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EVIDENCE

Thursday, February 27, 2014

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Chair

Mr. Leon Benoit

Standing Committee on Natural Resources

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• (0850)

[English]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)):
Good morning, everyone.

We are here, as you all know, to begin a study on the cross-Canada benefits of developing the oil and gas sector of our energy economy.

Before I introduce the witnesses, there are just a couple of very quick things I'd like to mention. I think we should probably end the meeting at about a quarter after ten. We have the Aga Khan coming to Parliament. That'll give us ample time to get over there.

Secondly, I guess it's been agreed that our committee could be one of the committees that goes to the paperless committee system, so the clerk will send all members of the committee a video. If you could look at the video, then at some future meeting, over the next couple of meetings or so, we could have a very short discussion on that if you'd like and make a decision.

Turning to our business today, we agreed on December 9, 2013, that this committee would undertake a study on the benefits experienced across Canada from developing the energy industry, with a focus on the oil and natural gas sectors. Specifically, the study would examine how investment in this energy benefits local communities, businesses, and other sectors across the country, both directly and indirectly. It would allow the committee to better understand a wide range of benefits of the oil and gas sector to the Canadian economy in terms of employment, government revenue, innovation, the contribution to the GDP, and other benefits unlisted.

That's what the study is about. We have officials from the department here to give us the first testimony on the study. After the departmental officials give their presentations to us, we'll go to questions and comments, as usual. I have to say that I'm very much looking forward to this study.

I'll introduce the witnesses here today. We have Jay Khosla, assistant deputy minister, Energy Sector. Welcome to you.

We have Jeff Labonté, director general, Energy Safety and Security Branch, Energy Sector. Welcome to you again.

We have Terence Hubbard, director general, Petroleum Resources Branch, Energy Sector. Welcome.

We have Carol Buckley, director general, Office of Energy Efficiency, Energy Sector. Welcome.

We have Jonathan Will, director general, Electricity Resources Branch, Energy Sector. Welcome to you.

We have Martin Aubé, director general, Strategic Science-Technology Branch, Innovation and Energy Technology Sector.

I know you all. This is your very favourite thing you do in your jobs: come to our committee to give us information. But it really is something very important. It is an important role. The information you give does help inform parliamentarians, and parliamentarians are involved in the decision-making process. I do thank you very much for being here.

If you could go ahead with your presentations, please do, and when that's complete, we will go to the questions and comments.

Mr. Jay Khosla (Assistant Deputy Minister, Energy Sector, Department of Natural Resources): Thank you, Chair. It's Jay Khosla here. Just building on that last comment, we do sincerely appreciate the opportunity to be here, and we completely understand the importance of this study. We also look forward to receiving the final report, so we can improve our practices within the Energy Sector of Natural Resources Canada.

Having said that, we've distributed a deck, so I'll be following the deck. You may want to follow along with the presentation as well.

[Translation]

I too am happy to be here today to talk about the economic benefits of the energy industry for Canada and the work accomplished by the energy sector at NRCan.

We are grateful to the committee for studying this issue, which we think is very important for Canada's long-term prosperity.

Since the committee is undertaking a study, my team is with me. We are here to answer any questions you may have.

• (0855)

[English]

As I said, we sincerely appreciate the opportunity to appear here and look forward to the results of the study.

[Translation]

To start off, the natural resources sector contributes significantly to Canada's economy and future. The sector accounts for 18% of Canada's GDP and about 1.8 million jobs in Canada. Resource development projects are also sources of capital and attract tremendous amounts of investment to the Canadian economy.

[English]

Finally, it's really important to note that our forecasts indicate there's currently approximately \$650 billion in major resource projects planned or under way over the coming decade, and of that total, energy accounts for nearly 75%. This clearly has major implications for our country.

The next slide is a bit of a "shovels in the ground" kind of concept, but as the slide depicts, Canada's vast energy resources benefit every region of the country. In some ways this represents how active energy development is across our country. Moreover, it shows the diversity of Canada's energy resources, including hydro and other renewables. Also, while oil and natural gas development is concentrated in western Canada, you can see that there is significant oil and gas production in the Atlantic offshore and elsewhere.

The smaller inset map shows that unconventional gas resources can be found across the country.

In a nutshell, energy development no matter the form, shape, or size touches all parts of the country from coast to coast to coast.

In terms of further setting the context in a global sense, Canada's energy resources are amongst the world's largest.

[Translation]

As we can see, Canada is the fifth largest crude oil and natural gas producer in the world, as well as a major hydroelectricity and uranium producer.

Canada is also a global energy efficiency leader. For instance, the International Energy Agency ranked Canada second for energy efficiency improvements between 1990 and 2010.

[English]

Canada truly is a global energy leader.

Very quickly, I want to point out that this next slide depicts the vastness of Canada's oil reserves. What's more, with innovations in technology and improved production methods, estimates are now indicating that up to 315 billion barrels may ultimately be recoverable in Canada. Canada's energy endowment is truly the envy of the world.

I'm going to spend a little bit of time on this next slide. There are some considerable statistics here. It is clear that this endowment has direct impacts on the economy.

As the slide says, the energy sector provides \$155 billion in GDP. That's over 9% of the Canadian total. It provides 300,000 jobs, equivalent to almost 2% of total employment; almost one quarter of all capital investments or \$96 billion; \$153 billion in foreign direct investments, which is again roughly a quarter of the total; and about 28% of total exports or \$119 billion.

The final point is that all governments, federal, provincial and territorial, benefit greatly from energy development in terms of overall revenues.

Beyond this, the energy sector is an important contributor to many of Canada's other sectors, which helps ensure benefits for Canadians across the country. Also, governments and industry in Canada are

investing significantly in energy R and D, which is strengthening the economic and environmental performance of the energy sector.

I'd be remiss were I not to mention the demand side of the equation of course, and that Canadians achieve significant savings through more efficient use of our energy resources. Based on efficiency gains alone since 1990, Canadians have saved \$32 billion in energy costs in 2010.

At the same time we know the energy landscape is shifting. The past decade has seen extraordinary growth in energy demand, largely driven by the fast-growing Asia-Pacific markets. Combine this trend with the fact that the U.S. is nearing energy self-sufficiency thanks to its unconventional oil and gas revolution—and don't forget that the U.S. is essentially Canada's only export market for energy—and taken together this means that Canada has both an opportunity and an imperative to diversify energy markets in order to continue reaping the key economic benefits that we enjoy today.

Chair, I won't spend a whole lot of time on this slide. I think this trend has been recognized at this committee in previous studies, but suffice it to say that Canada is well positioned to help meet this growing global demand for energy.

● (0900)

[Translation]

According to the National Energy Board, Canada's production of unconventional resources, including oil sands, shale gas and gas reservoirs, is projected to grow significantly until 2035 and beyond.

[English]

In other words, our stocks are not decreasing. The outlook for the Canadian energy sector is focused on continued growth.

[Translation]

In fact, Canada's sector is reacting to these dynamic changes. The new proposed pipeline projects could increase our export capacity to 3 million barrels a day.

[English]

Industry is also pursuing a variety of proposals to export Canadian natural gas resources to international markets via liquefied natural gas. As you know, 10 LNG export terminals are proposed on the B. C. coast alone, and one on the east coast. Canada's LNG value proposition is based on an abundant resource, clear regulatory structures, close proximity to markets, and an openness to foreign investment. The global community is showing active interest in our resources.

Summing it all up, what does it all mean? Canada has a huge economic opportunity, but needs to act quickly. Many argue that this is a time-limited window. As this slide indicates, economic experts agree on the tremendous importance and potential of Canada's energy sector.

A prominent stat comes from the IMF study, which indicates the potential to increase our GDP by 2% by 2020 if we're truly able to diversify our markets. Furthermore, the work by these experts highlights—you can see it on the slide—the importance of energy development for all regions of the country.

With that in mind, the Government of Canada is and has taken action to ensure success. In fact, much has already been done to support a vibrant and responsible energy sector. The government has modernized its regulatory system, is putting in place world-class safety and security regimes, and has invested in innovation and efficiency. The government is engaging domestically and internationally, and building partnerships with stakeholders to maximize Canadian benefits from resource development. In sum, the objective is to put all the building blocks in place to support the effective and efficient development of projects.

[Translation]

To sum up, the exploration and the diversity of Canada's energy resources provide significant economic benefits across the country. The government is actively implementing a program that supports the responsible development, transportation and use of our energy resources. In fact, energy fuels Canada's economic prosperity.

