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Chair

Mr. Bob Mills

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● (1540)

[*English*]

The Chair (Mr. Bob Mills (Red Deer, CPC)): I would like to begin by reminding members that today is our panel of economists. All of you have been itching to ask questions about the economics of Bill C-377, so this is your chance to go after the economics.

I would ask you to try to stay on subject. That's what the witnesses are here for.

I'd like to welcome our witnesses. Most of you have been here at one time or another, and we certainly are pleased to have you here again. Thank you for coming.

We'll begin with a brief presentation. Try to hold it to seven minutes or thereabouts, and then the members will have more time for questions.

We'll go in the order that's here, with Mr. d'Aquino kicking it off, please.

Mr. Thomas d'Aquino (President and Chief Executive Officer, Canadian Council of Chief Executives): Mr. Chairman, ladies and gentlemen,

[*Translation*]

good afternoon. It is my great pleasure to be here today representing

[*English*]

Canadian Council of Chief Executives.

Chair, I will present a brief introductory statement, stick to seven minutes, and then my colleague, John Dillon, and I will be pleased to answer any questions you might have.

As representatives of the Canadian Council of Chief Executives, we're very pleased to address the issue of environmental policy, an issue to which my organization and my fellow CEOs have accorded the highest priority.

I have reviewed Bill C-377, introduced by the leader of the New Democratic Party of Canada, Mr. Jack Layton, and while the sentiments expressed in the bill are noble, I fear that Mr. Layton's approach would divert us from the real task at hand.

The bill would set up a process to legislate a series of greenhouse gas targets from 2015 to 2050, but unfortunately, it provides no clue as to how these targets are to be achieved. It would be comforting to think that a simple act of government could get us to where we need to be, but if the past several years have shown anything, it is that setting ambitious targets is meaningless without the will to act by all segments of society and a solid consensus among all players on what needs to be done.

Now, let there be no doubt that turning around our growing greenhouse gas emissions is going to take time and enormous effort, and there is no silver bullet, nor is there any substitute for practical policies, sound analysis, and meaningful engagement about what changes we actually are prepared to make as businesses, governments, communities, and individual Canadians. We should be realistic about what is required, but also ambitious and creative about the kinds of policies that can make a real difference.

The latest initiative of my council to address the climate change issue was the creation last year of our task force on environmental leadership, which I co-chair along with Richard Evans, the chief executive officer of Rio Tinto Alcan, and Rick George, the chief executive of Suncor Energy. The task force, comprised of 33 chief executives from across Canada and drawn from a wide range of leading industries, forged an unprecedented consensus among Canada's business leaders.

In October of last year, we published what we call a policy declaration, in which we laid out five critical elements for an effective, sustainable, long-term plan, one that we believe will not only be successful in reducing Canadian greenhouse gas emissions but can also make a significant contribution to a global plan. It is called “Clean Growth: Building a Canadian Environmental Superpower”, and I have made copies available for all members of this committee in both official languages.

I was pleased to see that a number of our principles were echoed by the National Round Table on the Environment and Economy in its report last month setting out its recommendations for a climate change plan for Canada.

First and foremost, what the country needs is a more cohesive Canada-wide plan on climate change and air pollution, one that can make the most of the tremendous opportunity that we believe we as Canadians have to foster sustainable economic growth and superior environmental performance.

I want to commend the leadership shown by the Government of Canada in setting challenging greenhouse gas targets for Canadian industry, while at the same time recognizing the need to foster economic growth and technology enhancement.

In addition, a number of provinces have come forward with innovative ideas on how to address this complex issue, but what we lack, however, is sufficient convergence and cohesion around a Canada-wide approach involving all parties in Parliament and all levels of government—federal, provincial, territorial, and municipal. We need one set of targets and timetables for industry and, in our view, greater clarity about responsibility and accountability, in order to make the most effective use of public and private funds.

Such a plan must apply to everyone, and here I underscore the word “everyone”: large and small businesses, consumers, farmers, building owners, and public institutions, all of whom will have to do their part if Canada is to meet its ambitious targets regarding reductions in greenhouse gases.

● (1545)

Another key element of our proposal is to recognize the absolutely fundamental role of technology. There is simply no way to make meaningful reductions in greenhouse gas emissions without massive investments in new technologies. Business leaders in the council see this as a tremendous opportunity, since Canada has the natural resources and the technical, financial, and skills capability to be a leader in next-generation technologies such as clean coal, carbon capture and storage, nuclear, hydro, wind, biofuels, and other alternative energies.

A third element of our paper recognizes the importance of targets as a spur to environmental progress. We support the ultimate goal of achieving a substantial, absolute reduction in emissions of greenhouse gases, both in Canada and globally. At the same time, it is important that any target applied to Canadian industry recognize competitive realities and be set within an overall policy framework that allows profitable firms to increase their investment in new technologies.

A fourth necessity is to ensure that globally we have an effective and long-term plan that commits all major emitting countries to do more to constrain the growth of emissions around the world.

I believe that Canada can be a model to the world in demonstrating how to align public policy to strengthen economic and environmental performance. That brings me to one of the most critical elements of our paper, our policy declaration, and here I note our agreement with the recent report of the national round table.

I believe it's time to establish policy mechanisms around the appropriate pricing of carbon. I would tell the ladies and gentlemen of this committee that my organization said publicly that we supported the idea of putting a price on carbon as early as 1990. Appropriately set price signals encourage both business and consumers to change behaviour, and this can be done through emissions trading or environmental taxation, or some combination of the two.

Business accepts that there is a price to pay for our greenhouse gas emissions, and we have said so for a long time. But we have to be smart about how we design a price mechanism so that it accomplishes our environmental objectives and builds competitive advantage in Canada. Both emissions trading and environmental taxation have their advantages and disadvantages.

Cap and trade schemes have the advantage of a defined limit on emissions, but experience, especially in Europe, suggests there can be significant price volatility and difficult questions about fair allocation and emission rights.

Environmental taxation provides a clearer price signal and can be easier to design and administer. Relying solely on taxation, however, does not guarantee any particular quantity of emissions reductions. Any such tax must not discriminate against any particular sector or region and should be implemented only as part, in our view, of broader tax reform that is revenue-neutral and that aims to enhance our country's economic as well as environmental performance.

Increased revenues from environmental taxation could be offset by reductions in corporate and personal income tax, so that Canada can continue to attract the capital, innovation, and people to foster the technology shift that is critical to tackling climate change.

Governments also will need to think about their spending priorities. A strategy for climate change will require significant new public spending in areas such as public transit, clean energy infrastructure, and development of new technologies. This will require governments to change fundamentally how they spend, not just how they tax. Climate change must not become simply an excuse for governments to tax more and spend more.

Mr. Chairman, putting a price on carbon will mean real and potentially very costly obligations for everyone. There are ways to design our policies so that they do not place unfair burdens on vulnerable regions, sectors, or individuals, but we should not pretend that the cost is insignificant or that the policies need to focus on only driving reductions in Canadian industry.

I'll conclude with this. The reality is that we've been talking about this issue for 20 years, and it's long past time to get on with the job. Business has done a great deal already and is willing to make fundamental changes and the significant new investments that will produce a strong economy and a cleaner environment. We need to have a true Canada-wide consensus on the key policy elements and get everyone, including individual Canadians, pulling in the same direction.

● (1550)

Ladies and gentlemen, members of this committee, the ambition of Canada's business leaders in this regard is truly vast. We have stated, and I will repeat again today, that Canada has the natural resources and the technical, financial, and skills capability to justly aspire to environmental superpower status. I believe that you as parliamentarians have a critical role to play in moving Canada decidedly in this direction.

Thank you for your time and interest. Mr. Dillon and I very much look forward to answering any questions you might have.

[*Translation*]

Thank you very much indeed.

[*English*]

The Chair: Thank you very much, Mr. d'Aquino.

Dr. Rahbar, please.

Dr. Shahrzad Rahbar (Vice-President, Strategy and Operations, Canadian Gas Association): Good afternoon, ladies and gentlemen.

Thank you for the opportunity to appear before the committee as you deliberate Bill C-377.

The Canadian Gas Association represents natural gas distributors across Canada who deliver gas to around six million customers—individual homes as well as businesses and institutions.

I will touch upon three points in my remarks. I'll give you a brief overview of how we situate in the economy, give you specific comments on Bill C-377, and then wrap up by speaking to the opportunity to move forward and make real, meaningful, and quantifiable reductions in greenhouse gases.

Quickly, around natural gas and the economy, although in most public policy discourse you hear nothing about natural gas, we are a significant part of the economy: 26% of the energy end use—the numbers are in front of you—and something bigger when you look at individual homes for heating and businesses.

