with a crisp answer.



**Mr. Alan Tonks (York South—Weston, Lib.):**

I'll try to do better than I have in the past on that.

Thank you for being here.

I think, Mr. Reid, you talked about the role of the federal government with respect to one particular part. You mentioned providing a guarantee to lower the cost of capital. Do you have any suggestions as to how and where that might take place?



**Mr. Robert Reid:**

We intend to re-engage with the federal government. It has now been announced that INAC will be the responsible ministry. We intend to re-engage once we get the certificate or the order in council. We'll be picking up where we left off a year ago, and it'll be some form of guarantee. There's nothing carved in stone here, but



lowering the cost of capital is the key.



**Mr. Alan Tonks:**

So it would be something more than the accelerated capital plan that might allow for quicker write-offs at some point?



**Mr. Robert Reid:**

Yes. We're not looking for that at all. What we're looking for is a loan guarantee or equivalent, something along those lines, that simply stands behind the commercial loans.



**Mr. Alan Tonks:**

Okay.

I just have a quick question to Dr. Isaacs.

Dr. Isaacs, I'm very impressed, and I'm sure the committee is, with respect to the integration of a number of related research-based issues--water, oil sands technology and so on--that have been integrated into your group now. I understand that it is a provincial corporation. Is there an accountability through the board? How does it actually work?



**Dr. Eddy Isaacs:**

Yes, you're right about the accountability. I report directly to the board of directors. It's a very prestigious board, consisting of people who have been in the business community but who also have good insights into the technology aspect. It's a combination of these things. They report directly to the minister. He hires them and he fires them, but in between they are allowed to act in a responsible manner.



**The Chair:**

Thank you, Mr. Tonks.

We now go to Mr. Anderson for about two minutes.



**Mr. David Anderson (Cypress Hills—Grasslands, CPC):**

Thank you, Mr. Chair.

I appreciate you gentlemen being here today.

Mr. Reid, we've heard a lot in our hearings about both shale gas and conventional gas, as well as oil sands. Is your pipeline supplied by both conventional and shale gas, or is it pretty much all conventional gas?



**Mr. Robert Reid:**

It's all conventional.



**Mr. David Anderson:**

You were talking about shale gas. Do you have a vested interest in protecting conventional gas?



**Mr. Robert Reid:**

Not really, because the large decline rates, as you can see on the chart, are 20% per year. The conventional resources in the south are mature and are declining. Shale gas, as you can again see from the chart, is filling some of that gap, but overall, production is still declining.

  (1620)



**Mr. David Anderson:**

I don't have the tables from the other days here, but it seemed to me that the shale gas was going to be a far bigger part of the production in the future than what's on your map here. I suppose we'll have to take a look at those.

We had some testimony that said shale gas is actually competitive at the price that natural gas is right now, while presently conventional gas development really is not. How has the price of natural gas impacted the development of your project here in the last little while?



**Mr. Robert Reid:**

First of all, some shale gas is economically... Primarily the shale gas being produced in the U.S. basins, such as the shale gas in Horn River, for example, is going to be relatively costly, and again, all conventional gas is not equal. There are some wells that are more than economically viable today and some that are simply not. You can't really compare. All shale gas is not equal, and all conventional gas is not equal.



**Mr. David Anderson:**

I wish I had a little bit more time.

Mr. Isaacs, I wonder if you could be a little bit more specific about some of the technologies that you're talking about as part of your mandate. We've heard lots about things like new fracking methods. Horizontal well-drilling, of course, is something that we've heard quite a bit about, as well as the SAGD and those kinds of changes that are taking place here.

What do you see in the future? What will be some of your main initiatives that we could put in our testimony and our report?



**Dr. Eddy Isaacs:**

I think that this report will provide you with a little bit of guidance on that. I should say that our previous organization was the one very much responsible for the creation of steam-assisted gravity drainage. We now need to go beyond this technology; there are some technologies that are up and coming, including solvents, including the use of solvents with steam, including the use of electricity, including underground coal gasification. Some of these things we are very much engaged in to try to make happen and to advance.

We're also looking at renewable energy and turning waste into fuels. We've supported the City of Edmonton waste-to-fuels pilot plant. It actually uses a Quebec technology, Enerkem's technology. There are a number of technologies that we think are going to be critical. In the end, we do need biofuels. We have targets for biofuels, but we also think that there will be a future for both biofuels and fossil fuels together.



**The Chair:**

Thank you, Mr. Anderson.

Finally, we have Mr. Pomerleau for around two minutes.

[*Translation*]



**Mr. Roger Pomerleau (Drummond, BQ):**

Thank you, Mr. Chair.

Thanks to both of you for coming so far to be here today. The weather may be better back home.

Mr. Reid, in your presentation, you talked about the role of the federal government. You said the project was

“truly a nation-building project, determined to be in the public interest”. There is an implicit recognition in that statement that when something benefits the nation, no matter where in Canada—and gas development is very profitable—it inevitably benefits everyone.

If I was a Canadian in Toronto, I would say I agree completely, that is absolutely true, but I am not. I come from Quebec, and there are two nations in Canada. Even Mr. Harper recognized not just a nation, but the nations.

As a nation, we see things very differently. Why? I will give you an example. You mentioned funding that had been given to other major projects in the past, including the St. Lawrence Seaway, which was built mostly in Ontario with Quebec supplying 30% of the funding, the Hibernia development, which was built in Newfoundland Labrador with Quebec supplying 25% of the funding, and the TransCanada Pipeline, which is probably out west. But you did not mention the CANDU reactors at Atomic Energy of Canada Limited, which are also located mostly in Ontario.

