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Mr. Alan Tonks

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•(1115)

[English]

The Chair (Mr. Alan Tonks (York South—Weston, Lib.):
Good morning, members of the committee. *Bonjour, mes amis.*

Thank you to our witnesses for being here.

Ladies and gentlemen, this is meeting 34. The orders of the day are, pursuant to Standing Order 108(2), a study on Canada's implementation of the Kyoto Protocol, part II, "A Lower Carbon Energy Supply".

Today we have, from the Canadian Gas Association, Michael Cleland, president and chief executive officer; from Forest Products Association of Canada, Avrim Lazar, president and CEO; from Sustainable Development Technology Canada, Vicky Sharpe, president and chief executive officer; from the Federation of Canadian Municipalities, Yves Ducharme, past-president—*monsieur le maire*, it's nice to have you here again. The last time I saw you, I was in the back of your car; we were going somewhere. And we have Elisabeth Arnold, director of the Centre for Sustainable Community Development.

Welcome to all of you. Thank you for being here. I apologize that we are starting a little late—my apologies in advance for that. We'll try not to let it happen again.

Perhaps we can start. I've been told that the order we have is pretty much agreeable to everybody, if we start with the Canadian Gas Association. Michael, would you like to lead off?

I think you all know the routine. We have 10 minutes with respect to deputations, and then according to the various caucuses we have ten minutes of questioning. After that is completed, we have five-minute interchanges.

Thank you very much.

Mr. Cleland, the floor is yours.

Mr. Michael Cleland (President and Chief Executive Officer, Canadian Gas Association): Thank you very much, Mr. Chairman. Again, thanks to the committee for hearing what the Canadian Gas Association has to say on this important topic. I'll do my very best to keep to your 10 minutes.

Let me start by way of introduction. There's a presentation in your package, but I'll make a couple of introductory comments first.

You'll see that there isn't a whole lot of reference in it to Kyoto, or even necessarily to climate change, and that's not an accident. Our point is, basically, we think we need to look at the Kyoto issue and

the climate change issue through a somewhat different prism. I won't go into all the difficulties Canada is having in meeting its Kyoto commitment. I'm sure you've talked a lot about that. The point I'd like to make, though, is that climate change is an extremely pressing public policy issue that we need to address in a larger perspective than that from which we've been coming at it. We need to ground it in some basic realities.

Some of these include the fact that greenhouse gas emissions basically come from energy production and use—about 80% of Canada's emissions. Energy demand growth is pretty deeply embedded in the economy, about 1.5% a year. That's pretty steady. It's declining a bit, but it's not disappearing in a big hurry. There is a steady trend towards diversification of supply options, and that's a good thing for a lot of reasons, but CO₂ emissions are still pretty deeply embedded in the economy, again at about 1.5% a year, and not going away in a big hurry. So you have a big challenge.

At the same time, Canadians are looking to their energy systems to do a lot of things. They look for them to be environmentally sustainable, but they also look for other attributes. That—page two of the presentation—is where I'd like to start.

I think we need to think of sustainability as having a number of different attributes. We can come back to these, but we look for environmental performance, and we also look for it to be efficient and affordable; we look for reliability; we look for adaptability over time—and that's probably the most fundamental issue around sustainability—and we look for long-term security.

These are what I would characterize as the attributes of the energy system overall, a system that needs to include built-in drivers to improve energy efficiency—something I think we need to talk more about as we go forward—a system that also includes a complex mix of fuels, technologies, and infrastructure, and that ultimately delivers energy service needs to Canadians. The issue there is energy services.

On the next page I step through these attributes, at least with respect to natural gas. I'm talking, as I say, about the role of gas in this context, but I think we need to look at all fuels and all options and what their various mixes give us.

The first one in terms of environmental performance, and this is reasonably well known, is low GHG emissions relative to other fossil fuels—not zero, but much lower than others—and low or zero emissions of other air contaminants. I think that's a key part of the puzzle. It isn't just greenhouse gases we have to think about. The upstream footprint is another aspect you have to think about: air, water, and land impacts. Gas is by no means zero-impact, but then, neither is any other supply option that we have available to us.

That's environmental performance. The next page deals with inherent efficiency.

A few things about gas are worth noting, and particularly the end use, where in some applications—not all, but a fair number of applications—gas is far and away the most efficient option. When you think about what your energy framework or policy or strategy should look like, you have to think about how consumers view the different options and what sorts of signals we're giving them when they make their choices, and how we make sure they get signals that push them in the more efficient direction.

The next one is reliability. If the energy system fails on this particular attribute, then it has really failed. This is what we count on more than anything else: for energy to be reliable. Gas contributes to the reliability of the system. The reason for that is that we have a continent-wide, dense network of interconnected pipes and storage that can handle peaks and disruptions and ensure responsive, on-demand delivery. Again, in the right mix with other technology and fuel options, gas can be a pretty important part of ensuring reliability.

The next page talks about adaptability. One of the advantages of gas is that it can be scaled, that it's compatible with other fuels, and that it's substitutable. It's a complement to other options, including both renewables and large-scale traditional generation options, and that's something we need to think about going forward. It also has a lot of siting flexibility, again uniquely because of its nature and because of the distribution network.

The next few pages talk a little bit about the issue of long-term security. There's been a fair bit of discussion in the last few months about whether we are running out of natural gas. Well, we're not. We're a long way from running out of natural gas. If you look at this, our proven reserves, which are what people tend to focus on, are about nine times annual consumption. Basically, that's the inventory of proved-up, connected gas, and that tends to roll forward year by year, in about that range. There are other unconnected or uneconomical resources discovered that extend that a little bit. Then, more importantly, you have undiscovered resources in North America, with total remaining resources in North America at about 75 times annual consumption.

Looking a little bit further out, something we're going to need to do in North America is to look to global gas reserves, which we will be bringing into North America in considerable quantity in the coming years. Global gas reserves are enormous, relative to what we have in North America. One of the things we're going to be doing is tapping those resources increasingly in the coming years.

Looking even further out, gas hydrates, which are not being produced at present, are a potentially huge resource for the future. If you look at the bars there, in essence, gas hydrates, when we are able

to develop them and bring them to market, provide us with gas resources that are at least in the order of magnitude or maybe two orders of magnitude greater than our existing undiscovered natural resources. So in terms of long-term sustainability, defined as several decades into the future, natural gas continues to be a good option.

There are just a few snapshots of how we see things coming about in the future. On page 11 we talk about sustainable communities. A number of colleagues here at the table will be talking about that. In the long run, we're going to have to come up with some new models for the way we organize our communities. Sustainability isn't about any given fuel or any given technology, but it is about how we design, build, and manage our communities and how we integrate energy options into them. We tend to think of land use and transportation as part of our urban infrastructure. We increasingly need to think about energy as part of our urban infrastructure and about how we design our cities and our communities to make for a more sustainable energy future.

Page 12 shows gas and power generation. The last decade has seen a lot of gas in power generation, in some ways in applications that may not be sustainable—for instance, as base load power. That's probably not where you want to go, but in distributed options, in combined heat and power options, and ultimately as a source of hydrogen for fuel cells, gas will be an important part of the power generation picture in the future.

The next page is concerned with residential and commercial use. Today, it is far and away the most economical and efficient option for direct burn in space conditioning and water heating. In the future, it will be used for integrated appliances, district heating applications, and stationary fuel cells with gas as a source of hydrogen, and as a strong complement to renewables in a number of applications.

In industrial applications, the big story, I think, looking forward is again combined heat and power, and optimized process design. Again, we must build energy into the thinking at the outset, not only in our communities but also in our industrial processes. A world of higher prices will tend to do that to you and will have good environmental and ultimately good economic implications as well.

•(1120)

Finally, on the transportation front, gas has a very small role in transportation. There are some niches in urban fleet applications where its inherent environmental emissions make it advantageous. It also has some disadvantages, and it's unlikely that you're ever going to see gas as a big part of the transportation picture, with the possible exception of what might happen on the fuel cell front, where gas may indeed be the best option as a source of hydrogen.

In reference to page 16, "Getting to the Future", as you might expect, the Canadian Gas Association sees a large and continuing role for gas in the future, as do, though, many other observers of a long-term future or commentators on it. It needs to be part of an increasingly diverse mix of traditional and new fuels and technologies, and it needs to be part of a more concerted strategy to enhance energy efficiency. Again, it's something that I don't know there has been much discussion about at this table, or perhaps not enough. We need to be thinking about how we design systems to maximize efficiency as well as maximizing the diversity of supply options.

To wrap up, the messages under "Getting to the Future" are for all governments, not just the federal government, by any means. We need clear market signals for energy choices so we don't distort what consumers see. We need to ensure diversity of choice and market liquidity so people can make smart decisions on the basis of good information. We need to make sure that all options are competing on their environmental merits without a priori judgments about what can or can't compete in the marketplace. We need direct support to energy efficiency programs and direct support to investment in technology, including emerging renewables. And finally, we need regulatory efficiency to facilitate a more robust supply response. All that goes, in my view, to contributing to Canada's climate change future, as well as our energy future more broadly.

With that, Mr. Chairman, I'll turn it back to you. Thank you.

•(1125)

The Chair: Thank you, Mr. Cleland. You're right on time, too, and we appreciate that. Thank you for your overview.