It's interesting. When looking at natural gas, as with any other fossil fuel, you look at where our emissions come from. The entire upstream delivery, transmission, and distribution account for a quarter of the emissions for our sector; 75% of the emissions occur at the end-use point, the six million homes and businesses whom we deal with. Our particular part of the emissions is actually fairly insignificant, less than 1%.

So where do we stand as an industry? We do believe in and are committed to being part of the solution to get Canada toward a carbon-lean future, as we would like to call it. We worked on our piece and our own emissions reductions. Our numbers are publicly available. We have reduced our own emissions, and we've been part and parcel of the conversations initially with Natural Resources, and subsequently with Environment Canada, to develop a regulatory framework for large industrial emitters. We think you need that framework. However, we also believe that without turning our attention to the other 50% of the economy, we cannot meet our obligations and our aspirations of actually getting to a carbon-lean future.

So what have we been doing with our customers? In addition to our own operations, we have been working with customers on conserving energy and on a variety of demand-side issues. We have seen progress, with the intensity of use and average use per customer declining in the past decade or so.

In my estimation, we have reached the point where we need to do something more than we have been doing. For the past two, almost three decades since the seventies, we have been focusing on discrete component improvements, meaning higher efficiency standards for discrete appliances and turning our attention to buildings. In our minds, the only way to actually meet the challenge of substantially reduced carbon in the long term is to have an integrated strategy for managing the energy demand in our communities.

I have specific comments on Bill C-377, and then I'll come back to the communities agenda and what I think is lacking in our current perspective and perhaps warrants some attention from you, ladies and gentlemen.

On Bill C-377, we agree with the need for federal leadership. The intent is laudable. We think we need federal signals that we are serious about reducing the carbon footprint of the economy. We'd like to see this issue transcend partisan discourse around whether this is real or not—we'd rather focus our energies collectively on getting ourselves there.

I don't quite think the bill makes the intent. I have a couple of reasons and some general comments.

Legislation is not the place, in our estimation, for this level of detail. The more detail you have of the nature that we see in Bill C-377, the less stable a platform you have for long-term action. Also, we look at the bill and wonder whether it's trying to afford the framework and the authorities where they already exist, and if they already exist, why do we need to set the legislation again?

Although it's not explicitly stated, the bill has definitely the flavour of again focusing on the large industrials alone. I said already that we believe the large industrials need a framework, but we also need a more economy-wide signal and a focus on the other 50%.

● (1555)

With respect to specific issues with the bill, the short-term targets are problematic. The various analyses done by the provinces recently in the National Round Table report would suggest the 2020 target of minus 25% is not actually doable, given where we stand today. Having us revisit the conversation on baselines we've been having for the past 10 years and trying to determine what happened 17 years ago, I think, is a bit of a distraction from focusing on what can be done on moving forward.

Not to repeat myself—but I will repeat myself—we do believe the large final emitters need to have a regulatory framework, but we also do believe that you need to focus on the other 50%. How you turn your attention to the other 50% matters. For the past 15 years, we've focused the discourse in this country entirely on the large final emitters. I'm not encouraged by the level of sophistication I see on the other 50%. We tend to flip-flop between thinking that good thoughts will get us there, or we absolutely need to be draconian and regulate lifestyle. I don't believe either of those are feasible options or ones that we should pursue. There's ample experience and enough evidence to suggest that a systems-integrated approach to our communities is what we need.

We need to look at our energy system as an integral part of the environmental question, not as a problem. The upstream energy sector exists to meet the demand for energy at our communities and businesses. So without focusing on the demand side, we're not going to get very far because that demand, as evidenced by the track record of the past 20 years, will continue to grow. So look at energy and environment as an integral whole; look at the community space.

Municipal governments have done very interesting experiments across Canada. The City of London did a model of an integrated plan versus business as usual. In their estimation, they can achieve up to 55% energy reductions within the community. Not only that, they bring in on-site renewables at a price-competitive range. They take advantage of the existing energy infrastructure, both gas and electric. They bring their on-site renewables. They look at waste in water and harness the energy from that. There are innovative, interesting solutions that need to happen. So why aren't they happening?

We don't have a price signal for carbon throughout the economy, and we need to have a consistent price signal throughout the economy, close enough to the point of consumption so that people who make decisions can see the impact of their choices and their decisions.

We are very encouraged by the recent focus of the National Round Table's report on the other 50% of the economy and would very much support paying a lot more attention to that space. It's an interesting space. It's diffuse. It has a large number of players, and it will require three levels of government working closely with one another, but it's doable. We're seeing examples appearing all across Canada, and we would like to see price signals that would allow us to replicate the demonstrations and actually move along with it.

In conclusion, I repeat that we support the need for an articulated vision and target to reduce the environmental footprint of economic growth, or both of them will deteriorate. Serious action, in our estimation, requires more than, but includes, the regulatory framework for large industries. It needs a price signal for carbon throughout the economy. Policy initiatives should reflect the need for an integrated approach to all our systems: water, waste, energy, land use. Bill C-377, although laudable, falls short of achieving that.

Thank you.

● (1600)

The Chair: Thank you very much.

Mr. Sawyer, please.

Mr. David Sawyer (Economist, EnviroEconomics): Mr. Chairman, members, and guests, thank you for the opportunity to speak on the economic implications of Bill C-377.

My name is Dave Sawyer. I'm an Ottawa-based economist working on issues of climate policy.

I am here neither to support nor to contend Bill C-377, but rather to discuss the economic implications of the bill.

What are the economic implications of the bill? Well, not surprisingly, it depends. More specifically, it depends on how it's designed and implemented, but since the bill is not specific on this point, and since you have asked me to come here and comment on the possible implications, I basically need to identify a policy package from which to provide some judgments or some information for you. I'll do that now.

The key elements of a policy package that I use and that I think are required to assess any sort of deep GHG reductions like this—i.e., good principles to basically design effective policy for GHG mitigation—include the main points that follow.

First, not surprisingly, to attain substantial reductions in 2020 while minimizing costs, we need economy-wide carbon pricing. This means, as others have said, cap and trade, a carbon tax, or some combination of the two. Recognizing, however, that cap and trade is the dominant policy for large final emitters and that cap and trade is difficult to implement for smaller emitters like you and me—our houses and our cars—the preferred and maybe most expedient approach is to have a revenue-neutral carbon tax for the remaining emissions. While I recognize a carbon tax does not resonate politically, the alternatives have higher costs, and frankly, Canadians may dislike income taxes even more than they dislike carbon taxes.

Second, an effective policy package would provide subsidies to low-emitting technologies such as carbon capture storage and renewables—renewable electricity or renewable transportation fuel. Targeted regulations for buildings, transportation, and other difficult-to-get-at emissions would also be required.

Third, there would be significant financial flows with carbon pricing, and we must decide how these are distributed, or at least I must think about these in my assessment for providing information to you. Some revenue from cap and trade is transferred among industry through trading markets, but some could also accrue to the public through auctioning, because there is value in allocating permits free—significant value, in fact, as the European system is demonstrating. A carbon tax shift could then have income taxes on households reduced or targeted to address adverse competitiveness impacts in disproportionately impacted industries, so there are income effects that carbon revenue can be used to mitigate.

● (1605)

For now, let us look at domestic action only, but later on I will revisit this.

I will also focus on 2020, because if we don't hit the 2020 targets laid out in Bill C-377—or *Turning the Corner*, for that matter—we'll not likely be able to achieve longer-term targets by mid-century, at least not without significant economic dislocations. Again, the round table talked about this quite a bit, but technology lock-in is the issue where you have high-emitting technology rolling forward if you don't address it early on.

So with this policy package in place—I gave you a vision of a policy package—I now need to specify what the economy and the emissions will look like in 2020. With an economy growing at about 2% annually between now and then, Canada's GDP will grow from current levels of about $1.3 trillion to $1.7 trillion to $1.8 trillion. Again, a somewhat uncertain number, but the economy is growing at some sort of rate around 2% or 2.5%. This growth will then increase emissions by roughly 15% from current levels, from about 750 megatonnes currently to something around 850 to 900 megatonnes. These are publicly available estimates from Natural Resources Canada. This means that to hit the Bill C-377 targets of minus 25% below 1990, forecasted emissions will have to drop by about 50% in 2020—drop by 50% in 2020.

This compares to a 34% decrease under *Turning the Corner*. So we basically can bracket the types of reductions that we as a nation are contemplating in 2020: 34% to 50% below business as usual.

So now to get on to the interesting bits. To assess the economic implications of this stylized policy package, I employed two models that are routinely used to assess mitigation targets. CIMS is an integrated energy and emissions model of the Canadian economy, and it's widely used by governments, industry, and NGOs alike. Complementing CIMS is a model called C-GEEM, which is a macroeconomic model suited to questions of macroeconomic impact in public finance.

