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Mr. Alan Tonks

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• (1110)

[English]

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

Welcome to our witnesses. Thank you for being here this morning to continue our dialogue with people and groups and the broad cross-section of the environmental community that are following very closely the deliberations and the intake of further information, through the committee, on the Kyoto Protocol.

Pursuant to Standing Order 108(2), we are continuing our study on Canada's implementation of the Kyoto Protocol, part II, a lower carbon energy supply, in this, the 31st meeting. It may seem like more, but it is only the 31st. It seems like we had them all this week.

Today we have the following witnesses: from the University of Guelph, Professor Ross McKittrick, associate professor of economics; from Simon Fraser University, Mark Jaccard, professor from the School of Resource and Environmental Management; from the Canadian Climate Impacts and Adaptation Research Network, North Region, Mr. John Streicker, manager, and Peter Johnson, science adviser.

We are also going to be dealing towards the end of the meeting with the notice of motion from Mr. Mills.

To all of you, again, welcome. The procedure we use here is that we don't choose what the speaking order is going to be. Usually, the chair just goes through the names as listed. We have ten minutes from each of the parties on questions, ten minutes for the witnesses to give their overview, and then we go to five minutes back and forth between opposition and government side. Those are generally the rules.

Perhaps we could start with you, Professor McKittrick, if that's okay with the balance of the group. Or if you have chosen a different order, we're open to that.

They're okay with that. Thank you, Eugene. Our clerk says we're fine just going in the order on the agenda.

Professor McKittrick, you have ten minutes, thereabouts. Thank you for being here. Would you like to begin?

Dr. Ross R. McKittrick (Associate Professor of Economics, University of Guelph): First, can I just check that everyone has a copy of the submission? I'm going to refer to some graphs that will be helpful.

The Chair: Yes. It has been sent around.

Dr. Ross R. McKittrick: Thank you.

I'm an associate professor of economics at the University of Guelph. I specialize in environmental economics and policy analysis. I've been working in the area of climate change for over ten years and have published numerous articles on both the economics and the science side.

My understanding is that we're here today to discuss specifically the Kyoto Protocol. I'm going to confine my comments to the specific target and timetable implied by the Kyoto Protocol.

The background notes that I received included a couple of statements:

It is a key sustainable development issue for Canada, about which there is a sense of urgency.

The government is not only willing to change its plan, but is looking for input how to change its plan.

I respectfully suggest that the first statement is wrong. There is no actual urgency here. The Kyoto targets and timetables are arbitrary and artificial. Canada was unprepared going into the Kyoto negotiations and agreed to an impossible target, whose costs far exceed any conceivable benefits. The failure to develop an acceptable plan since then only proves that this target is unworkable. Since 1997 the other Annex I signatories have examined their commitments and have come to the same realization, as they've either declined to ratify Kyoto, secured loopholes that effectively exempt them from taking action, or have simply admitted they won't be in compliance. Even if fully implemented, Kyoto in its present form will yield no net global carbon dioxide emission reductions.

So the treaty is effectively a dead letter. It's a symbol of good intentions, perhaps. It's therefore irresponsible of Canada to continue putting billions of dollars and all our attention into attempts to implement this treaty if everyone else has given up on it. And we need to be especially attuned to the unique risk that confronts Canada by binding ourselves to the Kyoto targets and timetable in light of the refusal of our NAFTA trading partners to do the same.

In regard to the second point, the most important change to the plan, such as it is, is to extract ourselves as soon as possible from the legal obligations of Kyoto. Only by letting go of this unworkable timetable and target can we hope to devise a long-term strategy on climate change that makes economic and scientific sense.

I would like to move on to section two, to walk through these graphs, because I want to illustrate for you the magnitude of the problem that you face.

Figure 1 shows Canada's greenhouse gas emissions since 1980. You'll notice that the Kyoto target roughly equals the 1980 emissions level. These data go up to 2002.

You can understand where greenhouse gas emissions come from by factoring it into three components. Total greenhouse gas emissions can be factored into emissions per unit of GDP, or emissions intensity of the economy; GDP per person; and by population. Another way of expressing the same thing, over on page 4, is that the percentage growth in emissions each year is the sum of the percentage change in emissions intensity, plus the percentage change in average income, plus the percentage change in population.

It is active government policy that our population should be growing and that our average income should be growing, but it's also the implied policy under Kyoto that our emissions should be changing at this point by about minus 5% per year between now and the end of the decade. So that leaves the change in emissions intensity to cover the gap.

Emissions intensity in Canada does not change that quickly, but it has been going down over the long term. If you look at figure 2 on page 5, this shows the greenhouse gas emissions intensity of the Canadian economy from 1980 to 2002. Over the long term it declines by about 1.2% per year.

That happens because of the natural process of improving energy efficiency and investing in measures to get more value out of the units of energy that we consume. However, declines at the rate of 1.2% per year only just offset the percentage growth in population over the same time. Population grows by about 1% per year. So that means that greenhouse gas emissions in Canada grow at roughly the same rate as average income, which is the term in the middle.

If you look at figure 3 on page 6, that shows greenhouse gas emissions in Canada and average income in Canada, and they grow in lockstep with each other. Again it's because while we do get improvements every year in emissions intensity, those improvements are more or less offset by the growth in population.

The challenge that the government has set for itself is to cause those two lines to suddenly start to diverge. And what I'd like to emphasize for you is that those two lines move together for reasons that are intrinsic to the nature of the Canadian economy. You can't just cause one line to start going down without expecting the other line to go down with it, unless you've found some exceptional means of restructuring the Canadian economy in a short period of time.

To get from current greenhouse gas emission levels down to the Kyoto target would require reducing greenhouse gas emissions by about 25% over the next five years, and it's unrealistic to propose that you can do that without causing average income in Canada to go down by something like a comparable amount.

You are going to hear from my colleague, Mark Jaccard, about possibilities for greenhouse gas management strategies that could be effective and operate at low cost but on a very different timetable from what we're talking about here.

The problem that I want to emphasize for you here is that you are dealing with a target and a timetable that simply doesn't make any sense for Canada. And if you try to stick to it, you not only expose us

to considerable economic risk, but it's also distracting the conversation away from considering other policy strategies and a timetable for the issue that would actually have some chance of garnering public support.

With that, I think I'll turn over to my colleague, Mark Jaccard.

• (1120)

Prof. Mark Jaccard (Professor, School of Resource and Environmental Management, Simon Fraser University): Or did you want the questions now?

The Chair: Thank you, Professor McKittrick.

No, I thought I had explained that we have questions at the end of the deputations.

You may proceed.

Prof. Mark Jaccard: I've been a professor at Simon Fraser University for the last 20 years and run a model of the Canadian economy that was one of the two models used during the national climate change process, in which there were the 16 or 17 issue tables. We collected information from them and ran them through our model, which was an energy economy model. So my focus is not so much on whether or not Kyoto is the right target, although I do have to agree with most of what Professor McKittrick says, but rather is much more on how do we get moving, what are the kinds of policies we need to have if we are serious at all about reducing greenhouse gas emissions over a long time period—in other words, what policies do we need to implement right away? I'm going to argue that the policies that we're following won't move us at all away from the trajectory that Professor McKittrick was just describing.

I don't have time to read out my whole submission to you. I'm hoping that you all have it. I'm just going to touch on a few key points in the time that I have. I'm especially not going to focus on the latter part of it, which is the solutions. That's where I want to propose especially a couple of policies that the leading researchers in the world in this area are focused on. I think I can be of more benefit to this committee right now if I focus instead on just why the policies we have right now are ineffective.

In an opening comment, I looked at the French translation of my talk, and the first sentence is misleading. When I said what actions must happen for Canadian greenhouse gas emissions to fall, I wanted to remind everyone that the actions are energy efficiency, fuel switching, emission capture—that's where we would capture carbon and store it some way that it did not get into the atmosphere—and I said "reduced greenhouse gas-emitting innovations".

[*Translation*]

Therefore, it's not a question of introducing innovations to reduce emissions, but rather of slowing the pace of innovations that generate greenhouse gas emissions.

[*English*]

We have innovations happening in our economy at a tremendous rate, and as long as greenhouse gas emissions are free and energy is still relatively cheap, even at today's oil prices, you will see a rate of innovation that is phenomenal and is growing. I list here 25,000 new consumer products and technologies per year.

What I want to describe is that when we're focused on the particular policies that we've been excited about, we're actually like someone who has a two-kilometre-wide dike and we're plugging up parts of the dike over here and we're congratulating ourselves and we're very happy, and actually there are holes springing out on the other side of the dike.

This morning, when I was at the Delta Hotel, I went to exercise. Every day I find a new product. This time there was a fridge in the exercise area and in it were little towels rolled up. I asked, what is that all about? They said now you can open the fridge, take out this moist, cold towel and refresh your face. That was my new innovation.

I invite any of you to look around for the energy-using innovations that pop out every day and ask yourselves, how does that stop or slow down in a world where energy's relatively cheap and greenhouse gas emissions are free? The atmosphere is a free waste receptacle.

I will talk on that in the second section of my talk: Why will voluntary and subsidy programs falsely appear to be effective in reducing greenhouse gasses? Make no mistake, the policies we're using right now are virtually exclusively voluntary and subsidy-related.

With respect to voluntary, remember, as Professor McKittrick just said, there are innovations going on at all times that are improving or reducing energy use per unit value produced. So at any time we can draw up lists of all these innovations. We could have done it in 1920, 1940, and 1980. We just happened to decide we'd do it in 1990. We wanted to reduce our greenhouse gas emissions.

For industry we created a voluntary challenge and registry, and of course industry complied by coming out and saying to people in each plant, come back with a list of investments we would have made anyway or that are going to reduce greenhouse gas emissions. Not surprisingly, we drew up long lists of things we were doing, and yes, there were always capital investments that reduce emissions and at the same time our emissions levels go up for the reasons that I'm just describing.

What happens when you add subsidies to that? What if you subsidize some of the actions that people take to reduce emissions? Because those investments were happening all the time anyway, guess what happens? The people who would have made those investments in any case are mostly the ones who capture the subsidies. We're not able, anywhere in the world, to run a program where you can separate out who would have and who would not have made a particular energy-saving investment.

It's shocking to me, but the best researchers in the world—and I'm thinking of Kenneth Train at Berkeley, Joskow at MIT, and Robert Stavins at Harvard—have consistently found that about 80% of subsidy programs are captured by free riders. That's people who would have made that investment anyway.

Even if subsidies were not captured by free riders, subsidizing energy efficiency reduces the operating costs of energy-using devices. Yes, it might mean that people will use cars a lot more. You'll see more suburban sprawl, but it also means that people will find new uses of particular products. Hence the fridge that is in the

exercise room in the Delta Hotel now, or lighting becomes efficient, so we see an explosion right now in decorative lighting, in lighting for security. None of this is a surprise, but it's shocking when you realize that nobody's counting this. Nobody's keeping track of this except a few of us who are running models in this area.

