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Chair

Mr. Lee Richardson

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● (1105)

[*English*]

The Chair (Mr. Lee Richardson (Calgary Centre, CPC)): I notice that we have more than a quorum, and I'm going to get right into it, this being our sixth meeting on 6/6/06, the clerk tells me. Not being in any way superstitious, I won't let that trouble me at all.

We have today the Energy Dialogue Group that we were to have met in Calgary and unfortunately were unable to do that. So I'm very pleased that all of you were able to come here.

The format we have been working with would be to give you time to start. Have we talked about this? We had been doing ten minutes each. So you have talked about this amongst yourselves and sorted it out as to how you want to present.

Without further ado, then, we'll just get at it.

Hans, are you going to start off?

Mr. Hans Konow (Chair, President and CEO, Canadian Electricity Association, Energy Dialogue Group): Mr. Chairman, thank you.

My name is Hans Konow, chair, president, and CEO of the Canadian Electricity Association, and chair this year of the Energy Dialogue Group, and that's why I'm here.

[*Translation*]

Thank you for your invitation. I am going to introduce all my colleagues to you.

[*English*]

With me today are David MacInnis from CEPA, the Canadian Energy Pipeline Association; Brian Maynard from CAPP, the Canadian Association of Petroleum Producers; Robert Hornung from the Canadian Wind Association; and Murray Elston from the Canadian Nuclear Association.

We are basically the steering committee for the Energy Dialogue Group, which represents some 19 associations that have come together to create a dialogue and an interaction on energy matters.

With that, Mr. Chairman, would you like me to begin the presentation? The format we've decided on—

The Chair: [*Inaudible—Editor*]...and then we will do the questioning at the completion of your remarks.

Mr. Hans Konow: I believe all members have a copy of our overheads. I will quickly run through the presentation and try to respect a 30-minute deadline for that, and then we will be at your disposal for questions and answers.

On page 2 is the list of all the members of the Energy Dialogue Group. Our focus, as the slide indicates, is to encourage a broader debate around energy policy with all stakeholders. We do interface with the Council of Energy Ministers on an annual basis.

At the most fundamental level, the Energy Dialogue Group exists to encourage a balanced approach to Canada's energy system. We believe that what's needed in Canada are more efficient ways to ensure the development of energy resources, delivery infrastructure, and improved energy services. We recognize the need to adapt to the higher-priced reality that we are all facing with respect to energy by maximizing the choices we have, accelerating energy efficiency, and dealing with the challenges of vulnerable consumers.

Canadians and their governments need to work together to develop real, sustainable solutions to our energy and environment challenges, and I will get into many of those in the course of this conversation. We believe there's a need for a clearly articulated energy framework in Canada that recognizes jurisdictional authorities and the value of working cooperatively across governments.

On the fourth slide, we would like to bring you up to date on what we're doing within the Council of Energy Ministers process. There are four work tracks. There's one on energy efficiency, which has supporting it a working group at the assistant deputy minister level, drawn from federal-provincial governments as well as industry and NGOs. There are several studies that have been completed, and I will talk to those later in the deck. We continue to pursue information and public understanding, technology development, and more effective and efficient regulation. On the latter three work tracks, far less has been accomplished.

The fifth area is not a formal work track but a preoccupation for our industries, and that is the human resources challenges. They are rooted, first and foremost, in the aging of our population, but also in the skills challenge in ensuring we have adequate resources for the major project developments that are under way, particularly well known in the Fort McMurray area.

Slide 5, “Energy Matters”—quite clearly, it does. We're all aware of it, but it doesn't hurt to remind ourselves that energy lies at the heart of any modern economy. It's central to economic development and to productivity, it's fundamental to security and our well-being, and it's critical to environmental management. Many federal responsibilities exist, such as cross-border energy transportation, energy efficiency, R and D, nuclear, environmental files, national security, aboriginal issues, skills and infrastructure, trade, etc.

The next slide is a table of contents, and we can flip right past that to slide 7. I'll get into some of these attributes in this section.

The energy system includes everything from energy sources to energy services. On this slide, in the box entitled “Sources”, you can see some of the resources that go into our energy system, from crude oil, to natural gas, to the flow of rivers that are dammed, to the use of uranium and coal. All of those are then transformed through technologies such as those embedded in our refineries, through our hydro generators, through various processes into energy commodities. Those commodities—gasoline, electricity, natural gas—then power technologies that deliver the final end services to Canadians, be it the automobile, the light bulb, the furnace—those are illustrative. There are many technologies used that then deliver what people really come to expect when they pay their energy bill: heating, light, motive power, etc.

● (1110)

Each of those has unique attributes. For example, gasoline, motive fuel, has to be portable and has to have a high-power density to be efficient. We've struggled with this in trying to address some of the issues of the transportation sector, and there are no easy solutions.

On home electricity, again, reliability, stability, etc., nobody wants to readjust their clocks every time they come home.

On space heating, there are many options, but the degree of responsiveness and reliability are core to Canadians' expectations.

The next slide talks about long-term demand growth and what is basically the picture. I won't dwell on this slide. There are two interesting things to take away: Canada's energy demand increased by 1.5% per year between 1990 and 2003. That's a pretty typical number. If you look at the graph, the really interesting fact there is that GDP growth and energy consumption have been decoupled to some considerable extent since about the mid-1990s. That's reflective of energy efficiency in our industrial sector and structural change from high consumption industries to a more service-based economy. That's the one area in which we've seen significant energy efficiency growth.

On the next slide you see a little bit more granularity in terms of what underlies that 1.5% growth rate. You see the 1.3% decrease in energy intensity. That's the good news. On the flip side, you see that economic activity per person has actually increased, so you have 1.8% growth there, and population has increased as well. What it nets out at is that 1.5% growth figure.

Slide 10 gives us demand by sector. Again, you can see the overlay of generally rising demand. Again, different segments exhibit different velocities, but overall there is absolute growth in demand. The box shows you that in some areas energy intensity is improving. That's a good news story. Again, the most dramatic area is industrial, with a negative 1.8% average intensity decline.

Slide 11 talks about the growing supply for domestic use. We are a very fortunate country to have the energy resources we have. They are substantial. The basic share, as you can see, is 41% petroleum, 31% natural gas, 12% coal, and 13% primary electricity. Each source has its own unique characteristics and its unique production and transformation system. We'll talk a little bit more about that.

Slide 12 talks about one of the challenges we hear most about today, and that's energy affordability. What does it mean for consumers? It means a great deal to our economic competitiveness. You can see in the upper box some sectoral energy intensity examples, paper being the most dramatic at almost 25% of the end value. The value-added is energy, so the price of energy is extremely important in that business. It's pretty significant in the other three, including total manufacturing at something in the area of 6% or 7%.

It's also important for consumers whose well-being is affected by their purchase of energy commodities. In the lower box you can see there is a differentiated impact depending upon whether you're comparatively well off or comparatively challenged. For those least fortunate, energy can account for up to something less than 10% or 9% of their income, whereas for the most advantaged quartile it's about 5%, so it does have a differentiated impact on our citizens.

● (1115)

Slide 13 talks about energy affordability. The reality is input costs continue to escalate for virtually all energy forms. More remote and unconventional resources are being brought to market, and there is the ongoing need to meet our environmental goals, all of which requires investment and technological progress. So we certainly need to have a competitive investment climate. We need predictable and enduring policy that attracts investors to Canada as a means of enhancing the system's sustainability.

The reality of rising costs is reflected in prices, and policy should facilitate, in our view, adaptation by both industry and consumers. Obviously, energy efficiency is a key strategy in dealing with that. Citizens don't buy a commodity in its own right so much as they buy the services. So if we can have efficient transformation technologies at the point of use, then we can help them manage their bills. Again, the capital stock turnover at the consumer level also takes substantial time, so we need to continue the processes we have under way in improving the efficiency of consumer capital stock as well as our own.

The next slide talks about industry as a major contributor to the economy. The numbers are all big, as would be expected. Canada, as I said earlier, is extremely fortunate in its energy resource endowment. That translates into a great deal of contribution to GDP, and to our exports. We do import a great deal of energy resources as well, but as you can see, we're clearly a net exporter. We invest a great deal in the capital stock of our industry, and in terms of our companies, we're capitalized at a level of some $375 billion.

We're a major employer, and we're a major contributor to government coffers as well. The upstream oil and natural gas industry, for instance, employs something in the order of half a million Canadians and contributed $18 billion to governments in 2004.