Thank you. We are now ready to take your questions.

[English]

The Chair: Thank you very much for your presentation, Mr. Khosla.

We'll go directly now to questions and comments. Starting in the first seven-minute round, we have Ms. Crockatt, followed by Mr. Julian and Mr. Regan.

Go ahead please, Ms. Crockatt, up to seven minutes.

Ms. Joan Crockatt (Calgary Centre, CPC): Thank you very much, Mr. Chair.

Thank you as well to our officials for being here today. It's great to see flanks of knowledge there to be able to ask these questions of.

I'm interested in drilling down a little bit. Thank you for the overview, Assistant Deputy Minister, and I'm wondering if you could help me by breaking down a little bit.... These numbers are very large for many people, and it's difficult for them to get their head around \$2.8 billion, an increase in 2% of our GDP.

I wonder if you could take a stab at it, and we don't have an unlimited amount of time, but how does this break down province by province? If you could give us some detail of that, that would be very helpful.

Mr. Jay Khosla: Sure, I'd be happy to.

There are several different ways to take a run at the question. One of the most significant is to think about energy employment statistics, and I'll give you a smattering of the kinds of stats that we have.

In Newfoundland, energy jobs account for 4,500; in Québec, 23,000; Manitoba, 7,300; Saskatchewan, close to 20,000; Alberta, of course, 150,000; B.C., 25,000 and growing.

Overall, direct energy jobs account for 300,000 across the country. In terms of indirect employment, which may be something of consideration as well, there are 150,000 jobs across the country. So considerable numbers are there, obviously impacting every region. I didn't go through every province, but it gives you a sense of it.

• (0905)

Ms. Joan Crockatt: Okay, and if I asked you to highlight a couple of examples, could you break that out for us? One of the myths may be that there are only a couple of provinces in Canada that are benefiting from our energy sector. Can you explain?

You've broken this out—I'm surprised at 23,000 jobs in Quebec. Maybe you could highlight a couple of examples for us there, and help to broaden that.

Mr. Jay Khosla: Yes, I'd be happy to.

The first thing to remember is this. Sometimes we just focus on Alberta and oil and gas, but as the map showed in my presentation, if you look at that as shovels in the ground, every province has pretty much an energy play, whether it be oil and gas, hydroelectricity, and so on.

Some of those jobs that we were talking about in Quebec do emanate from other sources of energy. I would say also that in 2012 Quebec exported \$270 million of products to the oil sands—I hope I have that figure right. When you think about that from a perspective of give and take, some of the jobs that I would have spoken about are direct internal jobs to their main energy play, but also they're working with the oil sands.

I'll ask Jeff or Terry if they have anything else they want to add on this one?

Mr. Martin Aubé (Director General, Strategic Science-Technology Branch, Innovation and Energy Technology Sector, Department of Natural Resources): I would just add that some of the jobs are also manufacturing jobs, providing services or technologies and equipment for the oil and gas, and a lot of that is located in Ontario. That's where you also get the crosscutting nature of the impact from the industry.

Ms. Joan Crockatt: Are you able to give us an example of that, Martin or Jeff? What won't Canadians know about the jobs that are created in Quebec or Ontario that are either directly or indirectly related to the oil and gas sector?

Mr. Jay Khosla: Maybe they won't know about the array of spinoff jobs that come from the industry. A lot of people think about these jobs as direct jobs within the industry, construction or operations jobs, but when you look across the country, we are talking about an energy resource boom, which has secondary and tertiary effects—engineering jobs, manufacturing jobs, financial and technical jobs, scientific jobs, and on you go. Those jobs impact every part of the country. It's pretty clear when we look at B.C., for example, and you run the table in B.C. on the LNG play, that hotbed of activity in itself is creating a focal point for expertise being brought into a certain area of the country along all the types of jobs and sectors that we just spoke about.

I'll come back to the figure of the 150,000 indirect jobs across the country that are impacted. We're seeing hotbeds of activity in various pockets.

Terry.

Mr. Terence Hubbard (Director General, Petroleum Resources Branch, Energy Sector, Department of Natural Resources): As Jay indicated in his presentation, another element of this to highlight is not only the employment impacts, but the energy sector also contributes a significant amount of revenue to various levels of government, which pay for a whole series of important social programs that benefit Canadians right across the country. So there are the direct economic benefits that we see from projects that are taking place right across the country: significant hydro developments in Quebec, in Newfoundland we have oil and gas development, uranium development in Saskatchewan, the LNG plays in B.C. There's enormous development right across the country, and these benefits are shared through professional services, financial services, manufacturing.

Ms. Joan Crockatt: What percentage of government revenue comes from the oil and gas sector?

Mr. Jay Khosla: Twenty-six billion dollars. I don't know what the overall percentage is. I don't know if anyone here at the table—but of the \$26 billion, \$22 billion is from oil and gas. So you can see fairly considerable overall revenue comes from the oil and gas sector.

Ms. Joan Crockatt: Jeff, what about offshore benefits of the industry? Could you take a little snapshot of that and tell us what you've seen as some of the benefits there?

• (0910)

Mr. Jeff Labonté (Director General, Energy Safety and Security Branch, Energy Sector, Department of Natural Resources): Sure. In the offshore area, which is predominantly Newfoundland and Labrador but Nova Scotia as well, which started earlier than Newfoundland and Labrador, we see 3,000 direct jobs in the energy sector. But overall employment in Newfoundland and Labrador in the energy sector is 12,800 jobs, which is nearly 6% of total employment in Newfoundland and Labrador.

We also see this sort of growth as the wealth that's generated from the energy activities spins itself into other things. As Jay did, we've mentioned manufacturing, but it also leads into areas like research and development. In the Newfoundland and Labrador area, we've seen several hundred million dollars' worth of research and development over the last two decades.

Anecdotally, I was in St. John's and it was mentioned to me that, for example, the engineering faculty of Memorial University is in the process of doubling its size, from roughly 30 to 50 or 60 different faculty members, which then leads into advanced engineering, chemical engineering, and the range of engineering services that then grow a much more skilled workforce and a much more vibrant economy in the province, which then benefits the country overall.

So we see these things as the stability and the wealth generation that comes from the oil and gas development, which typically happens over 20-, 30-, 40-year cycles. The projects go on for extended periods of time and bring opportunity to parts of the country as well as the country overall. They stabilize its ability to deliver social programs and to grow our workforce, education, and then our health spending.

The Chair: Thank you. I'm going to have to cut you off there. You're a minute and a half or so over time. Thank you, Ms. Crockatt.

There's a change in plans. We have Ms. Duncan, from the New Democratic Party, for up to eight minutes.

Ms. Linda Duncan (Edmonton—Strathcona, NDP): Thanks very much. I'm sure I'll have the same problem as that of Ms. Crockatt—lots of questions to ask.

One of the important sectors in the resource sector is energy efficiency. I think I might have seen a number of you before when I was on the OGGO committee; we had a very extensive review of energy efficiency and what actions the federal government is taking to support and encourage that sector. Of course, that's one of the main costs that homeowners and business owners face, including our oil and gas sector: the cost of energy. Oil sands uses a huge volume of gas.

I've held consultations with people in the energy efficiency sector. They're telling me that the biggest barrier to the expansion of their sector, which they would like to expand—and potentially it could employ a lot of Canadians—is the failure of this government to impose an appropriate price on carbon, in particular in the oil and gas sector.

Can you update us on what's happening with imposing the price on carbon in the oil and gas sector?

Mr. Jay Khosla: I'll go to the first part of the question, and then deal with the last part in a minute.

I'm going to ask Carol, my DG of energy efficiency, to also take a stab at some of the question.

We're significantly proud of our Office of Energy Efficiency at Natural Resources Canada. It's a big player on the energy file.

As I had mentioned off the top, energy efficiency is important to this government. We've invested. I had a mentioned a stat of about \$32 billion in terms of savings, and that's considerable. Embedded within that, of course, would be the fact that there are some GHG reductions from the savings, and we can talk about that.

Ms. Linda Duncan: If I could interject, my question is not about what the federal government is doing to reduce energy use in the federal government, which of course would be admirable. My question is about what the department is doing about the reduction of energy use in the oil and gas sector.

Mr. Jay Khosla: We are working across the country on energy efficiency programs. We'll get into the oil and gas sector in a minute.

The stat that I gave was not about the federal government. It was actually the energy efficiency savings across the country from measures we have worked on and have implemented coast to coast. We're also continuing to pursue better environmental outcomes. We are a world leader and are recognized for our energy efficiency programs.