Mr. Lazar, from the Forest Products Association.

Mr. Avrim Lazar (President and Chief Executive Officer, Forest Products Association of Canada): Thank you.

Let me start by saying more than the usual thank you for inviting us. I know for members of the committee this becomes part of the daily grind, but for us the opportunity to be heard, especially on a matter like this, means a lot, so I just want you to know this is significant for us.

I want to start by agreeing with everything Michael said in terms of his recommendations. The forest industry supports all of his recommendations.

Now turning to my own presentation, I am going to share with you three things. The first is why the forest industry cares about climate change. The second is what we have done about it and what do we plan to do about it, and I think you'll find some of it quite exciting. The third is what government can do to help, how you can be real partners in our addressing climate change.

First, why do we care? As you'd expect, we depend upon the forests. We depend upon the biosphere, we depend upon sound ecosystems, and when you change the climate, you change the biosphere. We've had a tremendously painful illustration of how climate change can hurt Canadians with the mountain pine beetle. Over the last 10 years we've had the warmest winters in history, and those 10 years of warm winters have led to a tremendous outbreak of mountain pine beetle. The beetle in its larval stage gets killed by cold. Usually 80% of the little baby beetles die from the cold; now, instead of 80%, only 10% are dying. As a result, we're losing \$1 billion a year. We've lost an amount of forest six times the area of Vancouver Island.

So for us, climate change is not an abstraction. The climate is changing. It's affecting the forests and it will continue to affect the forests, and so the global fight to reduce climate change is of personal concern to the forest industry. That's why we care.

What have we done about it? Well, since 1990 we've reduced our greenhouse gas emissions by 28%. That's close to a third. At the same time, we've increased production by 30%, so we haven't just been reducing by doing less; we've reduced by being more efficient in the use of fuel. Most of that change has been achieved by switching fuels from fossil fuels—sorry, Michael—to renewable biomass. In fact, we've done a 60% turnover. We are now the largest cogenerators of electricity in the country. Take aside hydro and we're the biggest producers of electricity in the country. We produce enough electricity to power Gatineau and Ottawa twice over. You could go off the grid and go onto our mills, and just using biomass—completely renewable, completely Kyoto-neutral—we can power all of Gatineau and Ottawa twice over. We'd only need half for you. We produce the same amount as three nuclear reactors, and all of it is greenhouse-gas-neutral; all of it is Kyoto-neutral and 100% renewable.

We would like to continue doing this. In fact, we'd like to be not just energy self-sufficient; we think the forest industry should be a net exporter of energy. We're, of course, located in all sorts of remote communities, and as we increase our cogeneration of biomass, we can start providing energy to those communities who live near us and not have a huge wastage trying to send it long distances on the grid. We think that over the next 10 years, with the right partnership from government, we can increase what we've done by at least 50%—some say as high as 100%—so we're looking at a massive increase, from the equivalent of three nuclear reactors to the equivalent of up to six nuclear reactors of electricity, completely renewable, completely clean in terms of Kyoto. And we're not going to rest on our laurels.

That's why we care. That's what we've done and what we're doing. Where does government fit into this? Well, first of all, doing this sort of investment, this sort of switchover, we would love to have some more policy certainty. We would love to know what the rules of the game are. We'd love to know in what business climate we're playing, and for a few reasons.

One, of course, is we'll make investments based upon the return, and because we haven't had the sort of clarity we've wanted, it's slowed us down. But also, overall, our reputation as a country to do business in depends upon some business certainty. We pay more for the lack of certainty than the actual costs of implementing Kyoto. The recent plan is a very positive large step in the right direction. It does provide a great deal more certainty than we've had, but many of the details remain to be worked out and we urge that people move on and work them out.

• (1130)

In addition, the federal-provincial disagreements that happen on this make us very unhappy. We have to do business with the federal and provincial governments. We are regulated by both orders of government, and when the two orders of governments can't see eye to eye on the policy context on the regulations, industry is the victim. So we would like to see greater policy certainty. We would like to see greater cooperation between the federal and provincial governments.

We would like to see, as Mr. Cleland mentioned, climate change policy put more clearly in the context of energy policy, urban policy, transportation policy, industrial policy, and fiscal policy. The use of carbon for energy is so integrated into our industrial and social infrastructure that you can't do climate change policy unless you put it in the whole.

Again, we think the government's plan is a good step in the right direction, but many more steps need to be taken before it becomes clearer.

I have a couple of specifics. In the government's plan there is the renewable power productivity incentive. Simply put, it gives us the same incentives as wind power. Bravo! It will really help our utilization of biomass. I'd strongly support all parties to support that incentive because it allows Canada to use the biomass in an economic way and produce green energy.

The second thing is that in the budget there is the capital cost allowance write-off, which is being expanded to allow us to more

quickly write off the costs of energy efficiency equipment for the use of renewable fuels. It's an excellent step, but there's a technical error in the budget on it. It is defined too narrowly, and the definition of biomass, sludge, and black liquor has not been included.

This may sound technical to you. For us it makes the difference between being able to expand our biomass cogeneration and clean energy and not being able to. It would be a small adjustment, and if all members could support that kind of adjustment, it would have an impact not just in our climate change performance but on our capacity to keep jobs in our small communities.

One last specific point concerns adaptation. I talked about the impact of warm winters and summers on the forests. We spend all our time thinking about how Canadians could do less to affect the climate. We also have to worry about how Canadians are going to adapt to the impact of the climate on us. We are a most affected region in terms of climate changes, and so any plans for dealing with climate changes have to be balanced between mitigating the effects of greenhouse gases and protecting Canadians from the effects of the change in the climate.

Thank you very much for inviting us. We look forward to an interesting exchange.

• (1135)

The Chair: Thank you, Mr. Lazar, and thank you also for reminding the committee of the various witnesses from the forest industries' perspective. The opportunity for this kind of dialogue is very much not taken for granted, and the committee from time to time, you're right, is really overwhelmed with the number of witnesses who would like to appear. We find it satisfying that we're able to meet the expectations of at least some. We appreciate your saying that.

Thank you.

Dr. Sharpe, perhaps you would like to begin, for 10 minutes. Dr. Sharpe is from Sustainable Development Technology Canada. Welcome.

Dr. Vicky Sharpe (President and Chief Executive Officer, Sustainable Development Technology Canada): Thank you very much, Mr. Chairman. Thank you also, committee members, for the opportunity to speak here today.

I'd like to echo the comments from my colleagues. There are many constructive things that can be done to achieve solutions to climate change, and we certainly appreciate the opportunity to highlight some of those good things and to explain what we do.

Ultimately, we are one of the foundations. We're an arm's-length organization, operating as an instrument of government. Our mandate is to develop and demonstrate innovative technological solutions to address climate change, clean air, clean water, and clean soil, in the hope that we will contribute to providing a healthier environment, a more competitive economy, and a higher quality of life for all Canadians.

We are accountable to Parliament through the Minister of Natural Resources. However, Environment Canada and Industry Canada are other key departments involved in the work we do. We have a governance structure that includes 15 directors as the board. They provide direct oversight and fiduciary responsibility for the organization. We have a member council, made up of some 15 representatives of associations and affected sectors, that functions as a proxy for shareholders.

Our operations and accountability are defined in a detailed and thorough funding agreement set down between the Government of Canada, in particular Natural Resources Canada and Environment Canada, and the foundation. We provide an annual report, a supplement to the annual report, and a corporate plan, which is a forward-looking document. These are submitted to the Minister of Natural Resources, who can place them in front of Parliament. We also have an annual public meeting. All of these materials are available on our website.

We have an extensive corporate performance and evaluation plan, which has been developed around our mandate and mission. We have used consultants, who helped to design the results management approach for Treasury Board, to help us put in place an evaluation methodology that will enable the foundation, together with interested parties and Parliament, to determine whether we are actually making progress. We take very seriously the fact that we have the sacred trust in using moneys from taxpayers. This accountability has to be clear, and it has to be measurable. We use an evaluation logic model, to which all of our activities and staff performance are linked, so that there is a cascade between goals, activities, and measures of success.

We have been set in place to de-risk technologies in what has turned out to be a critical gap, in both funding and capacity, in the innovation chain. This is common to a whole range of areas but is particularly cumbersome and onerous for sustainable development or clean technology entrepreneurs and companies. We try to help build, with entrepreneurs, consortia of go-to-market groups that will be able, if the technology proves out, to take innovations to the marketplace and to successful future commercialization.

This is important because we do not want to be in a position where we have what I call orphan technologies—technologies that are demonstrated when there's a subsidy but don't make it to market if the subsidy is removed. It is not until Canadians can access those technologies, or the industry itself can benefit, that you'll see all those things flow through to a broader societal benefit.

We aim to bridge the gap. I would draw your attention to the diagram of "Funding Gaps" in the presentation, which shows the flow-through from concept to market entry. It shows the financial support that generally comes to different parts of the innovation chain. There is a pre-commercial gap, as we call it. Also, there's a pre-IPO gap. SDTC works in technology development demonstration.

● (1140)

Also, there's an imbalance in the amount of funds that are available. If you look at the left-hand side of the diagram, public and private funding represents annually about \$23 billion, whereas on the private side, downstream towards market, the only numbers we have with any certainty are those for the venture capital market, which you have seen, in Canada, placed last year about \$2.3 billion or \$2.6 billion.