The next slide is a bit of a replay of an earlier one that we shared with you. It speaks about the environmental footprint of the energy system. There is nothing we do that does not have an environmental implication—that's just a reality of it. Managing our environmental footprint is a key and core challenge for us; different sources have different types and different magnitudes of footprint. We affect land, air, water, and wildlife to one degree or another, so we have to focus on the challenge of balancing benefits and impacts.

Slide 16 talks about one particular challenge that gets a great deal of attention today, and that's greenhouse gas emissions. Energy is an important source of greenhouse gas emissions, and as you see from the chart on the right, the annual growth rate between 1990 and 2002 is almost the same as the energy growth rate. So there's clearly a close relationship between the two. Again, the one mitigating factor is the energy to GDP relationship, which helps to reduce the greenhouse gas emissions by improving that intensity.

The latest figures for 2004, which are not on your chart, we're told just came out. There was some 758 tonnes. That's up 0.6% from 2003. It's a relatively modest increase, and part of that is as a result of a decrease in electricity emissions. Again, there is a mix of technologies.

The Chair: Was that 0.6%?

Mr. Hans Konow: Yes, 0.6%. Those figures are from NRCan, I believe, so they're public data.

● (1120)

In the next chart we situate the Canadian circumstances that I've just discussed in the global setting. Looking at slide 18, we can see that Canada's circumstances are not very different from the global setting. In terms of world energy demand, we're seeing growth, according to the International Energy Agency, of about 1.6% per year. More than two-thirds of that is coming from developing countries. There should be no great surprise there. If we look forward, the OECD share of world demand is expected to decline to about 42% in 2030 from the current 52%. Of that, natural gas, oil, and coal are expected to provide about 83% of increase in demand.

Slide 19 talks about the world energy investment outlook. In order to meet this projected demand, estimates range in the order of $17 trillion to be invested worldwide between 2004 and 2030, about $3.5 trillion of that in North America alone. While these are huge numbers, they are certainly supportable in terms of financial markets. The issue will be more one of being able to sink that capital effectively and in a timely fashion to meet the expectations and needs particularly of the developing world and to deal with the added stress of that growth in competing for world commodities, particularly oil. That's part of why we see the prices we do today. From Canada's point of view in that setting, there's certainly no other sector in which Canada has as much weight globally as we do in the energy sector. We are a significant player.

The only other point I'd make is that in the chart on that page, the size of the electricity bar is interesting. Electrification in the developing world is far less advanced, obviously, than it is in the developed world. What we take for granted has yet to be deployed across the vast swaths of Asia, South America, and other areas. The scale of electricity investment certainly surprised me when I looked at this global data. It's actually the giant when it comes to share of the $17 trillion.

The next slide, on page 20, talks about Canada in that international setting. We're clearly a major producer and net exporter—we've noted that. We rank ninth in terms of oil and twelfth in terms of oil exports, third in terms of natural gas and second in the world in terms of natural gas exports. In uranium, we're number one across the page, and in electricity we're up in the top ten.

There are obviously regional trading patterns. Western Canada primarily exports energy, and eastern Canada primarily imports energy, which creates an interesting duality. Electricity is very much part of interconnected regional markets that cross the international boundary. We're deeply interconnected with the United States, region by region.

The next page addresses the necessary commitment Canada needs to have for multilateral cooperation. Clearly, as we've discussed, the energy system is increasingly global in terms of trade, investment, technology, labour, prices, and even the environmental footprint, if you think in terms of global warming gases. Multilateral cooperation, therefore, will be essential in optimizing the world energy system.

Multilateral international cooperation is a complement to our bilateral relationship with the United States. One area to think about that's moving more from bilateral to multilateral is the area of natural gas. Once you get into liquefied natural gas transportation, it extends sources from what was a continental relationship to one that becomes a global relationship.

North America is a big importer of oil. Notwithstanding the fact that we're a net exporter, we do import oil into eastern Canada, and we probably will become a big natural gas importer as well.

● (1125)

Canada and the U.S. are both founding members of the International Energy Agency, and we have worked on international cooperation for many years. We've negotiated provisions under the General Agreement on Trade in Services that cover energy services. Within North America, we have a North American energy working group that coordinates energy sector activities among Canada, the U. S., and Mexico.

The next slide, 22, shows Canada-U.S. energy trade. No big surprises here. Canada produces more energy per capita than any other G-8 country. NAFTA provides assurances of both market security and market access. Energy sector exports and imports have grown by roughly 12% and 10%, respectively, since 1991. We exported more than $65 billion worth of energy to the United States alone last year.

That's the international setting.

We'd like to talk a bit now about the energy future and how we see it. If we move to page 24, I think the title is probably appropriate, “Building on Success”. While we understand and recognize that we have many challenges in terms of our energy circumstances, we're very fortunate to have the ones we have, which are the challenges of abundance and dealing with the implications of abundance.

The alternative would be that we would be sitting here talking to you about energy security and how to compete for the global resources to meet our needs. Canada is in a uniquely well-placed position, given our rich endowment. But we must maintain and enhance our commitments to international trade and cooperation to be successful.

Our North American energy system is highly integrated and provides a wealth of shared benefits, but it has responsibilities as well. We need to work on the institutional framework that links Canada and the United States, and as we've discussed, the world energy system will become increasingly integrated. That provides both opportunities and challenges for Canada in terms of trade investment and expertise. We need to make sure that we prevent new barriers to trade and cooperation from forming, either inadvertently or otherwise.

For these reasons, the next slide shows an energy framework, which we believe matters. What we think we're calling for when we talk about an energy framework is a clear articulation of government's positions with respect to energy policy. We think we need to reinforce a core policy that's founded on market orientation, stable investment climate, competitive fiscal environment, and open trade. We believe there's a need to clarify the federal roles and to respect jurisdictions. We need to look at and guide spending priorities. We need to create a policy context for regulatory reform. We need to help shape climate change policy. We need to better communicate with the public so that they better understand our realities.

The next slide, entitled “The Need for Action Has Grown”, is on page 26. In recent years, EDG has identified three principal pressures: the need for a new supply and delivery capability; the need to adapt to the higher prices, which we have been discussing; and the need to find sustainable solutions to our environmental challenges. We believe that compared to even a year ago, all three are more pressing today.

In looking at those on page 27, it all starts with demand. Energy demand in Canada, as I mentioned, is set to grow between 1% and 1.5% per year. Our economic partners’ demand is also growing, so our export markets are looking to Canadian supply. There's lots of opportunity, and we are viewed in the world as a reliable supplier. But demand growth, combined with tight supply, bring policy and political challenges in terms of affordability, reliability, and environmental impacts. In our view, therefore, energy efficiency is a strategic policy issue, and we strongly support it.

● (1130)

The next slide looks at energy efficiency. As I mentioned to you earlier, within the energy ministerial process, one of the work tracks is energy efficiency. There is good engagement on the part of governments, both provincial and federal. Industry has sponsored two studies, one on the energy efficiency potential and another on measurement and data. The results from these are portrayed here.

We hired the two best-known research houses, Marbek Resource Consultants and M.K. Jaccard and Associates. One is a top-down kind of modeller and the other a bottom-up modeller. We locked them in a room and told them they couldn't come out until they came up with some answers, which they did.

What they tell us, when they look ahead at an achievable potential range for energy efficiency out to 2025, is that it would be somewhere in the range of 3% to 10% of total energy demand. That may not sound like a lot, but at the top end that is 50% of growth, so it's a very substantial amount.

To achieve the top end of their forecast would require social engineering and other dramatic interventions. For those who think energy efficiency is something that can be easily developed and delivered, the message we got from these studies is that it's hard work, like everything else. It's hard work that has to be done and that we are committed to doing, together with consumers, but the scale of it is such that it's no magic bullet. It's part of a portfolio of strategies that will deliver solutions. It's not, on its own, the answer to our challenges.

Energy savings, as estimated by the consultants, could range anywhere from $3.2 billion to $15 billion in 2025.

What other approaches can we look at? We certainly recognize the trend since the sixties towards greater energy supply diversification. If you look on page 29, you can see some of the trends of the different dominant fuel cycles that have worked their way through the economy. Each cycle is less dominant than the last one and lasts a shorter time. Until today there is a more balanced—I guess would be a way to look at it—portfolio of inputs. Oil is still number one—the red line. Natural gas is number two. Hydro and nuclear are down there in third place. And coal is just below that.

All of these, as well as the emerging renewable technologies, particularly wind, with the highest growth velocity—all of the input opportunities—will have to be developed and represent part of Canada's diverse and abundant supply mix.