Why is there so little awareness and interest in this conclusive evidence on the ineffectiveness of voluntarism and subsidies? Environmentalists tend to tell government that greenhouse gas reduction is profitable, implying that voluntarism and subsidies will work. Industry leaders either are warning government about cataclysmic cost effects or they're sitting up saying "look at these efficiency investments that we've made", hoping to get congratulated on that.

In a growing, innovative market economy, greenhouse gas emissions must face restrictions and penalties if they are ever to decline. It is that simple.

• (1125)

The difficult question, which I will just hint at in the last minute remaining to me, is how to design policies that provide the necessary restrictions and penalties. I'll only speak in vague terms, and then if you have specific questions about what I've written there, I'll be very happy to answer them.

The point I want to get across is that what economists working in this area are very focused on is how we can provide the right long-term signals to consumers and to innovators without wrecking the economy in the short run. Obviously, you don't put on a large carbon tax tomorrow; you don't put on a highly restrictive cap-and-trade system tomorrow; you don't regulate energy efficiency in a dramatic way tomorrow.

That being said, there are wonderful opportunities to start with policies today that give the right signal so over a 15-, 20-, or 30-year timeframe we see the innovation, we see the adoption of technologies that will move us in the right direction. We'll move away from the trend Professor McKittrick was talking about, and by our best estimates now, that will not be that expensive. All of this would be effective at prices that would not lead to energy price increases of more than 5% to 10%, perhaps 20%, which is even less than the fluctuations we've been experiencing.

There are two kinds of policy I particularly emphasize, and the first is a cap-and-trade system, which is not to be confused with the one we're working on with industrialists right now. It's economy-wide and has other aspects to it I'll describe if asked. The second is what we call niche market regulations, and that's not to be confused with the voluntary program with vehicle manufacturers, at least as I've heard it described. Instead, it's much closer to the California vehicle emission standards applying to carbon now. Arnold Schwarzenegger has been the one to bring that policy into play.

I will have to wrap it up there and say I welcome any opportunity to provide further elaboration on those two policy thrusts.

Thank you very much.

• (1130)

The Chair: Thank you very much, Professor Jaccard.

Perhaps now we can go to our next witness, Mr. Streicker, manager for the Canadian Climate Impacts and Adaptation Research Network.

Mr. Streicker.

Mr. John Streicker (Manager, Canadian Climate Impacts and Adaptation Research Network, North Region): Good morning, everyone. Thank you for inviting me to come and speak to you.

[Translation]

Thank you very much, ladies and gentlemen. I apologize for the fact that my brief is only in English. However, I do hope that a copy in French will be made available to the francophones in attendance today.

[English]

I am neither an energy expert nor an economist. What I am doing here today is coming to talk to you about climate change in the north.

I represent a group called the Northern Climate Exchange, and part of that group is C-CIARN, the Canadian Climate Impacts and Adaptation Research Network. I run three offices, one in each of the territories of the north. I want to talk to you about climate change and then follow on from that about what I think the implications are for implementing Kyoto.

Climate change is now clearly evident in the north. Over the last 50 years we've seen a two to three degree shift in temperature. To put that into context, I can say that's equivalent to about one-third of an ice age, and that's in a very short period of time. We now have a 20% decrease in both ice extent and thickness in the polar ice sheet, and this is causing a lot of changes to our world in the north.

We have just finished a four-year comprehensive assessment of climate change research. I have with me a highlights brochure, if anyone would like it. It's the "Arctic Climate Impact Assessment", which was released in Reykjavik last year. Along with that, the "Arctic Human Development Report" was also released.

Nowadays we're seeing climate change right on the ground. When I go out of my home, I can see certain things; the evidence is becoming clearer and clearer. Forest fires were at record highs last year. It's easy to see the receding glaciers. We've had overwintering of new insects that are causing damage to our forests.

Some years ago the first nations and Inuit people of the north started observing changes to sea ice, changes to permafrost, and changes to the behaviour of animal species. They started reporting these things back to the scientific community. Now we're starting to develop a new model about how to go forward on investigating climate change, where we incorporate traditional knowledge with the scientific approach.

In general, the changes to the biophysical environment and to the socio-economic environment are disruptive. Most of the impacts are

negative. For us the situation is very serious. There are species at risk, infrastructure is being damaged, and people's livelihoods are compromised. There are direct issues with health, the environment, and the economy, and there are indirect issues with security, human rights, and sovereignty. When I say "security", I mean security in the broadest sense of that word.

The north is not that populous a place, but it does have a relationship to the rest of Canada and in fact to the rest of the world. For example, the melting of the glaciers and the sea ice is changing the composition of the Arctic Ocean. It is changing the salinity and the temperature of the Arctic Ocean, and that in turn is changing the circulation patterns of the Arctic Ocean, which in turn is impacting on the global circulation patterns. These are drivers for the weather around the world.

What is happening in the north, which is magnified compared to other areas, is tied to what's happening in the south. In fact, we can expect the impacts we are seeing now in the north will, in the coming decades, be coming to the rest of Canada and the rest of the world. In the north we picture ourselves as being on the front line of climate change and acting as a bellwether for climate change for Canada.

• (1135)

How does this experience lead to suggestions I might have for the Kyoto Protocol? Here's where I'm probably going to disagree with Mr. McKittrick.

The first thing I think we need is a longer vision. The climate change issue, while it's been building incredibly rapidly on a geological time scale, has been building slowly on a human time scale. It's one of those low-level pervasive things that we see building almost a bit too late. But as a result, we need to be thinking of it as something that is also very slow to turn around. In other words, I don't think the goal is to try to just set up to meet a Kyoto target; the goal is much longer than that.

The goal is to try to think about how to change this carbon balance, or the greenhouse gas balance in the atmosphere, and Kyoto is merely an initial step in which to try to bring the industrialized nations online first, before we bring in the developing nations. So, for example, if our Kyoto target is 6%, what we need is something more like 60%.

I recognize there are other countries that haven't signed on, in particular the United States, but there are encouraging thoughts in that vein. There was mention earlier of the auto deal that has recently been signed. There is the possibility that these things will come at the state level and start to influence the changes we need to see. I don't accept the argument that because the rest of the world isn't doing this, we should turn our backs on it in any way. The ACIA, whose report was released—these are just the highlights of that report—has also released a policy document that suggests not detailed economic policies, but rather broad-based policies, about how to develop a long vision.

The second point I would like to make is that climate change is a new type of issue for us in the world. It's a completely broad-based, horizontal issue; it crosses all regions, politics, sectors; it's very low-level. The solutions we develop for it need to be broad-based and horizontal in response. Although there's been some work federally, it hasn't been successful to date. Maybe we'll see in a week's time when we get, I believe, the release of the new climate change plan, but the arrangement of Environment Canada—I'm going to say "versus" Natural Resources Canada—has not been constructive.

There needs to be some sort of broad-based thinking, and a way to get at that federally and to take those decisions up to a fairly high level quickly. There's been very little leadership shown at the provincial-territorial level, and similarly with industry. It's my opinion that it will take the federal level to entice and engage the provincial and territorial governments and industry.

Because the science is still unfolding, the broad strokes are understood and in place but there's a lot of detail that is still uncertain. We are certain that climate change is coming and is upon us in the north, but because we're changing our local focus or our local modeling, we'll need to continually redefine our policy. There needs to be a way in which we come back to review policy on a regular basis.

• (1140)

Continued research is an important goal for me. The international polar year has been announced and is coming up in 2007-2008. I strongly urge the federal government to get behind this initiative.

Typical research funding tends to be silo-based or narrow niche-focused. The issue doesn't lend itself to that type of problem. It crosses all types of research, and so we need the sorts of research initiatives that are promoting multi-disciplinary work and as well are more inclusive of traditional knowledge and indigenous peoples' experiences.

The third point I want to make is about a sense of vision, a sense of urgency. Canada and the world have been slow to realize and reluctant to accept that climate change is here. The situation in the north is a clear indicator that we no longer have the luxury of time. We need some clear direction on energy priorities and we need some stewardship—and by stewardship I mean leadership by example—on energy efficiency.

We need to strengthen the relationship between the health of our climate and the health of our people. We need to set some clear goals for industry, so that they can know what to expect in terms of caps or how to respond. If they're going to be regulated, I think financial incentives or disincentives and credits in trading are all useful fiscal tools, but there's not nearly enough time to rely on voluntary participation, so I agree with my colleagues that voluntary responses won't do it over the short term. So I think we do need regulation.

Finally, I want to say that I think what we need to do is promote social shifts. I think we need to break down typical old confrontations: of environment versus development, and of alarmism versus business as usual. I think it's beyond these conflicts where we start to see the solutions to true sustainable development.

On a positive side, there's been a shift in the last couple of years. We've gone away from asking whether this is a real thing, and by and

large whether it's caused by humans. What we're on to now is how this will affect our economy, and ultimately how to motivate people to action. From my point of view, the risks aren't to our economy as much as they are to our wellbeing in general. On the positive side Canadians, and northerners in particular, are fairly motivated now. We're ready to act.

I don't mean necessarily to come forward with the economic solutions or the alternative energy ideas. I have some, but my point is that with some charismatic national leadership, I think we can hit that tipping point, and I encourage you to go there.

• (1145)

The Chair: That's a good place to finish, on the business of charismatic leadership. Thank you, Mr. Streicker. We appreciate your insights and your perspectives on that.

We're now going to go to the committee. We'll lead off with Mr. Mills.

Mr. Bob Mills (Red Deer, CPC): Thank you very much, and thank you, gentlemen, for appearing here today.

I want to simply reassure Mr. Streicker off the top that while we don't agree with the Kyoto Protocol, we do have a plan that we believe would be a much better way of reaching where we need to go. Obviously the committee wouldn't let me exercise the ability to present that plan to you, but I'd be glad to do it in person. Simply call my office; I'd love to talk to you. I feel your sincerity in what you have to say. I just want you to know that and to make that offer to you.

Going to the questions, I would like to start off with a quote from what will probably be the plan released next Wednesday, where it says that to achieve the long-run reductions in greenhouse gases that are needed, the Canadian economy needs to begin the transformation to low-carbon technologies while maintaining strong economic growth. That is, I think, what we would all agree with, and it's a wonderful motherhood statement.

I would like to know from our two economists, is it possible to go to low-carbon technologies by 2008 and maintain strong economic growth? What I'm really asking you is, what might be the costs to Canadians in doing that?

Dr. Jaccard, I would particularly quote you, from some time back when you said that to do that would result in a 50% gasoline increase, up to a 90% natural gas increase, and a 100% electricity increase. How is that compatible with maintaining strong economic growth? That would be my first question.

The Chair: Professor Jaccard.

Prof. Mark Jaccard: Those were simulations I had done with our energy economy model, in which we assumed that Canada would 100% achieve its Kyoto commitment. In other words, all the reductions would be domestic. In fact, if we were to start now with the 100% target, those cost estimates I gave you are low. They could be double what they are now. That was assuming we started in the year 2000.