In Quebec, we have an energy supplier called Hydro-Québec, but we did not get a penny from the Canadian government. As a nation, we feel as though we are paying 25% to 30% of everyone's else bill, while we receive payments under the equalization program. So we do not really think it benefits everyone.

  (1625)



**Hon. Denis Coderre:**

I just wanted to make sure that everyone here understands that there are also aboriginal nations.

My colleague talked about two nations. I won't get into a history lesson, but he needs to correct himself, especially since we are talking about a pipeline in partnership with aboriginal nations.



**Ms. Paule Brunelle:**

That is not a point of order.

  (1700)



**Hon. Denis Coderre:**

No, but it is worth mentioning.

[*English*]



**The Chair:**

Monsieur Coderre, I think you're engaging in debate here.

Monsieur Pomerleau, did you have a question at the end of your comment?



**Mr. Roger Pomerleau:**

The question was this: do you understand that it is very possible to see things in another way than what you present?

[*Translation*]



**Ms. Paule Brunelle:**

Ha, ha! You slipped up. You spoke in English.

[English]



**The Chair:**

Do you have a response, Mr. Reid?

[Translation]



**Mr. Robert Reid:**

Yes, I understand.

[English]

The people in the Northwest Territories share your sense that they have not had their fair share. This would be an opportunity to really develop a project that has benefits not only for the aboriginals in the Northwest Territories but for people widely spread across Canada. It provides an environmentally preferable fuel, the fuel we need, in a timely manner, and it brings economic benefits and jobs for all of Canada.

[Translation]



**The Chair:**

Thank you, Mr. Pomerleau.

[English]

Thank you very much, gentlemen, for coming today.

Your presentations were very enlightening, and your answers to questions were very helpful to our study. Thank you very much.

We will suspend now for a minute or two as we change witnesses. Then we will come back to the second panel.

  (1625)

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  (1630)



**The Chair:**

We resume the meeting now with our second panel for today.

From the Alberta Chamber of Resources, we have Brad Anderson, executive director, and Larry Staples, project manager of the task force on resource development and the economy. From the Town of Bay Bulls, we have Harold Mallowney, mayor, and Ted Lomond, executive director, Newfoundland and Labrador Regional Economic Development Association.

Welcome, gentlemen. Thank you very much for coming today.

We will start the presentations in the order listed on the agenda.

From the Alberta Chamber of Resources, we have Mr. Brad Anderson and Mr. Staples. You have up to seven minutes. Go ahead, please.



**Mr. Larry Staples (Project Manager, Task Force on Resource Development and the Economy, Alberta Chamber of Resources):**

Mr. Chairman, we appreciate the opportunity to speak with the standing committee today and to provide the perspective of the Alberta Chamber of Resources.

The Alberta Chamber of Resources is 75 years old. We had a great birthday party last Friday night in Edmonton, with 700 of our closest friends at our annual banquet and awards evening. We have about 200 member companies from all sectors of resource development. We think that cross-sector membership gives us a unique, broad, strategic, and balanced perspective.

Our mission is orderly and responsible development. We think we've had an impact over the years on both corporate strategy and public policy. That impact has come through reports such as the few examples I have to show you today, including, the National Task Force on Oil Sands Strategies; the Oil Sands Technology Roadmap; "Learning From Experience: Aboriginal Programs in the Resource Industries", which is a best practices guide for relationships between resource companies and aboriginal communities; and "Caring for the Land", which is a summary of rehabilitation for surface mining operations and some success stories in terms of renewal and rehabilitation of surface mining.

The latest report of the task force on resource development and the economy will be issued in a few weeks. That task force was commissioned by the board of directors of the Alberta Chamber of Resources to look at the historical impact and the potential future impact of resource development on the economy and to formulate some recommendations that would invite governments and industry to work together to optimize that in the future.

The report was developed with very broad input from nine sector committees and with economic modelling by Dr. Robert Mansell and his team at the School of Public Policy at the University of Calgary. They used the Statistics Canada provincial input-output model to assess both the direct impact of economic activity within the resource sectors and the forward and backward linkages that give rise to the indirect effects in supply sectors and service sectors such as engineering and accounting. We think this more thorough understanding of the total effect, both indirect and direct, will be one of the major contributions of our report.

The report is in the process of being printed. We'll be pleased to send you a copy in early March as soon as it is available.

I'd like to highlight four of the broad conclusions from the task force report.

First, the resource sectors are key drivers that propel the whole economy. Nationally, one-quarter of all business profits and one-third of business investments arise in the resource sectors. Over half of the value of shares traded on the Toronto Stock Exchange are resource shares. The resource sectors are the largest net contributors to Canada's positive balance of trade. When we add up all these direct and indirect factors, we see that 20% of Canada's gross national product and over 60% of Alberta's gross domestic product arise from resource development activity.

Second, we have two wonderful competitive advantages in Canada: the resources in and on the ground, and the thriving knowledge economy, driven by resource development, that exists above the ground.

Some of that knowledge economy is resident within the resource development companies, some within the regulators and government departments and research laboratories that are connected with resources. To a large extent, that knowledge economy is in the supply and service sectors.

I'd like to point out that this knowledge is globally competitive, and there is a large export component to that knowledge economy.

Third, we should remind ourselves that in Canada we have a good track record in terms of responsible development. We have knowledgeable regulators, who set high standards and enforce them. We have resource development companies that take their safety, environmental, and community responsibilities seriously. They walk the talk.