The next slide is entitled “New capacity needs new investment”. Clearly we talked about some pretty large numbers being sunk into energy systems. Investment will go where opportunities and returns are best, and investors look for a stable, attractive investment environment.

The biggest constraint in terms of timely sinking of new capital has been approvals processes; that's across the board, with all the technologies. There is a complex web of regulatory processes that have to be navigated. Some good work has been done in trying to create single-window approaches, but much remains to be done. Our timelines for major projects are still up to a decade and beyond in length, and even routine, smaller projects can take several years.

Another issue for us, and an extremely complex one, is that of the aboriginal relationship: from land claims, which are certainly not the purview of industry but can become barriers in some of our projects, to working with native communities on community acceptance of projects, to sharing of benefits and sharing of jobs.

The good news is there are some tremendous opportunities, because we do our work increasingly out in regions where native populations are dominant and where we are therefore in a position to deliver jobs to native communities.

Looking at the bottom of the page, we believe there is a need to breathe new life into regulatory reform, looking for effective as well as efficient and timely regulation.

● (1135)

On page 31, environment and energy need to be linked, and indeed they are linked. Energy is the biggest environmental issue, and environment is the single biggest factor in our energy future. This joined-at-the-hip condition is a reality that we simply have to face up to and deal with. Years of climate change policy that did not fully appreciate this reality have not met expectations. A new approach, in our view, is needed. The linking of files can help stabilize energy investment, environment, and, at the same time, produce real gains for GHGs and air quality. Climate and air quality have to be dealt with, we think, in the near term, and both can only be dealt with successfully, in our view, within a coherent energy framework.

How do we address some of these things? Technology is the critical variable, both for energy and for the environment. New technology is needed across the board in terms of dealing with our fossil resources; in updating our nuclear capacity; in bringing hydro to market; in advancing our rapid wind build-up; in addressing geothermal opportunities, fuel cells, transmission, automated and smart distribution, and more efficient technology at the end use. Across-the-board technology is an absolute key to achieving our goals.

We think there's a federal role here, which is a critical one. NRCan has many programs, although limited resources, and can partner with both provincial governments and with the private sector in advancing these technologies. Overall, energy technology has been a relatively poor cousin in the federal technology portfolio. However, we think that should be addressed.

On page 33, people and skills, as I mentioned earlier, are a growing bottleneck. We're all familiar with the stories from Alberta of rapid growth and constraint due to difficulty in getting enough skilled individuals on sites. It's certainly driving up the costs of projects, but it's spreading out to all industries and in all provinces. Energy, and natural resources more broadly, will need a share of the federal effort in proportion to our continuing role in the economy. It's not only industry that is under pressure, but also policy and regulatory processes. The complexity, the number, and the scope of the projects that these processes are now facing mean that the capacity of many regulatory authorities to process things in a timely fashion, even if they wanted to, is constrained. The federal government, in our view, needs to ensure that policy and regulatory capacity for agencies under its aegis is appropriately taken care of.

All of the things we've been talking about are predicated, of course, on a level of public support. Public opinion on energy is a mass of contradictions. People, for obvious reasons, want it to be cheap. They want it to be perfectly reliable, do not want any environmental impact, and would prefer it to be built in somebody else's backyard. It's just a reality that we all share. It's rather hard to get away from it, but I think it's important that we don't indulge in rhetoric that suggests there are easy solutions, because there really are none in grappling with these difficult and complex issues. But neither is it hopeless. We need I think a commitment to a steady effort to reframe our messages and to communicate information clearly to the public in various ways. Information needs to be readily available, needs to come from trusted sources, and of course needs to be reliable.

We are prepared as an industry to step up. We've been trying to power up a number of sites, including the Canadian Centre for Energy Information in Calgary, but we do look to government to play a role. One of our concerns is that key data is at risk in terms of funding StatsCan data gathering and the analytical capacity at NRCan.

● (1140)

It's important that all Canadians have accurate data in order to make their own judgments with respect to the propositions we place before them.

So in summary, let me just say that we're fully engaged. This is part of that kind of process. We welcome it. In organizing under the Energy Dialogue Group, we've contributed to the deliberations of energy ministers, we've developed a perspective on an energy framework, we are participating and driving the energy efficiency and information agendas within that process I described to you, and we are reaching out to all stakeholders and parties to engage in a broad discussion.

With that, I thank you for your patience and look forward to our conversation.

The Chair: Thank you very much.

Before we continue, I just want to make further note of the meeting that was previously scheduled for today that was to have occurred in Calgary. We were going to have a more extended version of what you've just heard—and I hope we're able to do that at a future date—but in addition to that, we were also going to hear from the Pembina Institute for Appropriate Development, I suppose, by way of some balance on some of these issues.

You mentioned in your remarks the energy efficiency work tracks you're on. I met, on behalf of the committee, with the Pembina Institute this morning and will provide some of that information to the committee. I hope we'll have a future opportunity to hear from the Pembina Institute. But they did mention a dialogue group they were also involved with. You mentioned ADMs from the federal and provincial governments. Could you maybe bring the committee up to date on that group? We may want to hear more about that.

● (1145)

Mr. Hans Konow: There are several groups that are involved in energy efficiency. The one I was mentioning is the assistant deputy ministers' steering group on energy efficiency under the energy ministers process. It brings together, as I mentioned, governments—all levels—NGOs, and industry. It began its work by looking at two foundation documents that we shepherded through the process I described to you, one on energy potential and one on metrics in reporting, because data does matter, as we've noted.

It's also looking at transportation through a separate subgroup, and it will now begin to orient itself towards what its next goals would be based on having created a foundation of information. We'll see where that takes us. So it's in its early stages of working its way through an agenda.

There's a separate group under the energy sustainability table exercise, and that's another government-industry-NGO working group that's looking at a long-term agenda for energy efficiency. It's in its very early days.

So there are a lot of processes going on that are looking at different aspects of energy efficiency. Those are two I'm familiar with.

The Chair: I just wanted the committee to be familiar with that, because we get into questions, and that is partly the purpose of your visit here today and of our deliberations over the past month and over the past couple of weeks. We're looking at a broad cross-section of natural resources in the country and we are looking for specific topics to pursue at greater length. So it's helpful for us to know what else is going on out there.

You spoke about an energy framework. That's one that seems to be recurring here. There's also the relationship with the environment that may have to come back to this committee as well in terms of an energy framework, environment, and balance. So I was pleased to hear that.

Without any further ado, I'll get on to the questions with the committee. We've established a format that begins with the official opposition.

We'll hear from Mr. McGuinty.

Mr. David McGuinty (Ottawa South, Lib.): Thank you, Mr. Chairman.

Good morning, gentlemen. Thanks for appearing. Perhaps I can fire out a couple of questions and then you can decide amongst yourselves how to answer best.

Post-election there's been a lot of talk that's been very confusing for Canadians about the Kyoto Protocol—our obligations thereunder, how far emissions have increased. The UN says 24, the government says 36. Yesterday the Minister of Justice actually said on the floor, in a debate related to other matters, that there was no evidence underpinning the Kyoto Protocol. He actually said that.

First off, what is the position of the Energy Dialogue Group on the Kyoto Protocol? That's question one.

Two, Ontario is now running a series of advertisements on television about conservation costs being lower than generation costs. Just as we know that $80 oil is having a direct bearing on the economics of oil sands, I guess we're to assume that this kind of cost is also having an impact on potential conservation technologies, conservation efficiencies, and so on. Perhaps you could comment on that.

Third, why aren't you called the Energy "and Environment" Dialogue Group? Why wouldn't, for example, environmental groups be working with you hand in glove to come up with a more inclusive position on energy, going forward?

Finally, you talk about efficiency in metrics. Can you tell us how far your sectors have gone in terms of metrics—things like energy intensity, materials intensity, water intensity? We can't meaningfully compare your industries now. We can't even compare companies within your sectors. It's often apples and oranges, bananas and grapefruits. Can you give us some idea of how far the thinking has gone in metrics?

● (1150)

Mr. Hans Konow: Thank you for those questions.

First, you were asking about Kyoto. I guess I'll take it from the top, and then I'll ask other of my colleagues to reflect on it. I came to deliver the opening presentation, but others have insights that they'll want to share with you as well—

The Chair: I'm sorry to interrupt, but perhaps I can introduce everybody, just for the benefit of the committee.

We have David MacInnis, president of the Canadian Energy Pipeline Association, prepared to respond.

It is not Pierre Alvarez but Brian Maynard who is here for the Canadian Association of Petroleum Producers.

Robert Hornung is here as president of the Canadian Wind Energy Association. I should add that, really as a backup to this group, Robert will be appearing before the committee on June 13. You can go in depth with him then on alternative energy sources.

