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Chair

Mr. Lee Richardson

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● (1530)

[*English*]

The Chair (Mr. Lee Richardson (Calgary Centre, CPC)): We have a couple of items on the agenda to deal with today, motions that were carried forward from the previous meeting. At this point, and after brief discussions, it occurs to me that the presenter of the motion is not yet here. We have witnesses scheduled and in place, so I'm going to ask the committee its indulgence to proceed with the witnesses. If there is time at the end of the meeting we will deal with the motions of Mr. Cullen, should he arrive.

Do we have agreement? Thank you.

I also want to advise the committee that at the Liaison Committee this morning the budgets were approved, including a budget for a visit by the committee to the oil sands in Alberta on November 18 and 19.

If there's any further discussion we can probably defer that. I won't keep the witnesses any longer.

Let me welcome Hassan Hamza and Howard Brown. Also joining us is Kevin Cliffe, who is the director of the oil division, petroleum resources branch. Welcome.

We will allow you to make an initial presentation. It's going to be a little different this time because we are simply seeking information today.

Mr. Brown, are you going to begin?

At your leave, go ahead, and then when you have completed that, we'll go to questioning.

Mr. Brown, perhaps I could ask you to begin.

Mr. Howard Brown (Assistant Deputy Minister, energy policy sector, Department of Natural Resources): Thanks very much, Mr. Chairman. It's a pleasure to be back here in front of the committee.

The oil sands is an area that has obviously attracted a huge amount of interest recently, and that's not surprising, given the scale of the investment that's being talked about there, given what's happened to crude oil prices, and given the political instability in some oil-producing parts of the world.

There are also some big and difficult issues connected with the oil sands, and my colleagues and I would be happy to shed as much light as we can on these issues. I don't want to disappoint you, and particularly not in advance, but there are a couple of areas where we won't be able to help you out.

As you noted, Mr. Chairman, we're here to provide information. Policy questions we'd have to refer to the relevant ministers. And questions about the Clean Air Act, which may well have important implications for the oil sands, I'd also have to pass on, simply because I'm not qualified to really answer those questions. With those constraints, we'd be happy to provide as much information as we can.

Mr. Chairman, we've circulated a deck. I think it's gone out to the committee in both official languages. I could take ten minutes or so to go through it quickly and provide background information, or we could just go directly to the questions, as you would prefer.

The Chair: Actually, I think the committee had discussed it prior to your appearance and the consensus was that you would go through a presentation, so I'd welcome your going through the deck, perhaps leading us through it.

Does everyone have it in both official languages?

Some hon. members: Yes.

The Chair: Fine, then perhaps you wouldn't mind proceeding with the deck.

Mr. Howard Brown: Excellent.

Starting on page 2, we note that this natural resource is not only important in economic terms but indeed is strategic, given its position in a politically stable part of the world. Established reserves are estimated at 174.5 billion barrels, but in fact the ultimate resource is likely to be significantly larger than that. Just to put that in context, 174.5 billion would make these the second-largest reserves in the world, after Saudi Arabia.

As I mentioned at the start, there are some important issues raised by the development of the oil sands—perhaps most importantly, the environmental footprint, but also what it might mean for natural gas markets, and whether the pipeline capacity is adequate, whether there is enough labour, and so on.

Slide 3 shows you the scale of the oil sands deposits. It really is enormous. It takes in roughly half of northern Alberta. There are oil sands deposits in other countries. I am told that upwards of 70 countries have oil sands deposits. The largest are in Canada and Venezuela. Canada is the only area in the world where these reserves are being commercially exploited.

I think there is some interest in Saskatchewan, where there are also oil sands reserves. I believe there is actually exploration going on there. It's a matter of great interest to the Government of Saskatchewan.

Here I do want to acknowledge—I don't think I need to do this, but I want to for the record—that it is of course the Province of Alberta that owns the resource. Since the government of Mr. Mulroney dismantled the national energy program, respect for jurisdiction has been a very important principle underlying the energy policy of all governments. That certainly continues today.

Slide 4 tells you that the big area we saw on the previous slide is 141,000 square kilometres, or about twice the size of New Brunswick; so we now know how big New Brunswick is. They're reserves of different deposits. The ones that were exploited first were the ones that could be mined, the ones closest to the surface, but there is work going on now on some of the deeper stuff. There's interest in the kind of middle area in between, where I think we don't yet have the technologies but where a large part of the deposit lies.

Slide 5 explains a little bit about the physical properties of the resource. I am now going to exhaust my knowledge of chemistry by saying that the deposits there are bitumen, very long chains of hydrocarbons, which means a lot of carbon and not too much hydrogen. That presents some challenges. In addition, it's mixed with sand. So there are really two sets of challenges that need to be overcome.

On page 6 we have a picture of the trucks that bring out the six-year-old in all of us. Initially long conveyor belts were used in the mines, but it was found that the trucks were more efficient and more reliable. There are commercial developments going on now using what they call steam-assisted gravity drainage. That technology injects steam to liquefy the bitumen and make it flow, and then it's pumped out and exploited. There are other technologies being experimented with. Toe-to-heel air injection actually involves underground combustion to generate heat to make it flow. Vapex involves the injection of chemical diluents.

Slide 7 is a representative projection. I think this one actually came from the Canadian Association of Petroleum Producers...or no, from the oil sands technology program. But no matter which projection you look at, whether it's from us or from industry or from the National Energy Board, people would see synthetic crude and bitumen from the oil sands growing in importance in terms of Canada's oil production. By 2030, perhaps as much as 5 million barrels a day could be extracted from the oil sands. In context, that's about twice Canada's total production at the moment.

On slide 8 we can see the very large number of projects proposed, some of them from very well-financed companies with very solid engineering behind them, and others perhaps more speculative. The total investment announced for between now and 2015 is $125 billion.

I think most observers would not expect all of that investment to actually happen. Some of it's quite speculative, and some of it may be deferred as a result of cost increases and so on. Nonetheless, an extremely large amount is going to be invested.

● (1535)

Slide 9 talks a bit about what our responsibility is. I mentioned that the provincial government has ownership of the resource, but the federal government has important environmental responsibilities as a result of our responsibilities for navigable waters and fisheries. And there's certainly an interest in Ottawa in making those processes no less effective, but perhaps more efficient, than they currently are. The federal government has important responsibilities in terms of the overall policy framework, including the macro-economic policy framework ensuring a stable place to invest. And we do have a long-standing involvement in technology development in the oil sands and other areas of energy. Dr. Hamza can tell you a bit more about those.

Slide 10 goes one level below that and talks about our role. We're the centre of expertise under the Canadian Environmental Assessment Act and we have, much to my surprise, responsibility under the Explosives Act. But I would say that perhaps our key involvement in the oil sands is through Dr. Hamza's institution, the Canada Energy Technology Centre in Devon, Alberta, just south of Edmonton.

Slide 11 recapitulates some of the issues we flagged earlier: what does expanded production mean and what issues or problems need to be solved? As you can see, market access is certainly an issue, as are natural gas availability and pricing, and pipeline capacity, and so on.

So if we turn to those, the first question is whether there are markets out there for bitumen. The answer to that is undoubtedly yes. The United States is of course the world's largest market for energy in general, and crude oil in particular. There are near-term capacity constraint questions about whether the pipelines will get the crude to the areas where it needs to go. Because of those constraints, and because bitumen and synthetic crude tend to be marketed in a limited area, they often do trade at quite a significant discount to west Texas intermediate, which is the benchmark, of course.

Slide 13 asks the question, what about natural gas? As most people are aware, natural gas is used to fuel the oil sands production. People sometimes overestimate the importance of Fort McMurray and the oil sands in terms of North American consumption. The oil sands today represent about 1% of total North American consumption, and that's projected to remain pretty much stable over the next 15 years or so. So 1% is a non-trivial amount of North American product, but it isn't an amount that makes or breaks the natural gas market. I think it's also clear that going forward, there will be much more interest in other fuels, in particular in gasifying what they call the bottoms, the very sticky residue, turning that into a synthetic natural gas and using that for fuelling.

Slide 14 shows you the key links in the North American pipeline network. At the moment, most of our bitumen and synthetic crude are marketed in Chicago and to a lesser extent in Colorado and Washington State. For this to be economic and the producers to reap the maximum economic return, the market needs to be diversified a bit within the United States. So new pipelines are probably needed. There are a very large number of pipeline projects on the drawing board that have been announced. They will not all get built, because if they were, pipeline capacity would be something in the order of twice as much the amount of marketable bitumen synthetic crude available. So some of those will fall out for competitive reasons.

On refinery capacity, I think this is not an issue per se, but there is an issue about whether the refineries are equipped to handle bitumen and synthetic crude. There are some projects under way in the United States at the moment, and perhaps will be in Canada in the future, to convert the refineries to be capable of carrying more and ensure they are able to handle larger amounts of product from the oil sands.

Labour availability is probably the biggest problem facing the oil sands in the short term. Canada as a whole is probably at full employment—and you have to work pretty hard to be unemployed in western Canada at the moment. So this is not a problem unique to the oil sands, but you tend to see it more directly there because of the very large numbers of people involved in very large projects. The federal government is doing what it can to help. For example, the Department of Citizenship and Immigration has opened what they call “temporary foreign worker units” in Calgary and Vancouver, as a pilot project to help ease those constraints.

● (1540)

Certainly it is true that at the moment there aren't the skilled people needed to do all the jobs that have to be done.

We have talked a bit about technology, and I'm sure there'll be questions on this. CETC, the western research centre in Devon, has been a major player in this for a long time. It currently has a number of projects under way to improve the economics and reduce the environmental footprint of oil sands production.

In conclusion, this is a resource of great strategic importance to North America. It's hugely important to the economics of Canada. It's been a benefit not just to Alberta, but to all Canadians. Certainly, there are some short-term challenges that we and the Government of Alberta are working with industry to overcome.

Those are my introductory remarks, and I'll be happy to take questions.

The Chair: I would have been happy to have you take another hour. That's a lot of information in a short time. I hope that over the next month or two we will be able to fully absorb what you've just said to us.

Before we go to questions, I would like to ask Dr. Hamza to give us a brief background on the CANMET Energy Technology Centre and its relationship to the Alberta oil sands.