My understanding is that the green plan or whatever is not talking about 100% Canadian emission reduction. Those numbers of mine are specific to a 100% Canadian reduction. I stand by them, and I say they're way higher now.

Mr. Bob Mills: That just brings the obvious question, then. Is it even feasible, either Dr. McKittrick or Dr. Jaccard, to hit those targets of up to 300 megatonnes by anything we might do in this country, including buying foreign carbon credits?

Prof. Mark Jaccard: Yes, you can do it by buying foreign carbon credits. You can buy all of it with foreign carbon credits. Those foreign credits might be very cheap, especially with the United States not in the market and Russia now having ratified the protocol. I've tried to follow the literature on that, and the estimates are that the international credits could be very cheap indeed.

Mr. Bob Mills: NRCan has always said in its negotiation with the large final heavy emitters that in fact they would have access to the European market for carbon trading. That market opened on January 1 at \$3 per tonne of carbon. Today it's at \$27 per tonne of carbon and is now projected to go to \$75 per carbon-tonne. NRCan has always said you'll be able to get into that market. Environment Canada now says no, that is a closed market. You can't get into it; in fact, we're going to go to African countries and other places to buy really cheap credits. Obviously that isn't really the liberal way, ripping off a poorer country so that it remains poor forever, because they'll never be able to industrialize. That seems anti-liberal to me as a way of thinking.

Trying to get a handle on the price of carbon brings into question our farmers and our foresters. They are also saying they want credit for their sinks for carbon dioxide. Again, what price will they ask? We're saying it could be very cheap, but why would they not negotiate for the same price a European is getting?

• (1150)

Prof. Mark Jaccard: My understanding is that when the dust settles and Russia is part of the trading, and so on, the price of carbon credits looks likely to be very low.

Mr. Bob Mills: Is that so even if by 2008, or when you get close to that date, everybody's looking for credits?

Prof. Mark Jaccard: I would just add one last thing. There's an article by Christoph Böhringer, in *The Energy Journal*, which is our flag energy journal internationally, that did an estimate just in the last year. As I recall, his estimate was in the range of \$10 per tonne of carbon dioxide when everybody's involved in that trading mechanism who would have a right to be there.

The Chair: Professor McKittrick, you wanted to get into that.

Dr. Ross R. McKittrick: Yes. Let me address the points you've raised.

First of all, is it possible to move to a low-carbon economy by 2008? I think it's pretty clear that it's not. My understanding is we're specifically commenting on the legal obligation to reach the Kyoto target on the Kyoto timetable. I think I just need to emphasize that this is a non-starter, unless you're prepared to contemplate pretty severe economic consequences over the next three years. I guess we'll see when the government puts out its plan whether it's really serious about doing that or not, but as far as I can see, there's just no way to reach that target on that timetable.

With the foreign credits purchase, it's true in the context of a rather idealized economic model that the supply is potentially very large and the demand is not very large, and you could have a low market clearing price. But there's a practical problem. These are instruments being traded internationally with countries that don't have the same kind of contract enforcement rules we have. There's no way to audit performance on these credits. If we were to spend \$5 billion buying credits from Russia, all we're getting is a promise from them that they've cut their emissions and promise to keep them down by that amount.

How do we audit their performance on that? Are we going to go over there to check? The carbon dioxide emission numbers don't come out with a three-year lag. When they come out, if it turns out that they didn't honour their contract, how do we get our money back? I think what will happen is, if there is any serious attempt to set up a permanent trading system across borders—especially involving countries like Russia or the Ukraine—the market would unravel, because there would be widespread fraud and the permits would be viewed as worthless.

I think we might realistically have small-scale trading with some European countries, but there the demand is very high and the supply of credible permits is going to be quite limited. I just don't think this is a large-scale option for Canada.

Mr. Bob Mills: Well, that's really the next question—I think you've pretty much answered it—about the monitoring of these projects to ensure that they don't go to a Swiss bank account instead of to an environmental project: what do you do if something does go wrong with it? We can't basically monitor things here. How could we do it there?

Talking about the price of carbon credits, too, we have a rather poor government track record, where they have estimated that costs would be.... Well, the favourite is the gun registry: it's going to be \$2 million, and it ends up being \$2 billion.

Is it possible that there could be that sort of flaw in the costing? How do we know...? Why are the people in Holland paying as much as they are for credits today? Why would they do that if in fact credits are going to be so much lower? They have allocated \$1 billion to buy credits. Why would they do that today at \$27—I mean, they bought them at a lower price, but at that kind of European price—when in fact the price is going to be so much lower?

• (1155)

Dr. Ross R. McKittrick: I'd like to comment on one thing about the range of cost estimates that come out.

Model simulations of the cost for Canada to reach the Kyoto target have to assume a certain policy structure. One of the things that comes out in all these simulations is that the overall costs are very sensitive to the mix of policies that are used. If we have used a strict pricing system that involved carbon taxes or a tradeable permit system, then it's possible to have some reasonable-looking cost estimates. But as soon as you depart at all, exempting certain sectors or moving to emissions intensity trading or things like that, then the costs begin to move off very rapidly.

When you look at cost numbers for Canada, you have to look very carefully at the specific form of the policy that was being simulated. The closer you get to the actual policy mix we've seen proposed in recent years, the higher the cost estimates go, in terms of exempting certain sectors and making very limited use of pricing mechanisms and trying to rely instead on relatively ineffective measures such as subsidy programs.

The Chair: One minute left, Mr. Mills.

Prof. Mark Jaccard: Just to answer your question about why would the Dutch be paying \$27 now, I don't have a certain answer for you, so I'm just speculating. But if I look at other trading mechanisms that existed—I'm thinking of the U.S. sulphur dioxide mechanism that we look at as a model—you will see that. Especially early on in a process, you'll see estimates and prices that jump up and down.

It's like any kind of futures market. People are guessing. How effective will the trading mechanism be with the Soviet Union? Will it be politically acceptable, as you're suggesting, for Canadians to buy credits or for Europeans to buy credits? So that's my answer of why the price might go up and down, and I can't be sure that it will be as low as I was saying, because there are all these other political constraints, international relationship constraints.

The Chair: Mr. Mills, you're really out of time, but Mr. Streicker just wanted to get in there.

Mr. John Streicker: I just want to add a comment that my understanding of the credit trading is that there is a big difference between the types of projects that might go on in Russia, where there is no accountability, and those types of projects that have full accountability through the UN mechanisms to track and show transparency. There could be a big price difference based on that, which is part of what I think you're trying to get at, whether we're buying good credits or whether we're buying phony credits.

Mr. Bob Mills: For your purposes, Mr. Streicker, it would seem to me that to fix climate change, if we could bring the 1940 technology in China to the 21st century, we would help the climate change issue so much more than we would by bringing a 2003 technology of a

plant in Canada to 2005. The gap, the huge amount of greenhouse gases.... It seems to me that's a much better approach, and involving them in a program—not Kyoto—that would achieve that, we would really deal with the environmental problem you're concerned about.

The Chair: Mr. Mills, we're going to have to cap it at that for the moment and we'll go now down to Mr. Bigras.

Mr. Bigras.

[*Translation*]

Mr. Bernard Bigras (Rosemont—La Petite-Patrie, BQ): Thank you very much, Mr. Chairman.

I read your presentations carefully, Mr. McKittrick and Mr. Jaccard, without really knowing the specific parameters of the econometric model that you used to arrive at the conclusions you presented to us today. To my way of thinking, the parameters of an econometric model are just as important as any conclusions derived from that model. The parameters condition any findings.

I'd like you to tell us a little about the parameters that you used. You state that there is a link between higher emission levels and economic growth. Did the model that you employed also evaluate the impact, in terms of climate change, of the failure to take any action? Have you weighed the impact of climate change on various industry sectors? For example, consider the agriculture and forestry industries. Now more than ever, it will be important to invest public funds in these areas. In the far North, permafrost melting will impact the need to invest in infrastructures. In coastal regions, rising sea levels will lead to more coastline erosion, thereby creating a need for more significant investment in public infrastructures. Have you considered the impact of the possible salination of the waters of the St. Lawrence and the resulting need to invest in water purification infrastructures?

Did your econometric models assess the impact of not taking any action at all on this front? In the process of reaching the conclusions presented to us today, did you also examine the impact of climate change on industry?

• (1200)

[*English*]

The Chair: Mr. McKittrick, if you would like to respond to that.... Thank you.

Dr. Ross R. McKittrick: There has been a lot of work in Canada on the economic impacts of climate change—for instance, a team at the University of Alberta in the Department of Rural Economy and work by Michelle Reinsborough, who was at Queens and is now at Environment Canada—by looking at how climate changes in the past have affected industrial and agricultural activity.

In asking the question, you have to bear in mind that climate changes can have positive and negative impacts, especially in a country with large-scale forestry and agriculture. For many of the agricultural regions in Canada, using the scenarios that were generated by the University of Victoria climate model, most of those regions actually come out better off, in general, under the climate change simulations.

Yes, there are costs that go into, as you say, dealing with shifts in some weather patterns and coastal infrastructure, but there are also benefits that arise. If you're going to construct an argument based on the impacts of climate change, you have to take both sides into account.

The other thing you have to keep in mind is that by putting money into Kyoto, you don't avert any of those costs you're concerned about. We're paying for Kyoto and we're going to experience all those changes anyway. So we're paying twice.

The issue here, if you're really concerned about making sure the resources are available for future generations to deal with things like coastal infrastructure needs, is there's nothing stopping us from setting money aside now to make sure that the funds are available in the future that we think they're going to need. But if we're going to throw a lot of money at measures that we know upfront aren't actually going to have any effect on the outcome, that's just a waste. We don't defend that waste by pointing to the potential impacts that future generations may face

I think in general in Canada we do a pretty good job of developing infrastructure that can deal with a wide range of weather conditions. I'm sure the people who built the Confederation Bridge to P.E.I. built it to withstand all kinds of weather situations, even wider ranges of variability than we normally experience—at least, I hope they did. But if we're concerned about Richmond, B.C., or coastal areas in the Maritimes, there's nothing stopping us from putting resources in place now to make sure that that coastal infrastructure is robust. That's an investment that's fundamentally different from investing in Kyoto compliance, which as far as I can tell would be a waste, if that's what you're concerned about.

The Chair: Would you like to respond to that also, Mr. Johnson? Please do.

Mr. Peter Johnson (Science Advisor, Canadian Climate Impacts and Adaptation Research Network, North Region): This is probably a response to Ross and arising from Mr. Bigras' comments.

I think most of the models do not take into account the magnitude of the change in the north. Putting aside money now for infrastructure in the future is totally inadequate. According to the results from the Arctic Climate Impact Assessment and the Human Development Report, there are in the circumpolar north 143 communities—villages, towns—that will have to be moved within the next decade. Now, that's not putting money aside in terms of infrastructure in the future.