The overall flow is not being picked up by the private sector, so it's very important to ensure that there's a linkage to them with opportunities to invest in these technologies. And the numbers you can see there are the total number of energy and environment deals over nearly a four-year period—12 at the seed stage, 130 at expansion, and only 10 at the mezzanine funding level.

For SDTC, we only actually began our operations in November 2001, and within seven months we had our first round of funding; it was launched. Within twelve months, the first projects had been approved by the board of directors.

We initially had a \$100-million endowment, and we were obliged to ensure funding was available over a five-year period so that companies could build their understanding of this area and work towards applying for funding. There was an equal allocation across those years. That has now been modified, since we received a recapitalization of \$250 million, which arrived at the end of the first quarter in 2004. Since then, we have received an additional \$200 million to go with an expansion of the mandate to incorporate water and soil. I believe there should be kudos given for this being the first organization that we know of to make a true sustainability-based decision on land, air, and water to try to protect all elements of our natural capital.

Our application process is a two-step one, from the perspective of the applicants. There's a simple statement of interest in an electronic application form. Then if the applicant is invited to prepare a proposal, the process is much more complex and requires far more information.

Our due diligence looks pretty much like an early-stage venture capital company, so what we overlay into that, i.e., the technical, market, and business criteria, are emissions impacts and other environmental aspects. We've integrated as far as we can the environmental component into a business approach so that it's something industry will understand and resonate with.

We've had six rounds that have been launched to date, and in those rounds we've had 898 consortia, because we fund groups of companies, not individual companies. They have applied to SDTC. They have represented, therefore, in these consortia, over 2,500 entities from across this country that have capability in sustainable development or clean technology. They've requested \$1.6 billion in funding, and with the additional funding that they would bring with them, there's a potential for about \$6 billion worth of total project effort in this area.

I'd again like to emphasize here that 80% of the consortia that apply to SDTC are led by industry; therefore, if this technology de-risks, we believe we have people who will adopt and use the technology. It has value to these people; it's not something that is esoteric and outside of their needs.

SDTC has been able to place \$89 million of funding to 46 projects in our portfolio. That's leveraged with \$233 million of money from the private sector and from other sources, 60% of which is from industry. That has meant that we have a total project value under management now of \$322 million. SDTC's contribution represents 28% of that, so it has been successfully leveraged.

I also think this is something to take heart from, in that we talk about all the various battles that are held in the press on whether we can do something worthwhile in this area. Here's an illustration that industry is prepared to step up to the plate and leverage at a very high degree in an area that is addressing environmental issues.

We do address all of the sectors, so we have 22% of the portfolio in exploration and production, primarily in Alberta; 15% is alternative power generation across the country; 30% is towards energy utilization, which is very important because we need to be able to move into the marketplace quickly; 14% is towards transportation; 12% is to agriculture and forestry; and 7% is to waste management. If you look at it again, you'll see all the primary economic sectors that produce wealth in this country are participating with SDTC in looking for solutions in this area.

• (1145)

We have typically funded projects that have a three-year duration. We look at that milestone payment, so it's dependent on performance in these projects. It's fairly extensive.

An important point that just summarizes it here is that we also look at the megaton impacts of these technologies. We take the applicant-reported forecast for the impact of these projects in the first commitment period, and then we discount it. The total discounting amount is 90%, and that is to account for technical failure—because for sure we will have technical failure, because we are taking risk here—and also for market failure.

I think perhaps people could imagine that most entrepreneurs are slightly optimistic about the degree of market uptake of their product, so when we discount that by 90%, the current portfolio of only 46 projects has a potential to reduce greenhouse gases by 12 megatons. In the last climate plan, all the research and development activities in this country were pegged at a target of 10 megatons, and we've seen discussion around the Auto Pact; this is more than twice that. So we believe we can make a contribution.

We work with our colleagues in other programs to ensure that we are complementary. I'm sure we'll be able to mention that a little bit today with the GMF funds and FCM in that we would de-risk work and hopefully then be able to provide a menu or a toolbox of technologies and opportunities other funds may take to the market.

I have some examples listed here, but I believe there's just a couple of more minutes for me to talk about this so it can resonate with you. We have examples of our projects in the transportation sector, such as lightweight materials and alternative fuels for trucking engines. There's a very high level of emissions impact from heavy-duty trucks. We also have advanced catalysts for reducing the amount of pollutants put out from ordinary vehicles; there's a non-platinum catalyst that therefore is less expensive but also, because it operates at ambient temperatures, works in cold starts, so it makes a big contribution.

In the oil and gas sector, we have projects around enhanced methane recovery, at the same time sequestering CO₂, which if this works out will make a substantial contribution. We also have a project that looks at production of hydrogen from all refinery processing streams, and we also have technologies around identifying fugitive emissions from pipelines. All of these are important contributions to climate change.

For energy utilization, the work ranges from building envelope technologies through to lighting and energy management control systems.

For the industrial sector, one that is often overlooked, there are lots of applications, and I could give examples of different methodologies for producing steel. We have membrane technologies around ethanol production, and we have ways of reducing pollution in the pulp and paper industry. So there's a whole range of different things we believe are viable, plus we have some projects that look at producing fuels from biomass sources. That's very important, and we believe there's a great opportunity for Canada to lead.

I hope that gives you some examples of some of the good things we believe are of value and will both help Canada take a leadership position in some of these areas and benefit Canadians more broadly.

Thank you.

• (1150)

The Chair: Thank you, Dr. Sharpe.

We now go to Mayor Ducharme. Mr. Mayor, welcome.

[*Translation*]

Mr. Yves Ducharme (Past president, Mayor, Ville de Gatineau, Federation of Canadian Municipalities): Thank you very much, Mr. Chairman.

First of all, I would like to introduce Elisabeth Arnold, Director of the Centre for Sustainable Community Development at the Federation of Canadian Municipalities. Thank you for inviting us here today.

I would also like to echo the words of thanks my predecessors at this table have expressed. It is a great pleasure to speak to you here today on behalf of the Federation of Canadian Municipalities.

As you know, for a number of years the Federation of Canadian Municipalities has been seriously engaged in assisting the government to move forward with the Kyoto Protocol.

Our common goal is to ensure clean air and to provide Canadians with a healthier environment that improves their lives. We have a vision of working in partnership with the various orders of government, naturally including the federal government. In this respect, we wish to recognize the work of this committee in particular, which has demonstrated vision and leadership in support of a truly sustainable Canada.

We recently had evidence of the government's confidence, when the government remitted two payments of \$125 million each, and a third payment of \$300 million, to the FCM's Green Municipal Funds. Across Canada, more and more people agree that our prosperity and quality of life depends on sustainable communities. Canadians recognize the undeniable contribution that sustainable communities make to the achievement of national goals.

Today, I would like to point out that municipal governments are of crucial importance in the environment issue, both in Canada and elsewhere.

[English]

The Federation of Canadian Municipalities represents more than 1,100 municipal governments. We are the governments that make a difference in people's lives because we operate where people live. We see firsthand what is working in our communities and what is not. We have the confidence of our constituents and the tools to affect their quality of life.

[Translation]

We have a vision of a new intergovernmental partnership, where the three orders of government work together to find the most effective ways to implement national priorities on the ground.

As Mayor of the City of Gatineau, and as outgoing President of the Federation of Canadian Municipalities, I can tell you that municipal governments look for value for money when it comes to investing their taxpayers' dollars. Now, more than ever, value for money in municipal investment includes building sustainable communities. We need vibrant, healthy communities to attract the skilled creative people so essential to this country's success. And the key to that health and vibrancy is sustainability.

Some of the elements that make a community sustainable are obvious—fast and efficient public transit, three-stream waste diversion programs, by-laws limiting pesticide use, and sources of clean renewable energy. Others are less obvious, but we can see some of them today in Canada's municipalities, which have shown great ingenuity.

[English]

On the east coast, three new sewage treatment plants will help Halifax clean up its harbour.

[Translation]

North Bay, Ontario, is investigating windpower. Markham has a district energy system that is providing heat and hot water to North America's largest urban planning project. And in downtown Toronto, cold water from Lake Ontario is cooling 20 million square feet of office space. All these projects were supported by the FCM's Green Municipal Funds, and I will say more about them in a minute. These are just a few examples of what our communities have accomplished, but it is only the beginning.

We also have a growing consensus that, when we do start to repair, replace and rebuild, we must do it in ways that are sustainable, because only then will we get the best value for money. We cannot implement solutions that will become problems later on. We have almost all the ingredients for success.

First, we have a compelling need—deteriorating infrastructure combined with our need to control costs, keep taxes down and maintain quality of life in our communities.

Second, we have the commitment and the know-how in municipal governments across the country. They are committed to directing any new revenue where it is needed: fixing our streets and bridges, upgrading water-treatment plants, improving and expanding public transit, and providing much-needed services to people.

• (1155)

[English]

All we need are resources. During the 2004 federal election campaign, all parties acknowledged the need to deal quickly with a \$60-billion municipal infrastructure deficit that stifles economic growth and harms quality of life in our communities. Prescriptions varied, but all parties reflected the consensus. We believe this is because all parties and all Canadians recognize the genuine and pressing need for action to fix our cities and communities. We cannot compete in the global economy or maintain our quality of life unless we provide municipal governments with the tools and the resources they need.