What do the models have to say about the costs of these different targets? Essentially, applying an economy-wide carbon price, having subsidies for renewables, having targeted regulations and some smart tax shifting, the models imply carbon prices in the order of about $100 per tonne in 2020 for the *Turning the Corner* targets and about $200 a tonne for Bill C-377. They are somewhat uncertain numbers, but they give you an idea, a rough range.

Now the question is, what do these numbers mean? The economic impact of these carbon prices on GDP, on growth, could then range between about 0.6% of 2020 GDP for *Turning the Corner* and 1.2% for Bill C-377. We're looking at basically reductions in future GDP less than the forecast growth rate. So we're not talking about wrecking the economy, although there are some underlying assumptions here about early action, getting moving, and stringent policy. You must also recognize that there is a significant level of uncertainty in these numbers, as there is in all modelling, but this gives you a flavour for what you're looking at.

These conclusions assume efficient policies, and indeed the models can show that a lower target with poorly designed policy could be more expensive than a higher target with efficient carbon pricing. We could go on and on about these numbers, but simply, maybe the more important point is that policy design matters much more than the targets themselves.

So the policy package I have outlined will raise prices, with increases of about 25% in electricity, 15% in petroleum products, and about 10% in natural gas. Again, this is the order of magnitude and the numbers for you to get your head around, what this means, what's the “so what”.

The impact on oil production is not so clear, given the variable of carbon capture and storage. If carbon capture and storage is widely available, the cost impacts on that sector will be much lower. If it's not available, then there are larger, larger hits. Again, poor policy design would change these price impacts entirely.

This national picture masks some sectoral and regional variations. While I can't comment on the regional variation, I can say something about the sectoral impacts. While national GDP impacts seem relatively small, sector output for the energy-intensive sectors will fall, especially in sectors like petroleum refining and coal. The extent of this drop is dependent on what is happening in the rest of the world. If Canada acts more or less in concert with the OECD, the trade impacts will likely not be as large, with drops in exports but also in imports, because prices will be rising for foreign goods.

● (1610)

Still, competitiveness impacts will be real and significant for some segments of the economy, so the smooth macroeconomic picture nationally is not borne out at the sector level. This is not to say, however, that we don't or shouldn't seek reductions from these sectors—you have asked for some specific targets, so you need reductions from all sectors—but rather that we should design complementary policies to address disproportionate income effects; that is, we separate a carbon signal from an income effect.

As for the notion that manufacturing will move to China, I would submit that other factors are also influencing this business decision and probably need some closer scrutiny.

I'd now like to visit the importance of obtaining low-cost reductions internationally. At domestic reductions above 20% below 2020 BAUs—the two targets I mentioned are greater than that—domestic mitigation costs rise exponentially. This means that at the targets contemplated, costs are rising much faster than reductions, so to minimize economic impacts, a strategy to access low-cost international abatement opportunities is probably a good thing, assuming they're real and verifiable.

I'd like to conclude with a short discussion of the cost of inaction, shifting basically from discussion about costs to discussion of what we get, discussion of the benefits. In thinking about designing effective climate policy, at least from an economist's narrow efficiency lens, the economist would prefer cost-effective reductions at a level where the costs and benefits are balanced, but information on the scope and scale of the possible benefits of action is too uncertain to lead to recommending targets that balance costs and benefits, so we're not in a great place.

As a result, our national climate debate continues to be informed by only a conceptual understanding of the benefits of abatement or adaptation, while we have a very acute understanding of the costs. Because of this asymmetry in information, it is likely that we will continue to be locked into a cycle of questioning the appropriateness of action on targets, regardless of their stringency. Indeed, without a balanced view of what we get for what we spend, we will continue to argue about targets, discuss policy options, reveal the associated costs, and ultimately question affordability. I call this "*Globe and Mail* economics". This focus on costs and affordability is one-sided and will ultimately lead to poor national outcomes.

Oh, yes—in conclusion, a little more focus on action and a little less on targets would be nice.

Thank you.

The Chair: Thank you, Mr. Sawyer.

Go ahead, Mr. McGuinty.

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

Thank you very much, folks, for being here this afternoon.

There are so many questions to ask. I'd like to start, Mr. Chair, by following up the line of questioning I put yesterday, which I think speaks to the whole question of the need for Bill C-377. I think it's important for Canadians to understand we're debating a bill that is going to shift targets, a bill that is going to guide Parliament based on science. I think that's the import of what Mr. Layton is trying to put through here, but I think it's also important for Canadians to know that it's impossible to know where we want to get to unless we actually know where we are now. In that sense, I want to link Bill C-377 to the government's plan. These are important questions for us to know in order to understand just how far off the government's plan may or may not be in relation to Bill C-377 and the aspirations and the objectives therein.

I'd like to ask a couple of core questions, first to Mr. Dillon and to Mr. d'Aquino. Will the government's plan achieve what it sets out to achieve? Will we see 20% absolute reductions in greenhouse gases by 2020? If you could help the committee, we've been looking for months now for any kind of evidence or analysis that was performed by the government to substantiate that claim and those numbers. Have you come across these numbers? Will the government achieve what it sets out to achieve?

● (1615)

Mr. John Dillon (Vice-President of Regulatory Affairs, General Counsel, Canadian Council of Chief Executives): Thank you, Mr. McGuinty.

We haven't done the analysis. I haven't seen that specific analysis. The one thing I would say is that it is the national target. As Mr. d'Aquino has indicated, what we've seen so far is a lot of focus on the large industrial emitters that produce less than 50% of Canada's emissions, so we're never going to get to that target without a plan that actually engages all Canadians and all sectors and involves all levels of government in putting forward measures that will accomplish that.

I don't have the analysis and I haven't seen it, but I would simply reiterate that it is a national target. Until we have the full suite of policies, as my colleagues have also mentioned, it's not possible for us to say today whether we can meet that target or not.

Mr. David McGuinty: Mr. d'Aquino, please.

Mr. Thomas d'Aquino: Mr. McGuinty, I'd like to just add to what my colleague John has said.

I've been deeply immersed in this issue since the early nineties, and this is really an appeal to this committee and to you as parliamentarians, because I know we are preoccupied with meeting certain targets: I would make one very strong argument about the absence in so many of these initiatives that we have seen—and I don't think this is done out of any malice aforethought or an unwillingness to tackle what for all of us is an extremely important issue—of identifying this as a total Canadian problem. We see, time and time again, this focus on large industrial emitters, who, as we accept and have accepted for a long time, have a very important responsibility in dealing with this issue, not only in terms of meeting targets but also in terms of investing the new technologies.

The appeal I would make would be this: any purported policy, any purported bill, any purported initiative that does not lay out before Canadians a total plan that includes emitters, producers, and consumers will never, never be credible. It will never be credible on the numbers. In my view, it will never be credible politically. It will never be credible against the most objective assessments of what is a good, intelligent, rational plan in accordance with the best of public policy.

In a nutshell, we're saying that we've seen the provinces take some very important and constructive initiatives. We've seen the Government of Canada and the parties in opposition offer some very constructive ideas. If there's one thing that's missing, it is this total approach. I just wanted to emphasize that.

Mr. David McGuinty: It's interesting. We've worked together in the past, in a previous life, at the national round table. I have to say, for Canadians who are watching or following or reading, that with all due respect, Mr. d'Aquino, that is the same line I've heard for a decade. I have heard from large industrial emitters the same line about the fact that the large industrial emitters can't move forward until all Canadians are fully engaged. It's a stock response.

I'm happy to see that your organization has created an environmental responsibility panel of some kind. I'm surprised that your task force on environmental leadership was only created last year. You were involved in all kinds of issues, all kinds of task forces, all kinds of round tables in putting together solutions over the last decade, as you rightly point out.

So I'm going to take from both your answers that neither of you has concluded, and I'm assuming that all of your chief executive officers for whom you speak would share your view, that the government's plan will not achieve a 20% reduction by 2020.

Mr. Thomas d'Aquino: What we've said, Mr. McGuinty, to be fair, is that we have not done the analysis.

I would submit, with the greatest of respect, that no one whom I've talked to.... There has been some economic modelling done on this. We come at it from the point of view of two things, and I think you've already heard some of the testimony today.

Number one, it would be totally incorrect to suggest that we have repeated a mantra that we will not take action unless everybody does. This is nonsense. It has no connection to the real facts. In fact, while governments fiddled on this issue for a decade and a half, we were calling for a plan, a plan that was comprehensive, that was total, and that had real numbers attached to it. To suggest for a moment that we are saying, “No, no, no, if the large emitters don't see equal action from others”—it's just simply wrong. It is not in accord with the historical record.