There are also major challenges to infrastructure. You say we can design with respect to infrastructure. We cannot design the effects on ice roads, which a large number of communities depend on. We cannot design infrastructure to cope with changes in the Arctic ice.

So I think from the northern perspective, a lot of these fixes, models, and so on that are being developed in the south do not apply particularly to the north.

One of the things that always seems to me to be a real problem is that when we start talking about climate change, we talk about trading quotas and we talk about economy and so on. We should be talking about people. Climate change affects people, and particularly the people in the north. What we need is research, monitoring, and so on that responds to the issues of adaptation now for northern communities, and particularly if you look at things in terms of the whole of the circumpolar north.

● (1205)

[Translation]

Mr. Bernard Bigras: As a matter of fact, Mr. Johnson, your presentation ties in with the conclusions reached by Robert Corell several months ago, and with the work of the Ouranos Centre, a Quebec consortium studying climate change and adaptation issues.

Mr. Jaccard, I'd like to focus for a moment on buying credits on international markets and the cost of these credits. Correct me if I'm wrong, but you maintain that a reduction in the source of greenhouse gas emissions could have major economic repercussions and result in a drop in the per capita GDP. More than likely, this is how the government is preparing to deal with the industrial large emitters. We're being told today that future economic growth has been overestimated so that our emission reduction targets for industrial large emitters must be adjusted downward from 55 megatonnes to approximately 30 megatonnes, as Mr. Bramley noted yesterday.

In view of the situation, you're recommending that we buy credits on the international market, because the price is likely to be low. That surprises me. This is the first time since the committee began looking into to this matter that I've heard someone say that credits can be bought on the international market for about \$10. Companies such as TransAlta and P  chiney are currently buying these credits on the international market in the belief that the price will go up and that they will be able to benefit economically from the transaction.

I'd like to understand a little better how you came to the conclusion that credits could be bought on the international market for \$10. That's not insignificant. It should be remembered that the government has pledged to offer up to \$15 to major industries by way of compensation. Anything over and above this amount will come out of the taxpayer's pocket.

Is it not a risky proposition to suggest buying these credits on international markets, assuming that the price will be \$10 when ultimately, the price could quite conceivably be in the order of \$35? Taxpayers, not the companies, will be the ones making up the shortfall. Inevitably, companies, large industries and industrial large emitters won't be the ones picking up the tab. They'll pay one time for the difference between \$15 and the market price. In fact, they'll pay a second time for adapting infrastructures to climate change. Invariably, the money always comes out of the taxpayers' pockets.

[English]

The Chair: Professor Jaccard and Mr. Bigras, we'll have to make this the final response in this particular envelope of time.

[*Translation*]

Prof. Mark Jaccard: I thought about responding in French, but I think it would be best if I answered in English.

[*English*]

Stop me if I didn't understand exactly your question, but I think you were saying that you're troubled by this uncertainty in the international market as to where the price might be. In a way, I can't respond significantly to that, because I believe there will be a great uncertainty about what the international price will be. If that's your concern, I think it's quite true.

What I can say is that I have simulated in our model a price of \$15 per tonne of carbon, and even \$30 per tonne of carbon, and this is not where individual sectors are allowed to move higher and lower in emissions intensity, but rather where they are capped and they are looking at \$15 or \$30 as the cost at which they must buy credits, whether it's provided from the government or in an international market. In that scenario, if we'd started in the year 2000, that does not have significant economic impacts in Canada.

Am I saying to you that I'm promising this is what the price will be internationally? No. I think it's very uncertain. I take into account what Professor McKitrick is saying, and I'm not an expert in this area, but in terms of domestically, at \$15 to \$30, in spite of what you might hear, industry will do quite well, in my view, at that price.

• (1210)

The Chair: Okay. Mr. Bigras, we'll have to bring that to a close, and we'll now go over to Mr. McGuinty.

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

It's good to see you again, Dr. Jaccard, Dr. McKitrick.

Mr. Johnson, it's nice to meet you.

Mr. Streicker, thanks for flying down from the north.

I want to pick up on the excellent line of questioning that my colleague from the Bloc Québécois just pursued. It's the best I've seen in 31 meetings, and I want to congratulate him on it, particularly for probing the question of modelling.

I want to recount something, and if you bear with me, Mr. Chair, I'd like to just recount it for our guests today. This is the process that I've recounted here before, which is a national forum on climate change, where we invited 28 members of the Order of Canada into a room to participate in the most extensive series of briefings on climate change ever conducted in Canada for a proxy group of Canadian citizens who knew precisely nothing about climate change. And they were exposed to over 30 expert panellists—economists, international trade experts, environmentalists, ecologists, social scientists.

One of the things that we asked each presenter to do while they spoke and before they spoke was to speak to the limitations of their respective disciplines—the limitations of their modelling ability, the limitations of their econometric modelling, their physical modelling. And lo and behold, the interesting thing about the process was that not one single presenter did so. I don't know if it's a part of the human condition.

I want to pick up on, Professor McKitrick, particularly your submission, which is greatly disserving to me, particularly page 2, where comments are made that are, from what I can gather, way beyond the social science of economics.

You talk about, there is “no actual urgency”; at best Kyoto is “a dead letter”; it is “a symbol of good intentions”; “futile attempts to implement a failed treaty that everyone else has already given up on”; we should “extract ourselves as soon as possible from the legal obligations of Kyoto”; “the evident inability to obtain approval for a plan through normal Parliamentary procedures”. We're releasing a plan next week. “It threatens to bring the CEPA itself into disrepute”. Yesterday we had the two most prominent environmental lawyers in the country who litigated this matter to the Supreme Court of Canada in full disagreement with you. “It's a mistake to tell Canadians that the science of climate change is sufficiently settled as to necessitate a precipitous rush into a major economic restructuring with no regard to the costs Canadians will bear”, citing a source that I don't recognize as a legitimate one, and “justify Herculean experiments in controlling the weather”.

I may be a recovering lawyer, but I'm not stupid. This is not economics. What strikes me about this commentary is that it crosses over, unfortunately, in my reading of it, into the area of advocacy and not economics.

So I want to put a question to you, Dr. McKitrick, and to you Dr. Jaccard. I want you to help us understand as committee members what are the limitations of economic knowledge and modelling with respect to this excruciatingly difficult challenge we're facing. That's number one.

Yesterday we had Pembina here asserting once again that there were massive subsidies being extended to the oil and gas industry, and once pushed on it, Pembina's principal researcher admitted that the only way they could say this is because we're not taking into account full environmental costs, knowing full well that no nation-state on the face of the planet has found a way to take into account environmental costs. A very disingenuous argument—we keep getting faced with disingenuous arguments.

We're trying to sift through the disingenuity of these arguments. Can you help us understand what we do know, what we don't know, and then could you please point out to me three examples of three jurisdictions in the world that have achieved a better climate change plan than other countries, including this one, which is about to release its own?

• (1215)

The Chair: Professor McKitrick, would you like to begin?

Dr. Ross R. McKitrick: All right.

Let me deal first with the comments in my submission about CEPA. I submitted this about a month ago, so it would leave time for translation. At that time, the news of the day was a proposal to designate carbon dioxide as a toxic substance. That proposal, I submit, runs the risk of bringing CEPA itself into disrepute by enshrining something obviously untrue into it.

Carbon dioxide is not a toxic substance. I can't imagine it was ever in the minds of the people who wrote that section that it would be used to cover anything like carbon dioxide. That proposal has since been withdrawn—in part, at least, on these very grounds; it would stretch the meaning too far. Since it has been withdrawn, this part of that paragraph is now obsolete.

As for the other sections you found objectionable, I go back to figure 3. I am taking the government at its word that we've accepted a legal obligation to reduce greenhouse gas emissions from where they are now to the Kyoto target level over the next three or four years. That is a precipitous timetable. If you are faulting me for taking the government seriously, then I guess I have to plead guilty. The government says that's what its goal is. My argument is it is an impossible goal, and if you actually try to achieve it, you run the risk of creating severe economic consequences for the country.

Even acknowledging, as I freely do, all the limitations of economic forecasting and the extreme difficulty of coming up with economic models that give stable and reliable forecasts, I don't see any economic model out there that could suggest you could get greenhouse gas emissions down to the Kyoto target without taking down average income with it.

Mr. David McGuinty: Dr. McKittrick, I need to know—and I think the members would like to know—what those limitations are. Be specific for us so we understand, so we can help sift through a succession of different evidence being put in front of the committee.

What precisely are the limitations? What do you know, and what do you not know, in the social science of economics about this issue?

Dr. Ross R. McKittrick: All right. I'll answer that, but I also want to come back to the other point about the rest of the world effectively giving up on Kyoto.

At this point only Europe and Japan are nominally still involved in it. Australia won't ratify it; the United States won't ratify it; Russia only ratified it because they don't actually have to do anything to comply with it.

Mr. David McGuinty: How many countries are there in Europe?

Dr. Ross R. McKittrick: Europe is a single signatory to Kyoto. They have a joint implementation rule, with an internal burden-sharing rule.

However, even within Europe, if you look at their current emissions situation, they're well above where they need to be and they are having trouble coming up with a plan they can all agree with among themselves, so they won't be in compliance, and Japan won't be in compliance.

Mr. David McGuinty: So the European countries are not bound by European Union regulations to ratify the Kyoto Protocol by act of state. Is that right?

Dr. Ross R. McKittrick: They're facing the same bind we are. They've ratified a treaty—accepted it as a legal obligation—with no credible mechanism in place for compliance.

Mr. David McGuinty: How many European countries have signed?

Dr. Ross R. McKittrick: I believe there are 16 countries in Europe, but they entered the treaty as a single entity.

Mr. David McGuinty: I think there are 25 now, so that means 25 nation-states in western Europe have at least signed on to the protocol.

Dr. Ross R. McKittrick: Yes.

Now, as to the limitations of economic modelling, I don't know how much you want to know, but there are several broad categories of economic models. Some of them build up from microeconomic foundations, like CGE models. Others use more macroeconomic parameterizations. It's a question of the trade-off between computable tractability and the amount of detail that can be kept in place.

The big thing that's always left out of models is we can never really be sure how people will respond to changes in the economic environment around them. We can learn from how they responded in the past and try to build that into the price elasticities and parameters of the model, but the future is always a closed book, especially regarding new technologies that will develop, or, in the case of Kyoto, if we're trying a policy experiment that takes us far out of what we've experienced historically.

Models are very limited in their ability to tell us what will happen outside historical experience.

• (1220)

Prof. Mark Jaccard: Can I also respond?

The Chair: Yes, please go ahead.

This will bring this portion to a close.

Prof. Mark Jaccard: I always do the challenges of models in my presentations, in fact. I don't know if I was invited to your process, but I have been commended for talking about the problems with our models.

