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# Standing Committee on Natural Resources

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**EVIDENCE**

## Tuesday, October 31, 2006

## Chair

**Mr. Lee Richardson**

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● (1535)

[*English*]

**The Chair (Mr. Lee Richardson (Calgary Centre, CPC)):** Welcome. We will begin.

Today we have witnesses from the Mining Association of Canada and Nature Québec. And at the end of the meeting we will also consider a notice of motion from Monsieur Ouellet.

I would like to introduce our witnesses, if they're ready. I see we have Gordon Peeling, president and chief executive officer from the Mining Association of Canada; Dr. Harvey Mead and Marylène Dussault are here from Nature Québec.

The pattern we've been using in this information exchange is to try to bring people up to date on matters involving the oil sands. So I'd ask the witnesses to give us an opening statement, and from that point I'll have you both speak before we get into questions, and then take questions from the committee at the conclusion of your presentation.

With that, Mr. Peeling, are you prepared to begin? Very good. Thank you.

**Mr. Gordon Peeling (President and Chief Executive Officer, Mining Association of Canada):** Thank you, Mr. Chairman.

It's my pleasure to be here to talk about sustainable development. I'm going to take you through who we are as the Mining Association of Canada, a theoretical framework for sustainability, and the practical application we are undertaking as an industry called "Towards Sustainable Mining". I'll then focus specifically on the oil sands and then some conclusions. I hope that theoretical platform will help to shape the discussions today and help you position the public policy issues going forward.

Let me tell you a bit about the Mining Association of Canada. We're the national association of the mining industry, with 63 members and associate members. Our companies are engaged in exploration, mining, smelting, refining, and semi-fabrication, and we're suppliers of goods and services to the industry. We represent the "seniors" or producers of minerals and metals, including the Canadian oil sands producers who engage in mining in the front end of their process. As an industry, we are committed to sustainable development through our "Towards Sustainable Mining" initiative. We are also an award-winning association, having won the 2005 Globe award for environmental performance as an association.

Mr. Chairman, I'm not sure how much time you want me to take. I thought I'd go through some of the facts at the end of the process fairly quickly but spend a bit of time on the theoretics.

**The Chair:** I'm sorry I didn't discuss this with you and Dr. Mead to begin with. We've been going about half an hour combined, a little more than usual in this case, because we are trying to have you impart information to the committee and educate us as well, as we go through this piece.

**Mr. Gordon Peeling:** Okay. Perfect. I'll try to judge that time accordingly.

**The Chair:** So you have fifteen minutes.

**Mr. Gordon Peeling:** Okay. And I've used up some, a few minutes, already.

**The Chair:** Thank you for providing your deck in colour. We've had some problems with that. It's much easier for everybody when they are. So I appreciate your bringing that along.

**Mr. Gordon Peeling:** I won't go over all of the details of the facts, but 4% of gross domestic product is a number we've accounted for over the last 35 years—between 3.5% and 4% of gross domestic product as an industry. We're very important to both the rail system and the port system in terms of overall loadings, freight revenue, etc., and there's quite an extended range of companies that supply services. For those 2,300 suppliers, we use a cut-off point. More than 50% of their business is done with the mining industry. So if you do 10% of your business with the mining industry, we could probably triple or quadruple that number in terms of the reach the mining industry has throughout the Canadian economy. And we're significant investors in research and development.

I will take a bit of time on the next slide, on the theoretical framework. I think it helps situate what we're trying to do as an industry and what I believe we're trying to also accomplish as a society. I've adapted this particular slide from the work of Herman Daly, a name well known in the environmental area and in natural capital, and some additional work by Veronica Alvarez Compillay, in work included in "Indicators of Sustainability for the Mineral Extractive Industries". I've also drawn on some other authors as well and work at the World Bank.

To situate the traditional Herman Daly diagram of sustainability in terms of a theoretical framework is that pyramid you see in the centre of this diagram, how you move from natural capital, and you transform it with science and technology, economic policy, into produced capital, which would be what industry does in producing raw materials, work, etc. The financial side of that would go into and be reinvested by government in terms of its take into social and human capital, thereby, if it's all done properly, resulting in improved welfare in the Canadian economy and society in general.

That sort of beginning point has become more sophisticated and more detailed in terms of how economists and environmentalists theoretically look at this evolution. This is why I have given you the box with the arrows between natural capital, financial capital, human capital, and social capital, because that captures a bit more of the flavour of discussions over the last five years in terms of how this original sort of pyramid structure has broken down into more sophisticated compartments, although not losing sight of what that pyramid is trying to demonstrate in the centre.

I would even say that in the social capital, for instance, we now oftentimes break out into a subcomponent of institutional capital as well, or societal institutional capital, where if we reinvest properly with the capital that is derived from other parts of the system, we improve the institutional governance structures of society. That's part of public policy, but part of what we can also assist in.

I'll first of all explain a bit on the natural capital side. We're really talking about the flows in stocks of natural resources and natural services, water, flora, fauna, minerals, and metals. So that's what we put in the natural capital. That's not a static situation, because through the work of the sun we receive energy. It transforms into additional biota growth, etc. We're a bit more constrained in terms of how we look at the minerals and metal side of that issue, or fuels.

We transform natural capital into other forms of capital through the application of financial capital, economic policy, and social policy. Then we produce other forms of capital. We invest in that, and governments invest particularly in human capital through education, training, skills development, health, wealth, communication, knowledge. By the same token, we focus considerably, both as a society and on social capital as well, in terms of investing some of that financial wealth derived from other produced forms and natural forms of capital into social capital. I'll define that, and I'll use an OECD definition, which comes from a document called “Policies to Enhance Sustainable Development”, published in 2001.

The OECD's definition of social capital refers to the networks, shared norms, values, and understandings that facilitate cooperation amongst groups. It's social cohesion, commonality of purpose. Why I also break out and why a lot of the literature now talks about a subunit of that being institutional capital is that in some cases you need that institutional infrastructure to provide the platform for these social norms to work and coalesce and “cohese” more and improve. So there's a lot of subtlety to this.

● (1540)

If I were to really be totally complicating the sorts of debates that take place in the literature, we would also draw arrows going back and forth between natural capital and human capital, and social capital and financial capital as well, simply because with an increase in knowledge, we can work better to protect that natural capital. We can reclaim land and re-enhance natural capital. By the same token, through social capital and traditional knowledge on the first nations side, for example, that can be brought to bear to improve natural capital as well. So there is a very good reason that I show arrows going in both directions to all these boxes.

On the governance side and what government at both the provincial and federal levels and governments around the world do, and what we as industry do...we apply science and technology, economic policy, public policy, and so on, to ensure that we get the proper linkages and the optimum benefits out of the transformation of capital to these various boxes. This sort of diagram fits with where we were with the Earth Summit in 1992 and Agenda 21 on sustainable development. It fits with the Brundtland definition of bringing to bear a three-pronged approach of economic, social, and environmental foci to how we undertake economic and social development at the end of the day.

Although this is a complicated diagram—and I'll make just one other point about it—in looking at this, you have definitions of weak sustainability and strong sustainability. I don't want to dwell too much on those, but I'll put them on the record because I think you may end up with some appreciation for them at the end, because they are important.

On weak sustainability, the theoreticians would call that where your overall stock of capital, those forms of capital that I've laid out for you, remain in the development process at least constant over time. I'm using the definitions that are in a Eggert paper out of “Sustainable Development and the Future of Mineral Investment”, which is in actual fact a UNEP, or United Nations Environment Programme, publication. Just again, this is all well grounded in the literature.

Strong sustainability tends to focus on two elements, where it requires both the overall capital stock but also the natural resource stock to remain at least constant over time as well. So there is an argument within the literature that we need to pay particular attention to that natural capital stock.

So those are the theoretics. How do you go from that theoretical basis in terms of, for example, what we might do as an industry, the mining industry, which is dealing with a depletable resource...how do we operate in a sustainable manner or a manner that helps society achieve these goals of keeping this capital stock constant for growing so that we improve welfare at the end of the day?

That's really what this next part of my discussion is going to be about. I'm going to use the World Commission on Environment and Development—the Brundtland commission—definition of sustainable development, because that's at the heart of ours towards sustainable mining activity, where it's defined as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. That fits perfectly with that other diagram, because that is a long-term dynamic, and you want to achieve growth in welfare, improvements in welfare over time, but not at irreparable cost to any particular capital component.

As a bit more about where we are, our activity was launched in 2004 after four years of intensive work internally to MAC, the Mining Association of Canada. It's a condition of membership in terms of a commitment by our members to this process in reporting in metrics that I'm going to tell you about. But in its design to align our industry actions with priorities and values of communities of interests and by aligning with priorities and values of the communities where we operate, that reflects social cohesion. That's a commitment to enhancing that social capital, and we want to improve our reputation through improved performance, which is all about reducing our draw on natural capital and improving the financial capital side and the ability of governments and others to invest in human capital at the end of the day.

● (1545)

Our guiding principles are: to responsibly meet society's needs for minerals and metals; to be committed to sustainable development; to align our actions; to hold shared values; to offer ongoing protection of employees, communities, customers, and the natural environment.