Secondly, it seems to me that the large industrial emitters are already committed to taking action, and in fact will be compelled to take action in one form or another in provinces and at the federal level.

My point here—and I assume this committee is dedicated to what we're dedicated to, and that is how we come up with something credible that's going to work for all Canadians—is that along with industrial emitters, if we're truly committed to building a plan for Canada, we have to accept the fact that we need something that's cohesive and Canada-wide.

● (1620)

Mr. David McGuinty: I don't think the official opposition needs convincing, Mr. d'Aquino, that we need a national plan. We had four provinces announcing last week that they're going it alone. I think the quote was that the government was suffering from a poverty of ambition on climate change—a very well-crafted line.

I'd like to turn now to two other witnesses who are here with us.

Ms. Rahbar, did I hear you say that the government, under its plan, will not meet 20% or 25% reductions by 2020?

Dr. Shahrzad Rahbar: No, I didn't say that.

There's a graph somewhere in my presentation. I'm not an economist. For my sins, I'm an engineer, actually. So I had one of our economist colleagues draw me the graphs. I wanted to see what the National Round Table targets suggest the economy should do, what Bill C-377 is proposing, and what we said we would do in 1990 and didn't act on.

The history speaks for itself. We had a bunch of lofty ambitions that we didn't meet. The National Round Table suggests that the path we should be following is a slightly slower path—to slow down, stop, and reverse.

Mr. David McGuinty: Can I ask you this question. Is the government's plan going to price carbon, and do you think it's going to price carbon at the right price?

Dr. Shahrzad Rahbar: Allow me to answer that indirectly, in that on the large final emitter side, we think the regulatory structure that might be emerging is probably adequate. We've been having this conversation for a decade and a half. Are we going to get this right within the last 0.05%? Frankly, I don't care. Let's get on with it; we can course-correct.

On the other side of the economy, I'm not seeing any signals that we're seriously looking at the other 50%.

Mr. David McGuinty: Mr. Sawyer, can I ask you? Is the government plan going to price carbon?

I mean, this is no revelation. In fact, I'm sorry that the National Round Table spent so much time telling us that we need to price carbon. This has been known for some time. I wish they had actually performed the analysis to substantiate a cap and trade versus a carbon tax, or environmental tax, as Mr. d'Aquino puts it, and the merits of one over the other. Is the government's plan going to price carbon, and do you think it's going to price carbon at a sufficient price?

Mr. David Sawyer: The government's plan under cap and trade, assuming it's implemented, will place a price on carbon for 50% of Canada's emissions. The question is whether that price is sufficient to hit the longer term, the deeper targets. No, it doesn't look like it is, but then again we are 13 years away from 2020, so hopefully one would (a) transition the emission price, the carbon price, that's currently under cap and trade to the broader economy and (b) ramp it up significantly.

The Chair: Your time is up, sorry.

Mr. Bigras, please.

[*Translation*]

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

I would like to start by congratulating you on your briefs. I took the trouble to read the briefs twice, not once, particularly the one from the Canadian Council of Chief Executives, the CCCE. In the seven years that I have been a member of Parliament, I have noted some developments at the CCCE. It recognizes that a price must be put on carbon and it has suggested some ways of doing that—a tax or a market.

Finally, the Council says exactly what the Vice-President and Chief Economist of the Conference Board said on January 31, and the government should be listening: "At the moment, we are behaving as though GHGs could be produced and emitted with no costs whatsoever."

The business community therefore recognizes now that there is a cost involved in greenhouse gas emissions. It cannot yet put a figure on this, but it does recognize that there is a cost.

On page 7 of your brief, you say, Mr. d'Aquino: "When rules do change, governments also must be careful to reward rather than penalize companies that have taken early action."

I understand what you are getting at in your brief, but what does it actually mean? When the result of a climate change plan is to move the reference year from 1990 to 2005, to you really think that this is rewarding companies? I am thinking of the Quebec manufacturing industry, which has reduced its greenhouse gas emissions by 7% in absolute terms since 1990.

Do you not think that we should go back to the 1990 reference year in order not to penalize companies that took early action? We would actually be penalizing companies if we use 2005 emissions as the reference level.

● (1625)

Mr. John Dillon: Thank you, Mr. Bigras.

[*English*]

It's a complex question, as you know.

Obviously, there are sectors of our economy that, for a variety of reasons, are actually below their levels of emissions in 1990, quite contrary to what Mr. McGuinty suggested earlier when saying businesses have been waiting. In fact, those businesses have taken action for a variety of reasons, and there are real emission reductions to point to since 1990. That was done in the absence of policy on the part of Canada and the provinces, and in the absence of a firm price for carbon. Those firms did things that made sense, because they were investing in new technology, they were upgrading, and they were improving their efficiency.

Now, there are other sectors in the economy that are part of this large final emitter system that have seen significant growth in their emissions, for reasons of expansion—all of which produce economic benefits for this country. So we have a wide range of factors to look at in terms of how to make a plan.

Going back to a base of 1990 may work for some industries and not for others. That's a decision the government will have to make. But we've said that we want to make sure it's a fair and equitable plan and that it actually provides incentives for companies to continue to make the investments in the new technologies, which, at the end of the day, are the only things that are going to produce real and sustainable reductions in emissions.

[*Translation*]

Mr. Bernard Bigras: I would like to touch on the subject of new technologies, because yesterday, the House of Commons adopted a report of the Standing Committee on Finance, which said that measures must be taken to assist the manufacturing industry. These companies do not have access to the R&D tax credit, for example, simply because they are not making any profit. The manufacturing industry made an effort in the past and reduced its greenhouse gas emissions. It still has some polluting industrial processes that date back a number of years that it would like to modernize. The fact is that the Canadian tax system penalizes these companies just because they are not making a profit.

Would it not be time to provide access to these new technologies, as you say in point 2 of your brief entitled: "The Technology Opportunities", and to make R&D tax credits refundable? Is it not time to provide for a two-year capital cost deduction over a period of five years, and make these provisions of the tax system available to manufacturing companies? The federal government is cutting back on the options open to these companies. Of course, sometimes they want to change their industrial processes for economic reasons, but this would also have a significant impact on the environment as well.

Mr. Thomas d'Aquino: The issues you have raised are very important in our opinion, Mr. Bigras. We acknowledge that the manufacturing sector has been very affected economically, particularly in Ontario and Quebec.

If I may, I would prefer to answer in the language of Shakespeare, rather than in that of Molière.

● (1630)

[*English*]

I just wanted to say that in our view the way we tackle the environmental challenge—and this is what building an environmental superpower involves—means not only that we come at it with a Canada-wide comprehensive policy with long-term objectives that provide clarity to business, but also that at the same time we fundamentally re-examine the tax system, because the magnitude of change that is going to be required and that you are suggesting has already begun to take place is such that under the existing tax system of Canada, we are not going to be able to deal with this issue.

For example, we have said that should governments, or the Government of Canada, or Canada eventually move to some form of carbon tax, it would have to be neutral. What do we mean by that? What we mean is that certain sectors will be hit harder than others. It will mean that the price of carbon will add to the costs of running a business, and therefore we must intelligently revisit the tax system to ensure that there is, at the very least, a neutrality.

I would make a final point on taxation. One of the reasons we are so optimistic about Canada's becoming an environmental superpower is not just that we have the resources and the skills and the talent and the financial capability to do it; it's also because we believe that as a country we can come up with new approaches to public policy—of which taxation is a central point—that will allow industries that already exist to invest in the new technologies. We will not say to them that we're sorry, but they can't compete—they're out—and put people out of work and shut down towns, but we will look to industries that have had a long record of achievement and give them the time and the incentives to be able to retool themselves.

This brings us to why these long-term strategies are so critical. It's because many of the investments have to be made with a 15-, 20-, or 30-year time horizon, and in the case of the oil sands, a 100-year time horizon. That's why we've been calling for policy certainty. That's why we need it.

[*Translation*]

Mr. Bernard Bigras: I have one final question, Mr. Chairman. Ms. Rahbar's brief startled me.

Ms. Rahbar, you say and I quote: "Baseline of 1990 distracts the focus away from action going forward towards mining data and reconstructing the past."

I found that statement startling. You seem to favour the policy whereby polluters are paid, rather than the polluter-pay policy. Should efforts made in the past not be recognized? Would the best way of promoting innovation, technological change and social and economic progress not be to tell companies that made an effort in the past that these efforts will be considered and recognized?

Dr. Shahrzad Rahbar: Thank you for your question, Mr. Bigras.

[*English*]

I will also revert to English. I apologize; my French isn't good enough.

The issue of credit for early action is a very important issue. Yes, I share the sentiments that a credit for early action should not be ignored. Frankly, again I go to the practical approach. I've watched us—meaning the large final emitters—and different governments hit our heads on the increasingly thick wall of finding a way out of credit for early action.