Murray Elston is president and CEO of the Canadian Nuclear Association.

I see we also have some supporting cast in the audience. They could probably be called upon to answer too.

Again, I'm sorry to interrupt, Hans. Please continue; you have at least two minutes left.

Mr. Hans Konow: Okay. I will try to be quick.

First of all, we don't have a formal position on Kyoto. We are doing some work to try to bring together some views on climate change and Kyoto. Each of the respective associations have their own positions on Kyoto.

The point we're trying to make here is that we have talked a lot and have done relatively little effectively. We think there are strategies that make a lot of sense in terms of the longer term, dealing with real emissions from real projects. When we looked at some of the challenges facing us in terms of the Kyoto timeframe, and being able to reduce absolute emissions from existing projects, we ended up with a clear recognition that the only way we could meet the targets would be to buy our way to compliance, i.e. to buy offsets in order to comply with our obligations.

The electricity industry, and I'll speak for that, tends to have infrastructure that operates for 40 years or beyond. We can't turn it on or off overnight. I think the good news is to look at the technologies on the horizon. In terms of electricity, we're almost 75% non-emitting, so we're looking at a distinct slice of our fuel mix, largely based on coal but some natural gas, that we have to deal with.

There are technologies we can see available to deal with those, but they will take 15 to 20 years to prove commercially viable and deploy. If you look at the electricity system of the far distant future, you will see a world in which our emissions will be extremely low. There is potential to deal with this as climate change in a climate change sense of timeline. Within Kyoto, we would have to buy our way to compliance. I'll let others respond for their sectors.

Your second question was about conservation costs lower than supply. There certainly are conservation or energy efficiency opportunities that are lower than some supply costs, but you can't make a blanket statement about it. It's a curve like supply curves and demand curves. They are all pretty much one and the same.

Our view, and why we call it a strategic opportunity, is to harvest the lower ends of the curves and move up as the price of energy resources move up. If we're sensible about it, we optimize the system and we optimize the purchase strategies of consumers in ways that minimize price shock to these folks. I think we have to create an integrated approach to demand side and supply side opportunities.

On the third, energy and environmental groups, and why aren't we the Energy “and Environmental” Dialogue Group, it is because we came together under energy ministers. As a mechanism we came together originally as the voice of the energy industry, whereby instead of 19 talking heads, they got one. That was greatly appreciated at the time, but we have been reaching out to environmental groups. We sit down on a regular basis with our colleagues in environmental groups and talk about what we're doing, they talk about what they're doing, and we look for areas of common opportunity. And we will continue to do that.

In terms of metrics and energy intensities, I must admit I don't have much of an answer for you. We depend, in electricity, at any rate—and I'll let others speak for their data sources—to a considerable extent on government sources for the raw input. We do studies, such as the one I cited to you. I have not seen anything that we've done recently on energy intensities per se, beyond the trend lines I displayed to you. There probably is work done by member companies in terms of technologies at the consuming end, and work with customers in terms of driving energy efficiency from the bottom up, as it were, but gathering all of that input and refining it into some usable numbers, we have not done that to date.

I would open the floor to others on those questions.

● (1155)

Mr. David MacInnis (President, Canadian Energy Pipeline Association, Energy Dialogue Group): If I may, Mr. Chair, with respect to Kyoto, I think Canada is getting off base. The issue isn't about the Kyoto Protocol; the issue is about climate change. The fact is, I think all parties recognize that there's an issue and it has to be dealt with, and we're allowing the debate about the mechanism to get in the way of actually taking action. So I think we all would agree here that we need to take action.

Is conservation cheaper than production? With respect to energy demand in this country, it's growing significantly, and just as we need all sources of energy supply in order to address that demand, we also need to utilize not just supply methods but also conservation methods. So again, my message is that it's not one or the other; we need both approaches.

I think all of it can be summed up in your question of metrics. There's a real issue here in Canada about the ability to develop effective public policy without the necessary metrics that go behind it. At the federal level I'll cite an example. In 1995, under program review, Natural Resources Canada lost 52% of its budget. In a program review process several years later there was another significant cut. The ability to measure and analyse was lost as a result of this. I think that's an example of some capacity that needs to be added back into the system in order for it to be able to produce the data that we all need to judge what we should do and how effectively we are doing it.

Dr. Robert Hornung (President, Canadian Wind Energy Association, Energy Dialogue Group): I'll add a comment on Kyoto. Hans is correct to note that as the Energy Dialogue Group we do not have a position on Kyoto. I think it is important to note that the Energy Dialogue Group has, as a group, stressed the need to actually move forward on this issue. And I think all members of the group recognize that we all have a role to play.

At the end of the day, there are differing views among members with respect to the mix of potential solutions or the timelines, but I think we're working to try to find some common ground with respect to policy frameworks that we can all agree on that will enable us to move forward with a more sustainable energy system going forward.

Mr. Murray Elston (President and CEO, Canadian Nuclear Association, Energy Dialogue Group): I think it's pretty fair to say that each of us representing our industry, coming together on this, recognizes that we can play a role. Obviously, nuclear has an interesting role to play with respect to emissions, but I think the one thing that we haven't really chatted too much about, although we're getting there in hinting a little bit at it, is that we shouldn't be necessarily looking at our current mix of any of the generation types of technology, which Hans has identified, and advances in the technologies will probably make some gains for us. We will be looking I think more securely at competitiveness for things like hydrogen, for instance, as we move further into a higher level of cost associated with some of our fossils.

I think we tend to look too closely to today. If this committee can have a bit of a longer-term strategic orientation that helps us move into some of that transition, we will I think measure our progress on climate change in a bit of a different way than we tend to look at it today. Obviously, action, contribution, and transition are the three key areas.

● (1200)

The Chair: Thank you.

Thank you, Mr. McGuinty.

Mr. Ouellet. Again, we'll try it for five minutes, but we have a tendency to go over on the first question so I'll let you do the same.

Then we'll have Mr. Bevington when these questions are completed.

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

My question would be about the message an industry group like yours gives to the general public or to a committee like this, namely that you don't consider other energy too much, except as alternatives. Although there is a sun energy industry, a geothermal industry, and also a biomass energy industry, you don't include them. You see that they're small players and you don't want to bother with them. You call them alternatives.

In all your figures, we don't see those energies, and we know for climate change and other reasons that those energies are major energies. They're the ones that are going to come to last. You say somewhere that 83% of the energy comes from natural gas, oil, and coal. Yes, right now, but for how long? This you haven't mentioned. I would like to hear from you about that.

Don't you think it's a shortsighted view to think that regular energy will be the energy of tomorrow? You say that industry is prepared to step up. I'm sure you are, but still you leave those energies as alternatives. I don't think you'll do much for the future.

I'm very happy that you talk about energy efficiency. As some people said, we know now that it's cheaper to develop efficiency than to produce new energy. But if we only take geothermal energy, there is as much energy in geothermal as maybe there is in gas right now in Canada. I agree with you that government has to take a leading role to make a real energy framework, but when you come here and you don't mention those energies—even the passive solar energy.... I know why you don't talk about it, because it's not an industry, and it never will be, but it's an energy. It's a very important energy.

I would like to ask you one question for which I imagine you will have a good answer for me. As for the alternative energies, I'm not sure you will. You say that Canada is a leading exporter of gas. I don't know where I found that—yes, on your slide 20. What would be your viewpoint, then, on importing liquefied gas by boat from Russia, which is being prepared to be done in Canada, if we already are the second largest natural gas exporter? Do you see any rationale in this?

[*Translation*]

Nor do you mention stock-outs. Somewhere in your slides, you say that Canada's energy future must be secured. Canada's energy future, however, does not rely solely on sustainability, but also on sustainable development. The quality of life of future generations depends in large part on the energy industry. Nowhere in your text is there mention of the energy stock-outs concerned here.

There is also talk of overconsumption. But I did not see that anywhere in your text. I am not talking about energy efficiency, but about overconsumption. There is talk of all the rolling stock that overconsumes, of nighttime lighting. Canada, including Quebec, consumes more light at night than any other country in the whole world, even more than the U.S. There is no mention of the energy wasted in transit in pipelines or in electrical transmission lines, which should be improved, and little emphasis is placed on that extraordinary form of energy, namely geothermal energy.

When it does not mention that Canada has to reduce its unnecessary consumption of energy, the energy industry is not providing a complete picture of the situation.

● (1205)

Mr. Hans Konow: Thank you for your comments.

[*English*]

I will respond in English to be clear.