In terms of the impact on oil sands in Alberta, as such, we do work collaboratively with Alberta through a concept known as the Energy and Mines Ministers' Conference, which meets annually, to implement direct programming within Alberta.

In terms of the overall savings to the oil and gas sector, there's a pretty interesting study that just came out from Jack Mintz in Calgary, which said there's more work to be done, for sure. We see that as a ripe area to assist industry there to reduce its costs, and so on. We are working directly with it, and we're going to continue to expand in that area.

Carol, maybe a few more anecdotes, or stats rather, in terms of Alberta—

• (0915)

Ms. Linda Duncan: I would like an answer to my question about when we're going to see the regulations.

Mr. Jay Khosla: Sorry, I didn't realize you had a direct question on the regulations. I apologize for that.

I assume you're talking about the work on greenhouse gas regulations.

Ms. Linda Duncan: Absolutely.

Mr. Jay Khosla: That's under the domain of Environment Canada. It's the lead in the government on that particular file. I know it's working away at it, and has been. I'd expect it to be in a better position to answer. I certainly would not want to steal its thunder in that regard. In fact, it is the best positioned.

Go ahead, Carol.

Ms. Carol Buckley (Director General, Office of Energy Efficiency, Energy Sector, Department of Natural Resources): Speaking to some of the specific activities that take place with the oil and gas sector, I appreciate the interest in the work of the Office of Energy Efficiency. We deliver a number of tools. We're working with Alberta and companies in the oil and gas sector to deliver these tools in all of industry.

But we have a sector task force that addresses oil and gas specifically. Two of the tools we bring to the oil and gas sector to improve energy efficiency are the energy management standard from the international standards organization—this is an energy management standard that gets adopted voluntarily by industry.

Ms. Linda Duncan: I actually know all of that, because we did have a whole review. I had a specific question about the regulations.

So I actually have other questions—

Ms. Carol Buckley: Okay.

Ms. Linda Duncan: —but I appreciate that.

My next question is on information coming to the public attention that the insurance industry is growing concerned about the insuring of properties that are located near fracking because of the rapid devaluation of those properties—

The Chair: Ms. Duncan, I'm just going to remind you of what the study is about. Then if you can tie it in and explain how it fits, that's fine. I'm not going to try to—

Ms. Linda Duncan: Sure. This study is about the benefits of the oil and gas sector.

The Chair: The cross-benefits to the oil and gas sector, yes.

Ms. Linda Duncan: Right.

The Chair: I'm just having a hard time understanding—

Ms. Linda Duncan: It's about the benefits of the oil and gas sector, and what the insurance agency is saying is that the expansion of fracking, which is part of the oil and gas sector, is apparently causing the diminishment of property value, and insurers are growing increasingly concerned about that. I'm just asking if the government is looking into that and if they're examining that review that the insurance industry of Canada is looking into.

The Chair: So benefits to the insurance industry, then, you're talking about here.

Ms. Linda Duncan: No, it's benefits to property owners—

The Chair: Oh, okay.

Go ahead.

Ms. Linda Duncan: —and not benefits. Disbenefits to property owners who may be—

Mr. Peter Julian (Burnaby—New Westminster, NDP): Benefits and not benefits, right?

Mr. Terence Hubbard: I'm not aware of the specific study that you're mentioning, but would like to clarify a couple of points in this regard.

Overall regulation of shale gas development in Canada is within provincial jurisdiction. The Government of Canada is obviously committed to supporting the responsible development of all of our resources going forward. We've been working very closely with various regimes and industry in terms of practices and the requirements around shale gas development in Canada.

According to the regulators in western Canada, where most of this activity occurs, there has never been a proven case of contamination related to fracking activities, and these activities have been taking place in western Canada for more than 50 years. We're obviously following developments and interest in this area very closely, and will continue to do so, and work with our provincial colleagues in terms of ensuring—

Ms. Linda Duncan: Thanks.

Could I just follow up and ask you this, Mr. Hubbard? It's my understanding that the Government of Canada has commissioned the Royal Society to do a study on fracking. It's been going on two, three years.

Can you tell us when that study is due for release, and will the results be released to the public?

Mr. Terence Hubbard: As you mentioned, there is a study that has been commissioned. We anticipate that study will be released in the first half of this year. We don't have a precise timing at this point in time for when that study will be available.

Ms. Linda Duncan: Thank you.

The Chair: Thank you, Ms. Duncan.

• (0920)

Mr. Jay Khosla: Sorry, could I just come back on the question, too?

The Chair: Very briefly.

Go ahead, Mr. Khosla.

Mr. Jay Khosla: Ms. Duncan, we're always looking to bring the evidence base on board and we'll be looking at that study you mentioned, of course, to improve our programming as well.

I just wanted to let you know we do deal directly with landowners, among others, in terms of looking at issues. We'll incorporate that evidence base, so I appreciate your highlighting it.

Ms. Linda Duncan: I'd be happy to share the report with you.

The Chair: Thank you, Ms. Duncan.

Mr. Regan, go ahead for up to eight minutes.

Hon. Geoff Regan (Halifax West, Lib.): Thank you very much.

Thank you to the witnesses for being here today.

As you understand, the committee has chosen to do a study of the "cross-Canada benefits of developing the oil and gas industries". Now, I might personally have chosen a different study or a different wording of that, but it may be somewhat obvious to you that the Liberal Party doesn't have a majority on this committee.

But what I'm curious about is if we're doing a study on the benefits of developing the oil and gas industries, as you know, why would you do a presentation dated today on the economic benefits of the Canadian energy industry, in other words, as opposed to only oil and gas? I think it would be great to be examining the whole energy industry, but we're not doing that.

Mr. Jay Khosla: Right.

Hon. Geoff Regan: For instance, we're studying the oil and gas sector, right? If I look at the map on page 3 of the deck that you have apparently prepared for this meeting, we have things like tidal and hydroelectric, electric and coal, and wind farms, thermal electric, uranium mining, none of which has anything to do with oil and gas, which we're studying. They're interesting to study and worthwhile, but that's not what we're doing. So why would you have covered such a broad range?

Mr. Jay Khosla: Chair, I apologize if we misinterpreted the purpose of this study. We're happy to talk about oil and gas, no question about that. The title of the study, as it was handed to me, is the cross-Canada benefits of developing the energy industry, with an emphasis on oil and gas.

The Chair: That's correct.

Mr. Jay Khosla: So that was our take on the presentation.

Having said that, the energy sector in Natural Resources Canada does focus further than oil and gas and that's the purpose of the presentation.

Hon. Geoff Regan: Indeed it does.

In your chart you refer to \$32 billion in annual energy efficiency savings across the economy in 2010. That's compared to when?

I'd like to know to when does that compare, what's the reference point for that? Can you tell me how those savings were achieved? Are they the result of certain programs? Are they the result of technological changes? When and how?

Mr. Jay Khosla: Carol will be able to give you the exact reference on the study.

Again, I have to apologize to committee. If we misinterpreted the purpose of the study, that's our fault. We can certainly answer all the questions that are coming.

Carol?

Ms. Carol Buckley: Thank you very much for that.

That calculation is one that we make in the Office of Energy Efficiency and we use the same methodology that the International Energy Agency uses as well as five, six, or seven other countries: the UK, Germany, Australia, and so forth.

What we're trying to do is, we look at the economy and we know that this is measured over the past 20 years.

Hon. Geoff Regan: Thank you, it's 20 years.

Ms. Carol Buckley: We're looking at the savings measured in 2010, but it's the result of all of the investments that have been made in the economy in energy efficiency since 1990. These are not just investments made by the federal government. They're investments made by all Canadians.

Hon. Geoff Regan: Is there a reason why you chose 1990 as a reference point?

Ms. Carol Buckley: It's a pretty standard reference point in international assessment of energy efficiency.

Hon. Geoff Regan: It doesn't relate to Kyoto, for example?

Ms. Carol Buckley: No. We've been measuring since 1990, a group of countries who meet at the International Energy Agency in order to have consistency among countries and over time to compare the improvements.

Hon. Geoff Regan: Thank you.

Can you give us a statement of the investment by oil and gas companies across the country, broken down by province, by how much is in each province?

Individual companies would be nice, but I mean the whole industry. Do you have that available?

Mr. Jay Khosla: I don't know if we do. I don't have it right before me. I don't know if anybody else here has the exact breakdown by province in terms of oil and gas.

Mr. Martin Aubé: I have some statistics for planned investments, for example in 2012, in billions by province for the energy sector.