I've given you our record. Our industry, at least talking about my own sector, has taken action. I also look at our customer base, the six million we touch base with who have three-quarters of the emissions. My advice to my members is to forgo your credit for early action and let's get on with getting something in place. Yes, sure, we would like to have the credit for early action.

Did I misunderstand the question?

● (1635)

The Chair: Go ahead, Mr. Cullen.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): Thank you, Mr. Chairman. Thank you to our guests for being here today.

Just to quickly establish some finer points on this, Mr. d'Aquino, I will assume that you believe in the science of climate change.

Mr. Thomas d'Aquino: I do.

Mr. Nathan Cullen: Do you believe it is a serious threat to the economy and to the fabric of society?

Mr. Thomas d'Aquino: I do.

Mr. Nathan Cullen: What assessment has your organization or any business organization in Canada done on the economic impacts to the Canadian economy of any degree rise in temperature due to climate change?

Mr. Thomas d'Aquino: To answer that question, Mr. Cullen, would mean looking at many initiatives we've taken—some of them internal, some of them external—and I think you probably know our position on this.

In the mid-1990s, I would say, although a majority or a core of the leaders of major enterprises concluded that the science was still not exact—as one could argue is the case today—there was a wholesale shift to what I would call a prudential approach. That prudential approach was based on assumptions that whether it was three, five, or eight degrees over whatever period of time we were talking about, we knew one thing for certain: the earth was going to get warmer, and on that there was no debate—

Mr. Nathan Cullen: Let me stop you right there. Under those scenarios—three or four or five degrees—has there been any assessment? I'm looking for a figure. I'm looking for a dollar figure or a percentage of GDP, as was attempted under the Stern report. Has there been any assessment done by anybody in Canada—by the government or yourselves—to understand the percentage? You can say no if an assessment hasn't been done.

Mr. Thomas d'Aquino: I would just say, "No, but". That is, given the complexity of this and given how it will affect different regions and different industries, what you have is really a collection of prognostications, but no single number.

The only thing I would add is that very early on, when it was enormously unpopular to think about or talk about the word "adaptation", we recognized that with a warmer climate there would be transitional changes; we believed they would be quite profound, but we also believed there would be benefits as well as losses.

Mr. Nathan Cullen: Although I have respect for the intelligence of the panel in appreciating the science and understanding the gravity of the situation facing us, I have to express some disappointment in not seeing the severity and the seriousness of this issue matched by the measures that need to be taken.

I get no sense from any of the panellists that there is a dispute about the science. Anyone can disagree about the science of climate change if they wish.

I would then ask if anyone disagrees with the notion of setting our national targets based upon that science—I'm seeing no disagreement—or do we choose to use another metric, another measure, by which we set national targets, a measure not based on science? I would love to hear a reason for us to use something other than science to do that.

Mr. John Dillon: I would simply say that the targets we're talking about are global targets. We don't deal with climate change successfully unless we meet global targets.

Mr. Nathan Cullen: Is it possible to meet global targets without having domestic credibility of our own?

Mr. John Dillon: Well, that's absolutely correct. All that we've questioned is the continual focus on targets without actually putting the measures in place and without understanding what's going to—

Mr. Nathan Cullen: Certainly. Let's talk about some of those measures.

I'm just curious. Mr. Sawyer, you did some speculation and prognostication. I'm reminded a bit of the old saying that economists have predicted ten out of the last five recessions.

On the use of carbon tax in your modelling or your projection, I looked through the bill again just to remind myself. Is carbon tax put forward as one of those mechanisms in Bill C-377?

Mr. David Sawyer: If you want cost-effective reductions, there are certain policy measures you have to implement. In the absence of any clear indication of what those are, I brought some ideas forward.

Mr. Nathan Cullen: Great. The ideas are welcome.

I would take you to clause 10 and bring you to the four mechanisms that are actually offered in the bill, one of them being "market-based mechanisms such as emissions trading or offsets".

A confusion I have.... I mean, the list is long, and many years have been spent on this. This issue was first raised by the NDP in 1984 in the House of Commons, for goodness' sake, and Canadians can be forgiven for yet another panel and another bill attempting to set some certainty.

Mr. d'Aquino, you talked about the policy of both this government and previous governments being in a state of chaos and you talked about how there was no overarching plan. You were calling for aggressive action on climate change, a national strategy. Is it that you just don't like the targets in this particular plan? I ask because it is exactly what you asked for: certainty for your business community.

● (1640)

Mr. Thomas d'Aquino: Mr. Cullen, when I referred to "policy chaos", I was not saying that the policies of this government, or indeed certain elements of the policies that have been put forward by opposition parties or by provinces, were chaotic. What I was saying —and this is a very important distinction—is that no matter how good or constructive many of these policies are, if they're all going in different directions, you have policy chaos.

I visited the Commonwealth of Australia about four months ago and discovered that the states of Australia and the Commonwealth Government of Australia were all going in the same direction. It is a federation, just as we are; why we can't we do it? The Federal Republic of Germany has Länder and a central government all going in the same direction.

When I talk about chaos, it's not referring to any particular party policy or government policy as chaotic; it is saying we should have convergence, please, and I see very little indication, based on the last meeting of the Council of the Federation and the first meeting of the Council of the Federation, of that being the direction we're going. There's a price to pay for all that and all the uncertainty that goes with it.

Mr. Nathan Cullen: Yes, of course, there's a price to pay, and I think we're paying it right now.

Ms. Rahbar, I have a question on the polluter-pay principle. Is the cost of pollution being captured right now in the energy sector in Canada?

Dr. Shahrzad Rahbar: That's a good question, Mr. Cullen.

If the question is whether, as an economy, we have put a price on using the atmosphere as a receptacle for waste, I'd have to say not adequately.

Mr. Nathan Cullen: It's a rather rudimentary question, but as it is right now, the receptacle of waste, the atmosphere, is not being given any due course. Mr. Stern used the notion of the greatest market failure in history—our inability, as the free market is working right now, to capture the cost of the pollution we are creating through the generation of our economy.

No one has actually said it, but I get a sense that they don't like the targets in Bill C-377, yet the measurement and the management—the metric we need to use—is what any business must do. In every quarterly profit, they don't use the number of staplers they happen to own; they use profitability. If they are off those targets, then they have either compensation to pay to their stakeholders or a big problem within the board. The Government of Canada, as the board of directors setting the policy, must set targets based on the amount of emissions that we seek to have as a nation. To base any plan on any other metric seems to us to be foolhardy.

To suggest that the notions you've put forward are too ambitious... I just did a quick look and played some graphs and looked at what's happening in the U.S. Congress. They're right in line with the Lieberman-McCain bill, so if Mr. McCain needs to be accused of attempting to destroy the Canadian economy with his plan and his targets, then perhaps we can apply the same measure onto our own, and now Republicans and New Democrats are hanging out together and making the same economic models, which I suggest is not true.

If the cost of pollution is not captured as it is, it must be captured, and it is the government's responsibility to ensure that these externalized costs that we've been enjoying for so many years—and I'd suggest the energy sector in particular has been enjoying these externalizations of cost—must be captured.

I have a question on the baseline. Ms. Rahbar, you didn't like the 1990 baseline. You suggest it was going backwards in time to look at it. I would suggest to you that the market uses an index to measure whether the market is up or down. Picking a target in time is essentially what is required in order to have an ambition and a goal. Is that true?

The Chair: Mr. Cullen, could you also let Mr. Dillon answer, please?

Mr. Nathan Cullen: Of course.

Dr. Shahrzad Rahbar: Mr. Cullen, my remarks were perhaps jaded by the fact that for the past too many years I had been party to what I would characterize as not exactly productive conversations around who was doing what, and when, in history. If we could do it and agree on it without having to spend another five years, I would suggest that, theoretically speaking, agreeing on a baseline and measuring is fine. I've just been tired over many years with the experience of seeing the difficulty that has occurred in doing that.

● (1645)

Mr. Nathan Cullen: Of course, and I understand in this instance your consternation—

The Chair: Mr. Cullen, your time is up. Could we just let Mr. Dillon answer? He's been trying to get in for quite some time here.

Mr. Nathan Cullen: I get very excited about the topic. You know that.

Mr. John Dillon: And I'm very excited to answer you, Mr. Cullen.

I have two points.

First of all, the suggestion that I took in your premise is that right now pollution happens at no cost whatsoever. Clearly that is not true. We have scads of regulation at municipal, provincial, and federal levels that impose requirements on pollution. In fact, we have permitting processes in several provinces that require companies to deal with greenhouse gases, so the suggestion that it's not priced at all is not accurate. Whether we've got the right price or not, of course, is what we're all here to discuss.