First of all, if you look on our page 2, amongst our members are the Canadian GeoExchange Coalition and Hydrogen & Fuel Cells Canada. We have these so-called alternate members; they're full members of the Energy Dialogue Group.

The only point we were making about solar, sun, biomass, etc., and the reason you don't see a large number on the chart, is that these represent less than 2% of total supply. It's not to comment on them in any way negatively.

As I mentioned, wind is the fastest growing technology. It was an "alternate" technology, in the sense of an alternate renewable technology, because our core renewable technology is large hydro, for which Canada is well-known—famous—and which represents close to 65% of our electricity system. Our major renewable is large hydro; we believe wind is the fastest growing.

Biomass is substantial. It tends to take place in industrial settings, where it's used as byproduct from forest products and activities, etc.

Do we think that biomass, for instance, or solar is in the near term going to replace the core technologies? No, we do not. Nor do we see anywhere in the world projections of that sort. We think, when we look at what the International Energy Agency is saying and what virtually every global think tank is saying about the energy sources over the next 20, 30, 40 years, whether we like it or not, we're still going to be in a world that's based around a heavy dependence on fossil fuels, with growing contributions from the renewable sector from sources such as wind, and from nuclear, but we will not see a massive transition to biomass or sun, given the cost points of those technologies and the land use implications of some of them.

So do we represent energy for tomorrow? Absolutely. We're committed to representing the views of any and all providers of those services, but realistically speaking we are not going to see a huge transition in our core technologies, in our view, over the next 15 to 20 years.

With respect to passive solar, sure, it's a very effective strategy. It should be part of the energy efficiency strategy. We're very strong supporters of changes to the building codes to facilitate the use of passive solar and other technologies. I think I've made the case that we believe energy efficiency is a strategic theme and that we should be engaged in and committed to it.

You asked a question about importing natural gas via LNG. Our view is that economics and markets determine which sources supply which loads. Given the relatively tight supply situation for natural gas in the near term, we see LNG as likely an important and growing contributor in North America, but equally we need to build our pipelines to the north, we need to access the gas reserves that exist, we need to take advantage of what is available in North America.

Playing only one card is probably dangerous, because nobody can predict when those projects will be delivered. That's why we need the regulatory efficiency and coordination we talk about. So we've taken, quite deliberately, a strategy that says we discriminate against absolutely no option. Every option should be in the basket, and the relative importance of those options within that basket of energy resources should be determined by market realities. That way, we've been able to be inclusive, and frankly, we think this creates the flexibility to get us past unanticipated problems that emerge, with specific solutions.

● (1210)

I'm afraid I had trouble with your last question because my translation device was not working, but I think some of my colleagues picked up on it. Perhaps I will punt that one to them and let them respond.

Mr. Brian Maynard (Vice-President, Stewardship and Public Affairs, Atlantic Canada, Canadian Association of Petroleum Producers): Just before we do that, and to come back to the basic point, we see energy demand in this country growing by 1.5% annually. We see that forecast into the future for a significant period of time. That is new demand: people driving cars more, and having more televisions and computers in their homes. We are not even touching on the significant investment that has to go into the ground to refurbish units that generate electricity. We are not talking about new transmission lines, or anything else. There is a significant reinvestment potential, so the underlying point is that we need all sources of energy into the future.

You speak eloquently about geothermal, but we have not yet figured out a way to power a car with geothermal energy. It can provide space heating. It can provide heating in homes and buildings like this, but the beauty of oil is that it is portable. It allows us to fuel our planes, boats, trains, and automobiles. It has a very high energy content. It is very efficient and relatively cheap, in comparison to many other sources of energy.

It is our underlying principle that given the increase in demand worldwide and nationally, and given the need to replace significant sources of existing energy, all sources of energy will be absolutely critical into the future. It is not just this energy association, but worldwide we see the same situation.

That is why all energy components have come together as a group, including renewables and other sources.

The Chair: Mr. MacInnis.

Mr. David MacInnis: On importation of LNG, there is a real opportunity there for Quebec. There are two proposals: Rabaska and Gros Cacouna. There's a proposal in New Brunswick and one in Nova Scotia. There are opportunities here for Canada. Some of that product will go to supply the increasing needs being generated by Canadians, but also by the U.S. There's an opportunity here on that front for Canada and Canadians.

Around your comment about too little emphasis on renewables and alternatives, there are really two questions here. The first question is whether there is a future for renewables and alternatives. I would emphatically say yes. That's why, for example, members of my association, the Canadian Energy Pipeline Association, are buying into power generation projects in the nuclear, wind, and solar sectors. It's why some of my member companies have decided to partner up with fuel cell manufacturers and hydro companies. There's a need for a fully diversified mix of fuel supply, and they see the opportunity there.

The second question is, when does it get developed? That's the issue. Right now there's development under way, but save for wind and nuclear, for example, it's looking pretty far forward. I suggest that companies are making the investments in anticipation of a changing fuel source because they see opportunity there.

● (1215)

The Chair: Thank you very much, and thank you for the question.

Mr. Ouellet, I should also mention there will be a subsequent meeting on June 13, a week from today. We're inviting representatives from other alternative energy sources than those that have been discussed today. We have also asked the parliamentary liaison for the department to ask the officials who will appear to specifically comment on biomass and thermal. So bring your questions back.

Mr. Christian Ouellet: I knew that, but it's never a good thing to separate industries like that. As long as they're separate, it will always be a very minor industry.

The Chair: All right. I think the point was well made.

Mr. Bevington, we'll try to start with five minutes.

Mr. Dennis Bevington (Western Arctic, NDP): Thank you, Mr. Chairman. I'll try to be as brief as possible.

Thank you, panel, for being here today. Certainly energy is at a point in Canadian economic development where we're making some very broad and significant choices. That leads me to my first question, which I'll put out to you.

You talk about critical variables in making decisions about energy, and you mentioned an energy framework. Does this group believe we need a national energy strategy that can drive the industry in the correct directions with the correct values being attached to the directions we take?

That plays back in so many fashions. It can play back in energy efficiency, of course.

I went through the numbers you had given, and I thought 10% was a little bit conservative, considering that you were anticipating that the best-case scenario for energy efficiency was a reduction of almost 1,000 units out of 6,300. That's more like 16%. That was curious, but I do think there is a lot in energy efficiency.

If you look at the Japanese and the Swedish in terms of the efficiency of using fossil fuels for generating electricity, you'll see that their percentages are considerably higher than ours. If we're retooling into our production of electricity from these sources, we should be putting those values of efficiency very high, and it certainly could play there in making it energy efficient in that regard.

I want to touch on the natural gas industry, because of course the figures that the National Energy Board put in projection of supply and demand for natural gas show us in a crisis in natural gas by 2015 to 2020 in Canada, bearing in mind that we have some obligations under NAFTA. So we'll be in a crisis of supply, whether we bring in liquefied natural gas, whether we bring coalbed methane on board, or whether we use all the alternatives that we have available, if we don't have a massive program of energy efficiency using natural gas.

Then we go to liquefied natural gas, and when you attach it to values, say, at the heart of the modern economy, which is central to economic development and productivity, we're talking about importing another source of fossil fuel. We're importing gas and exporting our economy. In terms of our fundamental security and well-being, we're taking on another imported energy source, and that's certainly not providing security to Canadians critical to environmental management. We're transferring the greenhouse gas emissions that are required for the production and distribution of a liquefied form of natural gas over to another country. So when you look at it in terms of your values, this is something we have to take very seriously, this new energy form that we're considering for Canada and that you've promoted a number of times in your document.

Oil sands policy is another very important issue right now. It relates back to the production of hydrogen, interestingly enough, because, of course, Fort McMurray is the largest producer and user of hydrogen in the world. A partial problem we have with the oil sands is that we're using natural gas to produce hydrogen, where there may by renewable or more acceptable forms of production of hydrogen that we could look at.

However, we have taken a hands-off policy since 1995. The Chrétien government, in conjunction with the Alberta government at that time, instituted some very large tax and royalty breaks to these companies—when of course oil was at $12 a barrel; we're now at $70. Perhaps this is causing an imbalance in our energy mix right now in Canada and the direction in which we're going, because we've favoured one energy industry over others. It may have been appropriate in the 1990s, but obviously there's some question about its appropriateness now.

● (1220)

I am sure another one you talked about deals with coal, sequestration of carbon dioxide. A very good MIT study looks at the nuclear or the wind industry as being cost-competitive today with any potential sequestration of carbon dioxide. Are you suggesting we should wait 15 or 20 years in moving on our coal industry when we have more viable options right now in the renewables or in the nuclear industry, which are cost-competitive right now with the projections they have from sequestering coal from combined-cycled plants?