Hon. Geoff Regan: That's helpful. I'm talking about both existing and planned investments, but planned investments will be helpful, so please go ahead.

• (0925)

Mr. Martin Aubé: For example, planned investment in billions for 2012 and this is just for energy, so it's not necessarily oil and gas. In Newfoundland, it's \$34.4 billion; in Nova Scotia, it's \$14.1 billion; in Alberta, it's \$212.3 billion; and in British Columbia, it's \$99.1 billion. I could leave this.

Hon. Geoff Regan: You say those are overall energy, they're not necessarily oil and gas?

Mr. Martin Aubé: That's correct. They're overall energy.

Hon. Geoff Regan: So it doesn't break them down.

Maybe you can get back to us with—

Mr. Jay Khosla: No, it was just handed to me so I can give you some examples.

Provincial economic benefits of oil sands, is that the kind of stat you're looking for?

Hon. Geoff Regan: It's not what I said.

I asked: what are the investments by the oil and gas industry, broken down by province?

Mr. Jay Khosla: Okay, we'll come back to that question.

Hon. Geoff Regan: That information would be interesting. Maybe you could provide the committee with that as well, but that's not what I was looking for.

Maybe you could talk about the effects at the community level of the oil and gas sector. Would you say it is the view of the department that those effects are uniformly positive?

Mr. Jay Khosla: In terms of the economic benefits to local communities across the country, or within Alberta? Is the question across the country or within Alberta?

Hon. Geoff Regan: What are the effects at the community level of the activities of the oil and gas industry across the country?

Mr. Jay Khosla: As I mentioned off the top, in terms of my presentation, we see huge economic benefits across the country and locally within Alberta of oil sands development. We see big dividends, whether it be in Alberta, Quebec, or Ontario. For example, in Ontario, \$600 million was invested in oil sands activity. That will have secondary and tertiary impacts—indirect jobs, induced jobs, so on and so forth.

In terms of Newfoundland, if you want to talk about the offshore oil and gas industry, certainly there are impacts there. In B.C., there's the LNG play, and we could go on and on.

As Terry had said off the top, we really do see hotbeds of activity across the country and directly linked also to oil sands activity.

Hon. Geoff Regan: Is it the view of the department that the effects of the oil and gas sector at the community level are uniformly positive?

Mr. Jay Khosla: Uniformly positive, in the sense of the economics of the equation, or universally positive—?

Hon. Geoff Regan: In my asking about the effects at the community level of the oil and gas industry, you can understand it would have broad effects. I'm asking whether the department thinks they're uniformly positive.

Mr. Jay Khosla: In answering directly to the question, I would say generally yes. In terms of economic benefits across the country, they're uniformly positive.

Hon. Geoff Regan: Thank you very much.

The Chair: Thank you, Mr. Regan.

We'll go now to the five-minute round.

First in the five-minute round is the parliamentary secretary, Ms. Block, then Mr. Trost, and then Mr. Julian.

Go ahead, please, Ms. Block.

Mrs. Kelly Block (Parliamentary Secretary to the Minister of Natural Resources): Thank you very much, Mr. Chair.

I will echo my colleagues' comments in welcoming our officials here this morning. I certainly do appreciate the expertise that is represented at the table. I have come to understand the commitment that you all bring to the responsible development of Canada's natural resources, and I appreciate that very much.

Mr. Khosla, I heard you say earlier in your presentation that this is a time-limited window. I'm intrigued by that. My question is on whether there is an imperative to act. What is the impact, if we don't? Thirdly, how does the responsible resource development plan help us act in a timely way?

Mr. Jay Khosla: Thank you for the question.

In terms of the time-limited opportunity, there are a couple of points that I'd like to make. The first is what was in the presentation. We know very well on our end that in the United States there's been a technological revolution in energy development, especially when it comes to oil and gas. Many forecasters, the International Energy Agency, CERA, and a few others, are saying they'll be self-sufficient by the year 2035. You combine that with the fact that we're increasing our production and that they're our biggest customer, and you can imagine what we need to do between 2020 and 2035. We need to diversify our markets. That's one of the timelines on this.

Another one is that when you look at B.C., a lot of forecasters on the LNG play are saying there's a race across the world. But B.C. is not the only area within the world that's chasing liquefied natural gas.

We've been lucky enough to have engagements with countries like Japan, Korea, India, and China. Frequently when we meet with those countries, their point to us is that they like what Canada does and they believe Canada does it responsibly. But they're also going to other hotbeds of activity, such as Australia and Malaysia, for the same product. If we can meet their needs quickly, they would like us to do it. They especially like the way we do it because of the certainty and predictability we have in our system, the competitive tax base and so on. I'd say that those are two angles on the time element.

In terms of responsible resource development, as you know, a few years ago the government put time limits on the reviews of major natural resource budgets, and those are primarily energy projects. It was a direct result of thinking through the potential for ensuring transparency and predictability for the industry. But it was also to show the world that we are able to develop these assets in a time-oriented way to meet the growing demand. With all of that in play, responsible resource development has been acknowledged.

I want to come back to the point about meeting with various other countries and them saying that we do this with the highest standards. It brings with it a host of environmental protection initiatives. As a result, we're attracting some attention outside of our own country to develop these resources.

Terry, did you want to add to that at all?

• (0930)

Mr. Terence Hubbard: Thanks, Jay. I think you covered things quite well.

To reiterate, it is a global market that we're competing against. If we don't move forward and capitalize on this opportunity we have here in Canada, our competitors will. There are significant opportunities and significant proposed investments, in the United States, in Australia, in other countries, in terms of oil and gas development. The market for these products is limited, so those first to market are going to capture those long-term opportunities presented by the growing demand, in the Asia-Pacific region in particular.

Mrs. Kelly Block: How much time do I have?

The Chair: Half a minute actually....

Mrs. Kelly Block: So then the impacts on our economy, on the benefits that are experienced uniformly across the country to communities, would definitely be negative if we weren't to capitalize on the opportunities we have today.

Mr. Jay Khosla: Yes. In the deck we talked about the IMF study, which is a pretty groundbreaking study. Essentially it showed that by diversifying our markets in the year 2020 we have the potential to grow 2% of our GDP, which is considerable as you know. I think the reverse is also true. I can't remember the exact figure in the study but it did indicate that were we not to, we would suffer some consequences. That's just in 2020.

The Chair: Thank you, Ms. Block.

Very short, Mr. Labonté....

Mr. Jeff Labonté: Just looking at the example of British Columbia, the pipeline projects that are proposed in the west coast look at a combined GDP contribution of almost \$17 billion to the Canadian economy over the period of growth, with over half of that accruing to British Columbia. The LNG projects have a cumulative GDP effect of \$171 billion. That's \$386 billion when you include the upstream development of the gas resources in Alberta and British Columbia with the 43,000 jobs proposed. The impact to provinces across the country other than Alberta and B.C. would be \$10.8 billion. So these are substantial, staggering amounts of money to the economy over the period of those 20-year horizons.

Mrs. Kelly Block: Thank you very much.

The Chair: Thank you, Ms. Block.

Mr. Julian.

Oh, Mr. Trost and then Mr. Julian.

Mr. Brad Trost (Saskatoon—Humboldt, CPC): Mr. Chair, I'm a little concerned you're confusing Mr. Julian and myself.

The Chair: I never could tell you apart.

Mr. Peter Julian: You seem to be more progressive.

Mr. Brad Trost: Anyway, before we wander too far along the rabbit trail, part of the reason behind having this study was to look at areas of the country that are impacted by the oil and gas sectors that aren't always what we first think of—the offshore in Newfoundland, Alberta, Saskatchewan, the western sedimentary basin. With that I'm going to ask about the impacts in a couple of provinces that we don't

normally think of tying with oil and gas industry. Perhaps it's because I'm sitting in what is Mike Allen's seat here, I will ask about New Brunswick and Quebec, for example.

What are the impacts going forward? What is the potential? What is the forecast? I realize depending on decisions that are made this will vary. But when you look at those two provinces, which are traditionally not at all tied to this industry, what sort of potential is there and what needs to be done to develop it so that their citizens can enjoy benefits from this industry?

• (0935)

Mr. Jay Khosla: Maybe we'll start with a few statistics that could be helpful. In New Brunswick, there was \$19 million GDP in 2011 in direct economic benefits of the oil sands; Quebec, \$317 million in direct economic benefits of the oil sands.