The other point is on your suggestion that setting national targets in Bill C-377 gives clarity to industry. No, I'm sorry, it doesn't. At the end of the day, we need to understand what industry's obligations are. A national target—this is the debate we've been having for 15 years, and I'm sorry to see we haven't gotten any further, because at the end of the day you need to know what the requirements are for industry. We're never going to get to a national target unless every part of the economy and every part of society knows what its obligations are. That's what we don't have. That's what we'd like to get onto, and not a continual debate on more targets.

The Chair: Thank you.

Mr. Warawa, please.

Mr. Mark Warawa (Langley, CPC): I want to thank the witnesses for being here. I've really looked forward to your testimony. The costing has been very important to me, finding out what this means to the average Canadian driving their car. I have a number of specific questions on that.

I'd also like to address a comment made by Mr. McGuinty, and I'd like to do that by quoting his brother. Premier Dalton McGuinty made a comment, using a little bit of political rhetoric, attacking the minister when in fact he had provided one environmental promise—to close down the coal-fired plants—for which the federal government provided almost $600 million to make happen. So far that promise hasn't been kept.

The Chair: Mr. Warawa, could you just get on to Bill C-377?

Mr. Mark Warawa: I sure will. I was just addressing the topic that Mr. McGuinty had brought up.

In terms of this policy crisis that was spoken of by Mr. d'Aquino, maybe it's a lot of political rhetoric—which I am guilty of, at times, maybe by the comments I've just made—but I would think that if we all pulled in that same direction, as you're suggesting, maybe we could start moving forward on this. I think there is a willingness when you deal one on one, but when you get in this political environment, sometimes there are different agendas at work here.

The government has provided a very clear, focused agenda to reduce greenhouse gas emissions by 20% by 2020.

Mr. Sawyer, I have some questions on those numbers. What will that mean in 2020? What will it mean for gasoline prices and whatnot?

So the agenda is ambitious. The notices of intent to regulate were issued. The negotiation and consultation time is almost at the end now. The meat on the bones of that regulatory framework will be seen very soon. I look forward to your analysis on that as we see that policy and those regulations developing.

On Bill C-377, I have asked every one of the group of witnesses so far this question: should it be costed? I asked Mr. Layton when he was here, and he said it hadn't been costed. He was hoping the government would cost it. But he suggested that I ask Mr. Matthew Bramley from Pembina, who was also a witness that day. Mr. Bramley also said that they were consulted. Actually, their report—from the David Suzuki Foundation and Pembina—is what Bill C-377 was based on.

So Matthew Bramley said no, and he also was hoping that the government would cost Bill C-377. I also asked Dr. Stone, and he said yes, it should be costed. Every time we've heard from the witnesses—I forget who else there was—we've heard yes, it should be costed.

Mr. Sawyer, you're the first person I've actually heard cost it somewhat. Does there need to be an additional evaluation on the cost of Bill C-377—to put some meat on the bones, so to speak?

● (1650)

Mr. David Sawyer: You're contemplating a range of targets. You're contemplating a range of actions. Whether we need more analysis or not, I don't know. I mean, I can scurry off and bring you piles and piles of data and information, and we can pore over those.

I think what I'm hearing are some fundamentals about how to drive forward with policy. Policy needs to be effective. We need to hit some targets. If we set them, let's get on the road to hit those targets.

We need to care about efficiency. Let's minimize our costs while we get there. That involves, as we've heard, a number of options for carbon pricing. We need to care about the science—that helps with setting targets—and we need to care about disproportionate impacts on folks.

So there are some common policy criteria that we hear about. And although I'm an economist and I make a living focusing on cost, this focus on cost gets rather tiresome after a while. I think the focus should be more on a comprehensive picture and on design elements. How do we design this thing? How do we allocate permits? How do we recycle revenue?

These are the questions that I think we need to move forward on.

Mr. Mark Warawa: While I have your attention, I'm going to ask some specific questions. Of course, you're not going to be able to give specifics, but maybe you can give a general comment regarding the cost.

You were suggesting that by 2020 with Bill C-377, your analysis was about $300—

Mr. David Sawyer: It was $200.

Mr. Mark Warawa: Was it $200 for the *Turning the Corner* plan and $300 for Bill C-377?

Mr. David Sawyer: It was $100 to $200—

Mr. Mark Warawa: Okay.

Mr. David Sawyer: —plus or minus 50%, I might add.

Mr. Mark Warawa: And for the person filling up their car at a gas station, what would that look like?

Mr. David Sawyer: You're not looking at doubling the price of electricity—let's start there—or doubling the price of gas. You're not looking at anything outside the fluctuations in the gasoline market, actually. Gasoline, in 2005, fluctuated 50% plus or minus. It fluctuates on a daily basis 15%. So you're talking about resetting a new price, a new energy price, within the normal bounds of market fluctuations. You will then have fluctuations on top of that, but we're not really talking about doubling, tripling, or quadrupling anything here.

Mr. Mark Warawa: Are we talking about a 50% increase, a 25% increase, or what do you think?

Mr. David Sawyer: It depends on the target. It depends on the policy.

Mr. Mark Warawa: For Bill C-377, for instance...?

Mr. David Sawyer: For the package that I outlined to you, which would be a fairly efficient package where everyone would be required to make reductions and contributions and you'd recycle revenue and incent renewables, I think the number was 25% on electricity, around 15% for petroleum products, and about 10% for gas. That reflects the relative emission intensities.

Mr. Mark Warawa: The ultimate goal—and I appreciate your comments—with Bill C-377 is to provide leadership. I believe Canada is providing leadership internationally to get all the major emitters participating. There has been a focus on the other 50% in Canada, and I believe our *Turning the Corner* plan does that. But I appreciate your challenge to do more on that.

How can we get Canadians involved in picking the low-hanging fruit? But also, over the next twelve years, which goes very quickly, by 2020, you see an absolute reduction of 20%, as it is in our *Turning the Corner* plan.

Ms. Rahbar, how do you see Canadians actually lowering the amount of energy they're using, those who use natural gas, which you represent? How can we reduce that, both at the large final emitters but also for the average homeowner?

Dr. Shahrzad Rahbar: Thank you for the question.

I would like to differentiate the large final emitters conversation. Let's park that once and for all, the regulatory framework for that reduction.

On the natural gas side, as I said, we are 26% of end use. Looking at what the economy uses natural gas for, is there a way that we can meet the energy service requirements of Canadian communities and businesses at a lower intensity? I would say absolutely.

Can we achieve it through our historical lens of looking at discrete components of the system? I have serious doubts. I'm more familiar with natural gas.

Efficiency of space heat is 95%. Do you want to push it to 98%? What are you going to get with that?

What we are seeing, as I said, and there's evidence, are interesting projects happening across Canada at the municipal level, looking at where you can get the step reduction, and it comes as a systems approach to a community. Energy, land use, transportation, waste and water—when you start seeing all those together, you start seeing phenomenal opportunities.

● (1655)

Mr. Mark Warawa: Could you elaborate on what you mean by that? Are you talking about a common source providing the heat?

Dr. Shahrzad Rahbar: I'll give you an example. We are looking at a project—well, we are looking at several projects—with the potential for harnessing gas from waste. Alberta has a waste disposal problem that we'll be regulating. Our estimation suggests that up to 10% of the volumes used, in residential and commercial, can come from renewable—

Mr. Mark Warawa: I'm sorry for cutting you off. I have only a minute left.

How does Bill C-377, as you see it today, need to be improved?

Dr. Shahrzad Rahbar: As I said, I think Bill C-377 implicitly focuses on the large final emitter side. I have no issues with a regulatory framework. It's not clear on how the other 50% should be addressed, and in my estimation, the other 50% matters. Our own emissions matter. Regulate us; I'm not disputing that. But we need to get a lot smarter on how we deal with the other 50%, and I'd like to see some focus and leadership in that.

Mr. Mark Warawa: Thank you.

Mr. Dillon and Mr. d'Aquino, my time is up, but thank you for your testimony.

The Chair: Thank you very much, Mr. Warawa.

I believe we're going to Mr. Godfrey.

Hon. John Godfrey (Don Valley West, Lib.): Thank you, Chair.

Thank you to all. This has been a good panel. I think it's been interestingly balanced.

I have a comment on *Turning the Corner*, the plan of the government.

Now, the question was put to you, “Was Bill C-377 costed?” The question I'd put back to the government is, “Was *Turning the Corner* costed?” The answer clearly, from Mr. Sawyer's remarks, is no. The only way in which you could achieve *Turning the Corner* was if emissions were priced at $100 a tonne. The government plan calls for them to be priced at $15 a tonne.

Clearly a factor of six is not a costing; it's a gross error. I just would make that observation.