I have brought the TSM report with me in English and French and have made it available at the back of the room, so I'm not going to go into detail on a lot of these. Just read through these; they're there for you.

We are committed in all aspects of our operations to respect human rights, to respect cultures, customs, and values, to adhere to best practices, to be responsive to community priorities, etc.

In this practical application, we have developed performance indicators, because part of the sustainable development equation at the end of the day is based on how you measure progress. How do you operationalize the guiding principles into metrics on the ground, so that you can demonstrate whether you're making progress or not?

That's exactly what the MAC TSM guiding principles and MAC activity are all about: developing performance indicators to respond to critical areas of performance that civil society has asked that we improve on. Our board has decided that it wants and needs measurable results, it wants to be accountable for its actions, and it needs to report on that progress and results, and by reporting, be accountable to the public.

It also will build credibility and trust with our community of interest, not on the basis of, “Believe us, we're here to do our best”, but in actual fact, to demonstrate through reporting on the important metrics that we are living up to our commitments.

The indicators in the first instance, because again this comes from the feedback of what our communities of interest.... You might use the term “stakeholders”, but first nations and our Inuit and Métis members prefer “communities of interest” rather than “stakeholders”. They see themselves as more than stakeholders and as governments, in many instances, in their own right, so I will use the longer form, “communities of interest”.

Clearly, one of the first things they wanted us to improve was the crisis management in communications around our activities, our external outreach and engagement with the local communities where we operate, and they wanted us to reflect those values and engage in much better response mechanisms and capture benefits at the local level.

Greenhouse gases and energy use is a major issue, and we have focused on that for quite a number of years.

Because of events in the nineties with respect to tailings failures outside of Canada, we were asked to focus on developing best practice and world-class guidance in the management of tailings facilities to ensure that those types of environmental problems did not repeat themselves. We have developed a due diligence approach in tailings management that is now a world-class document that is on the UNEP world website. We've made it available to the rest of the industry worldwide. It's best practice guidance.

This is quite an elaborate architecture that we have built in going from guiding principles to interpreting those principles and defining performance indicators. We are working on those two additional boxes, aboriginal relations and biodiversity. We have developed workshops and policy positions with our communities of interest over this year, and we will be developing the metrics next year.

Behind those metrics go reporting guides and performance reporting systems, and we will be moving to third-party verification in 2007. Again, it's going to be quite a sophisticated process, and it won't stop there. We're still in the process of building this architecture. But I give you an example here of the TSM public report—and as I say, both English and French copies are available—and we will be moving to external verification next year on our reporting.

Turning to its practical application, what it has done for us in general as an industry is drive performance, refocus and stimulate activity in the industry on performance gaps, draw attention to our goals and targets, and create a culture of achievement. This is all the business case for doing this. It identifies trends and allows us to compare ourselves with others, both worldwide and in other parts of the economy. It creates a culture of transparency in our activities and actions, and it helps to earn our social licence at the end of the day.

● (1550)

Let me turn to the oil sands side of that and the members of the Mining Association of Canada—and I can only speak for them here—Syncrude, Suncor, Shell Albian. They have been leaders in implementation towards sustainable mining. In many instances—not right across the board, but in many instances—they already had best practice world-class standards in energy and tailings management, external outreach, aboriginal relations, and crisis communications, and we have used their best practices to drive performance in other parts of the industry.

I won't spend a lot of time going over these facts about the oil sands industry and the position that Canada is in. You're going to have more knowledgeable people from Alberta and the oil sands and the petroleum sector I think in your subsequent meetings, who can talk in much more detail about this.

The level of revenues that we are potentially going to derive as an economy and as governments over the period of 20 to 25 years is quite staggering. The employment benefits and the benefits in terms of procurement policies right across the country are important. Even within aboriginal businesses, in 2005, the industry spent more than $310 million in contracts to source goods and services. There is a culture of achievement and entrepreneurial development in Alberta in the aboriginal community that I think is the envy of many other aboriginal communities across Canada. We're seeing the same thing take place in the diamond industry in northern Canada. We hope to see that replicated in the diamond industry in Ontario and in the mining industry in general. We are taking best practices from what the oil sands are doing, in terms of their community outreach and aboriginal engagement, and trying to duplicate that elsewhere.

The job creation is quite spectacular. I'll just draw some links back to the TSM performance indicators: aboriginal engagement with the oil sands, the work with the Athabasca Tribal Council, 1,500 aboriginal employees in permanent jobs in 2005. I mentioned the contract.

In the performance indicators we have under TSM, the oil sands are the top performers in external outreach and aboriginal relations. Syncrude is a recipient of the Progressive Aboriginal Relations Award from the Canadian Council for Aboriginal Business. They are doing their best, as we are, collectively, as an industry, by investing in aboriginal business development and human skills development and training. That's the human capital component of this. Allowing those communities to become self-sufficient in terms of their own economic future is building social capital. And again, it's the way it draws back to those linkages. The moneys that will flow to government on the financial side put government in a position to invest in human capital and social capital, at the end of the day, in a broader sense than just a regional sense.

On environmental stewardship—again, air, water, land—they are doing quite significant work in terms of both tailings management and biodiversity. These are all regulated areas at both the provincial and federal levels in terms of air, water, and land. In the case of water, Suncor has doubled production over the last five years, but their water usage has remained the same. We've become much more efficient in water usage, and clearly, that's one of the key goals we collectively have as an industry. It's also acute for this part of Alberta. Again, they are very strong performers under the TSM with respect to those elements.

On responsible energy use and energy management, they are leaders, and many of our mining companies have been out to Alberta to look at the energy efficient processes they have in place. In many cases, they have led the way. There are still some big challenges, which I'll get to in my concluding remarks. They continue to push the envelope in sulphur capture, nitrogen oxide and particulate reduction, and greenhouse gas efficiencies and reductions.

● (1555)

I'll conclude my remarks. I've taken you through the practical side, but I wanted to really fit this within a theoretical context as well.

Quite frankly, in terms of the challenge we have as Canadians in looking at where we need to go next with development in Canada, the solution isn't in ensuring the oil sands, mining, or harvesting of any natural resource.... If we're going to make those part of the sustainability equation, the solution is not rendering these resources valueless by stopping development. It's ensuring that we have good public policy in place to optimize the human, social, and financial capital components while minimizing the environmental cost and the draw on natural capital. For the oil sands, that means in a general sense that we need to focus on public–private research, with added emphasis on greenhouse gas capture and sequestration—particularly the $CO_2$ component of that—and continued pursuit of energy efficiencies in production processes.

I'll end with a final comment that is a quote from Fred Carmichael, president of the Gwich'in Tribal Council and chair of the Aboriginal Pipeline Group, in a speech on October 24 of this year to the Canadian Council for Aboriginal Business. He stated, “I believe the Creator put the resources under and on the land so that our people can continue to make a decent living.” That comes back to the welfare and economic possibilities that these resources represent, but we have to do it in a responsible manner.

As an industry, we are committed to getting there. We're not at an end state of grace by any means. We have lots of elements to continue to work on, but you have a commitment from this industry to continue to improve, to continue to see those best practices evolve, and to work with government on some of the step change process realities that we need at the end of the day.

Thank you.

**The Chair:** Thank you, Mr. Peeling.

I think we will continue on with the witnesses and then go to questioning generally.

I'll now introduce Dr. Harvey Mead and Marylène Dussault. Dr. Mead is the president of Nature Québec. As many of us will recall, he was the chairman of the National Round Table on the Environment and the Economy. I understand Madame Dussault is a researcher as well, and she has done some work on the oil sands.

**Mrs. Marylène Dussault (Environmental Analyst, Nature Québec/UQCN):** I spent the last couple of months working on the tar sands. I did literature review and I worked on the first phases of a life cycle assessment on this subject.

**The Chair:** Great.

With that, I'll ask Dr. Mead to begin.

[*Translation*]

**Dr. Harvey Mead (President, Nature Québec / UQCN):** We did not have a PowerPoint presentation, so I hope you received the notes. Talking about the oil sands and sustainable development at the same time seemed like quite a challenge.

We changed our name last year. Nature Québec is therefore a transition. The UQCN was founded in 1981. Within the first two years, it adopted the World Conservation Strategy of the World Conservation Union, also known as the IUCN. It was at that time that sustainable development was mentioned for the first time in an international document. We have been working in this area for the past 23 years. Sustainable development is included in our charter and our primary activities. We work in the agriculture, forestry, and energy sectors.

I occasionally give lectures to the Quebec Mining Association. We work with that organization on a regular basis. Our contact with the Mining Association of Canada is much less frequent.

After listening to Mr. Peeling, I would say that, in our view, the approach taken by the Mining Association of Canada constitutes an excellent example of environmental management, as opposed to managing for sustainable development. This is also somewhat true in the case of the Canadian Chemical Producers Association, for which I serve as an auditor. This is still not a question of sustainable development. Rather, it is a matter of sound environmental management. I use the term “environmental” here in a very broad sense.

My notes on sustainable development are rather brief. I stopped developing the subject approximately ten years ago, after the publication of a book that gives 211 definitions of sustainable development. I do not wish to appear critical, but Mr. Peeling's document had a certain effect on me. Personally, I feel that environmental management is what must really be respected. It is often the forerunner.