[Translation]

Here are a few examples. Last month, the City of Regina announced it would use its share of the federal gas tax to purchase 11 new buses that used low-sulfur diesel fuel. The cities of Montreal and Toronto also intend to put the money towards improving their transit systems. And just last week, with the signing of the agreement between British Columbia and the federal government, BC cities will see money flow for public transit, water systems and waste treatment.

[English]

The budget also provided an additional \$300 million to FCM's Green Municipal Funds.

[Translation]

The Green Municipal Funds have been a great success, by any measure. They provide seed money to municipalities and their partners and explicitly target innovations that will lead to environmental benefits.

In their first four years, the Funds supported more than 400 studies and projects, lever aging more than \$1.3 billion in investment and delivering significant environmental benefits.

[English]

A good example is a project announced this month in Alberta. FCM is partnering with the federal and provincial governments and a number of Canadian companies to build and operate North America's first large-scale solar heating system using seasonal storage. The system will supply more than 90% of the space heating requirements for 52 homes in Okotoks, south of Calgary.

[Translation]

Projects like this one demonstrate that we can meet the challenge of building sustainable communities. We are in the midst of political uncertainty, but I can assure you that all Canadian municipalities are enthusiastic and encouraged by the efforts the government and all members in this House have made to reach out. The government cannot turn away from us now, and undermine our hopes.

I can tell you that many communities have thought very hard about what they will do with the new sources of gas tax revenue. One day, we may take clean air, efficient mass transit, alternative energy and effective recycling for granted, but only if we take action now. With your help, we can bring that day closer.

However, we cannot take up these challenges alone. We cannot take them up without a genuine partnership among the three orders of government. Like the three musketeers, we need the rallying cry: "All for one, and one for all!" Together, we can stand united for a healthy country, a strong country and a green country.

[English]

The Chair: Bravo! Maybe we can make that the clarion call of our committee. Mr. Mayor, thank you so much for that.

Maybe we should just adjourn now on a very nice note.

Thank you very much.

We'll now go to the top of the batting order. We have 10-minute rounds of questions, and we'll start with Mr. Jean.

Mr. Jean.

• (1200)

Mr. Brian Jean (Fort McMurray—Athabasca, CPC): Thank you very much.

I'd like to start with Mr. Cleland. You mentioned community planning and sustainable communities. I wonder if you could expand slightly on that.

Mr. Michael Cleland: Well, you could spend a lot of time on that, and some of my other colleagues might want to add to it.

The nature of our industry is that we're the downstream end of the gas industry. Our business is infrastructure and delivery, so what we do is pretty deeply embedded in the communities. We work closely with them. How we go about our business is very much tied to the way communities develop and the way they build their other infrastructure.

We've been supportive for a number of years of efforts to take a longer-term view. There's a project, for example, for which Vancouver recently won an award in a worldwide competition for taking a long view of sustainable communities, and the Canadian Gas Association was very closely involved as a supporter of that project. In fact, it was actually through the International Gas Union that the competition was held. To that extent, for us, sustainable communities are essential to our business. Our job is to deliver sustainable energy services to our customers. That's natural gas in the first instance, but one of my member companies was involved in the Okotoks project, for example, which has nothing to do with natural gas. It has everything to do with the design of the community and infrastructure. We're also closely involved in the delivery of energy efficiency services, so it's all part of the same puzzle for us.

Mr. Brian Jean: I understand, and I was familiar with the project in southern Alberta.

I'm more interested in the implication in northern Alberta. There are 5,000 homes to be built in the next two years in Fort McMurray, for instance, and I'm wondering if you could refer me to any materials to do with design and strategy for a community such as that, which obviously has high demand and is fairly remote.

Mr. Michael Cleland: I can't off the top of my head, but I will definitely follow up, because, as I say, some of my member companies will be closely tied to that. We'll definitely get something back to you on it.

Mr. Brian Jean: Thank you, sir.

My second question is actually for Mr. Lazar. I'm curious about this. With the budget, what are the implications of sinks going to be to your member companies, if any, and will the implications be positive or negative?

Mr. Avrim Lazar: It's not clear. The initial estimates on sinks were very enthusiastic and optimistic.

For those who don't know what a sink is, you have carbon in the air, and if you can get it out and into a tree, you've reduced the amount of carbon dioxide in the air; therefore, you've reduced the greenhouse gas effect. Kyoto allows countries to take credit for sequestering the carbon dioxide in the air in vegetation. Obviously, being in the tree-growing business, we consider this an opportunity.

In order for it to be an opportunity, though, there has to be a net increase in the forest volume, which requires fairly intensive silviculture methods—which could be an opportunity. What we're not certain of now is, if we do it, whether the credit will go to the forest company or to the province that actually owns the forest, and how all that would work, so the estimates have been revised down quite considerably. I think they used to be 40 to 60 megatons, and now they're zero to 20 megatons. It's going to require more research to sort that part out.

For us, the larger opportunities are in the fuel switching in the paper mills, in the general efficiency of our transportation, and in the general efficiency of our operations. Any opportunities we have for getting credit for sequestering carbon, obviously, we're going to take, but we see the larger play for the forest industry actually in the emissions from the manufacturing.

Mr. Brian Jean: Do you see, with the warming climate, any advantages in the forests moving north? Have your organizations done any studies on that?

Mr. Avrim Lazar: The government has done studies on it. It's very hard to predict, because when the climate becomes more permissive of species that didn't normally thrive—and of course, it also allows a faster rate of growth because of the warming—you also get the thriving of pest species that were always under control, for whom there are no natural predators. Fungi, viruses, all kinds of tree diseases that we don't experience in Canada's north could likely come, the pine beetle being the prime example. If they'd been here a long time, defence mechanisms would have developed, but with the rapid warming, the Canadian ecosystems haven't had a chance to develop a natural protection.

Overall, would we rather it stayed the way it is? Yes, very much so. Could there be some benefit to the warming? Yes. But will it offset the negatives? Not very likely.

• (1205)

Mr. Brian Jean: My other question for you, sir, is in relation to your comments on the capital cost allowance and the write-offs.

You mentioned, Mr. Lazar, that there needs to be additional adjustments to expand the ability to write off.

Mr. Avrim Lazar: Yes, it was a very good move to say that we could include biomass for the accelerated write-off. That will speed the rate at which the industry can retool. It provides both energy efficiency—greenhouse gas efficiency—and an air quality benefit. For some reason they left out black liquor and sludge, which are a huge source of biomass. If we're not able to use that for renewable energy, they just go to landfill. There's no point in wasting them.

When we asked the government officials we didn't get a very clear answer. It had always been that way, and it seemed to be technical. We think expanding it to include the sludge and the black liquor would have a big economic and environmental impact.

So we're hoping for support on this one. Of course, we'd be happy to provide the technical background to any members who want to become champions for this.

Mr. Brian Jean: If you could send it to the clerk, then we would disperse it.

Mr. Avrim Lazar: We shall, gladly.

Mr. Brian Jean: Thank you very much.

I'm wondering about comments from you all, especially Dr. Sharpe, in relation to alternative energy sources for the oil sands, which of course are utilizing and discharging huge greenhouse gas emissions at this stage. Some of the end-users are suggesting there's no alternative that's anywhere near feasible at this stage.

I'm also wondering what your comments would be as far as nuclear is concerned.

Dr. Vicky Sharpe: Are you talking about the production of energy on site for the oil sands?

Mr. Brian Jean: Currently they're using a tremendous amount of natural gas, obviously, to produce oil.

Dr. Vicky Sharpe: They are.

There could be some alternatives around supplementary things. The solar sources or renewables, and most of the ones of that nature, may not work in sufficient amounts, because obviously, as you say, it's a very energy-intensive process. Wind has been proposed as a possible contributor. We haven't really begun to crack the surface of the potential for wind energy in this country, so that is one option.

SDTC is currently trying to reduce the energy intensity of the extraction process itself. Currently it's about 80% energy product, so you're wasting a lot of energy. We're looking at things that will not only increase the efficiency of extraction but will also reduce the amount of water usage, which would also be beneficial for the Athabaska River and other things. So I think you can get at it from both ends.

Mr. Brian Jean: I understand some of your concerns there. My understanding is they've actually reduced the water consumption to about 90%, just through recycled processes.

Are there any comments from any of the other presenters as far as alternative sources to the natural gas and oil sands are concerned? I know of the wind atlas and the wind map. They didn't actually do a study on the south side of Lake Athabaska, which I think would have been an advantage. Speaking to specific end-users—Suncor, Syncrude—they say there's no alternative to natural gas at this stage that's anywhere nearly feasible to produce oil. I'm wondering if there are any other comments on that.

A blank.

The Chair: You had raised a question with respect to infrastructure. With the Federation of Canadian Municipalities here, I wonder if they could maybe let us know about infrastructure initiatives under the green funds that have been taking place in Fort McMurray and in the area around the towns and communities in that part of Alberta.

Mr. Brian Jean: That was my next question.

The Chair: It was a good question, wasn't it?

Mr. Brian Jean: It was a good question. I liked it.