Those are a number of questions, and I'll leave it at that.

Mr. Hans Konow: Thank you for those questions. I will invite my colleagues to address a number of them.

The first one was framework versus a national energy strategy with set or determined values embedded in it. Our view, which runs through the presentation, is that the track record of the former national energy policy as a value-determined strategy speaks for itself. It's not some place we want to go back to. We think markets do a much better job of allocating resources appropriately. No, we do not see a framework in the sense of a deterministic strategy. We see a framework in terms of an articulated set of government policies, and understanding those and then fine-tuning them to optimize investment conditions to ensure that markets are allowed to work well.

In terms of the last question—and I want to link it to markets, coal sequestration and its cost structure—about why we would do that when we think wind, for instance, or other alternatives would be cost-competitive with those projected costs, again, I think if you let markets work, they will either select for or against a clean coal strategy in future. If other alternatives are more economic and more attractive, they will emerge as the winners and those that are more expensive will not tend to flourish.

In our view, we in Canada think we have an abundant coal resource. If we are to use it, we have to make it environmentally compatible with our future commitments and expectations. There are technologies that would allow us to do that. If they are cost-competitive and can be made reliable and cost-competitive, we should use them. If we cannot get to that point, then we won't use them. It's that simple.

Efficiency based on Europe and Japan—when prices in Canada reflect those in Europe and Japan, we will see the same technologies deployed here. It's only economically rational that the technologies deployed address energy in the same way as other inputs. We optimize toward more or less energy depending on the price and the price of the technology choice you have. The trend is certainly toward a standardization in products and equipment that is more globally consistent, so European and Japanese products and equipment standards for efficiency will increasingly be interchangeable with ours in North America. I see that as closing the gap. At one time, we had huge differentials in energy prices.

Today those prices are coming together and technology is developed globally. All the manufacturing, the big equipment, most of the motors that drive manufacturing and industry come from a limited number of global technology sources. When you map technology you find you're going back to core technologies, and generally we see a closing of that gap through international standardization, another thing we are adopting in Canada. I sit on the board of the Standards Council of Canada. One of the things we do a lot of is adopting international standards for equipment; we see more and more of that.

I will pass on the natural gas crisis question—-the LNG, the oil sands, and the oil subsidies questions—-to my colleagues who are more directly involved.

● (1225)

Mr. Brian Maynard: I'll take the natural gas supply and oil sands policy and leave liquefied natural gas to Mr. MacInnis.

The numbers you referred to on natural gas are a reference from the National Energy Board about natural gas reserves. Natural gas reserves are what are technically and economically achievable today, and you're right, it represents today's reserves. Identified reserves that we can book represent 10 years' production.

But our resource base is far more significant than that. There is in excess of a couple of hundred trillion cubic feet in the western Canadian sedimentary bases covering British Columbia, Alberta, and Saskatchewan; we're producing six trillion cubic feet annually. A chart I'm looking at right now shows the remaining resource base as 538 trillion cubic feet, which represents close to 90 years of annual production.

We have to take into account that we are moving into more non-traditional areas. Coalbed methane represents a significant resource. We have drilled only a small number of wells and produced very little in terms of coalbed methane in western Canada. Our trend is to spend a lot of time, money, and technology on coalbed methane, and we expect coalbed methane to represent a significant growth area in the future.

Similarly, we have gas in the north, we have gas offshore on the east coast, and we have gas, we're fairly positive, offshore on the west coast. There are tremendous sources of gas remaining in the country that we need to be able to access and that we can produce.

Every chart we have seen produced otherwise shows that we do not see continued growth in natural gas production, but we do see a flattening and a long continued production profile, so please rest assured that we are not running out of natural gas any time soon.

With respect to oil sands policy, you're absolutely right. Governments of the day put in place a fiscal and regulatory regime that was very, very successful. Today we're seeing in excess of a million barrels a day come out of the oil sands. We see projections showing that it may possibly quadruple by 2020 and certainly double within the next 10 years.

Interestingly enough, this growth in supply by Canada is happening at a time when the global economy worldwide is screaming out for additional oil resources, and Canada is in the unique position of being able to meet that demand. We will add another two and a half million barrels of supply to the world supply over the next 10 to 15 years.

At the same time, we are challenged with consumers pressing us with respect to high prices. Prices are a function of demand and supply. We see the world supply situation; we see demand continuing at a fairly significant pace; if we don't bring on supply to address that basic demand, prices are going to go up and consumers are going to be that much more impacted by the very challenges we see—and those debates, we all know, are occurring.

So yes, we're a victim of our own success. We've put in place very successful policies that have led to tremendous growth rates. We are providing a supply the world is calling for in increasing numbers. Canada is in the unique position of generating tremendous wealth, generating supply for its own consumption, and generating supply for export, which leads to a situation such as Hans mentioned earlier. In 2004 the oil and gas industry contributed $18 billion to governments; in 2005 we contributed $27 billion to governments. From job impacts to the amount of taxes and royalties we pay, the oil and gas industry makes significant contributions to the Canadian economy.

A good sound policy has led to success, has led to increase of supply, and has helped dampen prices overall. I don't see any problem with it whatsoever.

● (1230)

The Chair: I'd give you a comment, but we have now gone to 15 minutes on that last five-minute question. I've allowed considerable latitude today in the first round for all of our questioners, simply because it's such a broad topic and you have brought so much to the table. There were very good questions, they deserve the kind of answer you're providing, and I appreciate that, but it simply cuts into the next round, so your colleagues will have to bear with the length of the questions that have been asked.

I'm not complaining about the answers. I think the questions were such that you needed to give that much time in response.

I will, though, have to move to Mr. Paradis for his round.

[*Translation*]

Mr. Christian Paradis (Mégantic—L'Érable, CPC): With regard to climate change, from listening to Mr. Elston's comments, I gather that the group thinks we are in a transition period. I find that very interesting. In the past, climate change was not given the same importance as it is today. Demographic and economic growth have necessarily given rise to an increase in greenhouse gases. Did we used to have the technology required? In any case, the standards set were not met.

Given that this problem is currently in the spotlight, do we have all the technologies required to assess the situation better, considering that there will necessarily be demographic and economic growth? No one is against economic growth.

I am referring more particularly to page 28, where it talks about the scenarios envisaged. According to the group, what would be a realistic scenario?

Second, on page 34, it says that public support is needed so that everything can run smoothly for everyone involved, with regard to the environment, energy efficiency, energy producers, etc. I feel that industry is ready. In fact, you write that industry is prepared to fall into step and do its part. I think that it is making efforts now. I would like some clarifications in this connection.

As for the government's leadership role in getting the message across, as you say, what do you expect in concrete terms? Earlier someone mentioned data-gathering by Statistics Canada, but some points remain a bit vague in my mind. I would like to know your opinion on this, since this is a sensitive matter in the public opinion. I think that your observations might be very useful in this regard.

Thank you.

Mr. Hans Konow: Thank you for your question.

[*English*]

There are a number of questions embedded in it, so I think we will work our way through it.

You mentioned Mr. Elston's comment about being in a transitions period. Murray, did you want to pick up on that?

Mr. Murray Elston: Sure.

I think it goes back to technology. Going back to Mr. Bevington's observation about sequestration with coal, I think we really have to be very concerned, very strong-minded, about taking stock of all of the resources we have at our disposal in Canada, and we shouldn't let any of them fall by the wayside without our moving very strongly to make sure we have the technologies to prevent problems with our atmospheric releases.

So sequestration is a response to carbon dioxide. I think the experimentation that has occurred in Saskatchewan has shown some success early on. It's certainly well touted by the United States as they look at their coal industry moving forward. There are huge amounts of money coming out of the U.S. government, by the way, to move towards the clean coal technology.

The same thing, by the way, is also happening in China, where there are huge amounts of money being invested in technology to clean up coal. In that jurisdiction, obviously, they have a huge amount of coal being used for energy generation.

In our situation, with the nuclear industry we are likewise moving to become.... Well, we can't eliminate too much more of our carbon dioxide, obviously, because we don't emit any as we go through the reactions and generate electricity, but we are looking at becoming much more efficient on the use of our fuel. The new ACR being designed at AECL, Atomic Energy of Canada Limited, will use less fuel and produce smaller amounts of expended fuel for the amount of electricity generated.

At the end of the day, that's just electricity. But nuclear, along with wind and some other renewables, can be used to generate hydrogen, which will permit us, with new technologies and with the building of infrastructure for those new technologies, to transition ourselves into other types of economies.