Marylène Dussault and I prepared the notes. We will gladly answer your questions following my presentation. The French term for sustainable development is in dispute. The translation used by the Brundtland Commission, of which we were a partner and responsible member, is “développement soutenable” (as opposed to “développement durable”). That decision was made in Switzerland. We therefore have a new term. In English, the term is sustainable development. In any case, the French term “développement durable", which has been in use for approximately 25 years, is really the term that should be used. The question is rather simple. Are our actions sustainable or not?

I would now like to move on to the second point. The basic principle is that mining, in general, is not sustainable. This is not a criticism, merely an observation. The resource will eventually be depleted. The industry often responds by developing technologies aimed at exploiting increasingly smaller deposits to extract more of the resource. I believe the problem concerning the oil sands, especially oil in the broader sense, as well as coal, is that, since we have already been using these resources for several hundred years, we cannot consider the possibility that they will not last forever.

A rather popular principle is that we should exploit a non-renewable resource only at the same rate as we are developing the resource that will replace it. This could mean another non-renewable resource, but recently, this more often means renewable energies.

Four years ago, Ralph Torrie wrote a paper for the Suzuki Foundation and Climate Action Network Canada on how to manage greenhouse gas emissions. He proposed a plan to reduce emissions by 50% by 2030. According to Mr. Torrie, between 1970 and 2000, we produced more energy through energy savings and energy efficiency than by new energy production.

● (1600)

At that time, during the same 30 years, savings totaled $50 billion. Thus, we could say that it would be easy, in terms of replacement resources, to turn to energy efficiency.

With respect to the 50% reduction in emissions, Mr. Torrie did not take into account our exports. I called him to confirm. He did not know what to do about the oil sands. Yet, that week, in fact the same day that I was contacted, the Pembina Institute published a report entitled Carbon Neutral by 2020. It tackles explicitly and specifically the question of how to manage the oil sands.

The approach recommends either carbon sequestration or the purchase of carbon credits. We will come back to this matter and discuss it further. What is interesting about the oil sands compared to oil in the Middle East or elsewhere is that the input-output performance, in other words, what is produced compared to what is needed to produce it, is getting worse. In the case of oil, approximately ten barrels are produced for one barrel of energy input. It is difficult to obtain data concerning the oil sands. I asked two or three people on our energy board and they indicated it would be two or three barrels.

Carbon sequestration will further reduce the performance of the oil sands in terms of energy. This is not grounds to put an end to their development. It is a question of recognizing what I call an indicator. The fact that the production of two barrels of oil requires one barrel of input indicates that the days of oil production are numbered. This is what some people claim. I have here a few references in this regard.

It is therefore in our best interest to reduce our oil dependency. At present, American and Canadian society, and that of other developed countries, are completely dependent, whether for transportation, industrial processes or other uses. We are in a situation of increasing scarcity. The price of a barrel is currently $70. I predict that it will increase to $100 or even $150 in the near future. The fact remains that the industry is doing rather well at present.

Our first suggestion involves doing away with the tax incentives introduced by the Chrétien government in 1995-96. They totalled $8 billion over 20 years. This industry is doing very well. It must deal with all sorts of restrictions, but the fact remains that it is at the end of its reign. It does not need any incentives. The renewable energies sector, however, does need incentives. Thus, we are proposing that those incentives should be transferred to renewable energies, which would not generate any additional budget costs. Furthermore, we are becoming increasingly aware of the impact of exploiting the oil sands. The same is true for the industry, as indicated by Mr. Peeling. There is the problem of water, which is just as significant as the emissions problem. There is also the problem of the loss of areas of boreal forest.

It is fair to say that planning was completed without considering all of these consequences, although they were more or less known. It is unfortunate. This is precisely the problem. The life cycle, which Marylène discussed earlier, gives us the opportunity to determine the consequences and measures that should be taken to improve the situation or at least avoid making things any worse. In order to do so, the principles of the Canadian association should be followed to some degree.

We are also proposing that external costs be considered during the planning, and not after the fact. In our view, the only way to do this would be to resort to the polluter-payer principle, although I detest the term. “Consumer-payer” would be the more accurate term, given that the price is integrated, regardless. The cost of the consequences should be integrated into the price. The only real way to achieve this would be to create a market. The current government does not want to create a market. The previous government talked about it.

● (1605)

We are proposing that the company or the industry be given the opportunity to purchase credits when the technology used does not produce the required reductions. Such an approach would be useful in that a consumer who selects one product over another would have to pay the price. The cost would be integrated. I will come back to this in a moment and give further details on the matter.

The third problem is that we are not yet ready in terms of replacement energy. A banker who manages tens of billions of dollars in energy investments has just released a book. He asserts that Saudi Arabia does not have the reserves that it claims to have. We must prepare ourselves for a post-oil future. This will happen within the next 20 to 40 years, which may not be tomorrow, but the crisis will be upon us more quickly. The cost of oil will rise and we will not have any replacement energy. The notion of transferring incentives to renewable energy sources, which I mentioned earlier, would help to find substitutes for nonrenewable resources and promote such substitutes.

Point no. 6 of my notes responds to the concern expressed by Mr. Peeling. It is regrettable that the debate is focusing on whether or not we adhere to the Kyoto protocol or on proposals aimed at slowing or stopping the development of the oil sands. We, on the other hand, try to be much more realistic and realize that no one is going to stop it. You met with representatives from the National Energy Board last week. The figure discussed was $94 billion. During the round table, that figure was $70 billion. Barely two weeks ago, the figure was put at $150 billion by 2020. In the case of the National Energy Board, the $94 billion targeted for investments by 2015 could be rounded off to $100 billion. That is the problem with politicians, whether Liberal or Conservative. No one is going to put a stop to that. We are not here to suggest that this is what should be done. We are proposing, rather, that the oil sands be placed in a market context, which does not yet exist. At least, an emissions credit trading market does not yet exist and there are subsidies that allow the industry to avoid planning its own development.

In the Pembina report and other such reports—and Mr. Peeling touched very briefly on this—sequestration is discussed. This concerns a range of technology that has yet to be developed and tested, but that will be needed to store the carbon directly in underground reservoirs, hoping that it will stay there for a few thousand years without escaping. This is an enormous challenge and businesses are working together on it. This is discussed at the end of Mr. Peeling's document. In any case, we are not proposing that the government subsidize this research. We are proposing, rather, that restrictions be placed on the industry in order to bring everything together, to ensure that research is conducted on technology and other aspects of the production.

The Pembina report also mentions the purchase of credits. Yet, we do not even have a market. I took part in the round table with Bob Page, vice-president of TransAlta, and who also represents several companies. He appeared on television not even two weeks ago. We regularly hear that industrialists would like the medium-term perspectives to be made clearer for investment purposes. When planning the installation of piping for future oil sands development, these people do not even know whether to head towards the Pacific or the United States.

I have already mentioned Peak Oil. I find it interesting that you have put the oil sands and sustainable development together. There is no need to discuss the Kyoto protocol. That is a rather different debate, except that it underscores the problem of greenhouse gases. Matthew R. Simmons, an American banker who has been managing tens of billions of dollars worth of investments for the past 30 or 40 years and who has his own Web site, stated several years ago that he was unaware of the scope of the risk involved in his investments. For the past 20 years, OPEC has no longer been publishing the state of its reserves, its sources of supply, and so on. It is a global unknown.

● (1610)

Mr. Simmons knew that petroleum engineers were meeting regularly and publishing technical reports. He analyzed 225 of those reports, especially those dealing with the Middle East, and wrote a book called *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy.*

The author is a banker, not an ecologist. He believes that Saudi Arabia does not have the reserves it claims to have and that it is unlikely new reserves will be discovered. Even oil is much less abundant than Saudi Arabia claims. Mr. Simmons concludes that even if we have not yet hit peak oil yet, it will not be long before we do. It does not matter whether we reached it last year or this year, or whether we will reach it in five years. The decline of supply has begun and demand is increasing. We have to be better prepared than we are.

Oil sands extraction is three times less efficient than traditional oil extraction. That is what is going on in Alberta right now. It is a huge challenge, but will probably be a profitable one, especially if the price per barrel continues to climb.

How can we prepare ourselves to deal with this impending scenario in which oil becomes so expensive we have to make major adjustments to the world economy? Like you, I did not have time to read Mr. Stern's report. He is not an ecologist either. He is the former chief economist of the World Bank. He says that that is where we are right now and that the risks are enormous.

Rather than talk about sustainable development, I chose to begin from the assumption that oil is not renewable and then figure out how to deal with that scenario. The oil sands might last 20, 30 or 40 years, but we are already facing scarcity.

● (1615)

[*English*]

**The Chair:** Thank you. I'm sure that will stimulate some questions.

We'll begin the first round of questioning. We'll try to keep it to seven minutes, and we'll watch carefully how closely Mr. Cullen reaches that target.

Mr. Cullen.

[*Translation*]

**Hon. Roy Cullen (Etobicoke North, Lib.):** Thank you, Mr. Chair.

Mr. Mead, Ms. Dussault and Mr. Peeling, thank you very much for your presentations. I hope I will have enough time to ask Mr. Peeling a question, but I would like to begin with a question for Mr. Mead.