Finally, as we look at the future of resource development, we see that we have ample resources. In the energy sector we have coal and bitumen. The production horizon of those resources is measured in centuries. Even for conventional oil and gas, as we've been hearing about, production horizons have been rising in the last few years. Beyond the energy resources, we have a big basket of other mineral resources. We have renewable forests. When we put all that together, we see that we have a large and diversified portfolio.

As we talked with our sector leads, we asked them to describe low scenarios and high scenarios for future development in their sectors. Dr. Mansell and his economic modelling team put all this together so that we could determine the size of the prize if we can come up with smart corporate strategies and wise government policies that steer us away from the risks of the low scenario and toward the rewards of the high scenario.

That prize, that difference between the low and the high curve, we've estimated in Alberta as \$700 billion worth of incremental GDP over the next 10 years, as well as four million person-years of incremental employment over the next 10 years, so industry, governments, and society generally have high motivation to pursue orderly and responsible development.

In conclusion, I would encourage the committee, when the report arrives in the next few weeks, to please read it and please understand the economic importance of these sectors and the tremendous effect the direct and the indirect effects have on the overall Canadian economy. Please look at the recommendations to determine how the federal government could work with the provincial governments and industry to pursue a common vision of orderly and responsible development.

Thank you.



**The Chair:**

Thank you very much, Mr. Staples, for your presentation.

From the Town of Bay Bulls, we go to Mayor Mallowney. Are you going to make the presentation?



**Mr. Harold Mallowney (Mayor, Town of Bay Bulls):**

Yes.



**The Chair:**

Go ahead, please, for up to seven minutes. Welcome.



**Mr. Harold Mallowney:**

Mr. Chair, committee members, thank you for the opportunity to speak with you today about the energy security of Canada, and in particular the regional economic impacts of oil and gas development.

The maximization of economic benefits from this non-renewable resource is of considerable interest to the numerous community-based organizations and countless volunteers who I am representing here today.

While oil and gas development and production have infused the province of Newfoundland and Labrador with financial resources and a confidence beyond any in our history, it must be noted that not all regions of the province have shared equally in this prosperity.



**The Chair:**

Excuse me, Mayor. The interpreters are having a little bit of trouble keeping up. Perhaps you could slow down a little bit. I know you have a limited amount of time, but they can't keep up. Please just slow it down a little bit. Thank you



**Mr. Harold Mallowney:**

Regional and economic development groups, such as those I represent, are working to bring local capabilities, knowledge, skills, and initiative to bear to ensure that the province capitalizes fully on this finite opportunity. We must nevertheless not lose sight of how a strong Newfoundland and Labrador contributes to a strong and vibrant nation of Canada.

Let me be clear: we do not support development at any cost. As the mayor of a small coastal community, let me first say that our natural resources and environment must be protected. Others may have already started to forget the disaster in the Gulf of Mexico, but we have not. Industries such as fish harvesting, aquaculture, tourism, and nutraceuticals will long outlast the oil and gas industry. The continuation of these sectors is

squarely dependent upon our stewardship.

As the brother of one of those lost in the Cougar 491 tragedy of March 12, 2009, let me make a second point: it is a price no family should have to pay. We believe that we must develop our offshore resources in the safest manner possible.

There are many things the federal government can do to help Canadians benefit fully from the offshore oil and gas industry. The oil and gas industry directly employs over 4,500 people in our region of Atlantic Canada and generates revenues of almost \$7 billion annually. The tax royalties resulting from the oil and gas industry, combined with those accrued in related spinoffs, are massive.

The cumulative benefits have not only enabled the province to end years of deficit financing but can now also be felt on the national balance sheet. The federal government must work to promote the technological advancements required to prolong the life of existing discoveries while it creates an exploration-friendly environment. This will ensure that the life of the industry is maximized to the fullest extent possible.

It is important to remember that while there have been 2.84 billion barrels of oil discovered in Newfoundland and Labrador, a potential six billion barrels remain to be discovered. In Nova Scotia waters, the CNSOPB projects another 2.6 billion barrels of undiscovered oil. Still, exploration in the region lags.

In the North Sea area, approximately 4,000 exploration wells have been drilled, compared to 140 wells in Newfoundland and Labrador, which has an area four times the size.

The federal government must also work with organizations such as NLREDA and the Newfoundland and Labrador Oil and Gas Industries Association, NOIA, to facilitate the participation of local business in the sector in the provision of products and services for the petroleum industry. The industry is one that is highly technical and regulated. It can be intimidating and it can be a challenge to enter. We must remove the barriers so that those closest to the resource can benefit.

The federal government must also engage with the Government of Newfoundland and Labrador and with industry to capitalize on exploration off the coast of Greenland. Greenland lacks the infrastructure and industry base required to adequately supply development of the sector in that region. We believe that our capabilities, our geographic location, and our position put us in a very good position to pursue a mutually beneficial partnership.

We must also leverage our skills and infrastructure to exploit opportunities for export all over the world. Companies from Newfoundland and Labrador have already demonstrated success in this regard. Together community, government, industry, and academia can grow exports through network and cluster development.

Natural gas holds tremendous potential for Newfoundland and Labrador, which has proven natural gas reserves of over 10 trillion cubic feet and an estimated 60 trillion cubic feet waiting to be discovered. The federal government must work with industry and academia to marry existing technologies with harsh-environment expertise to enable the development of natural gas production in that province. It is important to note that from an environmental perspective, natural gas produces far lower carbon emissions than coal.

Knowledge mobilization has always been challenged by large industrial projects, but it is by no means impossible. The project management, engineering, safety, and harsh-environment skills engaged in this sector are a potential source of competitive advantage, where they are not only transferred, but are embraced as part of the business culture. The federal and provincial governments, working with academia, industry, and development organizations, must develop a knowledge mobilization plan that spans the 30-plus years of coming oil and gas activity.