I will first talk to Professor McKittrick's model. One of the big concerns you have in modelling is how you determine technological change. We know it's uncertain. How do you incorporate it into your model? I understand that he's presenting this in a Kyoto timeframe, so technological change is not that important, but when he shows you fixed relationships between GDP and carbon dioxide emissions, income and carbon dioxide emissions, population and carbon dioxide emissions, I could show you a similar relationship over a 30-year period for sulphur dioxide emissions—that they were linked with, and climbing with, population and economic output.

Then when we bring in policies in which we try to change that relationship, we have all sorts of evidence of that happening with sulphur dioxide, and there's now growing evidence that it can happen with carbon dioxide, even staying with a world that uses fossil fuels. In other words, you capture and prevent the emissions from occurring.

The problem with our early models—or in this case, a short-run model—is it does not have technological change in it. When you put technological change in, it doesn't mean you should just trust the economist who's done it, because it's going to be highly uncertain—but I will say a lot of the modelling work I'm involved in internationally has really started to narrow the parameters of what we think it will cost us in the long term to get to a very low greenhouse-gas-emission energy system.

Wide estimates of those costs are in the range of \$40 to \$80 per tonne of carbon dioxide, Canadian. That's not a tax you would put on tomorrow, but that's looking at the cost heading over a 25-year timeframe. That's not a dramatic cost to society.

Finally, the next one, although Professor McKittrick already talked about it, was response to policy. We are always uncertain of how people will respond to policy. Again, we look at other instances in the past of how they responded to policy, but all our models are highly uncertain when it comes to response to policy.

You asked about countries that have better policies. If you think about what I'm talking about right here, in terms of getting well-designed penalties and constraints that don't wreck the economy, certainly England, with its climate change levy, a renewable portfolio standard, and a host of other policies, would be a better program.

Norway started out with a tax of \$70 per tonne seven or eight years ago, with partial exemptions—not total exemptions—for the oil and gas industry, so the oil and gas industry has flourished in Norway during this policy, but at the same time has had a motive to do technological change in terms of finding efficient ways of doing carbon capture and storage. So there are countries whose policies look better than ours.

Finally, I would say even the United States, at a state level—as was mentioned by Mr. Streicker—is superior to the Canadian policy, and I believe we should be copying the vehicle emission standard in California, for example. That one does not cause high costs; it does cause dramatic, long-run technological change.

The Chair: We are very much over time now. I'm afraid I'm going to have to leave it at that. We'll come back in the five-minute round, and you may have an additional supplementary.

We'll go to Mr. Cullen.

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

Thanks to our witnesses for coming today.

Just before I get into some broader questions, I'd like to clarify your last point, Professor Jaccard. I'm not familiar with the Norway scenario. Is this essentially a carbon tax, this levy you speak of?

Prof. Mark Jaccard: Yes. England calls it a levy; the Norwegians called it a tax. Several countries have that now.

Mr. Nathan Cullen: It's no different, but just in name, in terms of its application.

Just to be clear, you used the words “the oil and gas sector has flourished” while having this carbon tax in place. That's interesting. I thank the panel—

•(1225)

Prof. Mark Jaccard: I do want to clarify that it flourished, although the tax was set up so that export industries could make complaints to have their tax lowered by a certain percentage.

Mr. Nathan Cullen: But not removed?

Prof. Mark Jaccard: But not removed.

Mr. Nathan Cullen: So it exists; a carbon tax has been effectively put in place in an oil and gas sector. That's good news to many panellists, I would suggest.

To take a step back, Dr. McKittrick, climate change is a concept that through human input the climate is changing. Is that something you subscribe to? Do you believe climate change is in fact occurring, and that much of the change is attributable to humans?

Dr. Ross R. McKittrick: On the first question, of whether climate change is attributable to humans—yes, I think that is clearly true. I would say, for instance, on the prairies there has been a permanent climate change due to large-scale land use modification. We have changed the climate of southern Ontario through building cities and large-scale land use modification.

Mr. Nathan Cullen: I'm speaking specifically about global climate change and the introduction of greenhouse gases.

Dr. Ross R. McKittrick: My views on the role of greenhouse gases were set out at length in my co-authored book, *Taken by Storm*. I think the answer needs to be there are fundamental unresolved uncertainties there, and it is very difficult to give a straightforward answer of what climate change would constitute and what the role of humans is.

Mr. Nathan Cullen: I am having difficulty deriving any sense from that answer as to whether you believe humans, through greenhouse gas contributions, are in fact changing the global climate upwards.

Dr. Ross R. McKittrick: Humans are adding to the stock of carbon dioxide in the atmosphere, and I don't claim to know what that is doing in terms of affecting long-term weather patterns.

Mr. Nathan Cullen: I just want to stay on this point for a minute more because I am trying, as you can tell, to understand whether you believe climate change—human-induced, through greenhouse gases—exists or not. I am getting a suspicion that you are at the very least undecided, if not in disagreement with the notion.

Dr. Ross R. McKittrick: I'm undecided on the question and I take seriously the lines of evidence that are put forward. If we had the time and you wanted to have a long conversation on it, I would present to you the evidence I think stands in favour of an anthropogenic influence on climate, and the evidence I think stands against that, and why I regard it as an open question.

Mr. Nathan Cullen: That's interesting.

So with respect to the general body of climate change research in the world today, how would you describe where the debate is right now? Do you think there is much doubt left within the scientific community of climatologists and people who study this?

Dr. Ross R. McKittrick: Not that long ago a German research lab conducted a very extensive poll of people working in the climatology field, asking some of these very questions. The perhaps not surprising answer was that while there is general assent to the idea human carbon dioxide emissions are in general having an effect on climate change, there is a wide diversity of views on whether that climate change is currently observable, what the specific manifestations of it would be, whether it is a serious problem that needs to be addressed, and so forth, so I have difficulty trying to summarize in any simple way exactly what the scientific community would have to say on it. I think you would find people have their own areas of expertise, and within those areas of expertise they formed a judgment; you'd probably find the range of views is pretty wide.

Mr. Nathan Cullen: Thank you.

In economics and social science, peer review is important. Has the work you've presented to us today been peer-reviewed or published?

Dr. Ross R. McKittrick: The work I presented to you today is drawn from Government of Canada statistics.

Mr. Nathan Cullen: The conclusions are what is important, not so much the statistics from the Government of Canada.

Dr. Ross R. McKittrick: The bulk of my presentation is just dealing with a simple identity. That is simply a graphing of statistics.

As for my own research work, I'm only offering opinions based on work that's been published in peer-reviewed journals.

Mr. Nathan Cullen: I will leave off that topic, but it seems out of line with some of the conclusions here. They seem to be your own conclusions, and not so much just a reflection of what peers have said in terms of need to extract, and some of the comments Mr. McGuinty made, pulling from your dialogue. I would be curious as to where those have appeared in peer review, and if you're just simply quoting them or paraphrasing. They seem to be your own conclusions.

I want to move on to Professor Jaccard for a moment. In the assumptions of the energy models, Mr. Mills asked about pricing and costing—energy costs for Canadians.

We know some of the alternative energy sources are relatively new. As any innovation comes in, it is expensive at first, but decreases in cost as it increases in use. Do your models factor that in?

• (1230)

Prof. Mark Jaccard: Yes, my model factors that in. It has no effect in a five-year timeframe.

Mr. Nathan Cullen: Why not?

Prof. Mark Jaccard: Because what we call learning experience curves—relationships between the production and maturity of a technology, and what its ultimate costs are—are 20- to 30-year relationships. The price of wind power in favourable sites fell from about 22¢ to 5¢ per kilowatt-hour over a 20-year period; it didn't happen in five years.

Mr. Nathan Cullen: It's an extraordinary reduction.

I wonder if you could clarify one of the things you commented on. You suggested these costs could double as well, that the estimates you had first made could double as well.

Prof. Mark Jaccard: They could double if we are still trying.... My estimates were if Canada tried to get its emissions to 6% below its 1990 levels completely in a 10-year period. Then, instead, emissions just kept rising. Now we're trying to do an even bigger reduction, which would be to meet the Kyoto protocol in a five-year period, having done nothing in the first five years.

Mr. Nathan Cullen: I'd like to take us back to the technological fix you talked about. If climate change occurs, you mentioned fixes can be done; technological innovations can be made. In both your and Dr. McKittrick's presentations, there seemed to be a great reliance on the human ability to innovate and to adapt to whatever circumstances are presented.

My question is with respect to this fixed relation between GDP and greenhouse gas production. It seems to me there are some false assumptions being reported in the graphs. I had the Mining Association of Canada present here, and then had a discussion later, remarking on the fact that realizing Kyoto was coming into effect—something you believe we should withdraw from—many of the mining association members began to make changes to their industrial processes, some of them achieving extraordinary greenhouse gas reductions in the process, and achieving also greater profitability for their businesses.

What's the problem with that? And does that fixed relation that you pretend to, in terms of GDP and GHG production, remain? It seems contrary to your position on the human ability to innovate if climate change does continue to occur.

Prof. Mark Jaccard: First—and I don't blame you, you're hearing a lot of things—you are confusing a bit what Professor McKittrick is saying and what I'm saying. I am not saying there's a fixed relationship between GDP and these emissions. I'm just listening to the scientists in terms of what kind of impact it could be, and it could be very large.

When I was talking about technological change, it was not adaptation; it was mitigation. I'm talking about technological change to reduce greenhouse gas emissions, and I'm arguing that over a 20- to 50-year time frame, the global energy system can move to an energy system that has very low greenhouse gas emissions, and that ultimately the cost will not be very high. I predict energy prices will be about 20% to 40% higher than they would have been, let's say, starting forward from about the year 2000—not the latest increases. At prices of \$50 or \$60 or \$70 a barrel of oil, there are all sorts of ways we can reduce greenhouse gas emissions, and I'm not talking efficiency; I'm talking about emission control. For a typical household, that would mean energy, 35 years from now, might be 6% of their budget instead of 5% of their budget.

Mr. Nathan Cullen: That's interesting.

I have just one last thing for Dr. McKittrick. It is just that you have a caveat at the end of your presentation here, with respect to regulatory strategies. There was a comment—I think it was Dr. Jaccard—talking about the ineffectiveness of voluntarism. First, yes or no as to whether.... No, I'll leave it off; it's just too tempting.

With respect to your first comment, though, or second point, that people who want to buy a new SUV or minivan will likely not opt for a new, small car as a result of this policy, and instead will just buy an older SUV, I find the argument extraordinarily base, in that not only are auto producers starting to produce hybrid SUVs and lower-emission SUVs—there is an opportunity to incent people in that direction—but the three arguments pointed out here, particularly that one, seem to be very simple.

I'm confused as to why you would make such a case for the fact that we shouldn't have a progressive auto policy in this country because people will not get into a smaller car, even though auto manufacturers are now rolling out larger hybrid and progressive technologies.

• (1235)

The Chair: We'll have to have a short response. Who were you directing that to, Mr. Cullen?

Mr. Nathan Cullen: That was for Dr. McKittrick.

Dr. Ross R. McKittrick: First of all, motor vehicles today are considerably cleaner than they were in the seventies and eighties. Emissions in grams per mile today are a fraction of what they were when the regulatory process started in 1966 in the United States.