In paragraph 4 of your presentation, "Overview of the current situation", you said, among other things, the following:

> Almost entirely for export
>
> Environmental and economic impact here

and impact on society.

**Dr. Harvey Mead:**And on the environment.

**Hon. Roy Cullen:**Yes.

Last week, witnesses said that oil sands production was necessary for domestic consumption, which surprised me. Can you explain this? An American company, Conoco, is considering a strategic partnership with EnCana to buy the total oil sands output for its refineries.

**Dr. Harvey Mead:** Conoco in the United States or in Canada?

**Hon. Roy Cullen:** In the United States. This suggests that oil sands production is not really for domestic consumption. Can you comment on that?

**Dr. Harvey Mead:** I would be happy to.

I participated in a National Energy Board day of consultation that took place in May or June in Montreal. Other such days were organized in other regions of the country. The purpose of the consultation was to present the preliminary scenario in the report to be published in 2007.

Every five years, I think, the Board presents a broader outlook than what it presented during the day of consultation this year, because we only heard about the economic part. Many of those in attendance, including representatives of Quebec's ministries of natural resources and wildlife, were surprised. The Board suggested three scenarios, none of which raised any questions about the issues I was just talking about. We can only conclude that the National Energy Board is not concerned about the possibility that we could be facing a rather perilous and risky situation.

The Board said that Mr. Simmons might be mistaken, but that they had to develop a scenario based on the possibility of relative scarcity anyway. I have received only the summary of the report, which puts a lot of emphasis on steadily increasing demand. According to the Pembina Institute and Ralph Torrie reports that I quoted earlier, we can cut our emissions in half by 2030 or within 15 years, respectively.

● (1620)

**Hon. Roy Cullen:** Thank you.

[*English*]

Mr. Peeling, I'd like to talk a bit about your sustainable development model. It's a fascinating proposition, but I'd like to zero in on the oil sands. The first question is, how do the oil sands and mining intersect? I see the big companies are members of the mining association. What part do you see as mining and what part is an oil and gas project?

**Mr. Gordon Peeling:** The front end of the business for the three members we have—Shell, Suncor, and Syncrude—is mining. It's truck and shovel. It's the mining of the bitumen. The back end of the business is the separation and the crackers, the production of sweet crude, etc., and then it's into the petroleum business, and downstream, in Suncor, all the way through to gas stations, etc.

Part interest in our connection is with the mining component of the business and the best practices at that end in terms of energy efficient removal of materials, reclamation of landscapes, energy efficiency in that process, etc.

**Hon. Roy Cullen:** Thank you.

Mr. Peeling, maybe you could shed some light on this issue around...there have been a lot of people, and I've been one of them, pointing out that there are some environmental issues around the oil sands, one of them being water. Most people agree with that, the way water is used. One of the things I find confusing—and we're having more information submitted by Natural Resources Canada—is that we hear that 90% of the water is recycled. I'm getting a closer understanding of that, that some of it, maybe 80%, goes into the tailings pond.

Maybe you could comment on how, or if ever, that water gets recycled, because we have conflicting stories about the water table in the Athabasca under pressure, going down, farmers complaining, etc., and that doesn't square with the notion that we have 90% of the water being recycled. Maybe you could elaborate on that.

**Mr. Gordon Peeling:** I can only speak to three of those companies, and they're not the only operators within the oil sands, nor are they engaged in that portion of the industry to the south of their lease areas, which are in steam injection processes of removal, without excavation for the deeper deposits. But you have challenges, in that with the additional expansions and new investors in the area, they will have an initial draw from the Athabasca, while at the same time you have expansion and traditional users who are continually pushing the envelope toward a lower draw. When they put water both in the settling ponds and in the tailings area, it's to allow the fine silt to settle, and it takes time for it to settle out of the process. To the extent that there is an immiscible component of petroleum in the water, it takes time for that to settle. All those companies are investing at their research centres in Edmonton on improving those processes to increase the runaround and to reduce the draw on the Athabasca.

But there is a dynamic going on there, where some companies are ahead of others in their process, in that 90% recycle. In some parts of the mining industry, for example, at Raglan in northern Quebec, there's a different style of mining; it's 100% recycle. And that's the goal we're shooting for collectively as an industry—100% recycle. There's a very minimal draw in the first instance, but then we just keep recycling that water through our process, and ultimately, when it does get released back into the environment, it's released to the metal mining effluent regulation standards, or it is released to water quality standards, whichever is the better standard.

**Hon. Roy Cullen:** So then part of the issue is the one-time draw. It's a timing thing, on new entrants in particular, but also the timing of the water being available to go back into the system—

**Mr. Gordon Peeling:** Yes, there is a significant delay.

**Hon. Roy Cullen:** —after the particulates have settled and all that. If it goes into a tailings pond, is there 100% recycling potential of that water, or is there some loss in those ponds as well?

● (1625)

**Mr. Gordon Peeling:** I suppose there is loss back into the atmosphere during the summer, but that would be minimal. There isn't a loss during the winter. So there is not much of a loss in the system. But there is a timing challenge. It does take time for the fine particles, and silt particularly, to settle out.

I attached an information sheet to your document. I'm not sure if it answers all those questions on the region and water use.

It's unfortunate. I was just recently at the Alberta inquiry, and I know the government has put out very specific documents on water usage with the oil sands development. It's in a lot more detail, and I could certainly forward that material. Maybe representatives from Alberta are going to be here shortly to bring that material to you, but I can certainly forward that to you, if that's helpful.

**Hon. Roy Cullen:** Yes, thank you. That would be helpful.

Thank you, Chair.

**The Chair:** Thank you.

We'll move on to Madam DeBellefeuille.

[*Translation*]

**Mrs. Claude DeBellefeuille (Beauharnois—Salaberry, BQ):** Thank you for your presentations.

Mr. Mead, I am honoured to have heard your presentation, which was clear and sincere. I appreciated it very much.

The Minister of the Environment often quotes the National Round Table on the Environment and the Economy to justify the government's decisions on all sorts of initiatives to reduce greenhouse gas emissions and improve air quality. You were the chair of the round table until 2005, so you have not had the opportunity to work with the new government. The theoretical sources you quoted seem to me to be so obvious that I have a hard time understanding why your work—you were the chair from 2000 to 2005—did not prompt the government to adopt the approach you suggested, which was supported by the Pembina Institute study.

I am a newly elected member of Parliament; five or six weeks ago, I did not know a thing about natural resources. Since then, we have heard a number of witnesses. I am a little stunned by your report. It gives me the shivers because it makes me feel that we are hitting a wall. I get the feeling that the government, whether Liberal or Conservative, does not want to open its eyes and face its responsibilities, given the urgency of the situation.

You strike me as being a free thinker, a philosopher by training, so can you explain to me why, given all of the evidence you have already put forward, we are still coming up against governments' refusal to take concrete action, such as transferring fiscal incentives? Can you speak your mind on this? Why do we keep coming up against a wall, and why do we have to fight to make the government understand the evidence you have presented?

**Dr. Harvey Mead:** Honestly, I think the answer is very simple: $100 billion dollars, most of which is invested in a single province. I do not think there is a politician out there who could dismiss $100 billion.

I took notes and I consulted with people, and I am not alone in saying that we have to let the oil sands hit their own wall, if that is what has to happen.

The National Energy Board said that the major limiting factor is water. Forecasts are for 5 million barrels a day within 15 years and 3 million barrels within 10 years. Like many other people, I have reason to believe that the water issue will sort itself out. The problem is not water; it is emissions.

Marylène will talk to you about water, and you can ask her questions. We have to recognize the right to develop and the interest in developing an existing resource, but we have to impose normal market conditions, even with a Conservative government in power. That could slow down the process. The economy is so hot that even Alberta is starting to have problems. It is not like we are suggesting the idea of a catastrophe. The catastrophe could hit $100 billion in 10 years.

Deep down, here is what I think. The round table's mandate was to verify the 50-year forecast. I left when Mr. Martin came to power, not Mr. Harper. Fifteen members of the round table were replaced. The Privy Council had forgotten to renew the members' mandates, so a lot of them were replaced at the same time. Given that the previous chair was not left in place for a certain period of time, the document was put together by an all-new round table.

The fascinating thing about this document is that there is no recognition of the risks associated with the continued supply of oil, for example, which is required for exploitation. They talk about peak oil happening in 30 years.

The round table document says that there are three elements to electricity production. The first is increasing energy efficiency, which is the right way to do things. The second, which is producing energy through sequestration, presents a number of problems—as detailed in the Pembina Institute report—and entails both energy and economic costs, although the energy costs would be higher. The third is fascinating: clean coal technology.

The coal industry representative kept his seat at the round table during the changeover. Every member of the round table represented a certain group. I was the only one there who did not, and they respected that. But I think the round table made some mistakes in its analysis of clean coal technology. The energy cost of producing clean coal would likely cancel out any benefit, but I do not have any numbers to support that.