To come back to the question, though, more broadly it's important to note that certain provinces also have their own resources when it comes to oil and gas. I want to thank you for highlighting those two provinces in particular because while they do play in the oil sands from a manufacturing side, from an induced jobs aspect, from a support capacity in terms of Alberta directly, they also do have their own set of resources and we are starting to hear from those provinces as to the potential of developing their oil and gas reserves. These are early days with respect to that.

Mr. Brad Trost: What is the potential in those two provinces?

Mr. Jay Khosla: I'm going to ask Jeff to jump in but certainly there are significant reserves sitting in Quebec and in New Brunswick. At the end of the day....

I wanted to come back to the final point which is this. I think folks are learning from the Newfoundland experience a little bit in this regard on the east coast and understanding that these can have significant, positive impacts on the economy.

Jeff or Terry, did you want to come back on the specifics of the reserves themselves?

Mr. Jeff Labonté: Maybe I'll start, my colleague can join me. If one starts with Quebec, certainly one has to recognize first that jurisdictionally it's the province that sets the pace for development of oil and gas resources. The exception to that is the combination of shared management that the federal government and provinces pursue for the offshore. So in Quebec, the federal government signed an accord with the Province of Quebec to pursue shared management of offshore resources in the Gulf of the St. Lawrence, for example. We're actively developing the frameworks to achieve that objective with the province. The reserves expected there are in the billions of barrels of crude oil and several trillion cubic feet of gas.

Mr. Brad Trost: Quebec has the potential for billions of barrels of oil—

Mr. Jeff Labonté: Correct.

Mr. Brad Trost: —and trillions of cubic feet in gas.

Mr. Jeff Labonté: Correct. I think the estimates...our geological survey...I could get you the exact number with the study, but certainly I'll give you the rough, *grosso modo*....

In the Gulf of St. Lawrence, for the area that falls within the administration of a shared management regime between Canada and Quebec, I think it was in the area of two billion barrels of oil in the offshore, not including Anticosti Island. I think five billion barrels are expected in the Anticosti Island onshore. As well, the trillions of cubic feet of gas was in the neighbourhood of eight or nine trillion cubic feet, but definitely in the scope of a substantial amount of gas.

In the offshore area there is opportunity, and certainly there is an interest in making sure the frameworks are in place to allow decision-making to occur, that the environment can be assessed, and that a regulatory regime—

Mr. Brad Trost: New Brunswick, before Mr. Benoit cuts you off....

Mr. Jeff Labonté: In New Brunswick, the resource potential in the offshore is a little less understood, but certainly there is offshore nearshore gas in the New Brunswick example.

Of course both provinces have significant shale resources, and both provinces are looking at that from a regulatory point of view and from the point of view of if they should wish to develop those resources. Both have experienced exploratory drilling. In one case the potential for commercial proved fairly productive, and in the other case it's still being explored how that could be best tapped and optimized.

Not to suggest that's a known go-forward, but that's certainly something both provinces are looking at, which has potential again to essentially transform the way those provinces produce energy, not just from hydroelectricity and from renewables but from oil and gas.

● (0940)

The Chair: Thank you.

Thank you, Mr. Trost.

Mr. Julian, you have up to five minutes.

Mr. Peter Julian: Thanks, Mr. Chair.

Thanks, Mr. Trost. I think this is right on the money, talking about the Canadian energy industry as a whole. I agree with Mr. Regan that really what we should be looking at is a broader-based study, and I think you're helping to change the committee direction in that regard. That's very helpful.

The Chair: We have a point of order from Ms. Crockatt.

Ms. Joan Crockatt: Just before we go too far down on that track, Mr. Julian, I just want to clarify and if we need further clarification, I think we can do that by taking time out without the witnesses here.

But I think the intention very much with this study was that there is a focus on natural gas and the spinoffs. So when we are talking about the oil and gas in brackets, it is that the spinoffs and the benefits that we are talking about will not exclusively be in the oil and gas sector. That was very much the intention when I put forward the motion.

We might need further discussion on that, just so we don't redefine the study as we're going along here.

Hon. Geoff Regan: On the point of order, Mr. Chair....

The Chair: Mr. Regan.

Hon. Geoff Regan: Mr. Chair, looking at the agenda, the orders of the day, I assume that these orders of the day on this agenda come out with your approval, Mr. Chair, and it reads, "Pursuant to Standing Order 108(2), study of cross-Canada benefits of developing the oil and gas industries".

If that's not accurate, perhaps it should be changed for future meetings.

The Chair: But that is what the study is about. The focus is to be on oil and gas.

Yes, Ms. Block.

Mrs. Kelly Block: On that point of order, Mr. Chair, I would just point out that we do seem to have two different titles, one from the Library of Parliament and one on the orders of the day. The orders of the day indicate, "cross-Canada benefits of developing the oil and gas industries", and what has been prepared for us by the Library reads, "Study on the Benefits of Canada's Energy Sector (Oil and Gas)".

We probably should ensure that we are stating the same thing consistently throughout the material we are distributing.

The Chair: Yes, I think in both cases the focus is on oil and gas. That's what this study is about. That's what we agreed to do. No matter how it's written, that's the intent of the study, clearly.

Mr. Peter Julian: On a point of order....

The Chair: I'll go to Mr. Julian, then Ms. Duncan.

Mr. Peter Julian: On the point of order—and I hope the clock is stopped, Mr. Chair—it's very clear, particularly when you look at the French version of the study.

[Translation]

The motion asks "that the Committee undertake a study on the benefits". There are benefits but there are also consequences attached to developing the energy industry across Canada. Of course, the focus will be on the oil and gas industry, but the study will not be limited to just that. In the eyes of the public, the study is supposed to look at both the pros and cons of developing the energy industry. The motion we have passed is quite clear in that sense.

[English]

The Chair: Mr. Regan.

Hon. Geoff Regan: Thank you, Mr. Chair.

The difficulty here, it seems to me, is that as I mentioned earlier, the map shows nuclear, tidal, hydroelectric, coal, thermal electric facilities. What we're essentially saying by this focus is that these areas are not important to Canadians. It seems to me that this highlights how this ought to be a broader study. In fact the presentation today by the officials highlights how this should be a broader study than just one sector of the energy sector.

The Chair: As you know, Mr. Regan, the officials don't determine the scope of the study.

Hon. Geoff Regan: They're right.

The Chair: The committee did, and we're focusing—

Hon. Geoff Regan: The majority...*[Inaudible—Editor]*.

The Chair: —on the oil and gas sector of our energy economy. That's what the study is clearly about, we all know that, and that's the way we will proceed.

Ms. Duncan.

Ms. Linda Duncan: The problem, Mr. Chair, is that the experts, however they were advised on what they were come and speak to...

A good half of the material is about the energy sector, which is very interesting. The energy sector in Canada is and could be much more diverse, and they're showing that potential. Some of the overheads in the presentation talk just about oil and gas, and then towards the end we're talking about promoting energy innovation and efficiency, including hydro.

If the focus of this review is going to be only oil and gas, I think we might be well advised to say, in deference to the officials, who may have been left with some confusion on exactly what we needed from them, that they may want to revisit and pare this back and again provide us with information only on what the oil and gas sector is doing.

They could remove all of the other sectors—

• (0945)

Hon. Geoff Regan: Like the map.

Ms. Linda Duncan: —because that's not giving us a picture of just the oil and gas sector. They may well have it at their fingertips, or they may be able to drill down, but I don't think we're being....

You know, we're trying to respond to what they provided to us. That's why we're getting into the material they've provided. It is making it difficult.

The Chair: As you know, Ms. Duncan, witnesses can provide whatever information they choose. The study is focused on the oil and gas sector of the Canadian energy economy. I don't think we're disagreeing on that.

Let's just proceed.

Mr. Julian, are you ready to move ahead on that?

Mr. Peter Julian: Thank you, Mr. Chair.

Yes, I think we've clarified it. We've taken a look at the motion. It's very clear that it's not limited to oil and gas. I think that's an important point.

But I certainly appreciate our witnesses coming forward. I'm a former oil refinery worker, so I understand the benefits of the oil and gas industry—there's no doubt—but it has to be done in a framework where we're maximizing economic value and it has to be done in a framework where we're minimizing the economic consequences. I think public concern right now is that neither of those things is happening.

I'm interested in coming to the first part, which is the value added. I'm interested in knowing whether there's been any analysis done within the department on how a potential national strategy could

look, one that is based on really looking at value-added upgrading and refining here in Canada. The refinery I used to work for is closed, and so many others have closed as well.