The Chair: Ms. Arnold.

Mrs. Elisabeth Arnold (Director, Centre for Sustainable Community Development, Federation of Canadian Municipalities): I can't give you the exact number of projects in that area, but I can tell you that Green Municipal Funds, as part of its mandate, has to distribute the funding according to population in the country. So Alberta certainly has had a number of projects. Mayor Ducharme identified a number of them.

We also are required to fund presently in five categories—energy, solid waste management, transportation, water and waste water, and sustainable planning—and with the announcement in the budget, with the addition of brownfield remediation. We have funded projects in all those categories in all parts of Canada. Particularly, we've been focusing on an urban-rural balance and looking at projects in northern and remote communities to address their specific sustainability challenges as well.

We could certainly forward you a copy of our annual reports, which highlight all of those projects. In fact, perhaps I could take the opportunity to say that we would be very interested in connecting with the community you mentioned earlier in terms of sustainable community planning, as that's one of the green funds categories.

• (1210)

Mr. Brian Jean: I was actually going to ask you that question about the rural-urban difference. You can have a 50-floor apartment building that needs water and sewer, but you basically have to dig up the ground and put in a bigger pipe than you do in a rural community where you have, in the same area, only five or ten families. Obviously there are some real difficulties, in my mind, when you have a distribution based on proportionality. It's not fair, in my mind.

In northern Alberta, I spoke to the mayor of High Prairie two days ago, for instance, and he told me that his sewer systems are collapsing left, right, and centre, and all they can do, because they have no funds, is repair one instance instead of doing an entire replacement. It seems to be a trait in all the northern communities, in Alberta at least, that the infrastructure is falling apart, and everyone is very nervous about it.

Mrs. Elisabeth Arnold: I think it's an issue that has been identified in communities across the country. For example, we just funded an extremely interesting study in Iqaluit that is looking at a sustainable plan for Iqaluit. We will be able to transfer the knowledge gained in communities like Iqaluit to communities like the one you're speaking of. So we would be happy to share those best practices.

Mr. Brian Jean: I would really like to have some references for that.

My last question—thank you, Mr. Chair—is whether there are any large-scale potential hydroelectricity projects in northern Alberta primarily, or in southern Alberta. I'm thinking, obviously, with the mountain ranges there, whether any large-scale projects are on the books as far as possibilities are concerned.

Mrs. Elisabeth Arnold: I'm sorry, I missed the first part of your question.

Mr. Brian Jean: Potential hydroelectric projects in northern Alberta or southern Alberta.

Mrs. Elisabeth Arnold: I would have to get back to you with the details.

Mr. Brian Jean: Those are my questions, Mr. Chair.

The Chair: Thank you, Mr. Jean.

Mr. Bigras.

[*Translation*]

Mr. Bernard Bigras (Rosemont—La Petite-Patrie, BQ): Thank you, Mr. Chairman. I would like to congratulate our witnesses for their very clear presentations. Since I have a number of questions, I will probably come back during the second round.

My first question is to Mr. Lazar. I believe you clearly stated your position this morning, when you stated that the plan submitted may be a step in the right direction but is far from being clear. I would like to clarify some details. The figures you provided for greenhouse gas emission reductions are impressive: you have reduced your greenhouse gas emissions by 28 per cent, while increasing production by 30 per cent.

According to the way the federal government calculates these figures, the factor taken into consideration is not the overall reduction but the emission intensity. I find your performance interesting in comparison with that of other industrial sectors, which increase emissions when they increase production.

Don't you think that when future regulations are issued you should obtain credits for having taken measures quickly, to ensure that you are penalized less with regard to the 15 per cent reduction that will be imposed on you for your 2010 production? You have reduced your emissions by 28 per cent in spite of increasing production. This means that, in your industry, the marginal cost of each greenhouse gas reduction unit will be significantly higher than that in other industries, which have not reduced their greenhouse gas emissions.

Do you believe that future regulations should provide for an equity rule applying to industries that have made efforts in the past, efforts which do not appear to be recognized—though that is not clear—in the plan put before us last week?

[*English*]

Mr. Avrim Lazar: Thank you for that question, and it's a very good one. We've laboured with it and discussed it with government officials.

The Kyoto base year is 1990. Many industries, certainly not mine alone—gas, oil, certainly cement, aluminum, mining, many industries—went ahead and made reductions anticipating that the government would require it and also because of an indication from the government early on in the plan that we would be given credit for it. The more recent announcements from the government, both in the current plan and before, are that the base year is going to be significantly after 1990, and we will be treated as if the base year is the starting point.

You can understand that this is very frustrating for companies and industries that have already made the investment. Industries and individual companies wish to be recognized for what they've done and not be punished for being early movers. So if we had delayed, hesitated, and made the investments after we were required, we would get much more credit for them, and of course they would be more cost-efficient because the incentives that now exist would apply to them.

So yes, we are not happy with the lack of recognition for early action. Most of the industrial players share this view. That being said, I also have to underline that having done a lot, we are not content to rest on our laurels, and the industry knows that Canadians and the environment requires that we continue to improve. So we're not saying you should recognize what we've done and we'll stop; we're saying you should recognize what we've done, but we are committed to continual improvement nonetheless.

•(1215)

[Translation]

Mr. Bernard Bigras: My next question is for Ms. Sharpe.

This morning, you tried to convince us that, in spite of what the Auditor General may have said in her report on the various foundations, your foundation is very transparent. That is not, however, the focal point of my question.

You claim to address all of the major sectors, with 22 per cent of the portfolio earmarked for exploration and energy production, 15 per cent for alternative electricity generation, and 30 per cent for energy utilization. In all, more than 50 per cent of your investments are in the energy sector, while the transport sector receives only 14 per cent. That is what you told us this morning.

I am trying to understand what your foundation does to adapt to Quebec's situation, and how it contributes to greenhouse gas emission reduction in Quebec.

Given that 95 per cent of Quebec's electricity is produced hydraulically, using green energy sources, I am wondering how your investment choices will lead to a reduction in Quebec's greenhouse gas emissions. Your efforts ought to be concentrated in the transport sector, this is something which Quebec understands. More than other Canadian provinces, Quebec has to significantly reduce the greenhouse gas emissions generated by its transport sector.

How is what you told us today going to reduce greenhouse gas emissions, when only 40 per cent of the projects receiving support are in the transportation sector.

[English]

Dr. Vicky Sharpe: The nature of the foundation is such that we take in, on a reactive basis, the applications that industry puts in front of us. We have found that there has been a lesser level of applications in the transportation sector. That is what we are presented with. Then we select and screen projects based on their likelihood of making a contribution and getting to market. So in that instance, we haven't had a higher number of applications in that sector.

I think another element to that is that you have the primary automotive manufacturers, and they have their own research and development programs. They are not as involved in this program. I guess it is their own choice not to be so. So we have looked at applications that have come in, and I believe transportation—you're very right—is important across the whole country. It is a large area of emissions, and we respond to it as we are able.

[Translation]

Mr. Bernard Bigras: This morning, you provided us with a breakdown of investments per sector. Do you have figures on the breakdown of investments per province? You implied that Alberta

received a significant share of the 22 per cent earmarked for exploration and energy production. I think I have already seen a provincial breakdown of investments on your website. Could you tell us what percentage Quebec has received over the past few years?

•(1220)

[English]

Dr. Vicky Sharpe: Yes, I can.

Again, we respond to the applications that come in. We find that the application numbers are generally representative of the demographics. Some of them are slightly less than the population density, but that doesn't necessarily represent all the institutions.

We have currently invested nearly \$12 million into Quebec, and that represents about 20% of the funds that have been placed. Over 40% of the applications come in from the GTA, the Greater Toronto Area, and there have been moneys placed there. So it varies across the country.

The province that has the highest funding so far in relation to demographics is British Columbia. We believe that is possibly linked to some of their provincial programs that really encourage innovation in that province.

[Translation]

Mr. Bernard Bigras: I would now like to ask Mr. Ducharme a question.

You are familiar with the plan tabled by Minister Dion last week. Although it had already been mentioned in the budget, the plan announced a partnership fund with the provinces, municipalities and other stakeholders. In your view, what would constitute a fair Canadian partnership for greenhouse gas emission reduction projects? Do you feel that the partners should each contribute 30 per cent, or should they contribute 50 per cent? To your mind, what share of these projects should be shouldered by the municipalities?

Mr. Yves Ducharme: Theories abound as to what the municipalities' contribution ought to be. With the implementation of the infrastructure programs involving both federal and Quebec participation, or federal and provincial participation, it was understood that funding was to be split equally three ways. It was realized, however, that the third paid by the municipalities was, in fact, worth a lot more than a third.

In fact, until very recently, we had to pay GST. We now have an exemption, which makes the costs a little less onerous. We have asked several specialists to determine how funding responsibilities ought to be shared. Municipalities offer more than a financial contribution: all municipal experts are involved, and therefore make a contribution to the project. This is something which ought to be taken into consideration.

Obviously, we would like the other levels of government to make a greater financial contribution in order to create greater fiscal balance.

Mr. Bernard Bigras: My last question is for Mr. Cleland, who has been every bit as clear as he was the last time. Indeed, Mr. Cleland does not want to speak about the Kyoto Protocol, and his sector takes issue with the international consensus. Today, you made a lovely presentation, allowing us to understand the viability of the continental transport and distribution network.