Increasingly we recognize the need for government and industry to work with communities to build sustainable regions that offer not only employment but also equality of life in a rural setting. Funding earmarked for research, development, and training must be invested so as to contribute to maintaining a vibrant culture and to enhancing the opportunities outside oil and gas so that regions will continue to flourish long after the royalties have begun to disappear.

The social dividend of the oil and gas industry is something that is often overlooked. I've already alluded to the pride and confidence that come with prosperity. This is reflected in the growth of the province's artistic, heritage, and cultural sectors. In the province there has also been a sharp decline in the number of families torn apart as family members were forced to move away to find employment elsewhere. In our efforts to develop the industry further, we must never lose sight of the fact that these resources belong to the people and must be developed for the good of the people--all of the people.

The oil and gas industry has led to significant economic benefits, including direct employment, tax revenues, infrastructure improvements, skills training, major capital project spending, and supply opportunities. These benefits, however, are far short of their true potential. As we go forward we must not lose sight of those communities not sharing in the prosperity that the industry brings, nor must we lose sight of our environmental responsibilities or of our duty of care for those who put themselves in harm's way on behalf of all of us.

Thank you for this opportunity. I would like to end by saying that regular engagement with industry and community-based development organizations, such as the Newfoundland and Labrador Regional Economic Development Association, is critical if we are to maximize the benefits from our oil and gas resource as we move forward.

Thank you.



**The Chair:**

Thank you very much, Mayor, for your presentation.

We'll go now directly to questions and comments.

Go ahead, Mr. Andrews, for up to seven minutes.



**Mr. Scott Andrews (Avalon, Lib.):**

Thank you very much, Mr. Chair, and thank you to the witnesses for coming today.

I'm going to start my questions with you, Mr. Staples.

In your presentation you talked about provincial and federal governments and the high standards of regulation. We've heard from some witnesses that there's a lot of duplication in regulations.

Do you see that this is the case in your area? If so, is there something that this committee should address to reduce the amount of duplication in regulations?



**Mr. Larry Staples:**

It is certainly something we've seen. Luckily, there is action well in progress in the form of a regulatory review process in Alberta, where just in the past few weeks they have announced some streamlining at the provincial level to eliminate duplication without reducing standards. As well, there is a federal-provincial regulatory streamlining initiative under way. I can't recall the name of it exactly, but we had one of the associate deputy ministers from Natural Resources Canada actually come to speak to us at our environmental forum last year. It sounds as though progress is being made in resolving that problem.



**Mr. Scott Andrews:**

Thank you very much.

This question's for you, Mayor.

You mentioned oil and gas benefits stretching across the entire island, and how not all areas benefit from these.

Do you want to elaborate a little further on how far the benefits from oil and gas stretch across the Island of Newfoundland, and how not all areas are seeing this economic impact?



**Mr. Harold Mallowney:**

Most of the development and most of the spinoff benefits so far have been centred on the Avalon Peninsula, and the closer you get to the city of St. John's, the more you see.

I represent, as a mayor, a small town of 1,000 people. It has been 1,000 people for many years. We have a 500-year history, but in the last decade we've built an offshore oil supply base in that community. We have a deepwater port and, yes, we have received benefits. We have seen property values pretty well triple in the last



10 years. We have seen numerous new housing starts. We have seen numerous new subdivisions begin.

We are struggling with the fact that infrastructure and communications and the proper material to support all this is not always there. We're often reactive as opposed to proactive, but the communities farther removed from the community of Bay Bulls or from some of the oil and gas ports often do not share to the same degree.

I would also say we have created a very mobile workforce in Newfoundland. Many of our young people have travelled all over the world, and many of them have worked in the oil and gas industry. In recent years they are coming back home and are building their communities. Still, they are trying to centre themselves closer to the bigger communities.

I am fortunate that my community of 1,000 people is only a 15- or 20-minute drive from the capital city of St. John's, but we're also fortunate in that we have a very good deepwater navigation-free port that can service the Grand Banks. St. John's, as a harbour and a service port, is pretty well full, so the harbours that exist nearby will be filled up and move out, and you'll continue to see development, but that development needs infrastructure spending. I always fear that we'll miss the opportunity because we're always being reactive; the opportunity comes and goes and is lost, because we don't have the infrastructure to avail ourselves of it.

I don't know if that answers your question.



**Mr. Scott Andrews:**

Yes. Your community does a great job of balancing the oil and gas, the fishing industry, and the tourism industry, which are all vital to the survival of Newfoundland and Labrador.

You briefly talked about exploration. Let's dig into that a little bit. Exploration off the east coast has been decreasing. You said we need to prolong exploration and that government has a role in encouraging exploration.

Can you give us some examples of how, as a federal government, we could encourage more exploration off the east coast?



**Mr. Harold Mallowney:**

Any government really has the task of creating the environment in which things can happen, so when it comes to regulations and such, that's the role I see primarily for government. Of course, helping financially doesn't hurt either, but by and large, I believe government is in place to create the environment whereby things can move forward without trying to slow them down too much.



**Mr. Scott Andrews:**

I have two quick questions.

The first is on protecting the fishery. We had Earle McCurdy here before the panel. What are your thoughts on how we have to protect the fishing industry, balancing oil and gas?

Second, you briefly mentioned the Cougar helicopter crash. I wonder if you could just say a little bit on the safety aspect of the offshore oil and gas and how important that is.



**Mr. Harold Mallowney:**

For 500 years the fishery has been the mainstay of the economy of Newfoundland. In recent years we have moved a fair distance from that. It's still a billion-dollar-plus industry, but we've moved away from groundfish and into shellfish for the most part. I think the fishery is a sustainable resource that, if managed properly, will be there for generations to come.