I think the overall thrust of several of your remarks is that we've been a bit too leisurely in our approach. We haven't gotten our act together, and there are many things we could do. The purpose of Bill C-377 is not to provide a full plan that is going to answer what you ask for. It is simply to set an ambitious target that lines us up with the scientific reality of where we are and what we need to do as a planet and as a country.

So let me ask you this. If we accept everything that particularly the Council of Chief Executives has called for, and the Gas Association as well, which is a total plan covering the entire Canadian economy —not the industrial half but the part that deals with the built environment, the transportation sector and the bio-sector, which is agriculture, forestry, urban waste—then surely what we would need as our metaphor is a World War II mobilization of the economy metaphor, not a leisurely 100-year metaphor where we need to get all the targets up in place. We didn't know that in 1940; we just knew we had to win the war. You couldn't know when you would complete the Sarnia rubber plant; you just knew you had to do it.

I guess what I'm saying is that we don't have a complete road map. We do know the direction. We want to win the war on climate change just as much as we wanted to win the war last time.

Don't we really need a plan that covers the whole economy and all parts of the emissions spectrum but that also is far more ambitious, far more urgent than anything we've seen to date?

Mr. Thomas d'Aquino: Mr. Godfrey, well said, I think.

With regard to your analogy to the Second World War, that war began with the German invasion of Poland, as you know. One knew, or at least most people knew, that within days we would be facing a potentially catastrophic life-death struggle. Unfortunately, the appreciation of Canadians as a whole that we may be dealing with a life-death struggle is not remotely analogous in terms of perception.

Hon. John Godfrey: Is it in terms of reality?

Mr. Thomas d'Aquino: In terms of reality, I would say the following: everything that all of us have been talking about, this brave new world that we must all face and move into, will be more transformative than was the Industrial Revolution. That's how profound and how deep I think the change will be, and it will be necessary to be able to match targets with reality.

This is why, when I hear the word “targets” and I am asked by people if they've been costed out, I'm much more interested in the debate we've not had, or many of us have not had in this country—and, I would argue, in most other parts of the world—that if we are truly moving to an environment where we are facing the degree of constraints that many of us believe we are facing....

I shared a platform with David Suzuki two weeks ago. He was asked what would be the optimum number of people on the planet that would ensure sustainability. His answer was 200 million people.

Hmm. We have, at last count, about 8 billion people.

So how do we deal with this? It will require a fundamental transformation in all our thinking, not just for the tax system. I feel that for the last 15 years we have been fiddling at the edges of this whole thing. This debate is now beginning to get very serious.

● (1700)

Hon. John Godfrey: Let me ask you this question. Mr. Sawyer put a price or a range—we'll call it $100 a tonne—that we need to pay per tonne of carbon dioxide emissions by 2020 to get to the government's target, which is not very ambitious. I'd like to know how your membership would feel if we said, right, we're going to charge $100 a tonne one way or the other, through cap and trade or whatever it is. The price is $100 a tonne and we're going to put it across the whole economy; we see the consequences and they're not absolutely devastating for the consumer.

If everybody else in Canada was being confronted with that price, would your association, all of your members, take a rate of $100 a tonne, minimum, for 2020?

Mr. John Dillon: Mr. Godfrey, I'm sure you appreciate we can't get there in one step. Many analyses have suggested we need to be moving in that direction; we need to be moving in ways that send the long-term pricing but allow the adjustment to be made. Consumers and businesses have already made significant investments, and they're not going to change that in two or three years. We need the long-term signals and we need a process to get there.

As Mr. Sawyer noted, If we don't want to simply encourage businesses to move elsewhere, or have our businesses lose market share, which just means the greenhouse gases get produced somewhere else in the world, then we've got to move toward that in a transitional way.

I'm not here to dispute whether $100 a tonne is the right answer or the wrong answer. All I'm saying is we can't do that in one step.

The Chair: Thank you.

Mr. Vellacott, please.

Mr. Maurice Vellacott (Saskatoon—Wanuskewin, CPC): Thank you.

We should probably have on the record right away that although members across the way have alleged the Conservative plan has not been costed, it has been. Those who have read *Turning the Corner* carefully will find that there. In our worst year we would lose 0.5% of economic growth, of GDP.

So respond as you choose, in general or specifics. In Jack Layton's private member's bill, which we have before us now, given that we're already above our Kyoto targets by about 35% because of years of inaction under previous Liberal governments, now that we're already behind the eight ball to that degree, what would this cost us on a year-to-year basis in terms of loss of GDP?

Mr. David Sawyer: I can jump in there.

This discussion is surreal. Regardless of the targets—you've got two deep targets—you're talking significant reductions from what we're going to do anyway. That requires a response. If one announces these are the targets, one needs a response to hit the targets. What folks are saying, including me, is that if you're serious about this, these are the types of things you need to do, and, yes, there will be costs. There will be public costs, there will be private costs, there will be hits on exporters and importers, but there will also be benefits, and that benefit story is missing.

Regardless of the target you take, when you're talking about reductions of the kind that are being floated around and contemplated in this room, you're talking about significant deployment of technology, significant change in behaviour. The five megatonnes that were just announced for carbon capture and storage, looking for $2 billion from Parliament, is going to reduce five megatonnes. We need 50 megatonnes under either scenario, either target you're looking at.

● (1705)

Mr. Maurice Vellacott: I need to get to all of us here, but I need a specific answer, if you can give it to me. Maybe you can't, and that's being honest, but what reduction of GDP on a yearly basis would we see under this scenario?

As a way to lead into this, Ms. Donnelly tabled here, and this is where it hurts pretty good, a minus 43.2% loss in GDP for my province of Saskatchewan. That's pretty huge.

Would you agree or would you disagree with Ms. Donnelly's presentation in terms of a very significant loss in GDP for my province, minus 43.2%?

Mr. David Sawyer: I'm going to jump in. I don't know where that number came from, but it seems massive. We're talking about halving the size of the economy.

Energy accounts for 3% to 5% of the energy bills of some of the large final emitters. I don't understand if you doubled that how you'd suddenly shrink the economy in half. The numbers—

Mr. Maurice Vellacott: Okay, let me go on. I want to get to the next question.

Mr. David Sawyer: Yes, okay, just to throw in the numbers—

Mr. Maurice Vellacott: No, I'm sorry, sir, I would like to go to the next lady.

If you can go....

Dr. Shahrzad Rahbar: Are you talking about my numbers?

Mr. Maurice Vellacott: Because we're already behind by some 35%, I'm asking you, in terms of what you predict or what you would judge, what you think there might be in the way of an annual loss of GDP under Bill C-377, Mr. Layton's bill?

Dr. Shahrzad Rahbar: On specific numbers, I'll have to beg your pardon, we haven't done any calculations.

But by way of coming at this, is there a way we can move forward? If you look at the environmental footprint of energy production, that's electricity generation as well as upstream oil and gas, please have in mind that this energy is produced to meet some demand. If you don't look at meeting that demand, your energy footprint keeps going up, and then you're back in the world of—and I know this has been in vogue for 10 years—"Clean up your act at the generation site, the production site, and don't worry about demand."

I'm not disputing that we need to do something about the generation/ production site, but I'm suggesting—

Mr. Maurice Vellacott: Let me move to Mr. Dillon then.

Again, are we going to have significant loss of GDP? And I guess I'll throw the follow-up question to you right now, as well: if this bill meant putting Canada into a deficit position, would you still support it?

Mr. John Dillon: Well, I don't think we're saying we support the bill, in any event, as we indicated earlier, but to answer your specific question, I don't have the analysis. We haven't done the analysis. I think, as Mr. Sawyer has suggested, the regional impacts are much more difficult to quantify, but it's only common sense that if you're applying a significant carbon reduction target to the country, the biggest impact would be in Alberta and Saskatchewan. The reasons are very obvious, because that's where a huge proportion of our oil and gas production comes from, and those are the provinces that are most reliant on coal-fired electricity.

So whatever the numbers might be for the GDP as a whole, obviously there will be a much bigger impact in places such as Alberta and Saskatchewan. But what the size of that number is depends very much on the actual policies you implement, how quickly they're implemented, and what transition assistance and what assistance you give to the technologies that are going to be the real source of greenhouse gas reductions.

The Chair: Thank you, Mr. Vellacott.

Mr. Lussier, please.

[*Translation*]

Mr. Marcel Lussier (Brossard—La Prairie, BQ): Thank you, Mr. Chairman.

My first question is to Mr. Sawyer.