If, within the context of the Kyoto Protocol, Canada were able to negotiate clean energy exports, which would, therefore, allow you to sell natural gas to the United States, would you be more inclined to support the Kyoto Protocol?

[English]

Mr. Michael Cleland: I'm not quite sure I see the connection here. We have the right to sell natural gas to the United States and we do so under free trade arrangements, as does the rest of the energy system.

[Translation]

Mr. Bernard Bigras: That is not what I was asking you. As you know, within the context of the Kyoto Protocol, Canada has spent years negotiating so that your sector would be able to benefit from credits for exporting natural gas to the United States, the idea being that this would improve the energy balance of the United States, or indeed other countries.

If you were to be granted such credits, would you support the Kyoto Protocol?

• (1225)

[English]

Mr. Michael Cleland: Sorry, I missed the sense of your question. I do understand it.

The question of credit for clean energy exports has been rolling around ever since 1997, when we signed Kyoto. The problem was we missed the opportunity in 1997 to get that. The way to attain it would have been by establishing Canada's target. The problem was that we agreed to the target that we agreed to, and then we subsequently went back and attempted to negotiate what, to all intents and purposes, amounted to a car vote outside of the structure of what we had already committed to.

Could we do something like that going forward in a subsequent agreement? I would say absolutely. Canada should, in any subsequent arrangements past 2012, make sure that our ability to produce clean energy is well recognized in any commitments we make. That goes right across the board, from natural gas to hydro.

As for the question of whether or not we could build that into Kyoto now, well, we can't, and so the question in one sense is moot.

The Chair: Thank you, Mr. Bigras. Thank you, Mr. Cleland.

We'll now go to Mr. Paradis.

[Translation]

Hon. Denis Paradis (Brome—Missisquoi, Lib.): Thank you, Mr. Chair.

I would like to begin by congratulating Mr. Ducharme, who is here today representing the Federation of Canadian Municipalities. He shared with us his vision of an intergovernmental partnership whereby the three levels of government would work together. I

believe that the Federation of Canadian Municipalities has been, and continues to be, an important player in our tripartite programs in Ottawa, Quebec and the municipalities. I would like to congratulate him both on his zeal, and on this vision.

My question is for Mr. Lazar, who spoke to us about forests and tree planting. Firstly, you are also due congratulations for having managed, as my colleague pointed out, to reduce greenhouse gas emissions by 28 per cent while increasing production 30 per cent.

I know that the more trees we plant, the closer we get to solving our greenhouse gas problem. The documents which you circulated explain that you have a policy of planting a tree each time that one is felled. Could you not do a two-for-one, could you not plant two trees every time you cut one down?

This brings me to the matter of other figures. What is the difference, in terms of greenhouse gases absorbed, if you plant one tree or 1,000 trees? Have calculations been done on this? That is basically what I would like to know.

I would like to come back to my two-for-one idea. You said that you were a little hesitant, as you did not know whether it would be the province or industry which would receive the credits. If your sector were to receive the credits, would that not encourage you to plant two trees for every one felled?

[English]

Mr. Avrim Lazar: Thank you.

The answer is going to be a little more complex than the question.

[Translation]

I apologize.

[English]

To plant two trees for one really requires that we double our territory. Right now, we have zero deforestation in Canada. In fact, we have 92% of our original forest coverage. If you had come here before Jacques Cartier, you would have found that it was 8% more, that's all, and that's Montreal, Toronto, Vancouver, and farming. We have zero deforestation. We are maintaining an absolute balance.

We'd like to expand the volume of the forests. Maybe we could push Toronto back a little bit, and Montreal back, and have fewer farms, but in the end, you can't jam up the ecosystem with more trees. There's only so much sunlight, only so many nutrients.

[Translation]

Perhaps the most important thing is to conserve the integrity of the ecosystem.

[English]

So there's a limit to how much we can do there. There are technical possibilities.

Hon. Denis Paradis: How many trees do you have to plant to get one tonne of—

Mr. Avrim Lazar: Do you know that, Paul?

We might have to get back to you on that, but we will give the clerk the figures everybody should have.

To increase the volume of wood in a forest beyond what nature has done traditionally requires more active intervention in the ecosystems.

[Translation]

We have to find a balance between the differing environmental values of carbon sequestration and the integrity of the ecosystem.

• (1230)

[English]

We would be ready to go with something closer to tree farms, as they do in Brazil, and a more intensive silviculture.

[Translation]

However, we have concerns about reducing the ecosystem values.

[English]

the wilderness values. So it's a trade-off in terms of environmental values.

[Translation]

Hon. Denis Paradis: Allow me to digress for a moment. In Haiti, there are no trees left. An industry such as yours could help in two ways: you could plant trees in Haiti, and make a contribution to an utterly impoverished country.

[English]

Mr. Avrim Lazar: Certainly outside of Canada we could do a lot. Any place that has gone to unsustainable agriculture or unsustainable forestry, for which you have to pretty well go out of Canada, there could be a huge triple contribution: economic and social, because the local people could earn a living from the forests; environmental in the sense that you get ground cover, you get habitat for animals and birds, and you stop erosion; and of course, economic environmental in the sense that you sequester carbon.

[Translation]

Hon. Denis Paradis: I think that there is a need for this the world over. In a previous guise, I had to meet with President Turbay of Colombia. He told us that, for example, he would like to replace coastal workers with forestry workers. He wanted to know whether Canada could help his country to plant trees.

Our culture and our forestry mean that we could be very useful and, perhaps also take advantage of Kyoto Protocol credits available in the international system.

[English]

Mr. Avrim Lazar: It certainly is a possibility. As I said, it's a little more complicated than some of us want to go to Colombia and say, get out of our way, we're going to plant trees. But it certainly is a possibility.

There are possibilities in Canada. There are marginal farm lands in Canada that stay in production because of farm subsidies that could be used.

For example, people in the Palliser Triangle have been talking about moving more into wood production, which could be used to sequester carbon and to provide an alternative, less government-subsidized basis of living. We could also plant species not only for forestry but for biomass; we could go into aspen.

[Translation]

There are possibilities in the west,

[English]

but you're right that most of them would be *ailleurs*.

[Translation]

Hon. Denis Paradis: Recently, Toronto and Montreal, among other cities, have undergone periods of smog. During those times, I would listen to the radio and some claimed that the smog was due to people overusing their wood stoves. Is the link between wood stoves and smog formation well-founded?

[English]

Mr. Avrim Lazar: No. We wish they were using that much wood, but they'd have to use different types of fireplaces. You can burn wood, paper, bark, and branches as cleanly as anything, but you need a burner designed to take out the particulates, the matter. Smog comes primarily from transportation and secondarily from heating.

We have talked to the automobile industry about wood-burning cars, in which case we'd need special burners, but they haven't bitten so far. Just think, if you ran out of gas, you could go into the forest.

The Chair: Thank you.

I think they had what was called a Stanley Steamer that burned wood for steam. That was a long time ago.

Thank you, Mr. Paradis.

We'll go to Mr. Cullen now, please.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): Thank you, Mr. Chair.

Thanks to the presenters this morning.

I come from northwestern British Columbia, where we have a great deal of Canada's forest stands.

I'd like to start with Mr. Cleland, for a moment. I was looking over some of the graphs that you presented today in terms of the question of whether we're running out of natural gas in particular. You said that the current source is nine times greater than the current use. Is that correct?

Mr. Michael Cleland: The current reserves are about nine times more than current production.

Mr. Nathan Cullen: How does that compare to 10 years ago?

Mr. Michael Cleland: It's a little less than 10 years ago. It's a lot less than 15 or 20 years ago, when we had a regulated gas supply. We maintained about a 25-year supply under regulation, but since deregulation in 1985, the market has taken that down to around what we have today.

Mr. Nathan Cullen: I have a question that I want to put in all sincerity.

A constituent of mine talked to me this past week. He said that he wanted to understand the full cost accounting of using natural gas in the tar sands. Mr. Jean referred to it earlier, and I'd like to get some comments from you.

The person is an average Canadian asking what we see as clean production. Has there been much effort? Natural gas is a clean-burning fuel. Is the concept to use that to burn away the sands for oil production, which is a less-clean-burning fuel?

As we face climate change, it's intuitively difficult to understand why there are no alternatives available. Why has the industry structured itself in this way, to take what looks to the average consumer to be a clean fuel to produce what would be called a less clean, if not dirty, fuel?

• (1235)

Mr. Michael Cleland: In a sense, there's a glib answer, which is \$2 natural gas. When natural gas was very inexpensive, it was the natural and economical alternative. It was available and low in cost. In today's world, including the world over the next ten years, we're not sure what the price will be, but it's going to be considerably more than that.

You're seeing the drive to find alternatives. Dr. Sharpe talked about some of them, but there are alternatives that have carbon problems, such as the use of coke or the use of bitumen. There are alternatives that reduce energy intensity through solvent-based processes. There has been discussion on using nuclear power. The experts from the upstream industry could probably tell you more on this, but my sense is that the price environment right now for natural gas is driving the industry pretty hard to find alternatives.

I take your point. On the face of it, it does seem counterintuitive, but we lived in a very abundant, low-priced gas world, and that has driven certain outcomes.