Right now in Newfoundland, most people who pursue the fishery pursue it for a very short time and with a limited number of species. Many year ago I worked in the fishery as a quality control manager, and at that time we processed 37 species of fish and we worked 52 weeks of the year at the plants where I was in charge. I would have to go to the office and plead my case around Christmas to get a week off to enjoy with my family. Those days have disappeared, but the fish are still there, I think. It's just that we have moved away from them into other directions. That is something with which I'm a bit disappointed. I think that the fishery still holds great potential.

With regard to the Cougar crash, again it comes down to a regulatory regime. I've read through some of the report. At a quick glance, there were 16 items that could have probably prevented that crash. There were 26 other items noted, and four recommendations, but at the end of the day we had a helicopter that flew offshore from Newfoundland that supposedly should have had 30 minutes of run-dry time and didn't.

I do not blame the pilots. The pilots probably were operating with improper information. They thought they had longer to get to shore and they didn't.

My brother, who was on that chopper, had always said, "Don't worry. We have safety mechanisms in hand." I said, "If you're 200 miles out there over the North Atlantic, what happens if a problem occurs?" He would always sort of grin and say, "No big deal. We've been trained. They'll put her down, we'll jump into the ocean, and somebody will come to get us." He made light of it.

The thing that bothers me most of all is that he never had the opportunity to jump into the ocean. There were signals that said to put this chopper down. The protocols were there. They were not followed. Someone second-guessed it, and it was probably second-guessed because of false information. That still bothers me.



**The Chair:**

Thank you.

Thank you, Mr. Andrews.

We go now to Madame Brunelle for up to seven minutes.

[*Translation*]



**Ms. Paule Brunelle:**

Good afternoon gentlemen and welcome. It is a pleasure to meet you.

Mr. Staples, I want to start by congratulating you on your success. The companies you represent account for 62% of Alberta's GDP. That's a lot.

You called the current global trading environment resource-hungry. So that must put you in a difficult position because, as business people, you are trying to produce enough to meet the huge demand. But there are still major environmental challenges.

I am in favour of energy security, but not at any cost—not when it leads to environmental degradation. You mentioned in your presentation a project by the name of Caring for the Land. I would like to hear a bit more about that.

Given the project's name, I also want to know whether it is aimed at helping the environment. Are you accountable to the Alberta government to produce results? Do you have a strategic plan for the project?

[*English*]



**The Chair:**

Mr. Staples, go ahead, please.



**Mr. Larry Staples:**

Madame, yes, as you point out, there are many challenges of being globally competitive with the development of our resources, so we attract capital to Canada. There are challenges to make sure that it is not development at any cost and that we do have that balanced development, that responsible development.

Lately one of the issues that has been on everyone's mind, of course, is reclamation of surface mines. We see in the oil sands that we're just at the very beginning of that reclamation process.

Together with some of our other mining companies, our coal-mining members, we produced a document "Caring for the Land", which explains the whole reclamation process and the regulatory environment surrounding it. It presents some success stories of older mines that have been decommissioned and very successfully rehabilitated to support vegetation, wildlife, and wetlands, and these success stories really help to set the bar for reclamation in the future.

[Translation]



**Ms. Paule Brunelle:**

With such a project, surely you have an obligation to produce results. A culture of social responsibility must exist in Alberta, as it does in Quebec—the responsibility to be a good corporate citizen, as they say.

You represent 200 companies including operators, suppliers and advisors. Are you really the best people to look after the environment? Isn't that like the fox in the henhouse?

[English]



**Mr. Larry Staples:**

Well, I don't have red hair, so I'm not sure if I qualify as a fox.

**Voices:** Oh, oh!

**Mr. Larry Staples:** I can tell you that everyone with whom I deal in industry is passionate about this topic. They're passionate that we do things properly and that Alberta and Canada will be as good for our grandchildren as it is for us.

Most of the operating companies produce environmental impact statements and ongoing accountability reports. One of our recommendations in the task force report you see here is that we work a little bit more on improving that process and doing international benchmarking. Some companies do it now, but we want to broaden that out across the industry.

So we're not really in a conflict of interest here; I think we're in a confluence of interest, where we try to bring together government, regulators, and industry to try to create that common vision, those success stories--the height of the bar--and create progress.



**Mr. Brad Anderson (Executive Director, Alberta Chamber of Resources):**

Could I add something?



**The Chair:**

Go ahead, Mr. Anderson.



**Mr. Brad Anderson:**

Thank you.

That was a great answer.

The mayor made a comment that really struck me. It was about the "pride and confidence that come with prosperity". I think I quoted him pretty closely there.

I really liked that, but I'd add one more bit, about the pride and confidence that come with doing the right thing--with prosperity and with doing the right thing.

A great example, which is in this brochure, is Suncor's recent reclamation of its Pond 1. I went to that event. My career for nearly 30 years has been mostly in oil sands, and I have to tell you how proud the folks at Suncor and the reclamation workers were about what they were showing off, and what we were walking on was

amazing.

I heard your comment about the fox in the henhouse. Maybe there's a little bit of that, but I'll tell you what: there's much more so a tremendous amount of pride about doing the right thing here.

[*Translation*]



**Ms. Paule Brunelle:**

If we had the chickens here to testify, I would ask them whether they were satisfied with your work.

Mr. Mullowney, I have little time left, but I want to take this opportunity to commend you. From your presentation, I can see how dedicated you are to your community and your region. You take all of the stakeholders into account, and at the very least, that makes me want to visit Bay Bulls. It is positive to see.