Dr. Hassan Hamza (Director General, Department of Natural Resources, CANMET Energy Technology Centre (CETC) - Devon): We are part of the energy technology programs sector from Natural Resources Canada. It has three hubs: Varennes, Quebec; Ottawa; and Devon. Devon is focused on oil sands and heavy oil.

We have been in the Edmonton area since 1956. We began by working on coal. So we have a long history in being part of NRCan, or Energy, Mines and Resources, as it was formerly known. We have always worked in collaboration with industry to solve problems and to make sure that things are done in a more responsible way.

We moved to Devon in 1994. Since 1995, we have been focusing on oil sands and heavy oil. We have between 80 and 120 scientists and engineers, depending on the projects. We have a large number of collaborations with industry. We have a number of consortia with the province. We have joint programs, partnerships with the province of Alberta and with the university. We have a university activity on site. We have 12 Ph.D. and M.Sc. students doing research with our scientists and the University of Alberta.

● (1545)

Mr. Howard Brown: Mr. Chairman, if the committee is planning to visit the oil sands, I'm sure Dr. Hamza would be delighted to take members on a tour of Devon. It's well worth seeing. It really is very impressive.

The Chair: We had considered visits earlier. I agree with you that it would be an excellent opportunity, but our time is limited. One of the reasons we're happy to have you here today is to respond to questions.

Thank you. Allow me to begin questioning, then. I don't know if we have a list yet, so we'll start with Mr. Tonks.

Mr. Alan Tonks (York South—Weston, Lib.): Thank you very much, Mr. Chairman, and thank you very much, Mr. Brown, Dr. Hamza, and Mr. Cliffe for being here.

I'm sure the committee is looking forward to going up and seeing the projects first-hand. I know I am personally. I have questions in two areas that have given me concern.

Regarding the extent to which the present operations are impacting on groundwater, and affecting fish, water consumption, and water pollution, are we monitoring the extent to which that is a valid concern, and are we developing a strategic plan to deal with that? That's the first question, Mr. Chairman.

The second question concerns greenhouse gases. In her report, the Commissioner of the Environment indicated concern with respect to greenhouse gases as they relate to present modes of operation. Again, are we monitoring the implications with respect to the quantification of that, and again is there any strategic plan to deal with that, as we look at these other technologies and these other approaches?

Those are my two questions. Perhaps, Mr. Brown, you'd like to lead off on that.

Mr. Howard Brown: With respect to the question about water, I think there's no question but that the availability of water is potentially a constraint on oil sands development, because not only is oil sands production energy-intensive but it's also water-intensive.

You'd asked whether we were taking mitigating measures, whether we were monitoring, and so on. I'd observe that any oil sands project coming forward would be the subject of an environmental assessment, including scrutiny under both the Navigable Waters Protection Act and, importantly, the Fisheries Act. So my answer would be yes, on a project-by-project basis, that kind of scrutiny would be a matter of course.

I think your question, though, was a bit different. It was more about the long-term vision of the law as opposed to the kind of micro examination of it block by block. That is an important question, and one that I think the producers are very aware of. The figure that sticks in my mind—and Hassan, you may know this better than I do—is 90%. I believe 90% of the water used now in typical oil sands production is recycled.

● (1550)

Dr. Hassan Hamza: It's almost that.

Mr. Howard Brown: It's almost 90%, so the drop from the Athabasca River is very limited. Nonetheless, you will inevitably reach a point at which you're taking all the water from the river that you can, and then the only way you can expand beyond that is to improve that rate of recycling, or develop technology so that you're becoming less water-intensive.

I'd point to two aspects here in the longer-term dimension of the issue. The first is something that the Government of Alberta is undertaking, which is called the mineable oil sands strategy. The federal government is participating fully in that, and I would say enthusiastically in that, to look at some of these longer-term issues and at how we might address them.

The second way we're addressing it is through science and technology and research. There are, in fact, projects underway at C-Tech on water use in the oil sands, and on how we reduce that.

With respect to carbon dioxide, because oil sands production is energy intensive, it follows that it is, by definition, greenhouse gas intensive. It is also the case that the production of hydrogen, which is used to upgrade the bitumen to make synthetic crude, is also intensive in the release of greenhouse gases. Here I would point of course to the tabling today of the proposed Clean Air Act, which lays out a strategy for regulating greenhouse gas emissions.

Dr. Hassan Hamza: If I may add one thing about GHG production, it is not only coming from the energy intensity, but it's also coming from the vapours that are released from solvents being used to mobilize the oil. Some of these solvents are equivalent to 21 times the carbon dioxide, so a small amount of them produces 21 times more carbon dioxide. That's another thing worth paying attention to. Reducing these amounts will mean the GHG impact will be less.

Mr. Alan Tonks: Thank you.

That's my question. Perhaps Mr. St. Amand would like to use up the rest of the time.

The Chair: I think, again, that we're going to be a little more informal with committee members today, but let's just go through it and take a couple of more minutes, Mr. St. Amand, and then we'll carry on to Madame DeBellefeuille.

Mr. Lloyd St. Amand (Brant, Lib.): Thank you very much, gentlemen, firstly for a very cogent, focused presentation. We don't always say that, so when we say it, we mean it.

As I read it on page 14 of the deck, vis-à-vis the pipeline network, new pipeline capacity will be required within the next four to five years. Looking at the map of a good chunk of North America, are we talking about parallel pipelines—parallel to the existing pipelines—or about going into new areas?

Mr. Howard Brown: The answer to that is both of the above. As I mentioned, there are a large number of proposals currently on the table, because business is able to see that there is going to be a capacity constraint. I would say that this will be within the next four or five years, and I think it will more likely be within the next two or three years. Then some of these projects will come on stream, and if all goes well and the environmental assessment works out and so on, I think capacity will then likely be adequate.

Without necessarily wanting to promote one company rather than another or one project rather than another, I'll just mention a few things that are being proposed.

Mr. Lloyd St. Amand: Excuse me. Is this the current network?

Mr. Howard Brown: That's correct, and the network is, of course, much larger than that. These are the major backbone pieces.

There is a proposal to significantly increase the capacity of what's called the Trans Mountain Pipeline, which runs from Alberta through to Vancouver. That would allow greater amounts of product from the oil sands to go to refineries in the Puget Sound area of Washington State. Then some of the Alaska crude that's currently going there would go to refineries farther south, perhaps to Oregon and California. That would be one area of increase in supply in an area that is currently taking some product, but not a huge amount.

Mr. Lloyd St. Amand: At whose cost is the pipeline network currently maintained and subsequently built?

Mr. Howard Brown: Ultimately, it is the consumer of the product. The person who fills up her gas tank at the service station is paying the cost of it. This is all privately developed, so it would be private pipeline companies. And the economics of it is that typically, a pipeline company, before it puts pipe in the ground, would ask shippers for firm commitments. So in effect, they are renting a portion of the pipeline and they pay that rent whether they use it or not.

There are also projects being proposed, I think, in the area around Chicago, which is probably the biggest single market for product from the oil sands, to take oil sands product farther south into the U. S. Midwest and even down into the gulf states. That would be a second area of expansion. That, I think, is probably where the largest number of projects and the largest projects are. The third area would be to increase capacity south from Alberta into Wyoming and Colorado.

● (1555)

Mr. Lloyd St. Amand: You'll know that certainly there are groups or entities that have called for a moratorium on any new development. And it's beyond dispute, with millions of tonnes, or however this molasses is measured, being extracted from the earth, from varying depths, that it's very invasive for the land. Truly, it's invasive, and there are some impacts.

What is your reaction when you hear that there should be a moratorium, that we have to just slow down production?

Mr. Howard Brown: I think I'm being asked for an opinion, and I'm just wondering whether.... It's such a tempting question to respond to, but I think you are asking me for an opinion, and prudence dictates that I pass on it.

The Chair: Let me suggest, Mr. St. Amand, that you ask the minister that question and he would be obliged to give you some kind of answer. We're really looking for a technical briefing today, and I don't want to put the witnesses on the spot to offer opinions on these matters, if you will.

I think the time has pretty much run out, in any event, so we'll go to Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille (Beauharnois—Salaberry, BQ): Thank you very much for your presentation.

Page 2 of the document you submitted to us provides an overview of the oil sands and problem issues. We share your analysis of the issues.

What surprises me, Mr. Brown, is that you spoke about the labour issue separately from all social problems. However, members are increasingly being made aware of social problems. It is true that labour is a problem, but you still have to house, feed and care for employees. It seems this aspect is somewhat absent from your presentation. That's my first comment.

The purpose of my other comment is more to congratulate you. In the first point on page 10, I see that Natural Resources Canada's role is to see to the development of a Canadian energy policy for sustainable development. I'm pleased that a deputy minister has filed a document that clearly states that.

I attended a briefing session yesterday. The official referred to the responsible development of natural resources. I suppose that can be attributed to the lack of time given them. We far prefer the expression you use in your capacity as deputy minister: “sustainable development”. So I congratulate you, and I think that expression has the force of law. I'm going to cross out the word “responsible” in my briefing document.

Mr. Brown, can you tell me how much money is allocated to oil and oil sands research, and what percentage of that amount is allocated to research and technological development? In other words, what is the overall budget and what percentage is allocated to oil sands and oil? That's my first question.

Perhaps Mr. Hamza could answer. After the answer, I'll ask you another related question.

[*English*]

Mr. Howard Brown: Merci, Madame.

If you would permit me an anecdote, I have a son who was working in construction in B.C., and he thought for a time about going to work in the oil sands. The advice from his friends who had worked there was “If you go to Fort McMurray, get religion and keep to yourself.” I think that was a reference to the social temptations that might be in the way of a 20-year-old making a lot of money in Fort McMurray.

I think you're clearly right that there are social issues. I would put those in the category of labour issues, because at some point it's going to be impossible to attract people. One of the reasons wages are high is because housing is so costly due to a supply problem. To some extent the market is going to work that out.

There is clearly a role for government. I'm not a constitutional expert, but I do believe these issues would be the responsibility of the provincial government. As I mentioned, respect for the jurisdiction of the provinces on energy policy has been a cornerstone of Canada's energy policy under both Liberal and Conservative governments. It's not an area in which we would have an opinion or wish to intrude in any way.