● (1630)

**Mrs. Claude DeBellefeuille:** Do I still have a little time, Mr. Chair?

[*English*]

**The Chair:** You have one minute.

[*Translation*]

**Mrs. Claude DeBellefeuille:** Thank you very much.

Mr. Peeling, if the Conservative government were to say tomorrow that everything suggested by Mr. Mead made sense and that it had decided to transfer the tax incentives to renewable energies, would that reduce the amount of investments made by members of your association in the Alberta oil sands?

[*English*]

**Mr. Gordon Peeling:** I'm not sure I'm on the same page with respect to subvention, and there is a difference between "incentive" and "subsidies" at the end of the day. And I'm not sure exactly just what you think the subsidies are to the oil industry, or to the mining industry in general, because I don't see them. The issue people like to talk about is the accelerated capital cost allowance. The accelerated capital cost allowance simply changes the timing at which tax is payable. It doesn't change the overall level of tax that's payable. So it's a timing issue.

Right now I can tell you that the mining industry—and I believe the oil and gas is in exactly the same boat with the removal of the resource allowance. The economy generally is at a 21% federal corporate tax rate. We're at 22%. We're actually paying more tax. We will be at 21% next year. We're part of a collective that says we should be at 19%. And you know that different people have different views on subsidies at the end of the day. But the reality is that what is going to slow down investment is the availability of machinery, equipment, people—the government's ability to support with social infrastructure the Fort McMurray region and invest in that human and social capital that is required.

I've gone through so many business cycles in the commodities business, both on the oil and gas, and I have more experience in minerals and metals. Although I'm an optimist and I believe in the longer-term cycle that we're presently facing because of Chinese growth, the reality is that for these commodities, they go up and they go down. We should not lose sight of the fact that although we may look at $70 oil now, we could be looking at $40 oil three months from now or two years from now. So industry has to take its investment decisions on the long-term basis, and probably quite a conservative estimate. One of the challenges we will indeed have is to address these issues of....as the government has put us on notice of intent to regulate. Clearly, we have had a long history of improving energy efficiencies. But we need to move to that next stage of capturing greenhouse gases, $CO_2$. Sequestration issues are important.

Although Harvey says it's not an issue where he would like to see the government invest significant dollars, the reality is in some of these issues they are beyond the capacity of the individual company and it's not justified. It's basic research. No individual company can get sufficient return on its dollar of investment in R and D to justify the investment in the first place. So it needs the partner, which is why I emphasize public-private partnerships in research and development.

● (1635)

**The Chair:** Mr. Peeling, I think we've gone way over time. Maybe you could just be more specific with responses to the individual questions. I'm sure you'll get all the bases covered with the number of questions around the table.

Thank you for those questions.

Madam Bell.

**Ms. Catherine Bell (Vancouver Island North, NDP):** Thank you.

I thank the witnesses for the presentations. They were very informative. Thank you for coming.

I think you mentioned that it's our job to make public policy. I think you're trying to have input into that policy, and I think that's important. I'm very concerned about a lot of things around oil and gas exploration, which you talked about. I have a question around the sustainability aspect of it.

Mr. Peeling, when you were going through the beginning of your document, my very first question was, how can the development of the oil sands be considered sustainable because it's a finite resource? I didn't really feel that, even though you were explaining it, I had an answer. I think the definition of it is that it's something left for the future, and if we use it all up then there's nothing left. So I'm curious about that aspect of it.

But I also have a number of questions with regard to how the oil sands are in the Mining Association of Canada. I think Mr. Cullen started that question, but I have some more questions on it. I'll let you just answer the first one.

**Mr. Gordon Peeling:** On the sustainability issue with the oil sands, a lot of it depends on the timeframe, because you can say yes, each individual deposit is not sustainable—you're going to run out of it at some point—but mining's been with us for 10,000 years and it's going to be with us for another 10,000 years. It's the timeframe you put things in, and it's the transformation of that capital. When that capital, and it's a natural capital, is sitting in the ground, it is valueless. It doesn't have any value until you invest in it to take it out of the ground and get a return on it. That return allows you to transform it into financial capital—that's the wealth generation component. Those rent revenues that return to government through royalties and corporate income tax rates allow governments to invest in the human resource capital.

The human ingenuity we create at the end of the day allows us to develop the substitutes and develop the different approaches that ultimately will see us use renewable energy resources at some point in the future. It will allow us to—and we're going to continue to have to—use coal. Canada doesn't need to sink one more drill hole in coal. We've got 400 years of supply. It's a cheap energy resource, but given the other dimensions to it, it will only have continued use if we solve the greenhouse gas dimension associated with it, so that we protect the other elements of natural capital, like clean air, etc.

The question is, do we have the wit to manage this in a manner that contributes to those other forms of capital in an optimum way, without damaging other systems irreparably? That's where public policy and the issue of focus have to be, and where you should want to invest in terms of what we're doing as an industry and what government should look at in solving some of these problems.

**Ms. Catherine Bell:** Okay. Onto my other questions.

You mentioned where the shovel hits the dirt, and I wondered if the whole operation is considered mining.

**Mr. Gordon Peeling:** No. Once you separate the bitumen from the sand and it goes into the oil separation process and the hydrocarbon-cracking process to create some form of oil—and it may be heating oil, it may be the sweet crude that ultimately gets further treated for gasoline production and home heating oil, etc. All those products are considered to be part of the traditional oil and gas industry, right from what they call the cracking process. These companies would be members of the Canadian Association of Petroleum Producers, as well as the Mining Association of Canada, and they work with us because they have similar challenges that the rest of the mining industry has in terms of managing energy efficient processes and the extraction of materials, managing the reclamation process, and recovery of land at the end of the day, etc. They get benefit and we get benefit from their expertise in this process, but they straddle both.

● (1640)

**Ms. Catherine Bell:** I'll go back to the sustainability issue. Mr. Mead, I wonder if you have anything to add to my question.

**Dr. Harvey Mead:** Yes. To comment on what Gordon was saying, granted that mining has been around for thousands of years, and granted that the tendency of the industry in all its sectors, I would think, but in any event an awful lot of the sectors, is to continue to look for new deposits when they run out of the past ones, that's not going to go on forever. That's quite clear. The resources on the planet are limited. Whether it's going to go on for thousands of years, as it has in the past, or not is the question. With the population of the planet having tripled in the last sixty years, with the consumption of resources having probably increased—and I don't know what the factor is over the last sixty years—something has changed rather radically. We just disagree. I don't think you want to approach the question of copper or oil or zinc as something that's there forever.

He mentioned substitutes too, and given lots of indications, sustainability and the need for substitutes suggests you should start looking for substitutes rapidly. The general tendency is to look for renewables, rather than for more of the same non-renewables.

**The Chair:** Thank you.

Mr. Allen.

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

Thank you very much for the presentations.

I'd like to ask three questions, actually, on major topics. One is on the management systems and reporting on energy use and greenhouse gases. Also, Madam Dussault, I'd like to ask you a little bit about the report you did. And the last is on renewables.

But the first one is on your management systems and reporting, which you talk about on slide 11 in your deck, and then you go on to talk about it on page 13 of your deck, specifically around emissions reporting systems, energy intensity, and greenhouse gas intensity performance. You seem to be covering quite a number of those. Then you talk about external verification for 2006. What does that mean? Who are you going to for external verification for your members to be reporting?

**Mr. Gordon Peeling:** We are in the process right now of actually holding workshops with potential companies, and they run from small environmental companies to the KPMGs of the world, to be familiar with our reporting protocols and systems so that they will be in a position, first of all, to have a certificate from us that they are a potential and accepted verifier and that they've got training in the processes that we undertake. So it's going to be a range of commercial companies. We have followed advice from our community of interest advisory panel on how to manage this process, to develop credibility with that reporting system. So it could run to quite a gamut of companies that will be approved for that third-party verification at the end of the day.

**Mr. Mike Allen:** I have a follow-up on that. In your "Towards Sustainable Mining Progress Report" for 2005, Syncrude talks about reducing their sulphur dioxide emissions and particulates by 50%. Using this reporting system—I'm trying to get this straight in my mind—if you're reporting on progress, and you're able to report on progress, what is a realistic time that the industry would be able to set targets for specific greenhouse gas and pollutant emissions?

● (1645)

**Mr. Gordon Peeling:** Historically, we've had a target on energy efficiency of a 1% per annum improvement, in terms of energy efficiency per unit of output, and that comes through our work, historically, with the Canadian Industry Program for Energy Conservation, a government-based program that has been around for quite some time. But we have developed a reporting protocol so that we understand how those energy efficiency improvements result in reductions in both direct and indirect greenhouse gas emissions.

This is work we developed with the Pembina Institute and with the voluntary initiative the government had in place in the nineties and the early part of this decade, and we've continued on with that. We feel it will put us in a good position to meet whatever regulatory requirement the government has, at the end of the day, for both reporting and target setting, whether they be caps or other types of tools with respect to greenhouse gas emissions.

By reporting, you also create the dynamic of why is company X doing better than I am, and you want to go see how they're becoming more energy efficient than you are, thereby reducing releases. So target setting will be part of this, ultimately.

**Mr. Mike Allen:** That's good. I like peer competition.

Madam Dussault, we talked about the report, and just referred to the report, and you haven't had much of a chance to talk about that. Can you give us just a brief summary of the report you did on the oil sands, just to gloss over it? And is that report available for our committee?