I'm really quite keen to say that there is not yet enough being done. In Canada we are comparatively low in investments at the government level. For instance, in the United States there's a $280 million program out of the Department of Energy that assists the first building of new nuclear units in that jurisdiction. So there are lots of things happening there, lots of things on clean coal. There are smaller responses here in Canada.

I think the big issue—and I've heard it discussed with respect to coal technology—is that with such huge amounts of money being invested internationally, can Canada go on its own way in some of those technologies? I think not, but I think maybe we could become part of the international consortia to look at how we become more efficient. We are not the only jurisdiction looking at that as a prospect. Canada makes great contributions. Nuclear makes great contributions in this coal technology that's being developed.

So...more in the technology.

There's a great program, by the way, at NRCan that needs a little bit more encouragement. It's run out of Graham Campbell's shop. There are a lot of new technologies being funded there, novel technologies. I think it would be a very worthwhile one to push even further. There are some reports on technology development in Canada that I think will be extremely helpful. I think a lot of time should be spent on tomorrow, as well as on dealing with yesterday's problems.

● (1235)

Mr. Hans Konow: I'll briefly try to deal with the other two elements in your question, energy efficiency and public support.

In the area of energy efficiency, both gas and electric utilities have been involved in pursuing energy efficiency with their customers for decades now, so there's a long history of lessons learned. Some of them were painful, quite frankly, and some of them very useful in pointing ways to the future.

We see that commitment areas, such as building envelope efficiency to the efficiency of machinery for the manufacturing process...for instance, electric motors are used in every manufacturing process in virtually every part of our economy, and in aggregate, the amount of load they take off the system is extremely substantial. If you can increase the efficiency through variable speed drives and various technologies that are quite well known and continually upgrade that...again, that's why the industrial sector is showing some of the best results in terms of energy efficiency. On our industrial processes, including those that the energy industry uses, we have to continue to upgrade and render those more efficient, and we have programs to do that.

There are areas in commercial and residential that are challenging, particularly where energy is a relatively small part of the cost of doing business. Managers don't tend to focus on it very much, but in aggregate, if there's an awful lot of them, there's still a significant potential there that could be addressed. Similarly, in rented accommodation, in condos and whatnot, anywhere in which people aren't paying the actual energy bill, the message isn't getting through to them to conserve and do things wisely. So there are structural opportunities to address in different parts of the economy.

Again, there's no one area in energy consumption that lends itself to a quick fix. But all areas are being addressed through comprehensive programs. For instance, Power Smart is a well-known branded program used in British Columbia and some other parts of the country from time to time. There's a lot of learning behind how to shape behavioural response to energy prices, as well as the technological base that underpins consumption.

Public support, not only for us in doing our business but for energy efficiency opportunities, informing citizens as to where their best opportunity is to act in their own self-interest to improve energy efficiency, I think is an extremely valuable strategy. The federal government has had a role in some of those programs and probably should be considering how to deploy or redeploy some of them in the future, aimed at energy efficiency as opposed to some other target that's more difficult to quantify. As we say, as a strategic element in our mix, we need the public's support as well as government support to achieve energy efficiency objectives.

● (1240)

Mr. David MacInnis: Responding directly to the question of what you need from government, you need government to recognize the capital stock turnover cycle of companies, to make sure the programs governments do develop recognize those cycles.

Secondly, leverage industry and moneys from other governments as well. This is not only a comment about the federal government; there are too many governments doing their own thing in their own stovepipe manner. There are some incredible partnership opportunities out there. There's expertise in Quebec and B.C., etc., that the federal government can utilize, and a more effective partnership approach would help in that respect.

The Chair: Thank you, Mr. MacInnis, and thank you, Mr. Paradis.

Gentlemen, we're at a point where we can see we're not going to get to a third round today. We're going to have to be very strict with keeping to the five minutes for the question and answer.

Mr. Cullen, if you want to ask a four-minute question, you're going to have one minute for the answer.

We're going to Mr. Cullen, followed by Mr. Lussier, then Mr. Trost for five minutes each.

Hon. Roy Cullen (Etobicoke North, Lib.): Thank you, Mr. Chair, and thank you to you, Hans, and your colleagues. I must say, bringing all these organizations together under one roof is very energy efficient, and I congratulate you.

I wanted to dialogue a bit with Murray on a presentation I was just at with John Ritch, the director general of the World Nuclear Association. I am not going to have time to, but he made a very compelling argument for why nuclear should be in the mix and what can be done with the waste.

I wanted to go to Mr. Maynard because I was looking forward to the trip to Calgary and to Fort McMurray. I may have to go there sooner than next fall, because it's an area that is very important and one that I'd like to learn more about.

If we're going to deal with climate change and greenhouse gas emissions, it seems to me we have to all get together, all citizens, the manufacturing sector, oil and gas, transportation, you name it—if we're going to be serious about this.

I don't want to pick on the oil sands, but we talked about certain private interests and public goods. In the context of the oil sands, it seems to me that greenhouse gas emissions are a public policy question. Protecting our water resources is a public good. And there are some of the social problems, which I've just heard about tangentially. I wanted to go up there to have a look. They are perhaps more provincial in scope, but they are a public good and we need to be concerned about them.

I was wondering, in terms of the private interests of your member companies, if you've ever looked.... And I don't understand the economies of the oil sands. There are presumably economies of scale when you ramp up, let's say, quadrupling the volume from today. Are there not also some "dis-economies" of scale in the sense of cost pressures and just a shortage of labour, etc.? I'm wondering if your industry would be prepared to have a discussion, a dialogue, on the horrible thought of slowing the development of the oil sands down.

Let me come back to another public good issue, and that is the use of technology. We've heard some of this discussion today. I've been around long enough to know that technology in the head is one thing and getting it working on the ground is another. In terms of carbon dioxide capture and sequestration, in terms of water recycling, there might be a case to be made to say let's slow this thing down to deal with these public interest issues.

We talked about the demand for energy. Yes, but a lot of it is being exported into the U.S., where, I think you could argue, they don't have a really strong ethic in terms of conservation and energy efficiency. Maybe that's changing, but I just put that on the table.

Has your industry ever looked at it from the point of view of your own private interest, let alone the public good that I've mentioned?

● (1245)

Mr. Brian Maynard: Thank you for the question.

A lot of the answer to your question I believe is in exactly what you said. There are cost pressures. There are human resource pressures. There are supplier and contractor issues, and it is a tremendous challenge right now addressing many of those issues in the oil sands.

Our association and our members fundamentally believe in market-oriented approaches. Let these cost pressures contain the growth. Let the shortage of skilled people contain the growth.

That's not to say there are not valid and legitimate concerns around climate change issues, GHG emissions from the oil sands, about water use and things like that. Those are absolutely within the purview of governments to address on behalf of the citizens, and we are working with governments and stakeholders on those types of issues. We have members now who are recycling 90% of the water they use. It goes through and through and through again. We are looking at climate change issues, and we have been working with governments on this. We believe strongly that the solution to climate change in the long term has to be driven from a technology perspective. In the short term we need to pursue increasing efficiencies.

Earlier Mr. Bevington referred to the utilization of natural gas. We are looking at alternative energies to provide the energy required to produce the oil sands, from gasification of the bottom of the barrels and other technologies. That will have a benefit of cleaning the air but may result in higher emissions, so there are trade-offs as well that have to be realized in the whole issue.

What's important is that, yes, the discussion and the debate is taking place. Market forces will prevail to a certain extent and contain the rate of growth that we see in the oil sands, and there are legitimate debates that we all need to participate in, and are participating in, on environmental consequences. We firmly believe that it is not a "one or the other" choice, that the oil sands can be developed in an environmentally responsible manner, that we can address water challenges, and that we can address GHG emission challenges. That does require, without a doubt, contributions by my members with respect to the development of technology, working cooperatively through economies of scale, as you mentioned, and working with stakeholders to address those challenges, but it's not either/or.

The Chair: Thank you.

That was pretty close guys. Six minutes!

Mr. Lussier.

[*Translation*]

Mr. Marcel Lussier (Brossard—La Prairie, BQ): I have a brief question for Mr. Konow.

You mentioned something that made me bolt out of my chair regarding electricity in the East, that is, we are importers. If you have any statistics on this, tell me the year in which it was so. Which provinces are involved in importing electricity?

The second part is for Mr. Elston.

Nuclear energy does not produce greenhouse gases. I would like to know the nuclear producer's strategy concerning green energy. Do they want to categorize nuclear energy as a green energy, a renewable energy? To do this, do you want to focus on the production of hydrogen for automobile transportation, or is hydrogen going to be used rather in processing the tar sands?