I have a brief question. You said you need to develop your resources, but in the safest manner possible. Do you have suggestions on how to do that? I know we are talking about a huge issue here, but have you come up with ways to pursue that development safely?

[*English*]



**Mr. Harold Mullowney:**

There's always an inherent danger when you work in the North Atlantic. I don't know how safe you can make it, but we can certainly make it safer than it is.

I would refer to the helicopter crash in which my brother and those other individuals he worked with were killed. They had a helicopter that was certified and they thought they had 30 minutes to fly. The helicopter only had 11 minutes. That's the longest test they could pass. It was certified by the Americans and then sanctioned by the Canadians, because they regarded the chances of a catastrophic loss of oil as being extremely remote. Well, it's extremely remote that I will win the lottery on Friday, but I'll probably buy a ticket, so "extremely remote" doesn't cut it.

The other thing that bothered me was that there are aircraft out there that can fly for 30 minutes. It comes down to dollars and cents in that case. It's only money. I mean, we're talking people's lives here. Lives cannot be replaced. Money comes and goes.

We need to look at some of the regulations and make it as safe as possible for those people who engage in those industries on all our behalves, because it is the money that they generate that makes this country of Canada that much better.

So, yes, we can do things in the regulatory regime that would probably make the job a little safer, but then there's the social dividend I referenced earlier, and that's very important to me. Lots of people make incredible amounts of money in certain industries, but there are people who do not share in that. They do not have the same opportunities. That's where the social dividend comes in. If we were to spend some of that money on things like health, education, infrastructure, roads, and communications, I would see that as a social dividend. We all would benefit collectively.

What about pensions, for God's sake? There are Canadians who have worked a lifetime and have missed the opportunity to get the social dividends. They have been disenfranchised. We move on, and the new generation behind them benefits. What about those who did the time in the trenches, who worked hard to make this country what it is? We must do something to benefit all Canadians, not just a few.

That's where I come from on that.

  (1705)



**The Chair:**

Merci, Madame Brunelle.

Mr. Cullen, you have up to seven minutes. Go ahead, please.



**Mr. Nathan Cullen:**

Thank you, Chair, and if you could let me know after four minutes, I'd like to pass it over to my colleague, Mr. Harris.

To the gentlemen from the Alberta Chamber of Resources group, you sit on the Alberta Water Council. Is that correct?



**Mr. Brad Anderson:**

Yes, we do.



**Mr. Nathan Cullen:**

You seem like nice folks. You take environmental responsibility seriously. You want to do the right thing. Your companies walk the talk.

There are 25 folks from different groups—industry, government, environmental groups, non-profit groups—who sit on the Alberta Water Council. There was a recommendation that there should be reclamation of wetlands that have been disturbed or destroyed by oil sands projects. You folks and the Canadian oil sands producers were the only ones that rejected that proposal. Is that right?



**Mr. Brad Anderson:**

First off, most of the material in the report we endorsed. There were only certain aspects of the report that we had some problems with.



**Mr. Nathan Cullen:**

You mean the aspect I raised.



**Mr. Brad Anderson:**

Yes.



**Mr. Nathan Cullen:**

You say on your website, "While the wetlands policy has not yet been implemented, these changes"--you recommended changes against the report--"may save literally billions of dollars for our members in the future".

Your members are industry members. Walking the walk means walking the talk.



**Mr. Brad Anderson:**

Yes.



**Mr. Nathan Cullen:**

When a wetland is destroyed by an operation, of the 25-member group, which includes other industrial groups--not just oil groups, but farmers' groups, non-profits, the Alberta government--only you and the Canadian oil producers were the ones that resisted this reclamation proposal.

Are you aware of the Commissioner of the Environment's report on water testing in the oil sands this past year in December?



**Mr. Brad Anderson:**

Am I what?



**Mr. Nathan Cullen:**

Are you aware of the report of the oil sands advisory panel delivered on December 21? The panel testified before this committee.



**Mr. Brad Anderson:**

I'm not aware of the details, no.



**Mr. Nathan Cullen:**

That's confusing to me, because I'm assuming you had confidence in the water testing abilities that were going on with many of your member companies. I'm looking at the executive of your organization in 2010: Syncrude, Enbridge, Ainsworth, Finning, Suncor, Capital Power. You are an industrial group. Your industrial members work in and around the oil sands. Water is one of the most significant issues when talking about the impact of the oil sands.



**Mr. Brad Anderson:**

Absolutely.



**Mr. Nathan Cullen:**

The auditor has come forward and said that there is no baseline measurement, there was no testing for oil sands chemicals, there were no long-term data to track the changes. The oilsands advisory panel said there was a lack of leadership and coordination and a lack of scientific vigour to actually test the water that was being polluted by the oil sands projects--your members. You say you're barely aware of the reports, if at all. You talk about doing the right thing, but water is one of the essential concerns of the impacts of the oil sands, and you represent members of that group.

The oilsands advisory panel wasn't picked by Greenpeace; it was hand-picked by the federal government. They came back and said that the water testing in this environment is below basic standards, and you folks didn't raise any concerns with that at all leading up to that time, or even since.



**The Chair:**

Go ahead, Mr. Anderson.



**Mr. Brad Anderson:**

Thank you.

Clearly, water is a big issue, and that's why we've been participating on the water council. In fact, we were part of the group that helped form it. They're doing good work, and we support it.

On the piece that you mentioned on the wetlands, of course we still want reclamation. In fact, we're obligated to reclaim lands; however, the initial recommendations were very high ratios of 10:1 or 3:1 of reclaimed land to wetland. In other words, if you disturbed one acre of wetland, either three acres or ten acres should be replaced. That's where we had an issue. I just want to be clear on that part.