**Mrs. Marylène Dussault:** Actually, the report is not available because it was the first phase of a life cycle analysis. I've been working on the goal and scope and the literature review, so I had the chance to get familiar with different aspects of tar sands exploitation, from technical aspects of the extraction to the different kinds of environmental impacts. The life cycle analysis will be made. I expect it to be done around May. I'm not sure if it's going to be available for the public because it's done for a company. So I don't have really anything to....

[*Translation*]

I cannot reach a conclusion at this time.

[*English*]

One thing that is important to remember is we need to have a moralistic view of the different environmental aspects, and we only focus on one or two, but they are different. They are, of course, the GHGs, but there's also the problem of water and also the boreal forest. And sometimes we forget there are global, regional, and local aspects we have to consider, not only economics.

**Mr. Mike Allen:** Dr. Mead, one last quick question. We talked about renewables and possibly putting incentives on renewables, away from the oil sands and their companies. What types do you see in renewables as playing the greatest role, both immediately and in the long term?

**Dr. Harvey Mead:** It's mid-term, but I think solar is going to be the most useful area. Wind power right now is mature and it simply needs those incentives. In Quebec, we've proposed that 15,000 megawatts could be developed over the next 10 years. The government has decided to limit it to four. It's a policy decision rather than one that's based on economics, as far as I can tell. Biofuels are clearly interesting. There's a risk there. Ethanol from corn, whether it's positive or negative—it depends on which study you read—but I think the honest way to come out of reading the studies is it's ultimately neutral. There's no gain, probably, or not much gain with ethanol from corn. But other kinds of ethanol are interesting. The government in Quebec is planning to do research, but it's not ready yet.

● (1650)

**Mr. Mike Allen:** Thank you, Mr. Chair.

**The Chair:** Thank you.

Mr. St. Amand.

**Mr. Lloyd St. Amand (Brant, Lib.):** Thank you, Mr. Chair.

Thank you, Madame Dussault and gentlemen, for your presentations.

I have a question for you, Mr. Peeling, and then one for either you, Dr. Mead, or Madame Dussault.

You indicated, Mr. Peeling, that we as a committee would have the benefit of hearing from others who, by your own admission, perhaps are more knowledgeable about certain aspects of the oil sands. For what it's worth, at the risk of sounding as if I'm correcting you, on page 16 of your deck you talk about total federal government revenue over the period of 20 years being estimated at $79 billion. We heard last week from an acknowledged expert who indicated the actual revenue generated to the federal government would be about $124 billion. That's neither here nor there and has nothing to do with my question, but just for your own edification.

**Mr. Gordon Peeling:** Over the same period?

**Mr. Lloyd St. Amand:** I believe so. I think it was $124 billion. It was $138 billion total; $14 billion for Alberta and $124 billion for the federal government.

In any event, Mr. Peeling, you indicated on page 4 of your deck that mining is the largest private sector employer—and growing—of aboriginal Canadians. You'll know that the unemployment rate among Canada's first nations, Inuit, and Métis is disproportionately high compared to the non-aboriginal community. That's beyond dispute.

I have two questions then. In which province or provinces, principally, do you see the potential for more involvement by first nations, Inuit, and Métis? On page 9 of your deck you make reference to a respect for the “unique role, contribution and concerns of first nations, Inuit and Métis”. I'm wondering if you could focus on what potential there is Canada-wide to involve more of our aboriginal brothers and sisters. Secondly, what concerns particularly are felt by aboriginals vis-à-vis this type of development?

**Mr. Gordon Peeling:** Let me make a quick comment on that. At least I can give you the provenance of the number I have in there, which comes from the attached fact sheet, which comes from the Athabasca Regional Issues Working Group in Alberta, on oil sands. Your number may be 20-50, but it may be the 20-25 too. I'm only using that number, and your number indicates these are large returns we're talking about.

With respect to aboriginal employment, you may know there is going to be a skills shortage, and it's one of the issues I raised with this committee in the first presentation I made quite some time ago. The fastest-growing part of the Canadian population is our aboriginal population. In terms of skills gaps in the future being filled, we have to look to our aboriginal colleagues and Canadians to be a primary source of skilled labour and labour crews for our business, because we tend to be operating in remoter parts of Canada where they are resident. We have to do a much better job of engagement.

The provinces where we already have good involvement and where we clearly want to build on that.... Alberta is one. We're seeing tremendous engagement with the diamond mine opportunities in the Northwest Territories. I'm going to include the territories because we just opened the first diamond mine in Nunavut. Nunavut has seen more closures than new operations in the mining side in recent years, but nonetheless they see mining as a cornerstone to their future in terms of economic development and employment. A number of projects are in the environmental assessment process in Nunavut. They see that as part of their economic future. It's going to deliver jobs for them; they're going to be a partner in the development, so we see, clearly, a growth opportunity there.

In northern Ontario there is the De Beers Victor diamond mine.

In Quebec, I would say the Paix des Brave agreement has been a good platform for improving the engagement between the industry and clarifying ownership and partnership issues for industry in terms of investment and development. It provides a bit more clarity and certainty, so there are opportunities in the future there.

In Saskatchewan, I think a company like Cameco is doing a very good job with respect to engagement on their side, and they also are a PAR gold-level company.

That's spotty, I guess. We're trying to take those best practices and learnings. We, as an association, have worked with the federal government, both the Department of Indian and Northern Affairs and Natural Resources Canada, with the Canadian Aboriginal Minerals Association and with the Prospectors and Developers Association to prepare a community tool kit to explain mining to aboriginal communities, to put aboriginal communities in a better position of knowledge and negotiation with respect to how to engage with the industry. If they have development opportunities in their area, how can they engage to ensure there's a use of traditional knowledge, to ensure their communities' development aspirations are met by the development?

It's a challenge—there's no doubt it is a challenge—and we, as well as governments at both the provincial and federal level, need to work together to take these best practices, but also to invest more generally in aboriginal education. We can provide the jobs, and it's having that ability to have a job that is an important platform and element of convincing young aboriginal Canadians to stay in school.

● (1655)

**Mr. Lloyd St. Amand:** Thank you, Mr. Peeling.

Just very quickly to you, Dr. Mead, in response to a question, you indicated it's a matter of policy, in your view, rather than economics that has impeded or retarded the growth of renewable sources of energy. I'm paraphrasing a little bit, but that was the thrust of it.

We heard a fairly compelling presentation recently that indicated in so many words that it's all well and fine to have a wind energy program, a solar energy program, but the practicalities of wind energy, for instance—and the expert talked about how we could line up turbines across Lake Ontario or Lake Huron to our hearts' content, but transferring that wind energy to Toronto, etc., is another task entirely. I'm wondering if you have a comment about that.

**Dr. Harvey Mead:** My comment was on wind energy. Generally speaking, the subsidies to the other sectors have been much larger, both in Canada and in the United States, for the last 20 or 30 years. Generally speaking, I wouldn't say it's policy; it's economics and the lack of incentives.

Quebec is in an absolutely special situation with 30,000 megawatts, with reservoirs. The proposal for 15,000 megawatts that I mentioned was on territory where wind has been mapped by Environment Canada and some other private companies in the areas right around the reservoirs. What Quebec has as an advantage over lots of other places is that we have a grid and we have reservoirs that can take the wind when it blows and take the water when it's not blowing, so it is complementary. If you just leave it at that, it doesn't add to the total power, but that's the second step in the process. It's only in Quebec that it's policy rather than economics. The economics aspect is there right now.

I'll just add that Marylène Dussault can speak about the question of the environmental impact of the tar sands; she just can't talk about this particular study.

**The Chair:** Thank you.

Mr. Ouellet is next.

[*Translation*]

**Mr. Christian Ouellet (Brome—Missisquoi, BQ):** Mr. Peeling, it seems to me that you do very good lobby work. Clearly, your aim is to give oil production in the west a good image.

Your document and your remarks seem to be wishful thinking. One would expect that from a government, but one would have hoped for greater precision from you.

Are your companies prepared to do what it takes to obtain ISO 14001 certification? Are they ready to indicate what concrete measures they have taken or will take? What improvements do they intend to make over the next few years? Have they conducted studies on the life cycle? What externalities are they prepared to absorb? Are they preparing for the depletion of oil resources, the depletion of water, and so on?

This seems to be an exercise in public relations, but with very little precision. That was my remarks concerning the companies' intentions.

Getting back to sustainable development, which is much more important, I completely agree with the use of the French term “développement durable”. That is generally the term I use. I have been saying it for years. When we know that a resource is being depleted, why not save some of it for things that will be difficult to convert? Perhaps I am somewhat of an idealist.

I often cite the example of aluminum. We know that aluminum production will end within a few years. However, it is an irreplaceable metal in certain products. At present, we are still building bridges in aluminum with large structures. We are wasting our aluminum. Why could we not save it for things that absolutely require aluminum and do the same with oil?

At this time, 88,000 products are manufactured with oil. Those products would disappear overnight if there were no more oil. Could we not, in an ideal world, gradually reduce usage in order to make this resource, which will be difficult to replace, last as long as possible?

Do you agree with me?