There is a federal role in labour supply in immigration, and there are certainly measures under way with respect to training and the promotion of workers, etc.

As to your question about spending on research and development, I have numbers here, and I'd be happy to give them to you in writing, because they're fairly detailed. But the total amount of money spent on research and development within Natural Resources Canada for 2005-06 was $212.9 million, of which $81.7 million was spent by the two energy sectors. That means about 40% of the total spending on research and development was on energy. There would be small amounts from other sectors that apply to energy, but that would be roughly correct.

● (1600)

[*Translation*]

Mrs. Claude DeBellefeuille: I'm trying to get a better understanding of this. Are the research and funding that the Government of Canada allocates to Natural Resources Canada's budget allocated to reduce or clean up tailings in order to reduce greenhouse gas emissions? Is that the main objective of work under way? If so, will we be able to see these new technologies implemented and applied?

It's quite frightening to hear that oil sands emissions will double by 2015 and that the entire energy efficiency initiative will be reduced or nullified by oil sands tailings. I'd like to know the results of your research. Will we be able to see results in the short term or rather over the long term, within 10 or 15 years?

[*English*]

Mr. Howard Brown: A very significant portion of our spending on energy research and development would be for projects with an environmental dimension to them. I would have to go back to see if we could extract hard numbers on that, but reducing the environmental footprint is a very important dimension of the research and development.

I would also add that a lot of the work we do is on energy efficiency, which certainly helps reduce emissions and other environmental impacts. It also makes us more competitive and prosperous as a country. It makes us more secure, both as a country and a continent. A lot of work has payoff for more than one objective, so if we were to allocate by objective it would probably come to more than 100%, if you can see my point.

Oil sands production today is much less energy-intensive than it was ten years ago. Huge progress has been made, including work directly done by the centre in Devon. Perhaps it's a case of the glass half full or the glass half empty. There has been huge progress in this area.

● (1605)

Dr. Hassan Hamza: I would say that over 90% or 95% of what we do in Devon is related to environmental aspects of oil sands, whether it's to find new technologies that have less energy demand, fewer emissions, and so on.

You asked whether these have been implemented or not and when they are going to be implemented. They are already at different stages of implementation. We have one or two new technologies that are being implemented for tailings. In one stage of extraction we are using solvents to process the oil, so we have already achieved a paradigm shift, a quantum change, in how to process the oil sands. We do most of this work with the stakeholders as part of our activities. This allows the quick transfer of technology to the user of the technology.

On the 24th of this month there will a Shell day on the Hill here. One of the technologies we developed for them allows Shell to have their plan. They invested $6.7 billion on the first phase and about $10 billion on the second phase based on that. It is much better for the footprint, emissions, and cleanliness of the oil. They admit that without this technology they would not have been able to progress.

[*Translation*]

Mrs. Claude DeBellefeuille: Will your studies and your optimism put the lie to the statistics that show emissions will double by 2015? Normally, if your technologies work, should we be able to reduce them?

[*English*]

Mr. Howard Brown: The answer, of course, is that output is increasing faster than emissions intensity is falling.

Dr. Hassan Hamza: And this is another issue that I know should be looked at sometime as a piece of development, and this is a different issue completely from the technology side of things.

[*Translation*]

Mrs. Claude DeBellefeuille: So we should invest even more in science and technology in order to enable researchers to work. We find ourselves at a kind of dead end: growth is higher, the technology isn't following and we will never manage to reduce oil sands emissions. It's like an endless cycle.

[*English*]

Mr. Howard Brown: Perhaps I could make a couple of observations. I said at the start I wasn't going to talk about the Clean Air Act, but I am.

First of all, the question on the pace of development is really a question for Alberta. Alberta is the owner of the resource and it's really up to Alberta to decide whether it wishes to pursue that rapidly or not. There are limits to the pace at which the resource can be developed and we've talked about some of those in terms of the social issues and the labour availability and so on. It's really no more a question for the federal government to decide whether the resource should be developed quickly or not any more than it's up to the federal government to decide how quickly hydro potential in other provinces might be developed, for example.

I'll just speak from what I think is an analytical point, as opposed to a policy point.

Regulation of emissions, including greenhouse gases, but also other emissions, will create an economic incentive for companies to reduce emissions. It will also create an economic incentive for companies to invest in research and development for ways to reduce emissions, and I think that's the way one squares the circle here. It's the way you reconcile significant development of the oil sands, perhaps five million barrels by 2030, with a longer-term vision of absolute reductions in greenhouse gases. It is not impossible to reconcile the two.

● (1610)

The Chair: Thank you.

Ms. Bell.

Ms. Catherine Bell (Vancouver Island North, NDP): Thank you for your presentations. There's a lot of information in here, not a lot of words, but I think there's a lot more that you can add, so of course it's brought up a number of questions for me as well.

I too am concerned about sustainable development for the environment, for the economy, and for the social aspects as well. And you also talked about energy efficiency, and I'm curious, because you talk about the extraction process. What makes the steam get down there to extract the oil? What are they using to make the steam?

Mr. Howard Brown: The burning of a fuel, either natural gas, or in one project that's underway, a synthetic gas made from the residue....

Ms. Catherine Bell: And I heard, and I think you talked about it in one of the pages about nuclear energy.... I'm concerned about that because of the waste that nuclear energy creates and how that wouldn't necessarily be, in my mind, an energy-efficient way to go. I'm just wondering whether we are getting to a point where that is one of the only ways we can go.

Mr. Howard Brown: A couple of comments, if I could.

Large amounts of steam are needed for these underground, as opposed to the mining.... Well, mines need steam too. When you make steam, you can make electricity for nothing. One way in which people are looking to be more economically efficient but also more environmentally sustainable is to put cogeneration plants in place so you use that free electricity and feed that into the grid. That's an important potential future technology.

Whether natural gas continues to be used is fundamentally an economic question. The economics of it will reflect future regulation, how tight regulated caps on emissions might be. That would change the economic equation.

Whether nuclear is attractive or not is an interesting question. At the moment, I believe the Government of Alberta is opposed, and so long as the Government of Alberta is opposed, it's not really a live question. There are some challenges in using nuclear, in that there are limits to how far you can send steam by pipe. It's very hard to move a nuclear plant once you've constructed it, so this is an issue people would need to solve.

One of the most interesting developments is the gasification of the guck that's left over. It's got no other use, and it is technically possible to turn that into a synthetic natural gas, talking about our natural gas supplies in North America, and make the economics better.

A final comment I'd make on this is that in thinking ahead, if you talk to energy experts, and I'm not one, if you talk to the International Energy Agency or you talk to big oil companies or you talk to the Energy Information Administration, everybody sees hydrocarbons, oil and gas, as being the dominant source of energy supply for as far as you can see. At the same time, government today presented a goal of a very significant absolute reduction of greenhouse gas emissions by the middle of the century, and it seems to me that a very important way of meeting those two seemingly contradictory objectives is to capture the carbon dioxide and store it underground. And there is no better place in the world to capture and store carbon dioxide than the western Canada sedimentary basin. This is an area where there's been considerable interest to us, both on the research and development side and the policy side.

Ms. Catherine Bell: Another part of the sustainable development picture would be jobs. You talked about pipelines, and there's a big concern that when you put a pipeline through an area there's a potential for a leak or a spill or other things. But having said that, you talked about the capacity of Canada to refine, and I'm just wondering, are we building capacity here so that...? Because I looked at the map, and it looks as if all the pipelines are going down south and we're not doing a lot of refining in Canada. I wondered if there's any interest in expanding that aspect of it.

● (1615)

Mr. Howard Brown: There's not been a new refinery built in Canada for I believe 20 years, and there's not been a new refinery built in the United States for 30 years. It has not been a very good business to be in. Nobody's got rich.... I had better be careful here. It's not been the greatest business to be in over the past 20 or 30 years. What has happened is that existing refineries have expanded capacity. The technology is now such that you do not build a small refinery. If you're going to build one, it's going to be big. So there are questions about what's going to happen to energy demand in North America over the next 20 years. Does it make sense to make that investment in a big refinery? Not everyone thinks it does.

Having said that, there are some proposals to build a new refinery, one in eastern Canada and one in western Canada, and the market will sort that out.

On oil sands, though, it's important to understand that two kinds of refinery-like activities can take place. The first is turning this tar into crude oil, which is called upgrading, and that involves a big facility like an oil refinery. You either take carbon out or you put hydrogen in, correct? There you go, I'm an expert. At the moment it's something like two-thirds of the bitumen, the raw material, is turned into this synthetic crude. I think Alberta would like that to go higher, and there may be real economic sense in doing that.

So that's the first stage, and that's even more likely to happen than the oil refinery. But at the end of the day, it's really a question for the market to sort out.

The Chair: Before you conclude, I wonder if Dr. Hamza could comment further on Ms. Bell's initial question with regard to some of the technologies of recovery, such as making steam, for example. He may have some research that may help.

Dr. Hassan Hamza: On making the steam, as Mr. Brown said, you can make it from a number of sources. One of them is trying to take the waste from the process, gasify it, and make it into a source of energy to transform the water into steam. Our sister organization in Ottawa is doing a lot of work on the gasification of different materials, including waste materials.

But there is another way, and that is to use chemicals in a state of steam. You can use low temperature, and you add different solvents to the material you put underground, and this will help. But this only applies in situ, to the deep deposits. For the surface deposits, you add water and some heat. The heat is not very high. It's only about 40 degrees, as you don't need to turn it into steam for the surface. For underground and in situ, though, you need to have a driving force, and that driving force would be steam or solvent. There are a number of projects in Saskatchewan in which they are actually using solvents to drive heavy oil, which is very similar to bitumen.

The Chair: Thank you.

Monsieur Paradis.

[*Translation*]

Mr. Christian Paradis (Mégantic—L'Érable, CPC): Good afternoon, Mr. Brown. I'd like some clarification. I'm not from western Canada, but from the east. This may seem like a basic question to my colleagues, but I want to get a clear understanding of this.