Mr. Khosla, are there internally within the department any discussions about how we could put in place a dynamic national energy strategy that puts much more emphasis on value added?

Mr. Jay Khosla: In terms of an overall energy strategy, what I would say just off the top—I think you got to it in the second part—is that we're a little different from many of the other international players around the world in that we're a market-based system, and we're very lucky to have that system. We really do rely on the market to drive the energy resource, the energy play.

Secondly, the provinces, as you know from the overall construct, own the resources. Generally our role in the federal government has been to try to facilitate to the extent possible the development of these resources in, as you mentioned, a responsible and time-oriented way.

From an overall strategic perspective, in the deck we talked about some key imperatives. Responsible resource development, meaning that we want to put in play constructs such as time-oriented development—

Mr. Peter Julian: I'm—

Mr. Jay Khosla: Sorry, I'm just getting to the components on the strategy.

Mr. Peter Julian: What I'm actually looking at is the value-added component. Could you speak to that, to whether there has been any analysis within the department, any studies you could release to this committee that indicate what the economic added value would be of providing for more upgrading and refining in Canada?

Mr. Jay Khosla: Sorry. So specific on refining?

Mr. Peter Julian: Upgrading and refining.

Mr. Jay Khosla: Upgrading and refining.... Sorry, I was dancing on the other part of the question, which is what is the strategy, the overall national energy plan. I thought you were asking about that.

There are components we are driving forward on. I'm not sure we would label it so much a national plan as an action plan to get things done.

In terms of upgrading and refining, I'm going to ask Jeff to take the question, but I'll come back to the point that we're a market-oriented economy when it comes to energy, and those decisions are largely driven by the private sector. We do our best to facilitate, and we engage with the private sector where and when they need regulatory approvals, where and when they are looking for any other kinds of government levers that need to move forward.

• (0950)

Mr. Peter Julian: Sorry. I only have five minutes so I'll pass it on to Mr. Labonté if he could respond.

Mr. Jeff Labonté: I appreciate the question. Certainly in a market-based energy system and the way Canada operates private investors and companies make decisions about where to and when to upgrade and how to refine product based on their view of the market and the returns to their investments.

As you would know from your experience working in the sector, it's an extremely capital-intensive sector. It's certainly one that's globally competitive.

Mr. Peter Julian: I'm aware of all that. My specific question that I'll ask—this is the third time I'm asking it—is whether you have done any studies on how the federal government could take initiatives to provide for more upgrading and refining in Canada.

The North West Upgrading Inc. in Alberta is a good example. You could talk about market-based forces, but what the Government of Alberta did in this case—and I disagree with a lot of what the Government of Alberta does—in using the bitumen royalties to actually stimulate upgrading in Canada is a very good idea. It's the kind of thing former premier Peter Lougheed would have spoken very positively on.

I'm wondering to what extent within the department there have been any discussions, any studies, anything whatsoever you can release to this committee about value added stimulating upgrading and refining in Canada.

Mr. Jeff Labonté: I think generally, to take two parts to the question, the first part would be that if it's a market-based system, the government doesn't generally pick winners and losers as to whether or not the upgrading should occur here, there, or elsewhere.

Mr. Peter Julian: So what you're saying is that there have been no studies, no discussions, within the department. That's what I'm hearing.

Mr. Jeff Labonté: We certainly examine and study what's happening in the market and what's happening with investors, and the North West Upgrading is interesting. Certainly there's a proposal on the west coast by Mr. Black where he has proposed something.

Mr. Peter Julian: Is there anything within the department that you can...? Otherwise I think I'll have to draw the conclusion that you're simply not looking at value added within the department.

Is there anything you can release to us?

Mr. Jeff Labonté: I think we look at it. I think your question said is there anything the department was considering in a study that would stimulate, and I would say, no, we have not considered anything to stimulate, although we do look at value added and what its value does and how it works. But we haven't been looking at programs to stimulate. No.

Mr. Peter Julian: Okay. Thank you.

The Chair: Thank you, Mr. Julian.

We go now to Mr. Payne followed by Ms. Moore.

Mr. LaVar Payne (Medicine Hat, CPC): Thank you, Chair, and thank you to our witnesses for coming.

My riding is Medicine Hat. Many of you may have actually heard about Rudyard Kipling and what he said about Medicine Hat, that it has “all hell for a basement”, meaning plenty of natural gas, a lot of

shallow gas. That has been an important aspect for the community and surrounding communities.

From that there were a number of facilities built such as Canadian Fertilizers, which produces obviously fertilizers, ammonia, and urea. There is a company called Methanex, which produces methanol, and another company, Cancarb, which produces carbon black. All of this is from natural gas. I actually worked for one of those companies so I've had a lot of information regarding them.

In terms of employment, it's huge. Canadian Fertilizers probably has somewhere in the neighbourhood of 250. Methanex has about 100, and carbon black about another 75. Then if you do the offshoot on those things—I'm not sure which numbers are out there these days, I've heard anywhere from two to five but—that's huge in terms of employment in a community of 60,000 people. It's a lot of major jobs.

That happens with the manufacturing equipment they buy from other provinces, steam vessels, and so on and so forth, columns, valves, and pipes, and so on, as well as a lot of local investment in terms of supplies for the operations of those facilities. That doesn't even touch on the oil and gas part of the business around Medicine Hat, so oil and gas is a really important piece not only to our community but obviously to the country.

I'm wondering if you have anything that would indicate what the impact of these offshoot organizations, which are not directly involved in the development of oil and gas but actually purchase those supplies, are across the country?

Mr. Jay Khosla: It's a challenging question to answer because you're asking us to break down some big numbers and give them to you from a local context.

• (0955)

Mr. LaVar Payne: Not just the local, but certainly across the country....

I know that Medicine Hat isn't the only community that has these types of facilities. I understand there are a lot of other provinces that have investments like these and certainly it has a huge impact on the Canadian economy.

Mr. Jay Khosla: From oil and gas, period, the job figures and overall growth are enormous. Across the country...350,000 jobs that I had mentioned off the top, when you look at adding in induced employment versus direct.

We know for a fact, as I ran the table earlier, that each province has a play when it comes to that. I'm loath to repeat all of those numbers again—

Mr. LaVar Payne: No, that's fine.

Mr. Jay Khosla: I don't know if anybody else has anecdotal or specific information from Medicine Hat, or otherwise, on the examples that have been provided.

Mr. Terence Hubbard: Yes, I'm sorry, I don't have any specific examples to be able to highlight—

Mr. LaVar Payne: That's fine. I just wanted to actually highlight what's going on in my community and how this really impacts that particular community. Also, there are others in the riding.

But I also wanted to touch on one thing, which I haven't said yet. You talked about energy efficiency. It's really interesting, because the carbon black plant actually takes their excess steam and produces electricity, then sells it back to the City of Medicine Hat, which produces its own electricity. So there's a really prime example of the efficiencies that are being created, and certainly the dollars saved, instead of letting all this excess steam go to waste.

The other interesting thing is, of course, in my area there's a lot of oil and gas development. It's not so much the gas right now, because the prices haven't been...but oil wells being drilled around Brooks, which is part of my riding. There's lots of activity going on there, so there are hundreds of jobs in the oil and gas industry there. They have to go out, they have to have operators looking after the wells, and so on and so forth. So you have to buy the equipment to pump the oil, etc. This is huge for my riding. If there is some non-development there, that would create major problems in terms of employment.

The Chair: Mr. Payne, I think you've made your point.

Mr. LaVar Payne: Well, thank you.

The Chair: Your time is up. You've done your bragging on Medicine Hat. That happens from time to time, and I can understand that.

We go now to Ms. Moore for up to five minutes.

Go ahead, please.

[*Translation*]

Ms. Christine Moore (Abitibi—Témiscamingue, NDP): Thank you very much.

The ability to effectively manage the disadvantages of the natural resources industry is in fact an advantage, even if only a competitive advantage.

Can you tell me the main disadvantages and risks associated with oil and gas production? How does Canada's ability to manage those risks and disadvantages compare to that of other countries? How many jobs are involved in managing those disadvantages and risks? Would you be able to provide me with a breakdown of those jobs?

Mr. Jay Khosla: It is difficult to determine exactly the number of jobs connected to risk management, but the fact is that the natural resources sector directly and indirectly accounts for 18% of the gross national product. That percentage might give you an idea.

Furthermore, as you pointed out, when a project is initiated, an environmental assessment is carried out. The jobs that stem from this process are in line with the risk elements. As I already mentioned, it is difficult to provide an exact figure. Perhaps someone else has a better idea of the number.