The thing that slows down the changeover of the vehicle fleet is the purchase price of new vehicles. In the early 1980s, when people began to look at the impacts of the 1977 Clean Air Act amendments in the U.S., one of the things they found was that by accelerating the introduction of emission control devices, there is an effect on the price of new vehicles and the rate at which people exchange old cars for new cars. So that's the reason this is called a caveat.

If you raise the price of new vehicles relative to used vehicles, you can expect that people will hang on to used vehicles longer. People do seem to like SUVs, large SUVs. We know that they make up a significant fraction of the motor vehicle fleet now. That began back in the early 1990s. There's been significant market penetration from them. So you need to be realistic that, for whatever reason, people like large vehicles and they're willing to pay to have them.

If you are hoping that there will be a wide-scale switch to smaller vehicles on a voluntary basis, I don't think history is on your side.

The Chair: Thank you.

That's our ten-minute component. We now come to five-minute components.

Mr. Mills.

Mr. Bob Mills: Thank you.

Mr. Chair, I wonder if we might draw this to a close at 12:45, because we do have a motion on the table.

The Chair: All right. You've heard Mr. Mills' suggestion. It is true, and I think we want to expeditiously get on to it.

Does the chair have consent with respect to trying to set 12:45 as our target? I think we'll be able to get three or four five-minute interjections in with our witnesses. Do I have consent on that?

No? We'll go as long as—

[*Translation*]

Mr. Bernard Bigras: Mr. Chairman, what Mr. Mills is proposing fundamentally is that we consider the motion after he has put his question and received an answer. That's more or less what he's suggesting.

[*English*]

The Chair: No, no.

[*Translation*]

Mr. Bernard Bigras: If we're wrapping up at 12:45 p.m., then we have five minutes remaining.

[*English*]

The Chair: Mr. Bigras, that wasn't his intent.

I had asked Mr. Mills, when it came to his turn for five minutes, that we try to extract from the committee how they wanted to proceed. That's all. And if what I'm hearing is that we try to get in as many of the five-minute rejoinders, then let's go ahead with that. Mr. Mills is making it clear that we try to get to the motion in due course and not run out of time, that's all, and the chair is trying to facilitate that.

Mr. Mills, I think what we'll do is we'll try to get in as much as we can and then—

Mr. Bob Mills: I'll go as quickly as I can. My intention was not to take away anybody's time.

Basically I have a couple of comments from what Mr. McGuinty said when he was talking about lawyers. I just remind him that lawyers are always 50% wrong, because in the court of law somebody loses and somebody wins.

Also, on the fact about modelling, it seems to me in looking at the models that the IPCC has some 40 different models, and in modelling it's what you put in as to what you're going to get out. So to say that it's an exact science... I think our guests would certainly agree with me that it could vary.

As far as the Europeans are concerned, I had the privilege of meeting with a number of European politicians this year from Britain, Netherlands, Norway, and Iceland and asking them, "Are you going to hit your targets?" and all of them freely admitted "No, we're not". Japan said that they were going to be 6% above what their target agreement is. So to imply that somebody is going to hit their targets I think is totally incorrect, and it should be on the record that most people don't think so.

Now I come to the Montreal COP 11. At COP 10 we listened to some 123 countries present an attack on the United States for doing nothing about climate change, and second in that line of attack was Canada. I wonder what you think we can expect—and I'm asking you to hypothesize—what you think we're going to get when in fact we have COP 11 in Montreal in December.

• (1240)

The Chair: Would you like to respond to that, Professor Jaccard?

Prof. Mark Jaccard: I'm sorry, Mr. Mills, but I really haven't given it any thought at all. I'll think about it. But I'm sorry, I can't respond.

Mr. Bob Mills: Okay, that's great. If you'll think about it, just think about what we have to accomplish between now and then in order to not be in that line-up of bad offenders.

Prof. Mark Jaccard: At COP 11, what you'll see, I believe, is people talking about how to move part of their obligations into the next time period.

Mr. Bob Mills: Yes.

Mr. Streicker, please understand, I believe climate change is occurring, and I think we should deal with it, but there have been, over time.... I mean, we all hear about how Greenland was once farmed and so on, and now it's covered in ice. There have been these cycles, probably some 33 cycles in the past. How do we differentiate that this isn't a part of that cyclic process that goes on?

Mr. John Streicker: Over the last 200,000 years or so, we can observe directly, through ice cores, the content of carbon dioxide in the atmosphere. It has fluctuated, you're right. There have been variations. And some of Greenland's issues will be more tectonic—in other words, where it is on the globe necessarily—than to do with the climate that you are thinking of. But within that variation, we've maxed at about 250 parts per million carbon dioxide in the atmosphere. So it varies—it drops down, comes up. We see ice ages occurring with that. But right now we're at 375 parts per million. We've gone up by 50%, a maximum over the last millennia. Dr. Johnson can probably answer even more articulately than I can. In other words, when you look back at the record of what's been in the atmosphere, it's been like this, and oop, it goes up, right there, at the Industrial Revolution. So it's very clear. It's one of the easiest arguments for lay people to latch onto.

With respect to your comments on modelling, yes, there are 40.... There's a myriad of models, but they all show the increase. In other words, the range of models gives us a level of uncertainty, but it doesn't change our point of view about where the science sits.

The Chair: Mr. Johnson would like to get something in.

Mr. Bob Mills: Oh, sorry.

Mr. Peter Johnson: Just to build on John's point there, if you take the large number of models that are out there and run them on the information we have up to the start of the Industrial Revolution and then compare them to what's happened since then, you see a marked deviation from what would be expected under the conditions that had existed prior to the start of pumping carbon dioxide in the atmosphere. You can actually demonstrate that there is some element of the change that is very definitely related to emission of greenhouse gases.

Mr. Bob Mills: I know Mr.—

The Chair: We're really out of time now, Mr. Mills; I'm sorry.

Thank you, Mr. Johnson.

We'll go over to Mr. Bagnell.

Hon. Larry Bagnell (Yukon, Lib.): Thank you.

Before I ask my question, I did want to comment that I was glad Mr. Mills brought up the potential in China for making improvements. For committee members who don't know, we have a lot of agreements with China. We are doing investment in clean

technologies there and taking advantage of those changes, because obviously they affect us here in Canada on a global scale.

My question is for John and Peter, starting with John. I'm hoping you can reinforce the message, as a northerner, that I've been trying to get across to southerners. Southerners, of course, as we are, are working on reducing greenhouse gas emissions, but we have a second big objective because the climate change is already there, as you've mentioned in some brief references in your opening remarks. We have it there, causing some pretty dramatic negative economic effects and other effects—biological effects—so that we have a second agenda item of adaptation that we need government policy to still focus on and not be lost in just the reduction of greenhouse gases.

I'm trying to get that message out. That's very important for us in the north, as another focus of government policy, that we don't lose that. Hopefully, John, you and Peter might be able to reinforce that message. You can use the rest of the time, if you want, to answer the question.

• (1245)

Mr. Peter Johnson: I think one of our arguments, for quite a number of years now, is that there has been far too much emphasis on one side and not enough emphasis on providing the tools for adaptation. I don't think we need to get into actually telling people how to adapt. I think that is very dangerous. But in order to provide tools for people to decide how they want to adapt to change, there's a large amount of research that needs to be done in the north in terms of the impacts on the land, on the oceans, and also on providing the capacity in those communities to actually make the decisions themselves, as they move into the next century.

Adaptation really needs a far greater emphasis than most of what we've been doing in terms of just controlling greenhouse gas emissions. It's there now. People are noticing it. It's having an impact on their lives. We need to put a large amount of focus on that.

Just to get one quick word in, it's a quick quote and it pertains to modelling and it's very worrying, because although I have some doubts about modelling, models are very useful. John Marburger, who is the science adviser to the President of the United States, has stated that "Ultimately court decisions would be necessary to decide how seriously to take predictions from modelling".

The Chair: Mr. Streicker, you wanted to respond.

Mr. John Streicker: The only thing I would like to add to that is I come here from the north to bring that message, but I'll tell you flat out that adaptation is needed across the country. It's happening in the agricultural sector, in fisheries. I've talked to some colleagues who are now starting to rethink about why fish stocks are the way they are. You can mark this point in time, because from here forward it's just going to grow.

The Chair: Thank you, Mr. Streicker.

And Mr. Bagnell, you have one more minute. Did you want either of the professors to respond?

Hon. Larry Bagnell: No. I'll ask them another question.

A lot of the motivation for signing Kyoto came from the fact that industries that were in advance of other industries and put the things into place that you would put into place, if you were forced by Kyoto or voluntary agreements, went ahead and did it anyway and had substantial cost savings for their industries, a lot more than they predicted. Of course it was very economically profitable for them.

Do you have any comments on that?

Prof. Mark Jaccard: The whole thrust of my submission, and you might want to look again at pages 1 and 2, is that we are looking at the wrong thing when we draw up lists of the investments that industry makes or purchases that consumers make that we find reduce energy use per unit of value output. In 1920 we could have asked industry to come together with a list of the things it was doing to reduce greenhouse gas emissions, and it would have been able to come up with a different list, but it would have been just as effective a list, showing profits from reducing energy use per value of output.

We are totally mistaken when we spend our time focused on these things and think that we are moving towards some new target. What we're doing is re-identifying investments that were being made and would have been made by and large anyway. That's really hard for people to understand, and it's taken a lot of research by the very best people looking at voluntary programs in the Netherlands—well, throughout.

I was at a meeting in Paris just recently at the International Energy Agency where we compared notes across all the countries. We're finding that what look like investments that reduce greenhouse gas emissions aren't doing it. We're just re-identifying the same investments.

The Chair: Mr. Bagnell, I'm going to have to interrupt there.

Professor McKittrick, did you wish to add anything to that? Then we'll have to bring that to a close.

Dr. Ross R. McKittrick: No. I think that Professor Jaccard is correct. I would only add to re-emphasize a point that what we're considering here is a particular timetable to a particular target. If the discussion were to get to the point where we said all right, we're not going to talk about that timetable and that target any more, but we're going to throw open the discussion to other strategies and other goals, then there'd be all sorts of scope for....

• (1250)

The Chair: Thank you. I'm sorry to bring that to a close.

Dr. Ross R. McKittrick: That's fine.

The Chair: Mr. Bigras.

[*Translation*]

Mr. Bernard Bigras: I have a short question.

Regarding the 2002 strategy aimed at meeting the Kyoto targets, we know that industrial large emitters play an important role, that is 55 megatonnes. Inevitably, oil and hydrocarbons also play an important role.

Do you subscribe to the economic analysis presented by Natural Resources Canada which estimates that the application of the Kyoto Protocol will affect the price of a barrel of oil anywhere from 20 cents and 25 cents? Given that oil is currently trading for \$56 a

barrel, if you go along with this analysis, then would you not also agree that the cost to these industries is marginal?