Mr. Nathan Cullen: I'm wondering if you've taken a look at the recently introduced government plan for Kyoto and what comments you have.

Mr. Michael Cleland: I have looked at it pretty carefully, and we're implicated in several ways.

First, the plan encompasses opportunities for our industry to work with the federal government, the provinces, and municipalities on demand-side management programs. We're looking to develop those possibilities. This is positive.

Second, the plan has more of a focus on technology and longer-term possibilities. This is potentially positive. Our concern is that the focus is more on production technologies. We think there needs to be more focus on end-use technologies to improve end-use efficiency. That's something that needs work.

Third, the plan encompasses provisions for regulating greenhouse gases from industry. We can live with the approach they're taking, provided that all the commitments made to date are honoured. We're prepared to go forward on this basis.

Mr. Nathan Cullen: Just to be clear on that point, you're talking about the uses of—

Mr. Michael Cleland: The Canadian Environmental Protection Act. I wouldn't have said it was our preferred instrument. But the more important thing is to have a workable framework and to stick to those commitments. The instrument is of less importance.

The fourth point—and I think this is really important—is that we still don't really have a workable framework for thinking about

greenhouse gases in Canada. It's not rooted in an understanding of our energy realities. We can work with the plan, and it will take us forward for a few more years. But as we go past Kyoto, we have to come up with something much closer to Canadian reality.

Mr. Nathan Cullen: Thank you.

Mr. Lazar, you made a comment about federal and provincial cooperation. Your industry is regulated by both, with more weight to the provinces. Can you expand on that a bit?

Mr. Avrim Lazar: With respect to the plan?

Mr. Nathan Cullen: I think that's how you mentioned it.

Mr. Avrim Lazar: My comment goes beyond that. The fact that we are regulated on the same topics by both federal and provincial governments creates unnecessary red tape, but also gives us a bad reputation as a place to invest. Investors don't just do their arithmetic; they have a feeling about a place. Not being clear about jurisdictional responsibilities, allowing a lack of clarity, is not good for business. We don't mind being regulated. We want to do the right things. We're willing to be 100% responsible. But we'd rather we had one order or the other.

As to the plan, because we operate in forests that are mostly provincially owned, our plants are heavily regulated by the province as well as the federal government. Some common purpose between the two orders of government would be extremely useful.

At one point, we had the Alberta government being quite negative with the industry for signing an environmental accord with the federal government. If we behaved that way, we would never get away with it. We expect responsible behaviour from both orders of government. I'm not saying either side was to blame.

• (1240)

Mr. Nathan Cullen: Allow us to do that.

You made a comment about paying more for the lack of certainty than the actual implementation. I wonder if you could expand on that. I assume this is from a business perspective.

Mr. Avrim Lazar: That's right, it's from a business perspective.

To reduce greenhouse gases, you have to retool industry and retool end use. You can't just say you're going to use less. It's not a question of virtue, or hygiene, or good intentions; you have to actually retool. That takes a long planning horizon and it requires investments. While we've been debating the plan for the last x number of years, the capacity to make those investments has been delayed. One of the reasons industry is more positive about the plan than you expected is that we just want to get on with it. Of course, the plan could be improved. Over time, details will no doubt be worked out. But it's time to get on with it and just do it.

The other element is the effect of clarity on investment. In my industry, most companies have mills here and there around the world. You have a small pool of capital, and you're deciding whether to put it in a mill in Louisiana, New Brunswick, or Chile. The Canadians are busy competing for that money. They have to convince the guys holding the capital that it should come here. One of the factors is certainty. If it's not clear what Canada is going to do on climate change, if it's not clear who's going to regulate us, it feels less certain. So that costs us investment.

Mr. Nathan Cullen: Thank you.

I have a couple of small questions for Dr. Sharpe.

In the current climate and context that we're operating in here in Ottawa, the transparency of foundations is hugely important. I'm wondering if you can tell me very briefly how the appointment of directors for your association is done.

Dr. Vicky Sharpe: The government appoints seven of the directors, including the chairperson, and then there is a member council, the ones who act as proxy for shareholders. Seven of those are also appointed by the government.

Mr. Nathan Cullen: Just to be clear, when you say, "by the government", do you mean the Prime Minister's Office, or do you mean Natural Resources Canada, or where does the appointment generate from?

Dr. Vicky Sharpe: Appointments are announced by the Minister of Natural Resources Canada, and I believe he talks with his colleagues about who those should be. And then the members appoint the balance of the board, so they are called member-appointed. So I guess it's seven government-appointed and eight non-government appointed.

Mr. Nathan Cullen: I'm wondering whether you have done any analysis on the percentage of projects that you've funded so far, and how many of them have gone to market. And of those that have gone to market, what reduction in greenhouse gases have they been able to achieve?

Dr. Vicky Sharpe: We have completed only one project. It's been only three and a half years since we started, and these tend to be three-year projects, so it's not surprising that we're not seeing them completed yet.

We've had one that involved edge-lit signs. It's a lighting technology. That is being completed, and we are checking the numbers.

We have another eight going to completion this year, and we are tracking the kiloton numbers they have. I can give you the kiloton numbers for each of the projects if you want them.

•(1245)

Mr. Nathan Cullen: That's not necessary, but perhaps at the end of this year, if that could be part of your report to committee, that would be preferred.

Dr. Vicky Sharpe: Yes.

Mr. Nathan Cullen: Thanks.

Thanks, Mr. Chair.

The Chair: Thank you, Mr. Cullen and Dr. Sharpe.

We'll go to Mr. Mills now for five minutes.

Mr. Bob Mills (Red Deer, CPC): Thank you very much.

I apologize to our guests for not being here for the full time. I have a couple of questions, and if they have been answered, please move on.

The first question is really about the green funds and the municipalities' utilization of them. An area I've worked on a lot for 30 years is garbage and what we do with it. And I'm very interested in the funds because every community has a problem with its garbage.

As you travel around Europe and so on, you find that it has become a resource. Various types of garbage have become a resource for them. Yet no municipalities seem to be jumping on that bandwagon, and I guess the poster child for that thinking would be Toronto. We just say we'll use landfill, and that's okay because we've got lots of space. Nobody wants it. It's a huge problem for them. It's cheap.

When you go to municipalities, they say, "Well, it's a provincial matter. We just don't have the funds for it. We can't get into some of the new innovations". The federal government says, "No, garbage isn't our problem. Don't talk to us about that". So the thing keeps going around.

I wonder if you've initiated anything or tried to encourage the provincial and federal governments to do something, because there are so many solutions for garbage—gasifying it, and so on— involving super-modern technology. It's good for everybody. Everybody wins. Municipalities get a revenue from it.

I just wonder what you've done in that area.

Mrs. Elisabeth Arnold: It's an extremely important sector and one of the five, and soon to be six, sectors that we actually fund through the Green Municipal Funds. Out of a total of 407 of our studies and projects, 84 are in the category of solid waste management, so municipal governments are keenly aware of exactly the problem you're pointing out. And in fact a number of our municipal leaders have been on mission tours to Europe to look at the exact solutions you're pointing out.

The problem has been with transferring those solutions to the Canadian context. And in support of trying to identify solutions to deal with both the regulatory issues—which you've identified—and some of the pricing issues that are also driving the lack of movement on this issue, FCM has done a number of things.

One is that we have sponsored a waste conference to look at the potential solutions, and those questions have been captured in a report, which we'd be happy to forward to you. We also have produced a CD, which has gone to every municipal government in Canada, that looks at waste as a resource, exactly the point you're making.

We have, in fact, been funded to do community engagement strategy over the coming year, to look at implementing some of the solutions that have been identified.

We need to deal, at all orders of government, to work on a partnership to address that issue. It's the kind of thing we would look to funding as a project, coming out of the studies, as part of our transformation strategy in the coming years in the green fund.

Mr. Bob Mills: I guess the biggest problem is that it's long term. It's 25 years of financing and it's more expensive, but in the long run it's not. It's just been amazing to me that we haven't moved further on it faster than we have.

In terms of an interesting point that you made about certainty in investment, all the final heavy emitters and so on have made the point that we need some certainty. You guys recognized climate change as an issue in 1992, you signed on in 1997 without a plan, and now you sort of have a bit of a plan, but we still don't have the certainty. I just wonder, do you think there's enough there now to provide any certainty? Obviously our position is that there isn't, but I wonder if either one of you could answer that question—Mr. Cleland or...

Mr. Avrim Lazar: It's certainly a good step in the right direction. We've been saying for a long time to get on with it. We have to recognize that the government has actually taken a bold step in getting on with it.

You also have to put it in context. It's a complex, difficult thing to come up with the right plan. At the same time, it's not enough in terms of certainty. Many of the details have to be clarified, and we're looking forward to sitting down with the government, or members of Parliament, and trying to clarify those things.

We're headed in the right direction and we hope we all keep walking in that direction.

• (1250)

Mr. Bob Mills: When you look at the plan and know that the target is 270 megatons by 2012, is it achievable to hit those targets?

Mr. Avrim Lazar: I can tell you my industry will meet its targets.

Mr. Bob Mills: The oil and gas industry?

Mr. Michael Cleland: I can't speak for the whole oil and gas industry, because my association doesn't represent the upstream. I have a couple of points, though.