On page 5 of your presentation, you briefly explain that this is a viscous oil contained in the sands. The challenge is to convert the sands to usable petroleum products. You explained that you could use the vapours or extract the sand, then extract the oil elsewhere. I understand that this is the crude product.

Is the process the same for refined products, the lighter products? What kind of oil product can be derived from this? Is it similar to standard fossil fuel that can be found in liquid layers? That's my first question.

I'm going to ask my second question. Do the companies that operate in the field have effective measures for restoring lands to their original state? If so, how does that process work?

● (1620)

[*English*]

Mr. Howard Brown: There are two ways of dealing with the bitumen, the raw material, if you will. One is to mix it in small amounts with crude oil, and then you can put it into a refinery, but there's a limit of 5% or 10% of the total. You would add 5% bitumen and 95% crude oil and then proceed.

There are real limits on how much of it you can use in that way. Bitumen sold in that way sells at a very steep discount to crude oil, so it's not very attractive for the companies. Synthetic crude, on the other hand, is a very desirable product that sells pretty much at the same price as light sweet crude. It's considered a very desirable product for refineries. It goes into the refinery and comes out in exactly the same way as crude oil does, in the form of jet fuel, lubricants, diesel fuel, gasoline, and so on.

The reclamation of the land is one of the most impressive things when you do an aerial tour of the oil sands. It isn't being put back exactly the way it was, because it was very flat and there was not much drainage. The land actually has some contour now, so people not from the Prairies might think it's actually better than what it was in its original state.

It really is quite impressive to see how much terrain is being moved and how pristine and attractive it looks afterwards. As part of their licence from Alberta and as part of their operating conditions, they're required to restore the land so that you would not know there had been a mine there when it's over.

[*Translation*]

Mr. Christian Paradis: Is that process working well?

[*English*]

Mr. Howard Brown: Yes, to the very best of my knowledge.

[*Translation*]

Mr. Christian Paradis: Mr. Chair, if I still have some time, perhaps I could share it with my colleagues.

[*English*]

The Chair: You have three minutes. Go ahead.

Mr. Bradley Trost (Saskatoon—Humboldt, CPC): I just have a few quick questions here. First, to set the context, you look at the map here and you see all this beautiful brown stuff, the oil sands in Alberta, and maybe you should have had Saskatchewan showing up. I'm a member from Saskatchewan, for those who don't know.

Just how much of the surface area of this is actually used? What is exposed, just to put this totally in context? You don't have a little pink dot or whatever for what actually is the surface area.

Mr. Howard Brown: In the interest of full disclosure, I should say I'm from Regina.

Mr. Bradley Trost: We'll forgive you for that.

Mr. Howard Brown: It was a grave disappointment to me when I saw that the draft deck showed only Alberta and did not treat Saskatchewan symmetrically.

With respect, I don't know the answer to your question on what the percentage is. At a guess, I would say it's one percent of this area.

Mr. Bradley Trost: Roughly how many square miles is it, or, since we're in metric nowadays, square kilometres? Do you have any idea?

Dr. Hassan Hamza: The tailings—the sand, the water, and so on—that are left are in the order of about maybe 50 or 60 square kilometres.

Mr. Bradley Trost: If it's 50 or 60 square kilometres, then this is actually a really small area when you come to think of it, for all the imagery of a huge, massive eyesore.

Mr. Howard Brown: There actually is a dot there, but it's too small to really show up.

Mr. Bradley Trost: But that makes the point I was going after, which brings me to where I want to go with my further thought. I may ask for a little bit of crystal ball gazing here, but it's interesting that you note the new technologies that are coming online.

Right now, it's mostly open pit mining, with some in situ steam-cyclic mining being done. What would you say would be the mixture right now? Most of the oil produced would be open mine, and massively so, correct?

● (1625)

Mr. Howard Brown: Yes, and most of the development will be in situ.

Mr. Bradley Trost: Looking into the future—and maybe Dr. Hamza would be the best one to tell me this—what sort of technology evolution can you see that would allow us to go from just beyond the stock and begin to work? I realize Fort McMurray is chosen because it's nearest to the surface, but what do we see for technology that would allow us to go beyond that dot and work more effectively in deeper areas, deeper deposits of oil sands in Saskatchewan and throughout Alberta? If that's possible and it's beginning to hopefully go that way, then I'll follow up with what impacts that will then have on economics, the environment, etc.

Take it away as much as you can go with it.

Dr. Hassan Hamza: Two-thirds of the oil sands in place are not accessible by either method, by the surface or in situ. If they are deep enough to be exploited in situ, there is no major problem. There are technologies available right now to exploit them.

Mr. Bradley Trost: And that's deeper than what? What level are we talking about?

Dr. Hassan Hamza: That may be 100 metres or so.

Mr. Bradley Trost: It has to be below 100 metres?

Dr. Hassan Hamza: It's 100 to 140 metres, but I'm not sure about the exact number.

Mr. Bradley Trost: Okay, but roughly it has to be below that for in situ.

Dr. Hassan Hamza: Maybe, but I'm not sure.

Kevin is saying 400 metres.

Mr. Bradley Trost: The problem is the two-thirds that are in between. That's the point.

Dr. Hassan Hamza: Yes, 400 metres. The surface is down to 80 metres, so down to 80 metres you can do surface mining; 400 metres and deeper, you can do in situ, which is known technology, and we have been using it in the heavy oil all along in Saskatchewan and Alberta and so on. The problem is in the middle. The middle has a number of characteristics that make it difficult to exploit by either method. One of them is that it is not very continuous, not uniform and continuous; and two, if you use in situ methods, there's not enough pressure to keep the driving force for the oil and the pressure may break to the surface. For in situ methods, it would be very expensive to remove all the surface material to get to it.

So what we did very recently when we realized that was we commissioned a road map. We tried to look into this and we tried to get all the industry people and all the researchers in a brainstorming environment to see what could be done to achieve this. So we did this in two workshops. There was a report written on it, there were areas identified that were possible to exploit, and there were also some technologies and technology gaps identified. Now, just before coming here, I heard that the Alberta government has commissioned a follow-up to this, and they had a workshop that would take this further to try to identify technologies that can access this area. Technologies are non-existent right now, but hopefully when we bring everybody together we may be able to find technological help.

Mr. Bradley Trost: So right now for that 80 metres to we'll say 150 metres, for the sake of argument here, there's really nothing that's even in the hopper. They're still theorizing and the engineers aren't doing the field experimentation at this point.

Dr. Hassan Hamza: Yes, for the larger part of it.

Mr. Bradley Trost: Okay.

The Chair: We have to move on, Brad, but I'll come back to you on the next round.

Mr. Cullen.

Hon. Roy Cullen (Etobicoke North, Lib.): How much time do I have?

The Chair: How much would you like? Five, seven minutes? Okay, take seven.

Hon. Roy Cullen: Thank you, Mr. Brown and all the witnesses. Sorry I didn't make it earlier. I was in the House.

First of all, Mr. Brown, I'm surprised, in a sense, that you say the market is going to sort out all these social problems and labour market issues. I'm quite sure it won't, but that's not really why you're here. That's not your bailiwick, I suppose. When it comes to natural gas, and the fact that the market is going to sort out whether it's natural gas or something else, is it not appropriate that the federal government has a mandate to look at what is the highest and best use of our natural gas resources? Shoving it down to extract tar I think raises some questions about whether that's the highest and best use of our natural gas.

● (1630)

Mr. Howard Brown: I think the factual response to that is that to the very best of my knowledge, there is nothing in the legislation or in the Constitution that requires the Government of Canada to centrally plan the use of energy resources or any other resources in the country. I understand that some people feel the government should do that. It's not obvious to me that the federal government would have the authority to do that, even if one wished to do that as a matter of policy.

Hon. Roy Cullen: I'm not going to get into a political debate with you, but it seems to me that the federal government has a lot of levers at its disposal, and if our natural gas resources.... For example, if you look at the petrochemical industry, they're looking for feedstock, and we also have huge volatility in terms of natural gas. I think it is a legitimate question for the federal government to ask whether this is the highest and best use of our natural gas resources. I think if we were creative, we'd find ways to deal with that.

I'd like to come back to another question, and that is not to put you on the spot as to whether you think we should slow down or have a moratorium with respect to the oil sands development. If the Minister of Natural Resources came to you one day, Mr. Brown, and said he's been swayed by all these arguments that we should slow down the development of the oil sands or put on a moratorium, I'm curious to know what the levers of the federal government are in this area. Clearly, there are some provincial levers, but what are the levers the federal government has if they wanted to proceed in this way?

Mr. Howard Brown: I don't mind being put on the spot about whether there should be a moratorium or whether development should be slowed down. Actually, I already answered that question. I believe I said that—

Hon. Roy Cullen: No, I'm not dealing with that.

Mr. Howard Brown: I'm sorry. The question was...?

Hon. Roy Cullen: I don't think you were listening, Mr. Brown. What I said was that I'm not putting you on the spot with respect to whether the oil sands development should be slowed down or whether a moratorium should be placed. I'm asking this: suppose the Minister of Natural Resources came into your office one day and said, “Howard, I've been swayed by these arguments, and I think we should slow it down or put a moratorium on it. I'm confused. Tell me, what are the levers that the federal government has or does not have in this area?” That's what I'm asking.

Mr. Howard Brown: I'd be delighted to answer the hypothetical question.

My advice to the Minister of Natural Resources would be that, constitutionally, it is not the responsibility of the federal government to determine at what pace the Province of Alberta should develop its oil sands resources.

Hon. Roy Cullen: If I were the minister, that wouldn't be the answer. It might be an answer, but it's not a full one. There are indeed some levers that the federal government has at its disposal—maybe not the most useful ones, but some levers.

I'd like to come back to the state of play. We hear a lot about water recycling, as well as carbon capture and sequestration. They're great ideas, and that's the way we should be proceeding. But I've been around long enough to know that having an idea and actually doing something are two different things.

Could you brief the committee on the state of play with respect to the recycling of water? This is having a huge impact in the Athabasca basin. I'd also like your comments on where we're at with carbon capture and sequestration. How far are we from making these technologies economically feasible?