There's also--

(1710)



**Mr. Nathan Cullen:**

You said what you resisted--



**The Chair:**

Mr. Cullen, let Mr. Anderson have a little more time to answer.



**Mr. Nathan Cullen:**

I'm quoting from Mr. Anderson's own words. These are your words, actually--



**The Chair:**

You can do that later, but just let him have a little more time to answer.



**Mr. Nathan Cullen:**

I want to put a clarification to Mr. Anderson.

You said that the reason you resisted these policies--and you celebrated that the policies were being resisted by the Alberta government--was that it would save literally billions of dollars for your members. It was expensive.



**The Chair:**

Go ahead, Mr. Anderson. You can complete your answer from before as well.



**Mr. Brad Anderson:**

Thank you very much.

Well, it is expensive, and we do spend a lot of money reclaiming land. There's no question about that. It's a big cost of our business.

There are issues when you have a replacement ratio of something in the order of 10:1; there's also an issue of where you are going to do that. In Saskatchewan, there's only a certain amount of area to reclaim, so we reclaim the part of the land that we disturb, and that's where we come to.

If there were numbers in the order of 10:1, yes, it would be very expensive., but even more important, where are we going to do it? Are we going to do it in southern Alberta? Are we going to do it in northern Alberta? Are we going to do it outside of Alberta?



**Mr. Nathan Cullen:**

I'll pass this to my colleague, Mr. Harris, in a second.

I would note that none of the other folks except you and the Canadian oil producers had problems with this recommendation--no one in forestry, nobody in mining, none of the government officials who sat that table. It was just you folks.



**Mr. Brad Anderson:**

I have a correction on there being no one in mining. We represent the mining sector on that water council, so I think you're in error with that claim.



**Mr. Nathan Cullen:**

You folks and the oil producers were the only ones--not anybody from government, not anybody from the livestock, not anybody from forestry, just you and the oil guys.



**Mr. Brad Anderson:**

That's correct.



**The Chair:**

Mr. Harris, you have about a minute.



**Mr. Jack Harris (St. John's East, NDP):**

If I have only a minute, I think I'll focus on one issue that's a big concern of mine, and that is safety and search and rescue.

You mentioned your brother, and I know members of your family, Mr. Mallowney. A cousin of mine was on that same helicopter. Search and rescue may not have made any difference in that particular issue, but can you tell us the importance of high-level search and rescue capability in response to the development of both the oil industry and the fishing industry, particularly in Newfoundland and Labrador?



**Mr. Harold Mallowney:**

It's extremely high, extremely valuable. We work in the North Atlantic. We prosecute our livelihoods there. Most times if you go into that water, your life expectancy is measured in literally minutes.

In the case of my brother and those on the chopper, they may not have survived if they had got into the water. I do take some comfort from the fact that at least one severely injured individual did survive. I wonder, if they'd been quicker, then maybe.

It's absolutely critical to get a rapid response in the North Atlantic. Any time a fishing boat goes down, any time an oil rig has a problem, you don't have hours to wait; you have minutes. I don't care about the suits and all the protocols you put in place; that's what it comes down to--you have minutes.

It got better over the years. I remember in the early days, 30 years ago, when my brother was offshore working on the rigs. He often would say things like, "If we have to evacuate this thing in a storm, I might as well just stay on board and go down with it, because I'm just jumping into the water to die". He felt a little better as time went on and things changed, but you're right, the time is absolutely critical.



**The Chair:**

Thank you, Mr. Harris.

Mr. Anderson, there's not much time left in the meeting, but go ahead, please.



**Mr. David Anderson:**

Thank you, Mr. Chair.

Mr. Mallowney, I come from a small town in Saskatchewan that's in the oil and gas area, and I think we have the same challenge as you do, which is keeping our young people around.

I wonder if you can tell us a little more about the employment mix in your community. You said it's about 1,000 people and you're fairly close to the capital. In terms of that, what's the employment mix of the population? Also, what kind of training and educational opportunities are set up for people to get careers?



**Mr. Harold Mallowney:**

I'll answer briefly and then, if I could, I'd turn it over to my colleague, Mr. Lomond.

In Bay Bulls we are very close to the city of St. John's. Many people have access to Memorial University. Many people have access to the trades colleges. There's a tremendous interest in education. The young people have left, for many years, and they have travelled everywhere. They are a very mobile workforce. Many of them



have worked in oil and gas and offshore pursuits, in shipping and such. The good thing is that many of them are coming home now, because there are opportunities at home that didn't exist years ago.

In terms of the mix, Bay Bulls has probably five streams. We've got a lot of residential development going on, a lot of construction. We've got small-scale and large-scale manufacturing for the offshore and elsewhere. We have a tourism industry; people come from all over the world to see the whales at Bay Bulls. We have 1,000 people, but we have about 80,000 tourists pass through each year to see the whales. In addition, we have a commercial sector.

I think everyone shares equally in the prosperity, and the prosperity now is noticeable, but not all individuals have the high-paying jobs. That's why I always continue to talk about a social dividend. Some of those individuals are being left behind, even though there's tremendous wealth around them.

  (1715)



**Mr. Ted Lomond (Executive Director, Newfoundland and Labrador Regional Economic Development Association, Town of Bay Bulls):**

The only thing I'd add is that there's obviously been a big change in the province over the last number of years. Earlier, Mr. Andrews asked what we could do to encourage exploration. Well, right now in Newfoundland and Labrador about 50% of our GDP is underpinned by geological work. About 11% of our GDP is coming from mining, and around 39% to 40% of our GDP is coming from oil and gas.