[*English*]

Mr. Terence Hubbard: As Jay was indicating, we do have in place in Canada a comprehensive environmental and regulatory regime, which was put in place to manage the risk associated with resource development activities, both at the federal level and at the provincial level. These requirements create obligations on industry to be able to manage and study environmental impacts and obligations that create employment directly in environmental monitoring-type

activities to study and manage the risks associated with development.

• (1000)

[*Translation*]

Ms. Christine Moore: Canada is recognized as a country with extensive expertise in managing mining waste sites. That is why other countries want to work with Canada to develop mining sites.

In terms of oil and shale gas, what is our ability to manage spill risks, both environmental and economic, compared to other countries? Is our country better than other countries or is it average? Does Canada have to increase its ability to manage risks more effectively in order to become more competitive?

Mr. Jay Khosla: Canada is very innovative in developing gas and oil.

Martin, perhaps you can talk about our innovations, such as Canada's Oil Sands Innovation Alliance (COSIA) and other aspects.

Mr. Martin Aubé: Certainly.

First of all, I would like to point out that the industry has invested around \$1 billion in research and development, mostly to address environmental issues. I think those investments have had a positive impact. Right now, when we use the in situ approach, 90% of the water used for oil sands projects is recycled. In addition, we have reduced greenhouse gas emissions by 26%.

As Jay mentioned, COSIA has come into existence. This is an alliance of 14 companies that came together to share projects, resources and intellectual property in order to focus on environmental issues only. I am not able to tell you what the situation is in other countries, but I think Canada, in partnership with provincial and territorial governments, is investing a great deal in reducing environmental risks.

[*English*]

The Chair: Merci, Ms. Moore.

We go now to Ms. Crockatt for up to five minutes.

Ms. Joan Crockatt: Thank you very much.

I'm intrigued by the member opposite's question, I think it's a good one so I just wanted to expand on it a little bit more.

Are we able to ask you to get us information on where Canada sits? This is something I hear constantly as well. My colleague is from Quebec. She hears the same thing about us being world-class in terms of reclamation. I'm from Alberta, and that's what I hear too.

Could we have something from the department that actually lets us know whether that is correct? One of the things about our competitiveness is that our companies are saying that we are competing on the world market while maintaining the highest environmental standards in the world. This is something that our competitors from other countries like Algeria, which is the primary supplier of oil to Quebec, are not working on.

I think that is also a benefit to Canadians, that we are achieving these high environmental standards.

Are we able to ask you for that?

Mr. Jay Khosla: We have a pretty comprehensive piece that we can provide specifically on some of the innovations around tailings and tailings management.

Just to expand on the question for a minute or two, Canada is seen as a world leader for sure in terms of its innovative ability to develop these resources. I just heard recently—and maybe this will be interesting for the committee to hear—that even the United States is now asking us for our help in developing an area that they have in Alabama that's similar to the oil sands. They're coming to talk to our companies about in situ and more holistic ways of developing this resource.

Around the world, when we go and sign agreements with various countries, we have an energy dialogue, if you want to call it that. India, China, Japan, the first thing they obviously want to talk to us about is very clearly the resource. But the very next thing they generally want to talk to us about is our innovations in terms of developing the resource, so that we can help them. It's a true signal.

The final point I'll make—

• (1005)

Ms. Joan Crockatt: May I just ask a follow-up? Have we quantified that? Do we know how many? There's much talk about whether we have high-tech jobs being created here. This is an area again where we hear there are. This is a high-tech industry. It is not a hewers of wood and drawers of water.... Are we both creating very high-tech jobs in this industry and are we developing expertise? Are we then benefiting by selling both in terms of human intellectual property as well as manufacturing equipment to help bring the world up to higher environmental standards?

Mr. Jay Khosla: The simple answer is absolutely yes.

Ms. Joan Crockatt: Any quantification?

Mr. Jay Khosla: In terms of the numbers, I don't have them right before me. But it's very clearly scientific jobs, environmental engineering jobs, engineering jobs on the petroleum side, very clearly, in terms of regulatory practices and reviews, jobs that come forth from there; and it's very clearly jobs that emanate from the manufacturing sector and so on. So it's highly technical, specialized jobs, well-paying jobs.

You can look at Fort McMurray as an example. I was told this, so it's anecdotal and I don't have it verified with the department, but somebody told me the average household income is in the neighbourhood of \$150,000 and upwards for a family. That's something to sort of think about.

Beyond that, we could come back to the committee with specific comparisons. I would highlight again at the end of the day that countries are coming to us for expertise, not only in the resource base itself but how we do the business. We continue to innovate in the oil sands. I'm sure others will come to this committee as witnesses and be able to give you more characterization around that.

I don't know if you wanted to add anything—Martin, in particular.

Mr. Martin Aubé: I'll maybe add that there are hundreds of these examples, but maybe add the SaskPower Boundary Dam, where SaskPower is now being seen as a world leader in carbon capture and actually are seeing this as a business line, a new business line

where they'll actually export that knowledge because they are the first ones in the world to have done something like that.

When you're talking about keen competitive advantages, there are lots of stories.

Ms. Joan Crockatt: Is that in the oil and gas...?

Ms. Linda Duncan: Coal.

Ms. Joan Crockatt: Is there a relationship to oil and gas there?

Mr. Martin Aubé: The CCS...yes, it's in the electricity.

Ms. Joan Crockatt: We've developed the technology through the oil and gas sector of CCS that's now being utilized in SaskPower.

Mr. Martin Aubé: More important, it's not only the technology; it's the services that come with it. It's the engineering knowledge that comes with doing that kind of project that has major applications in the oil sands too.

The Chair: Thank you, Ms. Crockatt. Your time is up.

I do want some clarification as to what you're asking for from the officials. I hear answers coming from slightly different points of view. We're doing a study on the cross-country benefits of the oil and gas sector of the energy economy. Were you asking specifically about the environmental component of the oil and gas sector and that component, the innovation and technology that's developed, the benefits from that part of the industry?

Is that what you're asking the officials to come up with, roughly, if they understood what I was trying to say? I realize I didn't get that, because I'm hearing slightly different points of view taken in the answers, I think.

Ms. Joan Crockatt: I think the job numbers, too. We'd like to see them specific to the oil and gas sector.

Mr. Jay Khosla: For sure.

Ms. Joan Crockatt: On the spinoffs then we can do three levels: direct, indirect, and tertiary.

The Chair: I hope that clarifies. If you have any further questions on that, do ask.

Mr. Jay Khosla: We'll be providing that.

The Chair: Thank you.

Thank you very much, Ms. Crockatt.

We go now to Ms. Duncan, and Mr. Julian if you have time.

Ms. Linda Duncan: Thank you very much, Mr. Chair.

In following up on Ms. Crockatt—it was a good question—I wonder if you could table with us a detailed breakdown of the purported exact jobs per province and region of province that are direct and indirect jobs that can be associated solely with the oil and gas sector.

I wonder if you could also include data on the percentage of investment in extracting a higher percentage of bitumen versus investment in cleaner processing. Perhaps you could just provide that to the committee at a later date.

•(1010)

Mr. Jay Khosla: Certainly.

Ms. Linda Duncan: I want to make one correction. I said the insurance industry. It's actually the banking industry that is raising concerns about the depreciating value of property, which shouldn't be surprising to us because that happened with contaminated lands. It was actually the banks' intervention that finally caused governments around the world to start calling for regulation on contaminated lands.

I have one final question. Mr. Julian asked a question about the considerations in where the investment goes in various energy sectors. While the department is saying we have a market-based sector, in the Canadian democratic system that does not preclude governance. In fact, your very department is mandated to regulate the energy sector. The National Energy Board is required to consider the public interest. I'm wondering, why is the government not requiring the National Energy Board in reviewing export applications to require consideration of alternative scenarios, including job creation in Canada instead of exporting the raw bitumen?

Mr. Jay Khosla: Is the specific question what does the National Energy Board consider in its reviews?

Ms. Linda Duncan: I already know what it considers. You said there is no role for governance; it's all market-based. But in fact, your regulatory mandate gives you all kinds of governance powers. Is there no consideration being given to mandate the NEB, when it is looking at the public benefit, to balance off the value to the Canadian economy and job creation of exporting the raw bitumen or requiring a percentage to be upgraded in Canada?

Mr. Jay Khosla: On the first part of the question in terms of, sorry if I...

The Chair: Please just stop the clock for a minute.