Mr. Howard Brown: On the water recycling, any proposal to develop an oil sands project would have to undergo an environmental assessment. There would then be terms and conditions as part of the licence. Typically, there would be a water-use licence issued along with that, so that the companies would have to recycle water. At the moment, I believe 90% of water is recycled. Given that water is a finite resource, particularly in that part of the world, I think the level of recycling will simply have to increase. I don't think there's any way to develop the potential of the oil sands without increasing the recycling of water. As to how it will that happen, I think it will be through a combination of technological advance and regulation.

● (1635)

Hon. Roy Cullen: My information is that the water recycled now is not at that level. Maybe you could provide the committee with some additional information.

Mr. Howard Brown: I'd be delighted to do that. I will qualify my answer, though, by saying that this is my personal belief. I'd be glad to get hard figures for you.

On the question of carbon capture and sequestration, we may have a slight difference in the way we view the world, but I view this as a fundamentally economic issue. There are now commercially viable carbon capture and storage opportunities. They're economically viable, because putting the carbon dioxide underground increases recovery of oil from the wells, and this more than pays for the extra costs.

I think your question was aimed more at a larger scale of capture and storage. This would become economical if, through regulation or other means, emitting carbon dioxide were to become costly enough to overcome the costs of capturing and storing. When that will happen, I don't know. It depends to some extent on how quickly we're able to reach the long-term goals enunciated in the clean air package announced today.

Hon. Roy Cullen: I can't agree with your philosophy that the market sorts out everything. If you're going to intensity-based carbon dioxide, part of the oil and gas sector, then you don't have to worry much about anything. But if you want to deal with carbon dioxide emissions, you're going to have to deal with carbon capture and sequestration much more aggressively, or you're going to have to do something else. I can't buy the idea that the market will sort it out.

Thank you.

Dr. Hassan Hamza: I would add one thing. We actually engaged with a number of provincial governments in looking at safe installation and storage of carbon dioxide. One of them is actually internationally linked, and this is the IEA Weyburn carbon dioxide monitoring and storage project. It has finished the first phase, and the second phase is starting now. It shows a lot of promise. It injects carbon dioxide underground to produce heavy oil, and it is really increasing the production. At the same time, there is a large amount of carbon dioxide being injected. There's a lot of monitoring and so on, to make sure there is long-term safety of this. It's a large project. The U.S. DOE is part of it, for $6 million, and a number of companies, even some Europeans, and Japan is part of this, to look at how this technology can help store carbon dioxide in a manner that is safe. It is a large-scale experiment, but nevertheless it is showing a lot of promise.

The Chair: Thank you.

That concludes your contribution, Mr. Cullen, thus far.

Mr. Ouellet.

[*Translation*]

Mr. Christian Ouellet (Brome—Missisquoi, BQ): Thank you, Mr. Chair.

My first question is for you, Mr. Chair. Don't leave; I'm talking to you.

The Chair: Yes.

Mr. Christian Ouellet: May I ask Mr. Brown to file the sustainable development policy to which he refers when he talks about his role? May I ask him to file it with the committee? I'm not asking him to do it today, but in the coming days. I'm putting the question to you.

[*English*]

The Chair: Certainly. You don't have to ask me.

[*Translation*]

Mr. Christian Ouellet: All right.

So I'll ask you the question, Mr. Brown.

Could you file this sustainable development policy as soon as possible? I'm talking about the current policy, the one you use.

[*English*]

Mr. Howard Brown: I would be delighted to table the sustainable development report of the department. Absolutely.

[*Translation*]

Mr. Christian Ouellet: Thank you.

[*English*]

The Chair: Excuse me. The only qualification is that it be submitted to the committee, through the clerk, in both official languages.

[*Translation*]

Mr. Christian Ouellet: That's what I was thinking of.

Now I'm going to make a comment before asking my question.

Earlier you said, and rightly so, that the pipelines belong to the companies. I wouldn't want new members to hear that the companies maintain them. If a pipeline pollutes and the company considers that it's not leaking very much, it won't maintain it.

The last government had to spend $10 billion under the Kyoto Protocol to repair gas pipeline leaks because the companies didn't want to do it. The pipelines aren't necessarily maintained by the companies. As Mr. Cullen said, they leave that to the federal government, which then finds itself caught in the middle and obliged to do the maintenance that the companies don't want to do. The same thing occurs when they own part of the land.

In the current state of affairs, how much energy has a barrel of oil from Alberta cost in terms of embodied energy at the time it leaves Alberta, that is to say at the time it leaves for the purpose of being used?

● (1640)

[*English*]

Mr. Howard Brown: I understand the question, but I don't know the answer off the top of my head.

[*Translation*]

Mr. Christian Ouellet: Could you eventually give us that answer?

[*English*]

Mr. Howard Brown: Of course, yes.

[*Translation*]

M. Christian Ouellet: If the operation costs the equivalent of two barrels of energy to produce one barrel of petroleum, the decision won't be the same.

[*English*]

Mr. Howard Brown: I can promise you that it's much less than that.

Mr. Christian Ouellet: I know, I know.

[*Translation*]

I gave you an example.

I'd like you to give me your interpretation because you're part of EnerCan. Why, in this case, did EnerCan decide to use the expression “responsible development” instead of “sustainable development”? Was it based on a new technology that appears in a bill? Why does the Commissioner of the Environment and Sustainable Development never refer to responsible development, whereas, at EnerCan, you talk about responsible development rather than sustained development?

[*English*]

Mr. Howard Brown: If I could just complete my answer on the question about two barrels in for one barrel out, that of course is quite possible in a centrally planned economy. Indeed, there are many examples in the Soviet Union where the production in the centrally planned economy actually wound up destroying value so that the output was worth less than the inputs. But of course in a market-based system, it's not possible for that to happen.

I have no comment on the use of the term “responsible development”. I think you'd have to ask the people who have used it. The reality is that the term “sustainable development” appears in the mandate given by Parliament to the department when it was created. I think I'm fairly safe in coming to Parliament and talking about “sustainable development” until that's changed by Parliament.

[*Translation*]

Mr. Christian Ouellet: Thank you. Your answers are excellent.

Earlier, you mentioned water recycling. Let's get this straight. Nearly all the water used to make steam goes away and never comes back. So we have to agree on the quantity of water that can be recycled. For example, when you make artificial snow, it's said that the water will be recycled after the fact, but there is no water because it disappears. The same is true in this respect; little water remains.

Could you tell us what quantity of water disappears and what quantity would be recyclable?

[*English*]

Mr. Howard Brown: No, I think the steam actually is recycled. Under in situ projects, the steam is formed underground and either comes out as a mix with the bitumen or is recycled underground. That's why it has to happen at a certain depth. It has to be deep underground; otherwise, as Dr. Hamza was saying, you can't contain the steam. I don't think there is enough water in the Athabasca River to run steam projects without recycling the water.

[*Translation*]

Mr. Christian Ouellet: But you don't know the percentages. A certain quantity must be lost. It's scientifically impossible not to lose water, isn't it?

[*English*]

Mr. Howard Brown: Absolutely. The figure that sticks in my mind is 90%. What I don't remember is whether 90% is the average or best practice, but we'll undertake to provide the committee with those numbers.

● (1645)

Dr. Hassan Hamza: We'll give some information, but 90% is a commonly agreed upon number by researchers, and even the company records. But it would vary, and you're right about the evaporation. If you look at the tailings ponds and the water there, there is water that evaporates, and there is also condensation from the snow and the rain, and so on. If you'd like, we would be very happy to give you some account of that.

There are definitely some losses. That's why there is a draw from the river, to compensate for these losses. That's very well known. But one thing, actually, that is important is that there is a permission for the companies to withdraw certain amounts from the river, as given to them by the Alberta government, and I don't know of any company that has exceeded or even reached its level of allowance. It's always below the level of allowance. But that doesn't mean the technology is at its optimum. There is a lot of room there, and that's an area we're working in.

[*Translation*]

Mr. Christian Ouellet: Thank you, sir.

[*English*]

The Chair: Thank you for the questions and also for the answers.

Mr. Harris.

Mr. Richard Harris (Cariboo—Prince George, CPC): Thank you, Mr. Chair.

I have just one question, Mr. Brown, in regard to the explanation about natural gas usage on page 13. It would appear to me that there is a lot of natural gas being used in that process, and it's expected to double by 2015, according to your notes. What percentage of Alberta natural gas production would that roughly work out to be around 2015?

Mr. Howard Brown: Actually, I have an answer to an earlier question, so I'll add that to the list and provide the answer to the earlier one. We'll keep the inventory of things we have to get back to you on.

I don't know what proportion of Alberta production it would be, but it's about 1% of total North American demand. Canada produces maybe 20% or 25% of the North American supply, I would think, and Alberta would be the.... I'd have to check.

I don't know the answer on a BTU basis on the question about how much energy it takes to get a barrel of oil out. I'm quoting from the National Energy Board's *Canada's Oil Sands: an Update*. This was done this year. It's a million cubic feet of gas for a barrel of bitumen, currently selling for $6, or so, to produce it.

Mr. Christian Ouellet: You said a million cubic feet?

Mr. Howard Brown: I'm sorry, a thousand cubic feet.

Mr. Richard Harris: Actually, I only had the one question, Mr. Chair.

The Chair: Do you want to finish off that round?

Mr. Mike Allen (Tobique—Mactaquac, CPC): Thank you, Mr. Chair.

I really appreciate your presentation today, and I'm looking even more forward to going now, recognizing that we have 50 square kilometres on 140,000 square kilometres that we have developed. And I appreciate your including double the size of my home province. It gives me some context for this, as well.

It is going to be quite a challenge balancing out three things: the resource potential we have, the investment that's required, and the environmental implications we are going to be faced with.

I have a couple of questions I want clarification on. Would that 175 billion barrels be from the full 140,000 kilometres being developed? No? Is that just the usable piece?

Mr. Howard Brown: The 174.5 billion barrels, to be precise, is what is estimated to be economically recoverable with current technologies.

Mr. Mike Allen: So it is the one-third, basically.

Dr. Hassan Hamza: No. Actually, when we talked about the 50 square kilometres, that is the area where they are storing the waste, the tailings, and so on. The mineable area of the oil sands is much more extensive than that. If you look at the map and compare it to the size of Alberta, it is maybe a quarter or 20% of the size of Alberta.