[*English*]

Prof. Mark Jaccard: My answer is similar to what I said before. As a modeller, I would have to ask certain key questions. How much is happening domestically in Canada? How much is happening by purchasing elsewhere?

If you're asking industry to hit 55 megatonnes, and we had started at that in 2002, I do not believe that the cost would have been great to industry for 55 megatonnes. My analysis has been for the entire Canadian economy, including industry, initially for 180 megatonnes, then eventually for 240 megatonnes, and now higher than that, all of it done domestically.

I hope I've answered your question.

The Chair: Thank you, Mr. Bigras.

Mr. Wilfert, do you have a question?

Hon. Bryon Wilfert (Richmond Hill, Lib.): Thank you, Mr. Chairman.

Professor McKittrick, I have two questions. One is to follow up on my colleague, Mr. Cullen. I'm not sure whether I heard the answer as clearly as I would have liked. He asked if you believe climate change is a reality.

Dr. Ross R. McKittrick: No, he asked me if I believe that greenhouse gases are causing climate change. I do believe climate change is a reality.

Hon. Bryon Wilfert: You took issue, it seems to me, with the International Panel on Climate Change, the third assessment report—sometimes called the hockey stick analogy—in that you suggested, and correct me if I'm wrong, that basically the line has not gone up and that over the last thousand years it's remained fairly stable. It was purported in that report that in fact there's been a significant upswing in the 20th century. I know that you took issue with Mr. Mann and others who were part of that. In fact, I think you had an article in the *National Post* at the end of January. Can you tell us very briefly why you think they were wrong, considering that other scientists in the field stand by those recommendations?

Secondly, why would sane, rational governments presumably, over 100 in number, either sign Kyoto or the second or third annex? Why would they sign on to a treaty that you purport basically cannot be attained and will cause economic rack and ruin because it's going to have such negative impact, certainly according to the brief you presented today?

Dr. Ross R. McKittrick: On the first question, the hockey stick graph—I believe there's a copy of it in the Arctic climate change impact assessment document as well—was prominent in the third assessment report. It appears to show that the climate was more or less stable for about 900 years until the beginning of the 20th century and then took a jump.

I've co-authored a publication that appeared in February in *Geophysical Research Letters*. It shows that there was a non-standard transformation applied to the proxy data prior to taking principal components. As a result of this data transformation, the step increase at the beginning of the 20th century is an artifact of the way the data was normalized.

We showed in that study several corrections to the analysis. The first is that the analysis did not actually achieve statistical significance in a way that the authors claimed, that the model does not actually tell us very much about the past climate. It also shows, though, that when the principal component analysis is corrected the results are extremely sensitive to the inclusion of one particular group of proxy records from western North America.

I would say the dendrochronology literature presents a clear consensus that these records are not actually temperature proxies and shouldn't have been used. If they're removed, there is no hockey stick shape left; instead, the graph shows a considerable variability over the past millennium that's more than enough to account for climate changes in the 20th century. Now, at this point we get into a huge range of technical issues, which I would love to explain at great length if we had time. I'll return to it if you'd like, but I would like to pick up on the second question of why so many nations signed Kyoto.

The majority of countries that signed Kyoto did not take on any emission reduction requirements, the non-Annex I countries. Within Annex I, in Europe, with the reunification of Germany and the closing of the coal sector in the U.K., I believe they had a lot of room, so with fairly innocuous emission reductions they would be able to meet the target they agreed to, and it would be at a relatively low cost for them.

As for Japan, I don't know what its motivations were. It seems to have followed up the signature with very little in terms of regulatory intervention. It could be that it just didn't realize what it was getting into, but at this point it doesn't seem interested in compliance. That left the United States, Australia, and Canada. The other two have since pulled out, even though Australia not only had a mild target, but it was actually allowed to increase emissions over 1990 levels.

At the end, it leaves Canada; and I'm at a loss as to why we agreed to the target that we agreed to in the context of a growing population and an energy-intensive economy.

• (1255)

Hon. Bryon Wilfert: Mr. Chairman, if I had time I would go into at length why Japan is complying. Yes, it has a difficult target, the same as we do, but in fact I've spent a lot of time there and I can tell you that in fact it is moving very aggressively on its target.

On the hockey stick analogy, I assume you may agree that there are other published temperature reconstructions that also replicate the hockey stick trend. They may have a flaw, as yours may have a flaw—and obviously they're going to review that, I believe, for 2007.

But the fact is that if we accepted your analysis of the hockey stick graph, what you're basically saying is that the foundations for the Kyoto Protocol are in fact much weakened, and therefore the

urgency to deal with that issue is in fact not there. Would that be a fair assessment?

Dr. Ross R. McKittrick: On the first point, there is a wide range of paleo-climate evidence. At the time the third assessment report was published, there was a difference between the evidence that came out of ground borehole thermometry and the evidence that came from the handling of tree-ring proxy records.

The IPCC emphasized the results that came from tree-ring proxy records, especially the hockey stick graph. They gave no graphical representation of the borehole record, except for one small reproduction of a graph that only went back 500 years. I think that was an example of the selective use of the available evidence in support of an argument they wanted to make.

It was regrettable, I think, that so much attention was focused on the hockey stick graph, but looking at how that result has been used since then, people seem to build a large portion of their argument for the necessity of rapid action on climate change on this very striking visual graphic. To the extent that people feel that the urgency derives from this graphic, then, yes, I would say that this position has been substantially weakened.

The Chair: Thank you.

Thank you, Mr. Wilfert, and we're out of that element of time now.

Mr. Cullen, you're the last questioner. I'm conscious of the committee's time, so could we just bring this to a conclusion?

Mr. Nathan Cullen: Thank you, Mr. Chair. I'll be very conscious of people's time.

I want to step back to the car assessment, if I can for a moment, with Mr. McKittrick. To clarify the question that I had, I had an interesting conversation with a taxicab driver the other day and I asked, "If you could buy a hybrid car and find you could pay off the extra amount that the car cost within six months to a year, would you buy it?" He said, "Absolutely. Why not? Because then there are savings incurred at every point after the cost has been achieved."

Why would a program such as that not be a bad idea?

• (1300)

Dr. Ross R. McKittrick: Thank you for coming back to it, because there is another point I wanted to make about my submission. It was based on the news at the time I wrote this, which was about a proposal to require a 25% across-the-board improvement in motor vehicle fuel efficiency. The policy that's actually been announced is quite different from that, and I'm not responding to the policy that was announced.

What you've described is making available an option for a fuel efficiency increase that would pay for itself. I can't see any reason to object to that. If that's where the market is going, and if automakers can bring that on stream, then I think that's great. I don't have any problem with that.

Mr. Nathan Cullen: Just to clarify, then, you would see government playing a favourable role in providing some small-step incentive for people—fleet purchasers or individuals—to purchase alternative fuel cars.

Dr. Ross R. McKittrick: That gets us into all the problems that Professor Jaccard has pointed out: that you run a high risk of subsidizing industries for doing what they were going to do anyway.

Mr. Nathan Cullen: Thank you.

So here is a question to follow up on that with Professor Jaccard. You mentioned in one sentence earlier that in terms of energy-saving subsidies—which I would suggest is similar to what we're talking about here—it's impossible to pull out how many people are free riders or.... I'm not sure what the expression is.

Prof. Mark Jaccard: That's right.

Mr. Nathan Cullen: But then in the sentence following you said that 80% of them are going to be free riders by now. So which is true? Can you pull them out or can't you?

Prof. Mark Jaccard: The biggest experiment we have out there were the programs that electric utilities ran in the 1980s and early 1990s. These started out as voluntary programs through which they just provided information to consumers. That didn't work very well, and pretty soon they were giving subsidies.

We're now at a phase where, as I said, some of the top researchers in the world who are independent—they're not involved in any interest group—are trying to assess the effects of those programs. And the estimates range significantly, but 80% is a number that comes up quite often.

Kenneth Train has come up with that number from Berkeley. A friend of mine in the Netherlands who is the chief economist in the energy ministry there has been using that number as well, even for industry programs in the Netherlands.

Mr. Nathan Cullen: Professor, I have a question to the energy sector, which I think you have some expertise in. We've watched the deregulation of certain markets. I'll take the case of Alberta for a moment. I'm wondering if you can comment on what occurred in terms of Alberta's energy pricing when the market was deregulated and private companies came in for the electricity delivery sector.

Prof. Mark Jaccard: Well, the goal of deregulation, I guess, was to get to lower prices. Some people felt that another benefit, though, was what we economists call "marginal cost prices" or let's call them "time-of-use prices". The goal was to get the prices away from the monopoly pricing that we used to practise.

There are jurisdictions in the world where deregulation or reform of the electric sector towards more competitive markets coincided with falling electricity prices—for instance, Norway. There were also jurisdictions where it coincided with rising electricity prices—for example, California and Alberta.

Mr. Nathan Cullen: California and Alberta.

I just need some comment. I'm from British Columbia, and there have been certain aspects pushed by the provincial government there to deregulate that market as well. Could you comment on Alberta's experience in terms of pricing for the consumer?

Prof. Mark Jaccard: I'm not familiar with the last couple of years because that would depend on the contracts that people are signing now. I believe those are back towards lower prices, but the timing of Alberta's reform was such that people were exposed to having to go out and contract for electricity at a time when the western part of

North America saw very high electricity prices because of what happened in California.

The British Columbia reforms have been quite different, in that the prices are still, by and large, regulated. Consumers still have full protection and full access to the low-cost hydro power electricity.

• (1305)

The Chair: Mr. Cullen, we're out of time now.

Thank you very much to our witnesses. That brings us to the conclusion of this portion. As you can see, the questions have been very direct and have given you an opportunity to clarify some of the positions that you believe are appropriate. We appreciate your input. Thank you very much.

Have a safe trip home.

Mr. Mills, we have a motion. Would you like to talk to it, please?

Mr. Bob Mills: Yes, Mr. Chair.

I move that we give direction to the House and to the finance committee that in fact we in this committee believe that the CEPA section of Bill C-43 should be removed.

I know the House leader from the government side has agreed to that. The chairman of the finance committee has asked for direction. Our colleagues there have asked for direction. This is simply to pass on that direction from the environment committee.

The Chair: Thank you, Mr. Mills.

Mr. Wilfert.

Hon. Bryon Wilfert: Mr. Chairman, we received a report on that very item as well, but I would suggest to colleagues that the following amendment be entertained: that the environment committee report to the House and the finance committee its report, which you have in front of you, on Bill C-43, part 15, the amendments to the Canadian Environmental Protection Act 1999.

So we take this report that we have, which deals with part 15, and we report this report to the House.

The Chair: I'm just going to ask for clarification. I'm not quite clear what the difference is between your amendment and Mr. Mills' motion.

Hon. Bryon Wilfert: My amendment is to take the report, which you have here, and report this report, which contains part 15, to the House.

The Chair: Approve the report, and report it on to the House.

Hon. Bryon Wilfert: And send it to the House.