I would agree with Mr. Lazar. I think it's a step in the right direction. Our view is if you've accepted the idea that you're going to have to do something to manage greenhouse gases, sooner or later you're going to require some sort of regulatory framework to deal with it. Let's get a framework in place that we can live with and that we can start making some progress under, so we get past things like the problems of credit for early action—on which, again, I also agree with him. It's a step in the right direction, but what's really missing is

a long-term framework that gives us certainty beyond 2012, something that is realistic.

To your last point, we will not make 270 megatons.

The Chair: That's five minutes.

We'll go to Mr. Wilfert, and then Mr. Bigras.

Hon. Bryon Wilfert (Richmond Hill, Lib.): I'm sorry I was late. I was chairing a meeting for the minister.

But I guess you would like to know who the new Pope is. It's Joseph Ratzinger of Germany. I'm just breaking news here.

I wanted to first of all ask Mayor Ducharme about the importance of the budget implementation bill to the FCM and to all of the 5,000 cities, towns, and villages in this country. In terms of the environment aspect, how critical is it for the FCM to have the budget implementation bill passed, in order to move forward on a number of the key areas you mentioned in your comments?

[*Translation*]

Mr. Yves Ducharme: As I was pointing out, there is currently a lot of enthusiasm across Canada since the announcement of the last budget. In it, the same message as has been repeated by the Federation of Canadian Municipalities for years can be found. It must be said that a lot of progress has been made recently. I can recall a period during which we had to convince our partners of the need to access new revenue sources and to set up programs designed not just for one level of government, but for all three, municipal, provincial, and territorial, to make sure that there be coordinated and consistent action.

It is obvious that the current political uncertainty creates a malaise throughout Canada, and that is why in my brief I talk about the consensus reached in the House of Commons. No party has called into question the need to work together, the need to access new revenue sources and to establish funds to help us be more innovative. It is crucial that the commitments outlined in the last budget be implemented to make sure that considerable ground is not lost.

Currently, all mayors, municipal councillors, and even the people we represent are extremely nervous. I'm going to talk about my city, the city of Gatineau, which is slated to get back \$4.3 million of the gas tax under the agreement to be signed between the government of Quebec and the federal government. We already have plans to use this \$4.3 million, plans that have to be put on hold. For how long? I do not know. Toronto, Montreal, Vancouver, Calgary and small communities are already able to do things because a historical agreement was recently concluded on the distribution of new funds in Canada. Now, we run the risk of having to start all over. For us, it is important that this enthusiasm be maintained and that the consensus achieved in the House remain solid. We are still confident, but we are nonetheless nervous.

• (1255)

[English]

Hon. Bryon Wilfert: Mr. Chairman, I appreciate Mayor Ducharme's candour, and also clarity, on the green fund and on the gas tax issue, because I think these things are critical. The mayor and I go back many years, and I must say that it has been a long row to hoe. Clearly this is important in terms of addressing our environmental challenges, so I hope that message will be delivered quite clearly by his colleagues across the country.

Mr. Lazar, I'm encouraged by your comments, although a bit...not as strongly as I may have liked, of course, but I think you raise two points. First, at COP 11 in Montreal later this year, we are going to look at that whole framework issue for beyond 2012, and at how critical it is in terms of assuring that there is clarity. And not only that; we have to get on with the job. There's no question that the time for discussion is over. We are going to move forward.

The issue of how we recognize or reward early action is a very important issue. As you know, there will be further discussions in the next coming months, and as we get into the regulatory framework issues. Obviously, that will still afford some time for those discussions, but where that line is drawn is a difficult question. I certainly appreciated your comments, as I did Mr. Cleland's comments, with regard to your industry, because I know that has been an issue as well.

There was some criticism about not having a plan, but in fact we did have a plan, and now we have the economic instruments to move forward on that. I know that your industries will in fact be very much part of that as we move forward.

The Chair: Mr. Wilfert, do you have a question? We just have one question left for Mr. Bigras.

Hon. Bryon Wilfert: Yes, I wanted to ask a question.

In terms of Mr. Lazar's industry, my understanding is that there are going to be clearly winners and losers in the forest products industry, particularly in northern Ontario, but that many of them have adapted far faster than in other sectors. Can you give us an idea as to what you see as the picture, in both the short and medium terms, in that regard?

Mr. Avrim Lazar: Are you talking specifically about climate change?

Hon. Bryon Wilfert: Yes.

Mr. Avrim Lazar: The key to doing it in an economical way is to build it into the cycle of capital renewal. That really depends upon the flow of capital, which depends upon the return on capital employed, which depends largely on the overall business climate and of course global prices. So there's no simple answer, but the long-term planning, which you spoke about, is essential because when you do renew your capital infrastructure, if you know what's going to be expected in 2015 or 2018, you can build that into your calculation as to what you should be doing. Once you've replaced a boiler or once you've built a new plant, you can't go back and start jiggering around with it to make it respond to new requirements.

One of the intrinsic problems with the Kyoto process is that they wanted to have visible progress quite early, so you have reporting periods. It's turned out to be difficult for all countries, not just

Canada, to make progress in such a fast time when progress requires such an in-depth retooling of industrial infrastructure.

The Chair: We're going to have to leave it at that, Mr. Lazar. Thank you.

Mr. Bigras, the final round.

[Translation]

Mr. Bernard Bigras: Thank you, Mr. Chairman.

Mr. Ducharme, you talked about the \$600 million set aside in the budget regarding the gas tax. I've been a member of Parliament for seven years. Each year, the Green Budget Coalition makes presentations demanding the federal government hand over revenues from this gas tax to municipalities. This was a tax set up to pay down the deficit. However, the proposal put forward by the Green Budget Coalition was that these funds be allocated to ecological projects. As the situation stands, the federal government transfers this tax, as announced in the budget; however, it does not set the condition that projects must be green.

Are you able to assure the Standing Committee on the Environment and Sustainable Development that these funds, which will be transferred to you, will truly be set aside to reduce greenhouse gases or to build aqueducts, sewer systems and the like? In fact, if this federal tax on municipalities were to be transferred and used to build highway projects, we wouldn't be any further ahead.

In the context of this committee's study into ways of meeting greenhouse gas reduction targets, how can you ensure us that these budgets will truly be used to reduce greenhouse gases and not to fund highway projects, for example?

• (1300)

Mr. Yves Ducharme: Mr. Chairman, as Mr. Bigras will acknowledge, in the case of a province like Quebec, the transfer will be made under an agreement between the provincial government and the federal government. These agreements are concluded with all territories and with all provinces. Cities, municipalities and Canadian communities are committed to being accountable in one way or another.

Firstly, the government of Quebec will not allow direct transfer to municipalities without a number of commitments. We have already committed to making sure that the entirety of revenue generated by the gas tax be set aside for projects which meet federal and provincial objectives. The same goes for territorial governments.

We will make sure that all projects funded by these revenues further sustainable development. We are willing to be accountable, as we have demonstrated with the Green Municipal Funds. On several occasions, we were cited as an example for the projects which were financed and for our analysis process. We are willing to be accountable for the investments made, in as transparent a manner, as well as, for results, expected and achieved.

Mr. Bernard Bigras: I would like to ask one last question, Ms. Sharpe.

In the budget unveiled on February 23, the Minister of Finance announced that he would be asking all federal departments to review their programs, in order to determine whether or not government departments could start reducing greenhouse gas emissions to help Canada respect its international commitments.

Is your foundation, which is publicly financed, subject to this program review? If the review is good for the Department of Transport and the Department of Natural Resources, do you believe that it would be good for your foundation as well?

[English]

Dr. Vicky Sharpe: I'm not sure I entirely understood the particular thing that's being applied that you requested.

We are reviewed in a number of ways. Our funding agreement has a provision that we can have compliance audits undertaken on us at any time the government so chooses, and those compliance audits may or may not be conducted by the Auditor General. We also have a value for money audit. We also have an audit of whether we are still in the policy framework that was set up initially when the fund was designed.

So we have a policy audit, a value for money audit, a compliance audit. On top of that, we also have in our agreement that there will be two interim evaluations on the progress of the program at the organizational level, and its efficiency and effectiveness, as well as at the project level. Those interim evaluations are currently dated in 2006 and then in 2009. There also is a final evaluation on what we undertake. Also, we have project reporting for three years after the

completion of the project to track the progress of the technologies towards market. We take very seriously all those different areas for evaluation.

We have also just completed, at the behest of Natural Resources Canada and Environment Canada.... They undertook a compliance audit only three years into our existence—we are the youngest of the technology funds by a couple of years—and I'm pleased to say that the organization passed with flying colours.

So I believe the degree of oversight and scrutiny from the various departments is extremely thorough, and that the organization welcomes that so that people can understand the value of what we're trying to do.

● (1305)

The Chair: Thank you, Dr. Sharpe. Thank you, Mr. Bigras.

And thank you to our witnesses for being here this afternoon. The overview has been excellent and very insightful.

I'd like to clarify that the wood-burning car I referred to—the Stanley Steamer—was before my time. The clerk pointed out that it was after Mr. Caccia's time, but before my time, so you can try to place that.

Thank you very much, and thank you to the committee for your questions.

This committee stands adjourned.

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