● (1650)

Mr. Howard Brown: That is what could be mined. What you might ultimately be able to recover from the oil sands is much larger than 174.5 billion barrels, depending on future technology.

Mr. Mike Allen: The next question on that would be whether the $125 billion investment we would expect between 2006 and 2015 would be the amount of investment required for that recoverable portion.

Dr. Hassan Hamza: Yes, but it would not be for the intermediate layer we talked about.

Mr. Howard Brown: To be precise, the $125 billion, according to the project proponents, would be enough to increase production from about one million barrels a day to about 4.5 million barrels a day. So you'd get an incremental 3.5 million barrels a day for an investment of $125 billion, according to the proponents.

Mr. Mike Allen: With respect to the investment that's required, does that also include reclaiming the footprint?

Okay.

The next piece I'd be interested in knowing is whether you have any idea of what further investment in this will be required for the refineries, as well as for the pipelines. Do we have any idea of what the investment by companies is going to be for that?

Mr. Howard Brown: No, because you'd have to make an assumption about whether they are going to build an upgrade or refinery complex in Edmonton. People have talked about it, but that's a different thing from doing it. There are many pipeline projects out there, so to get that figure you'd have to go through and say that this one is going to go, that one isn't, these two, yes, that one no. It's a bit tricky to do.

Mr. Mike Allen: I have a final question I'd like to ask. When you go through the environmental impact assessment for any of these projects that are being done, are they required to file a formal land use plan, and is that followed through and monitored?

Mr. Howard Brown: Yes, on both counts, is the answer to that, and there are public hearings to go along with that as well.

Mr. Mike Allen: Okay, thank you, Mr. Chair.

Mr. Howard Brown: The $125 billion, of course, is the private investment in the oil sands projects. It does not include the public investment you might need in infrastructure, for example, in the local municipalities, in roads, and in all that kind of stuff.

Mr. Mike Allen: Is that a joint kind of thing between the environment...? Has anybody worked the urban factor into this, or is it just the project that would be involved in the land use planning?

Mr. Howard Brown: It would be an issue, really, for Alberta, but it does impose constraints on the ability to develop the oil sands, because if you don't have roads and sewers, you don't have houses, and if you don't have houses, you don't have workers, and if you don't have workers, you're not going to have development.

The Chair: That concludes the questioning.

I did want to offer Mr. Cliffe an opportunity. Was there something you wished you had an opportunity to say?

Mr. Bradley Trost: Mr. Chair, there are some of us who still have questions.

Could I finish my original...? I know I've gone for one round of questioning, Mr. Chair, but if we're not done questioning, I have a few more questions to follow up on about the technology and stuff that I was working on in the round that I had to end and that I shared with Christian.

The Chair: I'd say we probably have five minutes, then, if you want to do that.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Chair, with your permission, I would like to ask Mr. Brown for clarification following the answers he has given me.

[*English*]

The Chair: We'll allow Mr. Trost five minutes and then we can finish up with Madame DeBellefeuille.

Okay, go ahead.

Mr. Bradley Trost: Thank you, Mr. Chair.

To follow up on a few more of my questions on the technology, you'd indicated in my previous round that it's mostly open-pit mining. Correct? Why has there not been more emphasis on the in situ steam-injection cylinder? Is that because of cost issues? What is the particular—? As you said, it's an adaptation of a technology we use in Lloydminster and those areas for heavy oil. Why hasn't there been more emphasis on that? Looking at the map, I've assumed quite a few areas below 200 metres could be drilled.

Mr. Howard Brown: The answer to that is people started with the part that was easy, and I use “easy” in quotation marks, because none of it is absolutely easy, but the most accessible resource was the mineable resource. The technologies one would use for in situ are all of relatively recent development. So you do what you can with the easy part and then as the resource expands, technology—

● (1655)

Dr. Hassan Hamza: It's not only easy but also in surface mining you recover over 90% of the bitumen and in situ you recover less than 40% because of the nature of—

Mr. Bradley Trost: So it would be much more like a classic reservoir where you've got your gas cap and something and yield pressures—

Dr. Hassan Hamza: Exactly. There's no difference in that at all.

Mr. Bradley Trost: So essentially what they're doing is in situ, which is essentially pretty close to classic reservoir engineering.

Dr. Hassan Hamza: Definitely. Except for one development that was developed by Alberta in collaboration with Canada a long time ago. It's called underground tunnels. They go underground and make a tunnel and then they drill from that tunnel to recover the oil; it goes down into that tunnel, then it goes up. There's a facility in Fort McMurray called underground test facility that has been funded by the province and the federal government and some companies. This technology is not applied in the classical...

Mr. Bradley Trost: I can see why that would be very different from a classic reservoir engineering situation.

Is there a major cost difference? You're looking at.... It varies all over the world. If you go to Saudi Arabia, the joke is always about you stick a straw in the ground and start sucking, versus a reservoir in Russia or Nigeria or so forth. What are the costs we're looking at here with in situ in comparison?

Dr. Hassan Hamza: The joke goes beyond that. You suck it and put it in your car and run the car.

Yes, the cost is more expensive.

Mr. Bradley Trost: What are we looking at on a price per barrel? I'm trying to get a feel of how competitive this would be for development purposes.

Mr. Howard Brown: I'm referring to an excellent document from the National Energy Board, the 2006 updated energy market assessment. I'd be happy to provide you with the URL for it. Its estimate is that SAGD, the steam assisted gravity drainage, the supply cost, all-in cost, is $18 to $22 a barrel and $18 to $20 for mining. So it's essentially the same cost.

Mr. Bradley Trost: I'm sorry, I didn't hear what you said. Was that $18 to $24?

Mr. Howard Brown: It's $18 to $22 for steam assisted gravity drainage and $18 to $20, so essentially the same, for mining.

That said, I have an assumed natural gas price of $7.50 U.S. per million BTUs, and as gas prices went above that, SAGD would become relatively more expensive because there would be more—

Mr. Bradley Trost: But if they could find something to replace natural gas, their big cost up there is energy cost, the same as it would be—

Mr. Howard Brown: The capital cost is not trivial. But on the operating side—

Mr. Bradley Trost: For the in situ the big cost is more energy cost. It's not as capital-intensive as it would be for open-pit mining. Okay.

That concludes where I'm going at this point. The only other question I have is if you could crystal-ball gaze—and the new technologies are way out there—if they began to get implemented, if we began to do this, would it have a significantly different impact when it came to the environment and economics and so forth, or would it have a very similar impact to the open-pit mining we have now? What different impacts would we have if we started a technology swing from merely open pit—and I know that's going to be going ahead—if we began to expand beyond open pit? Do some crystal-ball gazing. I realize you can't do too much, but do as much as you feel comfortable doing about how that would impact everything from economics to environment, etc., in the projects.

Mr. Howard Brown: I used to pretend to forecast economic numbers, and I wasn't very good at it, so I'm not going to pretend to be able to forecast technology either. But I will just refer to a couple of things that are here and tangible, and almost ready to go, and one of them is gasification.

The gasification of coal and the bottoms—the very sticky residue—involves essentially the same kind of problem, technologically. That technology has been around since the 19th century, but it's obviously getting better over time, and I think gasification is something that's very nearly ready for the marketplace. It could make a huge difference to the environmental footprint of energy use in North America, because when you gasify you have an opportunity to take out carbon dioxide—which will always have a cost, but you have the opportunity to do that—and take out some of the other air pollutants, the particulate matters, the NOx and the SOx, and so on. So gasification gives you an opportunity to dramatically reduce the footprint, both of coal and oil sands development.

The other piece in that is carbon dioxide capture and storage and the carbon dioxide pipeline. Again, I think this stuff is close.

Just to make a small correction, I never meant to say you can leave all of this to the market. I think there's a very important role for government in the regulation, but regulation can be done in a way that provides the market with the incentives it needs to do things it wouldn't otherwise do. With the right incentives, through the right kind of regulation, I think this could happen sooner rather than later.

● (1700)

Dr. Hassan Hamza: Actually, in moving from the surface to in situ, you avoid all the land disturbance, which is another advantage.

Mr. Bradley Trost: I'm assuming my time's up, Mr. Chair.

The Chair: Thank you. I'm glad we had that.

Now we'll conclude with Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Brown, I'd like to go back a bit to what you told me earlier.

You told me that the growth, control and development of the oil sands are a provincial jurisdiction and that the federal government is not entitled to tell Alberta how to develop its natural resource. I entirely agree with you.

However, the emissions issue concerns all of Canada, the entire planet. And your responsibility, and that of the federal government, is environmental, and it can compel the oil companies, by regulation, to reduce their greenhouse gas emissions and, as a result, combat climate change.

I'd like you to comment on that because earlier you told me that quite briefly. We can't tell Alberta how to do things, but, since the government is concerned with sustainable development and wants to fight climate change, it is up to Environment Canada to compel the oil companies, through laws and regulations, to reduce their greenhouse gas emissions.

Is what I just said true, Mr. Brown?

[*English*]

Mr. Howard Brown: It is my belief that the clean air act tabled today, which gives Environment Canada the power to regulate not just greenhouse gases but also other air emissions, is on very firm constitutional footing. In other words, the federal government has the power to regulate the emission of greenhouse gases and other pollutants.

It's also the case that the federal government, I believe, is on very strong constitutional grounds in exercising its powers under the Fisheries Act, for example. I don't think the federal government has any role to say, well, we think you should only go to three oil sands plants over the next ten years, rather than five. It's a matter for the Province of Alberta.

[*Translation*]

Mrs. Claude DeBellefeuille: No, but...

[*English*]

Mr. Howard Brown: But it may be the case that in exercising those powers, under the protection of fisheries, for example, that has, as a side effect, a constraining influence on the development of the oil sands.

[*Translation*]

Mr. Christian Ouellet: Mr. Chair, I have a brief question following those of Mr. Cullen and Ms. DeBellefeuille.

Mr. Brown, do you have a framework, directive or something similar that talks about federal or provincial areas of jurisdiction? At the department, do you have a guide that prevents you from touching what comes under provincial authority, but authorizes you to deal with what falls under provincial jurisdiction?