● (1700)

**Dr. Harvey Mead:** Yes, we talked about this before coming here. The problem is finding a politician who will impose such a reduction, but the fact remains that—

**Mr. Christian Ouellet:** The Conservatives want to impose certain things. We completely agree with them.

**Dr. Harvey Mead:** That will take too long.

I believe the petrochemical industry currently uses 5% of the oil produced. It has been clear to me for years that this is the best way to use oil.

As for a reduction, I believe that this will come from a boost in the economy, if that goes too quickly, through the water problems that we are going to have if we exceed our capacities. If production capacity is doubled, the volume of water will be doubled. Some want to triple, if not quadruple, current production. This area of development functions in a private market context. The best way to impose a reduction is probably through management of economic interests. There will also be social interests, because the Kyoto protocol and greenhouse gases will be factors in political decisions.

Thus, in my opinion, a number of factors will slow development, which is fine, because we will need oil for hundreds of years to come. It will always be very useful. Proponents are thinking of their investments. Their amortization must extend over a certain period of time. How can this be managed? I would say that these costs must be integrated into their economic and strategic planning. Some are in the process of doing this. Companies are currently integrating these costs and it seems clear to me that this is already slowing down future projects.

**Mr. Christian Ouellet:** Mr. Chair, I would like to ask one last quick question.

You said two or three times that Ms. Dussault could talk to us about the water situation.

Could you please talk to us about that?

**Mrs. Marylène Dussault:** In fact, there are several problems.

I would first like to talk about the availability of drinking water, surface water that is recovered. We have not yet discussed it, but there are two types of recovery. One is in situ recovery and the other is open-pit mining. The latter requires a lot more water than in situ recovery, but in situ recovery uses a lot more natural gas. There are availability problems in both cases.

I would now like to discuss surface water. Consider the Athabasca River, for example. Only 90% of the water is recycled and 10% of the water is returned to the river. To produce one barrel of oil, two to five barrels of water are needed, which would all come from the river. That is a lot. In fact, I read that, in one year, they pumped in twice as much water as the population of Calgary needs to live in the same timeframe. Considering the fact that this is going to increase, double even, in the coming years, we must ask ourselves some serious questions.

Indeed, we have seen the water level of the Athabasca River go down and droughts have already occurred on the delta. I know that they are supposed to conduct studies on the minimum level to maintain a viable ecosystem. It might already be too late.

There is also the question of the glaciers. The river is fed by the glaciers, which are in the process of melting. How much longer can we maintain this rate? These are serious questions that we must ask ourselves.

● (1705)

**Mr. Christian Ouellet:** Gas is needed to melt the glaciers.

**Dr. Harvey Mead:** There is also groundwater to consider.

**Mrs. Marylène Dussault:** Yes. In the case of in situ recovery, groundwater is more often used. If we extract groundwater, that could change the pressure, which could change how aquifers are fed. Few studies have been conducted on this problem. Once again, these are questions that must be addressed.

[*English*]

**The Chair:** Thank you.

To wrap up this round, we'll have Mr. Harris.

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

I have just a couple of short questions.

First of all, Dr. Mead, Madame Dussault, and Mr. Peeling, I really appreciate your presentations today.

Dr. Mead, I believe earlier in your presentation you made a comment, and correct me if I'm wrong, but I think I heard it this way, that the government should take away the incentives they offer to the oil and gas industry and—I don't know what your exact words were—give them to those seeking alternative energy sources.

I'm not exactly clear what incentives you mean, and I wonder if you could elaborate on that. There may be some incentives I don't know about, and I'd sure like to know about them if there are some.

**Dr. Harvey Mead:** I haven't had time in preparing for this meeting to check out where the situation is right now. They were estimated at $8 billion over 20 years back, in 1995 or 1996. I'll be glad to do some checking of this and respond.

Mr. Peeling says he's not aware of them. I was talking of incentives, which are an indirect subsidy, but I can't answer you on the specific matter.

The position I was proposing is that there be no net increase in costs for the government, rather than trying to propose that the renewables get new funding or new incentives, leaving the existing ones in place. I was specifically addressing the tar sands rather than the overall sector.

On the radio yesterday, Hugh Segal was commenting that he thinks they should stay and that we should add the incentives for the renewables.

**Mr. Richard Harris:** Okay. I'm still not clear on what incentives exist.

● (1710)

**Dr. Harvey Mead:** I'll check.

**Mr. Richard Harris:** Maybe in a moment Mr. Peeling can address that, but it's my understanding that the oil sands for a number of years sat rather dormant with nothing happening. The reason for that was primarily and almost exclusively the market price of oil; it simply wasn't cost-effective or efficient in any way to try to extract the oil out of the oil sands. So I rather think the biggest incentive that keeps the oil sands going might be the market price of oil.

But Mr. Peeling, I'm not aware of—and if I'm missing something, I'd like to know—what incentives specifically are driving the activity in the oil sands. Are there some I'm not aware of?

**Mr. Gordon Peeling:** There's nothing specific that I understand with respect to the oil sands, but I'm not an expert in that sort of financial aspect.

There is the accelerated capital cost allowance. Other people have suggested it's a subsidy, but as I stated earlier, it's simply a timing issue with respect to tax, and at a high price right now, the producers in actual fact, with the accelerated capital cost allowance, are being subjected to the tax and moving from the 1% to 25% royalty rate very quickly. That's why you're getting those very high numbers of government revenue—as a result of tax exposure.

I'm just trying to think. In the mining business, there is the flow-through share issue with respect to exploration. It doesn't affect the producers; it lines up future projects. It's only available to those who are in the non-producing side of the business, so it's not something that works for the producers—although I suppose in the long run you can say it does. But again, the draw to the treasury is quite minimal.

I think there's a different issue of incentives in trying to incent investment in alternative energy sources. That's quite a reasonable public policy. I'm not quite as pessimistic as Monsieur Ouellet about the timeframe in which we will see transitions to alternative energy sources in a significant way in the economy.

We're going to have coal and oil for a long time to come. The question is, are we going to have the clean coal technologies and the sequestration results that we need so as not to significantly damage or have an effect on climate. I think that's one of the real public challenges we face, because those will remain the primary energy sources.

We still need—and I don't mean to take away at all—to continue to develop wind and solar and address those issues of how we integrate them into the grids, etc. We're doing that in the mining business. We have some of our northern operations looking at wind farms to reduce the use of diesel fuel for remotely located mines. We want to take advantage of these new technologies as well, to reduce our carbon draw.

**Mr. Richard Harris:** Mr. Chairman, I think that's the only question I had, and I know we are pinched for time today.

**The Chair:** Yes, unless you have a final question...you still have three minutes.

**Mr. Richard Harris:** Let me just ask one short one then, and talk about the efficiencies of wind power and solar power. From what I've been reading, it appears to me that the efficiency of that source of power is quite a distance away from being cost-effective in relation to the investment that's needed to produce that source of energy.

Let's take wind power, for example. You spoke about it earlier, Dr. Mead. It's my understanding that this is still far from an efficient source of energy to take the place of fossil fuels. Am I correct on that? If so, how far away is it from having an efficiency at a level where it's, say, comparable?

**Dr. Harvey Mead:** The reason for answering Mr. Allen with solar as the priority is that wind power will never be a basic energy source. It's not a constant factor; wind doesn't blow all the time.

Quebec is in a unique situation. There are some other jurisdictions that would be as well. Its present efficiency is about 40%. We've been working with specialists in Hydro-Québec's research lab with 20 years' experience, and presently it is perfectly viable economically. We were having a discussion over there.

The question of incentives is for other jurisdictions. It would only be equitable to let Quebec have the same opportunity, but Quebec would put them in today—proposals over the next 10 years for 1,000 megawatts a year, with an extra 5,000 megawatts possibly for export, and so on. Its efficiency is there already.

Countries in Europe are using it in a perfectly efficient way, economically and energetically, but you have to have a backup source. Quebec has that with its hydro grid. Most other jurisdictions don't have something like that.

● (1715)

**Mr. Richard Harris:** Thanks, Mr. Chairman.

**The Chair:** Thank you.

Mr. Peeling, did you want to add a final comment?

**Mr. Gordon Peeling:** I have one comment. There was an analysis, which just came out and is in the press today, with one of the reasons Denmark, Germany, and other countries in Europe are so successful at integrating wind power. It's partly the issue of having backup in their own systems, but in actual fact it's being connected to the international grid within Europe. When the wind dies, they can purchase from Germany or other places. When the wind is blowing and they're producing more energy than their grid can take, they can sell it and move it outside of Denmark.

When we're locked into single sources, it's this trade-off: have you got the hydro backup, or can you ease off while you've got the wind blowing, and so on?

We need a more integrated grid process to really take full advantage of the variability within the supply that wind would have for us, whereas with solar we can be a bit more predictive about it, in terms of how it's integrated and used.

**The Chair:** Thank you again.

With that, it's a little past 5:15, and we're going to move to the motion.

I'll thank our witnesses for appearing. I hope you enjoyed the contributions as much as we did.

If there are any further questions, I'm sure we can get those in writing.

Thank you again for your appearance.

We will move now to our orders of the day, committee business, and the notice of motion from Mr. Ouellet.