What we need to do is, as you say, to be able to create opportunities for young people. It's not just through training; it's through some of the other things we've mentioned. Training is great, but training and research are not just for the industry but for what comes after the industry. How do we diversify? How do we build on the skills that we've acquired in operating in harsh environments and lever those skills to use in other industries, whether it be fishing or whatnot?

We've got a project of 30 years or more. If we were to put in place a 30-year knowledge mobilization plan, the skills we could acquire could be a source of competitive advantage for years to come, as Mr. Muldowney said.

In the interests of time, I won't ramble on about that.



**Mr. David Anderson:**

That's interesting. It's great to see that potential being realized.

I want to talk to Mr. Staples a bit, and this has to do with the realization of the potential we're talking about. In talking about the number of person-years that are going to be required in Alberta over the next while, you mentioned about 4 million over 10 years. Do you have comments on the challenges to fill that workforce?

We've talked about this, and some of our other witnesses have, but you're talking a lot about other areas. What are the challenges to fill that? Maybe Newfoundland has some of that same challenge as well, if not Labrador.



**The Chair:**

Mr. Staples, go ahead.



**Mr. Larry Staples:**

They're interrelated, certainly. The 2006 to 2008 period could be described as frantic in Alberta. We certainly had workforce challenges, and they constrained the rate at which we could build projects and bring them online and start creating wealth.

I think there's every expectation that we're headed in the same direction starting in late 2011 and into 2012. We're going to have to apply the lessons we learned and work hard to produce the projects and start bringing the wealth on stream.



**Mr. David Anderson:**

Do you have the same challenges, Mr. Mullowney?



**Mr. Harold Mullowney:**

I would echo that. I know right now that in Newfoundland and Labrador we have a number of megaprojects out there in the wings. I fear if they were all to come to fruition in a short period of time, we wouldn't know where we'd find the workers.

Most individuals who want to be working are working. There's a high level of skills that we require for some of these projects, and this is a mobile workforce that travels the planet, so if you wanted to start several of those projects at one time, the workers really are not there right now. That's a challenge.



**Mr. David Anderson:**

I have just one more question to wrap up.

We have had some witnesses in here who have suggested that it would be better if some resources weren't developed right now and that we should leave them in the ground. I pointed out that our province already tried that, and it didn't work very well.

I would like reflections from both of you on what you think your province would be today without the development of the natural resources they have chosen to develop.



**The Chair:**

By "both", I suppose you mean Mr. Staples and Mayor Mullowney.

Go ahead, Mr. Staples.



**Mr. Larry Staples:**

That is actually one of the charts in our reports. When you get the report, you will be able to look at one of the figures and track the total GDP in Alberta over time. There's a line where we have subtracted conventional oil, and another line where we have subtracted bitumen and unconventional sources. Then there's another line where we have subtracted all of the resource industries. Needless to say, that bottom line is about 40% of what it is now.

(1720)



**The Chair:**

Go ahead, Mayor Mullowney.



**Mr. Harold Mullowney:**

I would believe that without the spinoffs and the direct moneys from oil and gas development, our province would be in a very sad position indeed today. It has been a tremendous boon, a tremendous windfall. I always say that it could be much more. As my colleague Mr. Lomond said, we're probably looking at a 30-year window. We're well into it now.

Who's looking beyond 30 years? There are not too many people. I think we need to be really focused on the fact that we'll reach peak oil, and then it will start to drop off. We really need to look at the sustainable industries that sustained us for all those years leading up to oil. They still can be there and can be great drivers of our economy in the future, and now's the time to be at it. Now is the time to be developing and to be looking in those directions. There are lots of other resources out there that we have put on the back burner. The skill sets to even pursue some of them have disappeared.

We're missing a tremendous opportunity in enjoying this brief boom in cash.



**The Chair:**

Mr. Sorenson, you can have just a very short question.



**Mr. Kevin Sorenson (Crowfoot, CPC):**

Thank you.

I do not usually sit on this committee. I chair public safety. I find this study quite fascinating.

First of all, I pass my sympathies on to you, Mr. Mullooney, on the loss of your brother. Certainly tragedies like that one lives with forever, and our sympathies go out to you.

I wanted to thank both Mr. Staples and Mr. Anderson for appearing. I'm an Alberta member of Parliament, and I thank you for the work done by you and other groups like yours, such as CAPP and other groups and organizations that are involved in advocacy.

Mr. Staples, a couple of times you mentioned bitumen. This maybe isn't part of the study they're presently doing, but if you're doing it on security of energy in Canada presently, what is your opinion as to the capacity for refining bitumen in Alberta and in Canada right now, compared to just shipping the bitumen down to the United States? Are we low in capacity? Do we need to increase that greatly? Is it a better model to have refineries than it is to ship?

Do you have an opinion on that?



**Mr. Larry Staples:**

Certainly the best plan for Alberta and Canada is to add the most value we can to the resources before they're exported, but right now the economics of doing so are not in our favour. The Alberta government has certainly been promoting technology development to change those economics to allow us to add more value.

In the final analysis, the market will dictate that, but it depends on how clever Dr. Isaacs and the scientists in the Devon labs and the scientists in industry are in coming along with technology that makes it economical to add value in Canada. That has to be the goal.



**The Chair:**

I'm sorry, Mr. Sorenson, but our time is up. People have flights to catch.

I want to thank all members of the committee for a great discussion here today. I especially want to thank all members of the panel for your presentations and for your answers to the questions. Thank you very much for appearing. We appreciate it.

The meeting is adjourned.

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