[*English*]

Mr. Howard Brown: Yes, absolutely. It's in my briefing book. And since it would be accessible under ATIP, I don't think I would have any problems in tabling it with the committee. It's not a....

[*Translation*]

Mr. Christian Ouellet: That would help us a great deal, Mr. Chair.

[*English*]

The Chair: Yes, it's called the Constitution.

[*Translation*]

Mr. Christian Ouellet: Why yes, but they've decanted it.

[*English*]

Mr. Howard Brown: It's not a formal document, but I think if the department can tell me what our authorities and responsibilities are, I don't see any reason why we shouldn't inform Parliament as well.

The Chair: Thank you for that, Mr. Brown. That was a very good explanation for Madame DeBellefeuille, in that yes, indirectly, of course, these matters could be restrained within the context of emissions. That certainly is one area that is not directly related to this department at this time. That's a good question.

I hope that satisfied you as well, Mr. Ouellet.

Mr. Cliffe, I did say a minute ago, before I was interrupted, that I appreciate your patience in sitting through. I know, as someone who has been on both sides of the table here and never got asked a question, I always had something I wanted to say, so I'm going to give you that opportunity, if there is something you think might be of benefit to the committee, before we adjourn.

● (1705)

Mr. Kevin Cliffe (Director, Oil Division, Petroleum Resources Branch, Department of Natural Resourses): Thank you, Mr. Chairman.

I'd like to follow up on Mr. Allen's question concerning the size of the oil sands deposits and the reserves we've talked about.

If you take a look at the 140,000 square kilometres they've got, the total reserve in place, as estimated by the Alberta Energy and Utilities Board, is about 1.6 trillion barrels. If you could recover everything out of that area, that's what you would get.

Coming down from that, there is a question of what is ultimately recoverable. There are estimates based on the application of the technologies, the accessibility of the technologies, given the structure applicable to those sites, and that comes down to about 315 billion barrels. The 174 billion or 175 billion that was referred to by Mr. Brown is really the reserves that can be accessed right now with available technologies and the economics.

When we talk about the size of the reserves for the oil sands, we're talking about the most conservative estimate. There is a very strong possibility that you'll be able to access and produce substantially more than the 174 billion we've referred to. The Alberta government and the Alberta Energy and Utilities Board are really looking more towards the 315 billion barrel level.

The Chair: Thank you.

With that, I want to thank all of our witnesses today for their very efficient answers. Thank you very much. I think that was a great help to the committee. I wish we had had more time for the initial presentation, because it was very good. I think it will mean more to the committee as time progresses. It's a very good base to start from. Again, I thank you very much for your time today.

With that, we have other items on the agenda. Moving on to committee business, we have notices of motion from the Honourable Mr. Cullen. We'll deal with them one at a time.

Mr. Cullen, do you want to read the motion?

Hon. Roy Cullen: Yes, and thank you, Mr. Chair.

I think the motion is in front of everybody. I'll start with the EnerGuide motion. I'm not going to read it, as I think everybody has it in front of them, but I'd like to spend a few moments giving the background as to why I'm bringing this motion forward.

We're mostly familiar now with the subject matter. The EnerGuide for houses and EnerGuide for low-income houses programs were just two of the many programs that were put on hold or scrapped. At the time, the Minister of Natural Resources defended the decision by claiming that 50% of the money went into administration, but when we had the deputy minister here, he clarified that and indicated that only 12¢ out of every dollar went to administration and the other 38¢ was involved in pre- and post-audits of the program.

In spite of very clear advice from the department officials—and I have obtained, by the way, under access to information, the briefing note on that if anyone would like to review it—the minister and the government decided to scrap the EnerGuide program. The decision to do so seems to be based not on the advice from the department, but on some other factors.

[*Translation*]

Mr. Chair, that's an error that should be corrected. I invite the parliamentary secretary to admit that error in his observations. There's no shame in that, and it's clear to everyone in this case that a mistake has been made. Clifford Maynes, Executive Director of Green Communities Canada, has stated that the cancellation of the EnerGuide Program "could set back residential energy efficiency at least 10 years."

On average, that program made it possible to achieve 30% energy savings, and its cost of $75 million from October 2003 to March 2005 resulted in $975 million in energy savings over the duration of investments for energy efficient upgrades.

● (1710)

[*English*]

It's clear that the department knew it was a mistake. NGOs and environmental experts who have come out strongly against this decision have said it was a mistake, and we in this committee, like all Canadians, understand that it was a mistake. Therefore, with the support of colleagues around this table and in the interests of sound public policy, we need to demand that the minister reinstate this program immediately for the benefit of all Canadians.

That's all I have to say, really. I tried to keep my remarks brief on the EnerGuide program. The wind power we'll deal with secondly.

The Chair: Yes, I think it's easier to do one at a time.

Will you read the motion into the record so we can officially move it?

Hon. Roy Cullen: Yes. And based on what happened on Tuesday, we have reviewed the motion with the clerk in advance, and the clerk has advised that the motion is in order.

The motion reads as follows:

[*Translation*]

> That the Committee regrets that the Government rejected the advice of departmental officials to continue and renew the EnerGuide for Houses and EnerGuide for Low-Income Houses programs; and
>
> That the Committee calls upon the Minister of Natural Resources immediately to reinstate these programs; and that this motion be reported to the House.

[*English*]

The Chair: Thank you.

Mr. Richard Harris: I didn't quite get all the motion.

Hon. Roy Cullen: I can read it in English if you like. It states:

> That the Committee regrets that the Government rejected the advice of departmental officials to continue and renew the EnerGuide for Houses and EnerGuide for Low Income Houses programs; and
>
> That the Committee calls upon the Minister of Natural Resources immediately to reinstate these programs; and that this motion be reported to the House.

The Chair: Thank you.

We'll resume debate.

Mr. Richard Harris: I'd like to argue that this motion is still out of order on a number of counts. The first issue is that the EnerGuide for low-income households was in fact managed by the Minister of Human Resources and Social Development, not Natural Resources Canada. I believe this motion is more appropriate for the human resources and social development committee rather than the natural resources committee, because it was under its management. It was the ministry that dealt with this EnerGuide program. So quite plainly, I think the motion is in the wrong committee.

The Chair: Thank you, Mr. Harris.

Mr. Cullen.

Hon. Roy Cullen: The reality is that EnerGuide for houses is owned, operated, and administered by NRCan, and the two are companion programs. In the House of Commons when questions have been put to the government about EnerGuide, the Minister of Natural Resources has responded to them. However, it may well be true that the administration and operation of the EnerGuide for low-income houses program is in another department. If that is the case, I'd be happy to say, on a technicality, "and renew the EnerGuide for Houses Program", and delete "EnerGuide for Low Income Houses Programs". I think the motion loses something by doing that, because they're companion programs. One happens to be administered by another department.

● (1715)

The Chair: Are you moving an amendment?

Hon. Roy Cullen: Yes, I would move that amendment. It's just in the preamble. It's not in the motion, although there would be a requirement to make an amendment to the motion itself, because it's now in the plural. So what I would move, then, is that the preamble should read as follows:

> That the committee regrets that the government rejected the advice of departmental officials to continue and renew the EnerGuide for Houses program; that the committee calls upon the Minister of Natural Resources immediately to reinstate this program; and that this motion be reported to the House.

The Chair: We have a new amendment before the committee, so the debate will resume on the amendment.

We are now speaking to the amendment, Mr. Harris.

Mr. Richard Harris: My point was that because this program was under the management of Human Resources and Social Development, any debate on this motion should take place in that committee.

The Chair: We're now speaking to the amendment, Mr. Harris. The portion you identified has been removed. At least that was my understanding. Did you not say that the low-income housing part was in another department? If this was the case, then clearly it would be beyond the scope of the mandate of this committee, and it would be out of order. Mr. Cullen has proposed an amendment, which we are now debating. It is to renew the EnerGuide for houses program. If that's not the case, perhaps you could clarify.

I'm sorry, the motion that is before the committee is the amendment itself. The amendment is simply that "EnerGuide for Low-Income Houses" be deleted from the previous motion, and that we change "these programs" to "this program". That is what is under debate right now, whether we accept this amendment.

Mr. Richard Harris: Mr. Chairman, could I have the motion, as amended, read in its entirety?

The Chair: I understand where you're going—you're seeking clarity. We're not going to debate the motion until we have dealt with the amendment. The only reason I would reread the amended motion is for clarity. We're not dealing with that. We're simply dealing with the deleted part. So to put it backwards, I will read how it will appear after the amendment, if the amendment is accepted. It will say:

> That the committee regrets that the government rejected the advice of departmental officials to continue and renew the EnerGuide for Houses program; that the committee calls upon the Minister of Natural Resources immediately to reinstate this program; and that this motion be reported to the House.

The motion before the House is an amendment to say we will delete "and EnerGuide for Low-Income Houses programs", and change "these" to "this" and "programs" to "program". That is the amendment.

Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Thank you, Mr. Chair.

[*English*]

The Chair: Are you speaking to the amendment?

[*Translation*]

Mrs. Claude DeBellefeuille: Yes.

As a new member, I've learned a lot about procedures and so on in the last 10 minutes. Mr. Cullen has really shown good will in submitting an amendment. It would be common sense for the committee to support this amendment so that we can dispose of it.

All members, with the exception of a few, have really concluded that the EnerGuide Program is important and essential and that it should be reinstated. That's what our electors and fellow citizens are asking of us. Its relevance has been largely demonstrated by the report of the Commissioner of the Environment and Sustainable Development.

● (1720)

[*English*]

The Chair: Is there a resumption of the debate on the amendment? Is there any further debate on the amendment?

As there is no further debate on the amendment, I'll call the question.

(Amendment agreed to) [See *Minutes of Proceedings*]

The Chair: We now have a motion before the House that says:

> That the Committee regrets that the Government rejected the advice of departmental officials to continue and renew the EnerGuide for Houses and EnerGuide for Low Income Houses programs; and
>
> That the Committee calls upon the Minister of Natural Resources immediately to reinstate these programs; and that this motion be reported to the House.

The debate will resume.

Mr. Harris.