[*Translation*]

**Mr. Christian Ouellet:** Thank you, Mr. Chair.

This notice of motion does not concern the House. It simply aims to establish some sort of work grid or modus vivendi among us, on which we could then base our assessment of these presentations.

I am proposing this pursuant to the mission of Natural Resources Canada, as defined in the 2005-06 departmental Report on Plans and Priorities, which states:

> NRCan's mandate is to develop, implement and deliver policies, programs, science and technology (S&T) for the sustainable development and responsible use of Canada's mineral, energy and forestry resources;

pursuant to the Department of Natural Resources Act, which stipulates, in section 6:

> In exercising the powers and performing the duties and functions assigned to the Minister by section 5, the Minister shall (a) have regard to the sustainable development of Canada's natural resources and the integrated management thereof;

pursuant to the definition of sustainable development in the Auditor General Act in section 21.1, which states:

> The purpose of the Commissioner is to provide sustainable development monitoring and reporting on the progress of category I departments towards sustainable development, which is a continually evolving concept based on the integration of social, economic and environmental concerns.

My motion, which you have in both official languages, therefore reads as follows:

> That the Committee acknowledge the analytical framework to be used by the Committee in its work be that of sustainable development, which gives equal consideration to economic development, social equity and environmental conservation.

It should not be too difficult, but it would be a good idea to establish a framework that corresponds to the legislation established for Natural Resources Canada.

[*English*]

**The Chair:** Is there any debate?

[*Translation*]

**Mr. Christian Paradis (Mégantic—L'Érable, CPC):** Mr. Chair, with all due respect for my colleague, I seem to remember that, at the first committee meeting held this fall, we clearly established the committee mandate, which specifically covered these points.

I do not see the relevance of this motion. I find it redundant. If we want to study certain questions, such as economic development or social equity, all parties are entitled to inform the clerk of any witnesses they wish to call. Studies will be conducted in this way. I therefore do not see why we would adopt a motion to this effect, given that our mandate is already clearly established.

Furthermore, you have said yourself, Mr. Chair, during your speeches that, when a witness comes to speak to us about an economic aspect, we will listen to that witness but we will not ask his or her opinion on any other matters. The inverse is true of a witness who talks about another aspect of a question that is part of our mandate, which was established at the outset.

● (1720)

[*English*]

**The Chair:** Thank you.

Mr. Cullen, do you want to comment on this?

**Hon. Roy Cullen:** Thank you, Mr. Chair.

I think the motion is quite appropriate. I'm not sure it is a given, because we've had some debate in the past about whether we look at it through the prism of sustainable development or responsible development. I think the way we're looking at the oil sands is really the way we should be looking at natural resources generally, and that's in terms of how we develop natural resources in a sustainable way.

We've even heard at this table debate about the idea that if you have a mine and a non-renewable resource...it's not sustainable. I think Mr. Peeling made a very good case. Over the next 10,000 to 20,000 years, the mine is probably going to be around.

We need to make sure we understand what we mean by sustainable development. I think this is very clear. It means we have to look at how we can develop our natural resources, but that development has to be environmentally sound.

We have to look at the social considerations as well. I think that's the way the committee operates, or should be operating, without necessarily articulating it that way. It's important to put it out the way Mr. Ouellet is proposing here, and I don't think it should cause us any great hardship.

**The Chair:** We have a list.

Madam DeBellefeuille.

[*Translation*]

**Mrs. Claude DeBellefeuille:** Mr. Chair, I think that Mr. Paradis, Mr. Cullen, Mr. Ouellet and I are all saying the same thing. We are currently experiencing what will be proposed for the next issues. This is a good exercise with respect to the oil sands, because we are studying the three consequences as they apply to sustainable development.

Mr. Chair, this motion is meant to ensure that we will proceed in the same manner as we are now concerning the oil sands, for future issues to be studied by our committee, particularly, sustainable development. I believe it has been successful. We heard witnesses talk about the economic, environmental and social impact. It is entirely reasonable and complete. This motion is meant to ensure that, after studying the oil sands issue, we will proceed in the same manner for other studies. I believe we all agree.

[*English*]

**The Chair:** Thank you.

Mr. Bevington.

**Mr. Dennis Bevington (Western Arctic, NDP):** This is an interesting motion. It needs weight attached to it, of course, and it needs to be put into context.

The tar sands are a huge industry that is getting larger, and certainly the tar sands require other streams of Canadian production to make them work. We've heard that over and over again.

Essentially, sustainability is not linked solely to the site or to the product that's coming from the ground there. It's linked to a number of other things that would suggest pace and would suggest process. Ultimately, the judgment of some of these things will be based on... the sustainability will be linked to the pace of development and the processes used. That's a very complex look that you have to take at this.

I think it's correct, but to design a sustainability model for the tar sands, even within these three categories, is going to be a big job. There's no doubt about it. I think it's correct to go this way, but the resources of this committee in coming to those kinds of points are going to be a challenge.

● (1725)

**The Chair:** Thank you.

Mr. Harris is next.

**Mr. Richard Harris:** Mr. Chairman, I think Mr. Cullen, Madame DeBellefeuille, and Mr. Bevington really made the case. The fact is that what we're doing in examination of the tar sands is exactly the same thing Mr. Ouellet is asking us to do in this motion, and we're doing it based on the original mandate and the original framework. For that reason I see no need to change it.

We've discussed the economic development aspect of the tar sands. We've discussed the social aspects. We've discussed environmental considerations from a sustainability point of view. We've done all that under the mandate and the framework that we set out at the very beginning of this committee, and therefore I suggest that we can keep doing it under the framework we already have.

Consequently, Mr. Ouellet's motion would be redundant, considering we're already doing it.

**The Chair:** Thank you.

Mr. Tonks is next.

**Mr. Alan Tonks (York South—Weston, Lib.):** Mr. Chairman, I think Mr. Ouellet wrote this motion before we had the deputations today, and it's interesting that the motion actually is more applicable with respect to what we heard today in terms of varying opinions on sustainable development and the balancing that takes place in terms of trade-offs of economic against social against conservation. Mr. Ouellet should be somewhat satisfied that he sees this process more today than we have up to now. That is why he moved the motion.

I see it as a process motion. It simply says that we should attempt to be balanced, as Mr. Harris has said. The only word I would have changed here...the analytical framework encompasses a balancing of objectives, and there are always trade-offs that have to be made and decisions made to that. I don't think you can ever really give equal consideration, but you can in process. You can in terms of the kind of input you want to have. I think that's what we heard today.

Therefore, I see the motion as an affirmation of the way we should approach not only the oil sands, but also energy strategies and other issues that we are going to turn our minds to. I think it's just a reaffirmation of what we in fact are trying to do. I don't think it's redundant or academic, but from time to time you have to enshrine your first principles in your process.

Thank you.

**The Chair:** Mr. Russell is next.

**Mr. Todd Russell (Labrador, Lib.):** To differ from some of my colleagues around the table, I do believe there is an absolute need for this.

I wasn't here when there was apparently an agreement on a framework, but if I had to sit down and look at all of the witnesses who have come before this committee, I would venture to say that 80%, if not more, talked about the economics and only touched in a very obtuse way around issues dealing with the social consequences or the environmental consequences or the conservation aspects. In fact, when they discussed those issues, they only looked at them through the prism of the economics around the tar sands.

Whether it's an affirmation or not—although that would seem to be the general consensus—it is still necessary to refocus us as a committee in terms of bringing that balance. I don't see anything whatsoever out of place about the motion. I see it as necessary to refocus us in terms of our comprehensive approach.

I haven't heard the social impacts. I really haven't. We all know there are some, and we're not going to really see them in the day we're going to spend on the oil sands. Conservation and those other issues have only been touched upon; people just touch on them. We've hardly seen any expert come here to talk about conservation or environmental protection—no expert, as I would see it.

I think this is absolutely necessary.

Thank you.

● (1730)

**The Chair:** Madam DeBellefeuille, please go ahead.

[*Translation*]

**Mr. Christian Ouellet:** I believe it is necessary to adopt—contrary to what has been said, it does not exist—an analysis framework in order to prepare a report and make recommendations, and not to hear witnesses who are going to appear within this framework. We should not spend two months talking about the oil sands without making recommendations or having ideas on the matter. We cannot abandon an idea like that. I believe we must have something to back us up. This comes from the department.

[*English*]

**Mr. Richard Harris:** On a point of order, Mr. Chairman, it's obvious how the vote is going to go. I just want to suggest that maybe we can close off the debate.

**The Chair:** Are you calling for the question?

**Mr. Richard Harris:** Yes.

**The Chair:** I don't see any disagreement here. It's pretty light stuff.

(Motion agreed to)

**Mr. Bradley Trost (Saskatoon—Humboldt, CPC):** On a point of order, Mr. Chairman, I have new business.

Mr. Chairman, tonight is Halloween and it also is the chairman's birthday. I'm sure your mother was thrilled to know that it was this particular day, but on behalf of the committee, happy birthday to you.

**The Chair:** Thank you very much.

**Mr. Todd Russell:** Mr. Chair, that must have been a treat.

**Some hon. members:** Oh, oh!

**The Chair:** That's a good point to end on.

We're adjourned.

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