● (1250)

[*English*]

Mr. Hans Konow: On the first question, I think you misunderstood me. What I did say, I believe—I hope I said—was that we import energy in the east, that is, oil and gas.

In terms of electricity, just so I'm clear on that, we import electricity as well, but not on a net basis. That is, we bring in electricity off peak and sell it back on peak in areas like Quebec, where we have storage reservoirs that allow us to play that role.

There may be times.... Manitoba, historically, has been the largest exporter of electricity in terms of their system. In 2003 they were a net importer due to water problems. So it is not inconceivable that even in Quebec we could have a year in which we were a net importer—I live in Quebec, so I can say “we”—on a temporary basis. But in the longer term, and in general, in the east we are net exporters of electricity.

So if I misspoke, I hope I've corrected the record.

Mr. Murray Elston: In relation to nuclear, we really do see ourselves as a green energy source. We have issues with managing our waste, but it's something we have managed very well and have technically discovered how to deal with. We know exactly where each fuel bundle is that has been in any of our reactors, how long it was in, and how long it's been out. So yes, that's particularly true.

We think we can have an advantage in the oil sands in terms of greenhouse gas emissions. There's no question. But that remains to be dealt with under the right business case to ensure that we can be competitive. All those other things we need are things we would like to live up to in the business challenge.

We do need some predictability. We need regulatory certainty, obviously, if we are going to go into those areas. Hydrogen has always been a favourite of ours, because nuclear plants run best and most efficiently when they're running all the time. They lug, so in the daytime, when people are using lots of energy, we're able to produce it. At night, when things generally fall off, we are still much more efficient when we're lugging at a high level. So at those times we could be used to generate hydrogen.

We're very keen to play a strong role in developing the hydrogen economy, moving forward. We provide Canada I think with an ability to participate in that new world. We have great potential in some homegrown companies in that business, and we would be seeing ourselves as a natural partner with those companies. We probably wouldn't want to focus exclusively on developing hydrogen for motive power and other things, but we would sure like to play a significant role in moving to that next technology.

I should say, by the way, that Canada has signed an international agreement. A role is being played by Natural Resources Canada to take us into the next generation of nuclear power generation. I think it's fair to say that we are very pleased in our industry that a long-term view has been taken and that we will play an increasingly important role there.

I'm somewhat concerned that we're not also still at the table with the fusion project, which is now to be located in France. But all those technologies help us to move one step beyond where we are now. I can see a very bright future for our industry, because we played a leading role in it internationally, but also because I think we helped to increase the ability of Canada to access its natural resources in a very profitable way for people right across the country.

● (1255)

The Chair: Thank you. That was very good.

The last round will go to Mr. Trost.

Mr. Bradley Trost (Saskatoon—Humboldt, CPC): Well, I'll ask a very brief question, and again we'll see the answers.

The one thing I saw in the presentation was about the international role and the role with the United States.

We are very tied in with the American economy in our north-south power lines, pipelines, etc. American energy policy concentrates on security, and they have other things. So my question is this: how does the American energy policy and energy market directly impact the ways in which we will plan in Canada?

Each of you have specific industries that will be impacted more than others, so you're going to have different answers. How does it impact Canada? How does it impact our thinking? How does it impact our strategy? Are there specific strategies we should use to exploit the American market? Are there specific cautions that we need to be aware of as we prepare for what could cause us difficulty, caused by our relationship with the United States?

So take it away from there. I think every industry will have a slightly different spin on this one.

Mr. Hans Konow: I'll make a brief set of comments, first overarching and then with respect to electricity.

Clearly in energy, as with our economy as a whole, our degree of interdependence with the United States market is extraordinary. We can neither deny it nor would it be in our interest to avoid it. It presents huge opportunities and some challenges, because it is a very large market, with a very large appetite, when it comes to energy.

But we shouldn't forget our dependence on the United States for items like food stocks. If you want fresh fruit in the winter, it doesn't come from the Okanagan Valley; it comes from somewhere south of the border. We can't pick and choose in the relationship that we will only share what we don't care about with our partner and expect them to share with us, in terms of the overall optimization of a North American marketplace. So first of all, we have an embedded relationship.

Second, we'll talk more about energy. In terms of electricity, for instance, we're a net exporter of electricity, but a relatively minor one. It's something in the order of 1% of U.S. needs. What we've seen over the last 10 years is an increase in imports to Canada of electricity, some of it on a business basis, as discussed with respect to Quebec and British Columbia—and to Manitoba, to a lesser extent—since they have storage capacity, and some of it is an investment timing issue.

At one point, the electricity systems were managed on a fairly regulated and generous fashion, in terms of assuring adequate capacity. Part of being more efficient is reducing your margin of surplus to the minimum that's safe, so that you haven't over-invested in the system, but never to be short. That's always critical in these systems.

So the regional linkage of electricity markets has allowed us to tap into the resources of large binational, regional markets, which create economic opportunities in Canada, but also reliability and stability benefits. Quite frankly, when it comes to electricity in Canada, it's a relationship that's extremely positive on all counts.

I'll let others talk about the benefits of this relationship in their particular areas.

Mr. David MacInnis: On the benefits that we see, with the U.S. focus on energy security, getting it from a supplier like Canada provides benefits to all Canadians with respect to job creation, etc. I think there is also an opportunity if you're looking at the issue from a public policy point of view. There are obvious foreign affairs and foreign relations benefits to be had, as well as international trade opportunities to be developed. I've talked about the economic benefits from developing energy, be it the exportation of hydro, the development of natural gas, or what have you.

On the sustainable development front, as I was saying earlier, I think there's an opportunity to leverage the development of technology, for example, to improve energy efficiency and for other sustainable development measures. The Americans have put well over $1 billion into a variety of climate-change-related technology developments. There's no reason we shouldn't do some more active partnering with them.

I see benefits on a host of fronts.

● (1300)

The Chair: Mr. Elston.

Mr. Murray Elston: The energy program that was passed in their energy bill, which has just come about, has actually driven a whole series of activities in the nuclear sector.

They've looked at coal and nuclear power as being helpful. As the President of the United States said, we need to wean them off their addiction to oil. They have actually put together very strong programs that could be beneficial to us.

As I said earlier, Canada has certainly signed an agreement to work on fourth-generation nuclear technology with the United States and nine other parties so that we can help to develop the new world of energy. It's an extremely exciting prospect for us in that way.

I mentioned sequestration and clean coal technology in the United States. It's not my area of expertise, but I think there is so much activity being generated around it that Canada should have some sense of the importance in playing a role there.

I think some pretty good work is being done in this country, which we should take advantage of. It's not always in terms of what we contribute, but what we can learn by being internationally engaged, particularly with our largest trading partner next door. There are some great synergies that can help Canada and the United States and our populations to become secure together in the continent.

The Chair: Mr. Hornung will wrap it up.

Dr. Robert Hornung: Yes. I have one quick comment.

Of course, going along with the United States sometimes poses challenges as well. We need to pay attention to the policy context in the United States.

For example, the United States is quite aggressively pursuing wind energy right now. It looks like the U.S. will install about 10,000 megawatts of wind energy over the next three years. It has implications for Canada because it means we're actually in a situation where the demand for wind turbines is outstripping supply. A lot of those turbines are going to the U.S., and it's now hard for Canadian developers to get turbines in a timely fashion to meet the objectives we've set as a country.

We need to look at the policy framework in the U.S., and we need to make sure our framework is competitive to be able to ensure growth in these industries going forward.

The Chair: We're going to have to wrap it up.

Murray, go ahead.

Mr. Murray Elston: There was one important element that Mr. Paradis raised earlier, and I don't think he got an answer to the question. The issue of energy information is critical to us, and he asked a question on what our position is with respect to energy information.

We think the provinces and the federal government should play a very active funding role in ensuring that the base information is well collected and then well analysed. Some of our industries have actually put money into the Centre for Energy Information. We think it should be a prime goal of governments across the country to ensure that we have accurate information.

I didn't want to leave this room without leaving you with that critical piece of pitch, because you can't do anything unless your information is well based. For us, I think it's a huge contribution the government could make.

The Chair: Thank you. That's a good way to wrap it up.

It is in fact the intent of the six-week cram course at Natural Resources Canada for this committee.

We appreciate your contribution to that and for changing your schedules to adapt to ours in order to come again to the committee. I'm sure we'll come back to you, and members will have additional questions in the future.

Thank you all for coming.

We are adjourned to the call of the chair.

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