Mr. Richard Harris: Mr. Chairman, I would like to speak to the motion. The motion indicates that this program was in fact an effective program and that the government rejected any advice that it was an effective program. That assumption or suggestion is—

Mr. Christian Paradis: I just want to be clear. I thought we were supposed to debate the motion on Tuesday. That's what I understood. I had discussions with Mr. Cullen, and the motion itself, the debate would be on Tuesday.

Hon. Roy Cullen: No, that's not exactly what I said, Mr. Chair. What I said was that there may not be a big appetite to keep debating this motion tonight. I'm not going to speak for all the members here, but my understanding is there's not a big appetite to do that tonight. There might be support on this side to say if we can't resolve this tonight, then we would debate it on Tuesday until we exhaust the debate, and then we would vote on it.

[*Translation*]

M. Christian Paradis: We have a point of order, Mr. Chair. It's quite serious. Furthermore, I'm not sure that we can immediately agree. If you agree to postpone the debate until Tuesday, I would concur in that wise decision, given the time.

[*English*]

The Chair: Let me say, then, because you're interrupting the debate, I will take that as a point of order and Mr. Cullen's response as a response to that point of order.

Can I then ask you to clarify what it is you're asking of the committee?

Mr. Christian Paradis: I am asking to report the debate on these two motions on Tuesday.

The Chair: So you wish to table the motion that is currently before the committee until the committee meeting resumes at 3:30 on Tuesday? Is that my understanding?

We'll hear if that's what Mr. Paradis is saying, but the motion to table takes precedence. We've now heard a motion to the table—

Mr. Christian Paradis: Mr. Chair, I just want to make quite sure, because we are ready to debate the motion tonight, but I don't see my colleagues.... They have points to raise, and that might take some time.

The Chair: Let's consider the point of order, then, rather than tabling the motion.

Mr. Cullen.

Hon. Roy Cullen: I was just going to say that I'm happy to debate this tonight until we've exhausted the debate, but I understood from my colleagues in the Bloc and NDP that there are some time constraints tonight, so that might not work for tonight. The other option would be to table a motion that says we deal with both motions on Tuesday and we debate them until we exhaust the debate on Tuesday, and then vote on them on Tuesday.

I don't know if that's representative of the views of the committee.

● (1725)

The Chair: Sorry, go ahead, Madame.

[*Translation*]

Mrs. Claude DeBellefeuille: I'm not sure I understood the interpretation, because there was a lot of whispering around the table.

Mr. Cullen, could you repeat what you just said? You don't want the debate on the motion to continue this evening?

An hon. member: That's correct.

Ms. Claude DeBellefeuille: That's what you just said? I have no plans.

An hon. member: But I do.

Hon. Roy Cullen: Mr. Chair, I could continue the debate this evening, until we finish with this motion. However, I get the impression that other colleagues on this committee have other engagements this evening.

An alternative solution would perhaps be for us to continue the debate next week, on Tuesday.

Mr. Christian Ouellet: Mr. Chair, if the debate continues this evening, I can have myself replaced and leave.

[*English*]

The Chair: I'm sure we can all be replaced.

Voices: Oh, oh!

The Chair: And to our colleague from the NDP, are you fine with that?

Ms. Catherine Bell: I don't think I can be replaced, but I do have other appointments. I'm not able to stay this evening.

The Chair: Could you find a replacement?

Ms. Catherine Bell: I'm not sure. Mr. Bevington had to go home. He had an illness in the family. I could try.

The Chair: Mr. Trost.

Mr. Bradley Trost: If I may enter the debate here, out of common courtesy, all parties should be recognized in debate. If the NDP is going to have a problem.... Let's face it, as members, we all have lives. It's getting to be the top of the hour, and we'll want to do things.

We can stay here all night and work this out. Ultimately, though, whether we do it now and make it all inconvenient for ourselves, or wait until next Tuesday and do things in a more proper order and not wear ourselves out, that's a situation in which I think common sense should dictate a little bit more. Ultimately, if all the opposition parties do want this motion to go through, it will go through on Tuesday rather than today.

And if I may give some advice to the opposition parties, Tuesdays, Wednesdays, and Thursdays are better media days than are Fridays. If you guys want this to get in the press, maybe you should let us all go home and have a little bit of a rest, and we can come back to it next Tuesday. We all know what we're going to get ourselves into here, so let's just have some respect.

We're going to go at it Tuesday again. Unless there's some surprise from the opposition, the government will lose the vote on Tuesday and things will roll on. I think everyone knows we're all prepared for that.

It is 5:30, and I don't want to spend another couple of hours here talking in circles. I can do that. I'm starting to do that right now, and I can keep going for a whole lot longer, but I think that would be practical.

The Chair: I think you've made the point.

Mr. Cullen.

Hon. Roy Cullen: My only hesitation about punting it to Tuesday is that we have some witnesses lined up. I'm therefore prepared to stay here tonight for as long as it takes, if that's the will of the committee.

The Chair: Thank you.

May I just make one other comment in this regard? On deciding whether or not we carry on tonight until 11:30—at which point we would have to adjourn until Tuesday in any event—or, by a point of order or a tabling, move it to Tuesday, I just wanted to speak of Tuesday.

We have engaged witnesses to appear on Tuesday. They are coming in from the National Energy Board in Calgary, and also from the Canadian Energy Research Institute. Those arrangements have been made, and it would be rather inconvenient to stand them down.

I appreciated the courtesy of the committee today to allow us to hear the witnesses who were in front of us.

There are two reasons I raise this. One is that this clerk, who is familiar with the current motions and has ruled on them before in terms of their correctness, will, as I understand it, not be here on Tuesday. Also, I have been advised that one of our key witnesses for Thursday has called today and is unable to attend.

I only raise that from a logistical point of view. Could we perhaps come to some consensus that, rather than defer it to Tuesday, we defer it to Thursday? If we could have perhaps some sense that we might come to agreement Thursday, I think that might encourage others to put it off the Tuesday, presuming we could deal with the matter on Thursday instead.

Mr. Tonks.

● (1730)

Mr. Alan Tonks: Mr. Chair, I was just consulting with Ms. Bell with respect to extending the time. It's 5:30. I would move—and she is in agreement—that we extend until 6 o'clock.

Because we have what is now an amended motion, the clarification that I would need is that the points of order are on the next motion. I would suggest that if the points of order that have been dealt with are the same as those we dealt with in the amended motion, the amendment has been passed.

Why don't we just concentrate on the motion as amended and go until 6 o'clock? Hopefully, we might even be able to get to and deal with those issues that you have with the second motion, but let's not prejudice that discussion. Why don't we extend until 6 o'clock and see if we can deal with at least the one motion? That would be my suggestion.

The Chair: I appreciate the suggestion, but I think it has been made clear that there are other concerns by the committee with the amended motion. It is very unlikely we would get a resolution to that motion before 11:30 tonight, at which point we will adjourn, in any event, until next week.

Mr. Alan Tonks: But they're not matters of order. On the amended motion, they're not matters of order, are they?

Hon. Roy Cullen: On the question of putting it to Thursday, I must say I'm not very anxious to do that. I tabled these motions. Admittedly, there were some problems with them, and I accept responsibility for that, even though I thought the clerk had okayed them. The point is, the motions have been around for a while, and frankly I want to get rid of them. I want to deal with them. I'd like to deal with them either tonight or Tuesday. Thursday doesn't really work, as far as I'm concerned.

The Chair: Well, in practical terms, you might want to ask the clerk to order sandwiches, because I think it's clear that if you want to continue this debate tonight, we will be here until 11:30, at which point we will adjourn and it will carry forward to the Tuesday agenda in any event. That's just so we're clear as to what's going on here.

Mr. Alan Tonks: With respect, Mr. Chair, not if there's a motion to extend to a specific time.

The Chair: So you're prepared to extend it to 6 o'clock, and at 6 o'clock we adjourn whether we have passed the motion or not.

Mr. Alan Tonks: That would be what would happen. I take it that requires unanimous approval.

I'm taking it that there is some degree of unanimity to extend the meeting until 6 o'clock to deal with this amended motion. That would be my motion.

Why don't you try it and see?

Some hon. members: No.

The Chair: There's no consensus.

Mr. Alan Tonks: That was a good try.

The Chair: It was.

Mr. Cullen

Hon. Roy Cullen: I was just going to ask, if there's no consensus, what then?

I don't think there's support for Mr. Tonks' motion.

The Chair: No, there is not.

Again, to clarify, if we don't adjourn now, the debate will continue until 11:30 tonight.

Hon. Roy Cullen: What's magical about 11:30?

The Chair: That's when they turn the lights out.

● (1735)

Hon. Roy Cullen: Is that the legal limit about how long we can last?

The Chair: No, that's just the practical limit. It's a little late to organize extra staff to come in. We have translators and other staff, but we haven't made prior arrangements, so the best we can do is to extend to 11:30.

The committee meeting was supposed to adjourn five minutes ago.

Again, I don't know how practical it is to do that when we know nothing is going to be accomplished between now and that time.

Mr. Alan Tonks: I have a point of order, Mr. Chairman.

I haven't been around to know all the tricks in the book, but it has been my experience that when we couldn't get a motion to extend, the committee adjourned at the time on the order paper. The clerk will verify that.

The Chair: That would be nice. I would welcome a motion to adjourn.

Mr. Bradley Trost: Again, like Mr. Tonks, I'm not an expert on the procedure motions. Having been in a similar situation once in the aboriginal committee, my understanding was that it is the prerogative of the chair to rule whether the meeting is finished. So Mr. Chair, from my past experience, unless the clerk explains that I'm completely wrong, which is possible, Mr. Richardson does have the power to close the meeting at 5:30.

The Chair: I would just beg the indulgence of the committee for one minute while I talk to the clerks. We've brought in one of the veterans. Let me just see if we can come to some resolution here.

I'll be back with you momentarily. Let's take a two-minute break.

● _____ (Pause) _____ ●

The Chair: We will resume debate.

Mr. Cullen.

● (1740)

Hon. Roy Cullen: Mr. Chair, it doesn't look like we'll reach some kind of solution and get this finished tonight.

I move that we adjourn debate on these motions.

The Chair: That's not debatable.

There is a motion to adjourn.

(Motion agreed to)

The Chair: The meeting is adjourned to the call of the chair.

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