The Chair: Mr. Mills.

Mr. Bob Mills: Yes, but the problem with that, Mr. Chair, is that we just got that report this morning. I haven't read that report. Obviously, I was listening to our witnesses. I haven't read the report. It might be very fine, and I might agree with it if I'd had a chance to read it, but I didn't.

The House is not sitting tomorrow. Budget debate begins on Tuesday. I think it is critical that we give our advice to the finance committee today and not postpone that. We need time to read that. So I would oppose that amendment.

The Chair: Can I beg the indulgence of the committee? I have Mr. Cullen and Mr. Bigras. May I just make a clarification?

Mr. Watson, would you take the chair just for a moment? I would like to address the committee on a matter of process.

I had asked our committee researcher—and I use the term very carefully—to assimilate what he had heard with respect to the witnesses on the issue of CEPA. I asked him to bring that into a report that would be presented as an explanation for the committee's position, because as both Mr. Wilfert and I think Mr. Mills have mentioned, we're getting into two committees of jurisdiction: finance and environment. When you ask the finance committee chair, he says this is an environment issue, and of course we have said it's an environment issue right from the very beginning.

What I was trying to do on behalf of the committee was to have a synopsis of what we had heard, so that when this is presented to the House and the finance committee, they know precisely what the substance issues were vis-à-vis toxic, the alternatives to that approach, and the implications with respect to process. Speaking on behalf of the committee, I'm trying to send a signal that when these issues appear before it, it's incumbent on the government to look at the committee structure as the jurisdiction and the process whereby the committee should be charged and have carriage of these issues.

That's what I was attempting—and I thought that's what the committee was attempting to do. You have the report that's before you. I'm sorry that it is late, and I agree, I would much prefer that all members have an opportunity to synthesize what the report says.

My opinion is that it is what we heard from the witnesses. So what I would suggest—I think you can see the process and what the chair is trying to do—is that if the issue is that you haven't had an opportunity, as you should have, to read the report and synthesize it, my suggestion would be that we hold the matter to Monday and then deal with it, together with the report.

I am very much aware of the concerns that have been raised by both sides. I think this is a very important issue of substance, but really it is one of process.

I honestly believe in the democratic deficit that we have talked about, and my understanding, based on my experience, is that the best way to make that up is at the committee level. And I would like to take the opportunity as the chair of this committee—and I hope I'm not out of order on this—to emphasize to the government and to parties on both sides that there is a process way of dealing with things.

So that would be my suggestion.

• (1310)

The Acting Chair (Mr. Jeff Watson (Essex, CPC)): I'm not sure what to do here.

The Chair: I could take the chair back. Thank you.

Mr. Jeff Watson: Thank you, Mr. Chair.

The Chair: Mr. Cullen and then Mr. Bigras.

Mr. Nathan Cullen: Thank you, Mr. Chair.

I have a question. We had talked earlier about this being in camera. Is that true? No? We don't need to go there?

The Chair: I don't think so.

Mr. Nathan Cullen: Okay.

I was going to raise the same suggestion as you, that it's very difficult for committee members to see the report and then vote on it to pass it to the House. The one caveat is that because the debate begins on Tuesday, this motion, or this motion in connection with this report, or some version of this report needs to be submitted prior to the budget debate.

It's been suggested that a half-hour subcommittee meeting on Monday—or the full committee if the whole committee wants to get together for it—would give us an opportunity and give people the weekend to look it over. I would support that. I think in 30 minutes to an hour we could take a look at it on Monday. I know it's very difficult for people's schedules.

If we can't do that, I would suggest that we need to get the motion in, perhaps today, if we're unable to see this motion in connection with the report prior to Tuesday morning, so that it can be submitted to the House so it's part of the debate.

The Chair: Mr. Bigras.

[*Translation*]

Mr. Bernard Bigras: Mr. Chairman, I think we have a procedural problem. When I received a copy of the agenda this morning, I saw that the committee was scheduled to hear from some witnesses. There was also a motion scheduled to be considered. I'm an MP and I've served on this committee for seven years. As a rule, when the committee is scheduled to consider a draft report, it is so noted in the agenda. We're now being asked to consider a draft report that we haven't read. If you're asking me to read the report while our witnesses are making their presentations, that would be very disrespectful.

In my opinion, we have to take a graduated approach. We heard from witnesses this morning. There's also a motion on the agenda and on the table that we need to consider. That motion can be amended because I have 24 hours - and we mustn't forget that - to draft a dissenting report. I also have some rights in so far as the report we're preparing to adopt is concerned. I think we should turn our attention to considering the motion. I remind you that I won't be here on Monday, as no committee meeting has been scheduled for that day. Our next scheduled meeting is Tuesday. Debate will therefore commence on Tuesday.

I think it will be difficult for this committee to adopt a report by next Tuesday. Even if we adopt the report next Tuesday, there's still the possibility that I might present a dissenting report. I have 24 hours to do that.

[*English*]

The Chair: Thank you, Mr. Bigras.

Mr. Watson.

Mr. Jeff Watson: I have just a very brief comment on this. I think a draft report would be important for the entire committee—not just part of the committee—to look at, assess, and provide its opinions on whether to approve it or not. We can't do that at this stage. It doesn't look likely that's going to happen until Tuesday. But I don't see the two as necessarily being linked—the current motion before us, and this attached to it—with all due respect to your own personal position when you were out of the chair.

I see no reason why the motion can't go forward and then, with consideration on Tuesday, this can't be sent along afterwards, if the committee feels it should do that to sort of strengthen what it's already done.

So I don't see the two as necessarily being linked.

Thank you.

• (1315)

The Chair: Thank you, Mr. Watson.

Mr. Mills, do you wish to speak?

Mr. Bob Mills: My only comment is much the same. I agree with my colleagues that this motion is important, because the debate begins on Tuesday. They need a clear message Tuesday on exactly what the environment committee thinks about CEPA. We have tried to make that clear, but let's make it even clearer and speak as a committee that agrees on that.

The Chair: Mr. Wilfert is next, and then I'll get some clarification.

Hon. Bryon Wilfert: I oppose the motion on the basis that it has to be put in context, and without a report there's no context. I'm prepared to put a report forth, if that's the wish of the committee. In fact it is not the wish of the committee to do so, then I suggest the whole thing is redundant, given the fact that the House leader has already said it is procedurally, after second reading, up to the finance committee to deal with it. The finance committee, under their rules, can take a look at Bill C-43, and if they decide they want to remove this section they can do so. The government House leader has indicated, "if they withdraw it we will not put it back in". I think that's a pretty clear indication, given the numbers on the finance committee, that it will be taken out.

So I have no problem with making a recommendation in context, as Mr. Mills is suggesting, without the evidence provided in this report, taking your word, Mr. Chairman, that this report basically reflects what we've heard over the last while. I'm quite prepared to meet Monday morning. If the Bloc wants to send a representative, make a telephone call, whatever, I'd have no problem. But to send it by itself without that would be inappropriate. Failing that, it would be redundant, since the finance committee has the privy to decide what they want to do, in any event.

The Chair: Okay.

Mr. Cullen, you wanted to shoehorn something in there.

Mr. Nathan Cullen: Yes, it would be a friendly amendment to this motion to include to the House and finance committee. And prior to making a vote, I wonder if I could have some clarity, Mr. Chair, as to whether people would be willing to get together Monday in a full committee to look at it.

The Chair: I'm just noting that Mr. Bigras and Mr. Watson have a problem with that, so you'll have to consider that in terms of...

Mr. Mills.

Mr. Bob Mills: My only comment is that the chairman of the finance committee has said, "I don't believe that section 15 of that bill in fact is our committee's job". I'd like some clarification. Our members on the finance committee have said "make it clear to us what your exact position is", and that's why I'm calling for the vote.

The debate begins on Tuesday. They need to have that clarification. My goodness, they understand what CEPA is all about. The debate has been going on for a week, and any more clarification is just not necessary, unless the junior environment minister thinks they're that dense.

Hon. Bryon Wilfert: Mr. Chair, first of all, I thank Mr. Mills for the promotion, and I notice it's in the paper. I will be checking with pay and benefits to deal with that.

On a serious note, Mr. Chairman, this is a question through you to Mr. Mills. What was unclear about what the government House leader said? He made it very clear that the finance committee will be charged with the responsibility of dealing with Bill C-43. If in fact it is the will of the committee to remove it—and given the numbers on the committee, I presume it will be—then the House leader has said that he will not attempt at all to put it back in. Therefore, it will be out.

Is there any part of this that was unclear?

Mr. Bob Mills: I think we should get to the question.

The Chair: I think that's the answer. May I suggest, members...?

Hon. Bryon Wilfert: Mr. Chairman, I asked a question and I didn't get an answer.

• (1320)

The Chair: And he said let's get on with it.

Hon. Bryon Wilfert: That's not an answer to the question.

The Chair: Well, it might not be the one you want, but that was his answer.

Taking into consideration what Mr. Bigras has said and reflecting on the *raison d'être* for putting the report forward, may I suggest, members, the following: that we take the friendly amendment that has been made with respect to amending the motion—the intent of Mr. Wilfert's motion is to provide the context; that the report be put before our meeting on Tuesday—and I hope the chair is not going beyond what the chair is supposed to do; and then we can reflect on the report, and it may be that we forward that on to finance, to the House.

May I suggest that, Mr. Wilfert?

Hon. Bryon Wilfert: You can suggest whatever you like, Mr. Chair, but I don't accept that.

I would suggest, Mr. Chair, that you seek consensus to have a meeting at nine o'clock on Tuesday morning, before it goes to the House. It will give an opportunity for all members to reflect on it, and then the decision can be conveyed to the House immediately.

The Chair: All right. Does the chair have consent to have a meeting on Tuesday morning with respect to the report?

Mr. Bob Mills: I think you should call the question.

The Chair: We are going to put the question, but I think everybody would like to know how we are going to deal with the report.

Hon. Bryon Wilfert: Well, I would move that amendment.

The Chair: If the chair has consent, then there is no problem. We're still going to go ahead with the motion.

No consent on that? Okay.

Hon. Bryon Wilfert: To put a motion forth.

The Chair: Not to put the motion.

Hon. Bryon Wilfert: To amend that motion.

It's an amendment to have this committee convene at 9 a.m on Tuesday in order to deal with this and then immediately report to the House.

Some hon. members: No.

The Chair: I'm going to rule that in terms of procedure that is not an amendment, Mr. Wilfert. It's a stand-alone motion. We have one motion before us, and I think I have consent to put that motion right now as amended.

Hon. Bryon Wilfert: I'm just amending the time. That's all I'm doing. It's not a separate motion.

The Chair: I understand that, but you see the thrust.

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

The Chair: In retrospect, may I entertain a motion with respect to having this on the agenda for the regular meeting?

Some hon. members: Agreed.

The Chair: Everyone, thank you very much. It's been a long week. Thank you for your attention and your diligence.

We are adjourned.

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