I just want to get some clarification here, because I think Mr. Aubé, in his answer, talked exactly about government investment along with business in the environmental component of the oil and gas economies.

Ms. Linda Duncan: With all due respect, Mr. Chair, my question has nothing to do with the environment. It has to do with job creation.

The Chair: Well, I was struggling to actually understand exactly what you were asking.

Ms. Linda Duncan: My question is very clear. The NEB is required to consider the public interest. In the direction that Natural Resources can provide, because it gives the direction to the NEB in how it conducts its reviews.... In fact, NEB doesn't make the final decision anymore. The cabinet does.

Is there new consideration being given to...? This whole meeting is all about job creation, development of the Canadian economy. Is there increasing consideration of job creation from upgrading, not just simply exporting, the raw bitumen?

The Chair: Go ahead.

Mr. Jay Khosla: Jeff will come back on the last part of the question.

But I'd like to clarify, Chair, that in terms of no governance, I think it's really important for me to mention that if I misled the committee, again, I apologize. I certainly did not want to leave the impression that there's no governance with respect to these issues. In fact, it's quite the opposite. We take our role very seriously as regulators in the federal government of these major resource projects and have been working hard and long at putting in effective regulatory practices over the last number of years—and decades, I would argue.

In fact, we continue to look at it on a daily basis: how pipelines operate in a safe and secure manner; how we can do environmental assessments in a time-oriented but effective way. We've put in means and mechanisms over the last four years that, we would argue, are amongst the world's best—the environmental certificating process and on we go. So the NEB does take its role very seriously. I would never want to leave this committee with an impression that there is no governance. In fact, we exist to do that. That's why we're here at this table.

Jeff, answer the specific question on the reviews, please.

Mr. Jeff Labonté: The other part that I think we want to be clear with is that the government doesn't direct the NEB in any way. The NEB is an independent regulator. There's an act of Parliament that spells out how the NEB functions. It has a regulatory set of protocols and guidelines. The government doesn't direct the NEB. I think it's clear that Parliament does. That's a point of interest.

In terms of the upgrading....

Ms. Linda Duncan: The regulations....

Mr. Jeff Labonté: Pardon me?

Ms. Linda Duncan: The regulations are not passed by Parliament.

Mr. Jeff Labonté: But certainly the act that spells out what the regulations will be and what the scope of the regulations are is an act of Parliament.

Ms. Linda Duncan: I couldn't agree more.

Mr. Jeff Labonté: With respect to the issue of the value added, I think we should probably step back a wee bit on this point. Certainly more than half of the oil sands produced in Canada today is upgraded in Canada. Canada's refining and upgrading capacity is running at about 85% right now, which is still lower than most global standards. So if you will, there's more capacity that we would want to look at.

At the same time, certainly the market determines where the best value comes from the resources in terms of its ability to sell those products to customers. Certainly we live in North America. North America is a completely integrated market. Energy flows across the border in both ways.

Certainly one of the things we live with is that there is already an existing capital stock of refineries and upgraders across North America, and some of those happen to exist in the United States and some of them exist in Canada. Certainly in eastern Canada, Irving's refinery exports the predominant output from its refinery into the eastern seaboard of the United States, because that's the dynamic of the eastern seaboard. In the western part of the country, more of the crude oil exits the country and the refining happens more in the United States. But overall, Canada still is a net exporter of value-added petroleum products. So I think it's really important to contextualize all of the aspects, and certainly the NEB act does not spell out that the NEB's public interest test is to test what alternative uses of the energy might be. The test is whether or not there's adequate supply for Canadians and there will be supply for Canadians in the foreseeable future. So given that we have capacity that's not being utilized and given that there's a North American context, I don't see where the difference would be.

• (1015)

The Chair: Thank you.

Thank you, Ms. Duncan.

We really don't have any time to get into Ms. Block's section of questioning, so I'll just thank the witnesses all for coming today: Jay Khosla, assistant deputy minister, Energy Sector; Jeff Labonté, director general, Energy Safety and Security Branch, Energy Sector; Terence Hubbard, director general, Petroleum Resources Branch, Energy Sector; Carol Buckley, director general, Office of Energy Efficiency, Energy Sector; Jonathan Will, director general, Electricity Resources Branch, Energy Sector; and Martin Aubé, director general, Strategic Science-Technology Branch, Innovation and Energy Technology Sector.

Ms. Joan Crockatt: I think we have to raise a point of order just before we leave—

The Chair: Okay, there is a point of order.

Ms. Joan Crockatt: —and that is that Ms. Duncan asked our witnesses for some information that I think is far outside the scope of what we are working on in this committee. I just want to clarify so that they might not feel that they had to follow this through.

I think she slid it in, rather than giving us a chance to hear what she was asking for.

Ms. Linda Duncan: Can we discuss that?

The Chair: What was the information, Ms. Crockatt?

Ms. Linda Duncan: Well, I asked for it, so I'll explain.

The Chair: Yes, sure.

Ms. Linda Duncan: The study we're doing is looking at the benefits of the oil and gas sector, and we heard some testimony. Then, we all agree that the information that is provided does not just talk about the oil and gas sector, but talks about the whole energy sector. So—

The Chair: Well, we're focusing on oil and gas.

Ms. Linda Duncan: So I asked, if they had the information available, whether they could provide it with a detailed breakdown of the direct and indirect jobs affiliated with the oil and gas sector.

The Chair: Right.

Ms. Linda Duncan: I don't see why that's out of order.

Ms. Joan Crockatt: I thought that was great.

The piece I thought I heard you say—correct me if I'm wrong, and if I was, then it's no problem—was hypothetical: what could we do if we used this money in some other way?

I think that is something that is far beyond the scope, asking our officials to spend time on an endeavour that isn't productive.

Ms. Linda Duncan: Mr. Chair—

The Chair: Order, please, Ms. Duncan. Just let Ms. Crockatt finish first.

I think you're finished now, are you?

Ms. Joan Crockatt: Yes, thank you.

The Chair: Okay, now—

Ms. Linda Duncan: Okay, my second—

The Chair: —we have Mr. Regan.

Ms. Duncan, if you would like to respond you can.

Ms. Linda Duncan: I just want to clarify what I asked for.

The Chair: Go ahead, please, Mr. Regan.

Hon. Geoff Regan: I just want to say, on this same topic, that if the officials could give us.... We have talked about the kind of information we're looking for. If we were able, for instance, to have a map that extracted those items that I mentioned that are not oil and gas, that would be useful, I think, and interesting.

The Chair: Do you mean, focusing on the oil and gas sector rather than on all the broad energy sector?

Hon. Geoff Regan: Well, I think we should be focusing on the whole energy sector, but in view of the fact that we're not doing that—

The Chair: Yes, that's not what the study is.

Hon. Geoff Regan: —it would be good to have the map that actually is solely on the oil and gas sector.

The Chair: Right. That would be helpful.

Ms. Linda Duncan: Mr. Chair, can I just clarify?

The Chair: Yes, Ms. Duncan.

Ms. Linda Duncan: The second part of my question was this. In giving the information about the direct and indirect jobs, can they tell us how many of those are associated directly with higher extraction of bitumen or of oil and gas versus cleaner processing?

There were a number of people at the table who asked those questions. I just want to give them the chance to give us the breakdown of the investment of federal dollars in those two aspects. Both create jobs.

The Chair: You've heard the request and I heard the request. I think it's within the scope of the study. Whether you can get them or not is another issue. We're talking about the oil and gas sector.

• (1020)

Ms. Linda Duncan: Just ask NSERC.

The Chair: Do you want to say something, Mr. Khosla?

Mr. Jay Khosla: Yes. I'm sorry, Chair, and I know everybody wants to go, but the last question was a bit ambiguous in our terms. It spoke of government dollars versus higher extraction and cleaner processing, and then it said "jobs".

Can I just get a sense.... This may engage a considerable amount of work, depending on how the question is put.

Ms. Linda Duncan: I'm not asking for anything magical. It's very straightforward. There was a lot of discussion here about where the

federal investment is going and where the jobs are being created. All I'm asking is simply whether you can tell us what portion of federal dollars is going into helping the companies extract more resources, whether it's conventional oil and gas or the unconventional, and what percentage is going towards making those systems cleaner. You simply have to go to places such as NSERC and your National Research Council, and maybe your own department.

Mr. Martin Aubé: I can give a quick answer to that.

The Chair: Well, we've ended the meeting. We're just clarifying that question because I was having a little trouble understanding exactly where Ms. Duncan was trying to go.

This meeting is adjourned. Thank you all very much.

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