Mr. Sawyer, you gave us some figures about the increase in energy costs for the year 2020. You talked about a 25% increase in the cost of electricity, 15% for gasoline and 10% for gas. Could you tell me why the cost of electricity would increase by 25%? I do not think that applies in the case of Quebec. In the Canadian context, if producers would convert from coal to gas, electricity or renewable energy, then I would understand. However, I do not understand why you would apply this increase to Quebec, which produces 95% of its own hydroelectricity. I do not understand these figures. Are the figures accurate, or is this a Canada-wide projection, which includes all producers of electricity?

[*English*]

Mr. David Sawyer: That's a very good question.

The regional implications will depend on the emission intensity of the electricity. Quebec, then, being a low-emitting generator of electricity, would benefit greatly, one would think, with an increased rise in the price of electricity, because they're supplying into the grid at very low prices, and as price goes up there's more profit to be made.

So the growth in the electricity sector under either of these targets —again, minus 35% under *Turning the Corner*, or Bill C-377, minus 50%. You're talking about a significant expansion in the electricity sector—more renewables, more hydro power, and so on—so yes.

● (1710)

[*Translation*]

Mr. Marcel Lussier: You spoke about an integrated approach, Ms. Rahbar. You spoke about London. Does it use natural gas for its heating?

[*English*]

Dr. Shahrzad Rahbar: London is on the natural gas grid, as they are on the electricity grid.

What they have found is that if they look at their systems, they can find ways of harnessing energy from their local waste. They can harness waste heat from their industries to then put into use in their residential and commercial. So it's the systems look, and I think in totality, as I said, they anticipate achieving a 55% reduction.

How is that split between gas and electricity? I'm not sure, but I assure you it's not.... It's coming off one field and it's going on to the other one. They're bringing in geothermal, they're bringing in passive solar, and they're bringing in energy from waste.

[*Translation*]

Mr. Marcel Lussier: You say that natural gas represents 26% of the energy produced in Canada. Of that figure, what percentage of the natural gas is used by the tar sands industry?

[*English*]

Dr. Shahrzad Rahbar: That's an excellent question, and it's a number I should know, but I don't. May I come back to you with that?

The 26% is across the whole economy, which is residential, commercial, and industrial. Industrial would account for roughly half. As to what percentage of industrial the oil sands would be, allow me to get back to you.

[*Translation*]

Mr. Marcel Lussier: I see. Please send your answer to the clerk when you have it.

What advantage would natural gas companies have if there were a price on carbon?

[*English*]

Dr. Shahrzad Rahbar: Mr. Lussier, let me clarify. I represent the distribution side of the gas industry, not the production side. Colleagues from CAPP should be answering your question. We, for want of a better analogy, are the truckers. We own the pipe that delivers the gas that customers use. As you can see, our own emissions are only a small part. We touch the six million that emit the 75%. That's the space I have been talking about.

I would defer to my "upstream" colleagues; I wouldn't presume to talk on their behalf.

[*Translation*]

Mr. Marcel Lussier: Thank you, Mr. Chairman.

[*English*]

The Chair: Thank you very much

We'll go to Mr. Harvey, please.

[*Translation*]

Mr. Luc Harvey (Louis-Hébert, CPC): Thank you.

I would like to clarify one point before I ask my questions. R&D tax credits are refundable. They amount to 75% for in-house research and 50% for research done outside. We should not confuse research and engineering. I worked in this field for a long time, Mr. Bigras, so I could discuss it at length.

I come back now to our witnesses. This is my time, and today I would like to talk about aluminum produced here in Canada. When we produce a tonne of aluminum here, we produce four tonnes of CO2. When the same tonne of aluminum is produced in China, seven tonnes of CO_2 are produced. Mr. Sawyer spoke earlier about a carbon cost between $100 and $200. That means that Canadian aluminum would cost between $400 and $800 more than it costs at the moment.

Since you are economists, can you tell us whether we will continue to sell Canadian aluminum or whether the market will move to China?

Since I have only five minutes, and since there are four of you, I would ask for very brief answers.

[*English*]

Mr. David Sawyer: Thank you. I'll be very fast. It's a great question.

The aluminum industry is interesting in that there are investments in new high-efficiency facilities like in Kitimat—$2 billion, which is reducing emissions significantly. Those emissions can be used through a trading mechanism to help their sectoral colleagues in Quebec to meet targets. So here's a good example of flexibility in trading, where there might not be such a big hit.

The other interesting thing about aluminum is that the technology is improving to reduce those emissions. It has improved significantly, and it continues to improve. With an emission price, the deployment of that sort of technology improvement may be accelerated. The aluminum industry may not be the best example for talking about impact, because there are opportunities in the next while to reduce the cost of possible carbon dioxide.

● (1715)

[*Translation*]

Mr. Luc Harvey: That means that this would have no impact. We should not forget that in China, there is no price on carbon. Even if there were carbon trading, there would be no restriction. So you say this would have no impact.

[*English*]

The Chair: If you could be quick, and then Mr. Dillon.

Mr. David Sawyer: I'll be very quick. I'm not saying it has no influence; I'm saying the influence is likely not as stark as the first look would imply. There are opportunities there.

Mr. John Dillon: Thank you, Mr. Chairman.

I don't think any of us, certainly not my organization, are here to suggest that aluminum production should move out of Canada. Clearly we want that to continue. We have companies and facilities that are world class when it comes to that sort of thing.

It is about smart policies. As we said in our statement, it's about getting those countries involved in such a way that Chinese production or whatever does not have an advantage over Canada. If we're talking about implementing a price on carbon, there are means to recycle those revenues, either through production in other taxes on those companies or through the cap and trade system, to ensure there's an incentive to invest in the technologies Mr. Sawyer is talking about and that there isn't that cost advantage to our competitors elsewhere. That doesn't do anything for greenhouse gases internationally.

So we have to be smart about those policies. It's not just about putting a huge price on carbon and seeing what happens. It's about recycling revenues, making sure we reduce other taxes so the costs to that company are in line with their competitors. That's critically important, and I hope we've made that point clearly today.

The Chair: One more question, Mr. Harvey, please.

[*Translation*]

Mr. Luc Harvey: Do you want to add something, Mr. d'Aquino?

Mr. Thomas d'Aquino: No, I have nothing to add.

Mr. Luc Harvey: Fine.

Do you think nuclear power stations are a valid solution that should be considered? Do you think that nuclear energy is clean and a valid source of energy?

[*English*]

Mr. David Sawyer: I can jump in. I'm not advocating nuclear. In fact, if one tumbles the numbers, nuclear is a very high-cost policy option, but it is being actively contemplated in the country.

I think for the carbon prices, nuclear becomes competitive, but there are all kinds of reductions below that, and we should go after them first. Simply being very lumpy with our policy—by which I mean picking winners—is probably not a least-cost option. We may solve the problem with a bunch of nuclear facilities fairly easily, but that may not be cost-effective.

Nuclear is not the answer.

The Chair: Go ahead very quickly, Mr. Dillon. Your time is up.

Mr. John Dillon: Thank you, Mr. Chair.

We've said quite clearly for some time that Canada is going to need all forms of energy. We shouldn't be discriminating against any. Energy demand is growing, not just in Canada but worldwide. We need all forms of energy.

The Chair: Thank you.

Mr. Regan.

Hon. Geoff Regan (Halifax West, Lib.): Thank you very much, Mr. Chairman. Thanks to the witnesses for coming today.

Mr. Sawyer, Mr. Vellacott was asking you questions earlier. Like all of us, he had a very short time, and we have the choice of saying please move on to the next person and so forth. He did that, and that's fine.

He was talking, as I recall, about your numbers in terms of Saskatchewan, and you wanted to go on to explain that. I'm going to give you the opportunity to do so right now.

Mr. David Sawyer: Thank you. One of the observations was that the targets in *Turning the Corner* and Bill C-377 are not that far off. One is 35% off BAU in 2020, and one is 50% off BAU.

So my quick observation is that if someone is saying that the one target is going to reduce GDP by 50%, while the other plan is going to reduce it by 36%, I don't think those are credible numbers. I think most numbers indicate that at these deep targets, you're talking about an annual growth. You're dropping annual growth down in half or by three-quarters of a point or something. So it's sort of in the range of 1%, certainly well within the growth rate.

Again, that masks sectoral and regional implications, and there are issues there. But 45% seems crazy.

● (1720)

Hon. Geoff Regan: Thank you very much.

Mr. Dillon is anxious to answer that.

Mr. John Dillon: Most of the economic studies that I've seen—and I'm not sure about the one Mr. Sawyer is referring to—usually assume that the rest of the world is acting in concert with Canada, or at least there are no major differences in the way we're acting. That's a critical assumption in any of this economic analysis.

If we're projecting out 10 or 15 years and saying that we'll only lose 0.5% or 1% of GDP growth or one year of GDP growth, you have to look very carefully at all of the assumptions that go into that, because if Canada has a policy domain that's significantly different from our competitors, not just in the United States but in many major emerging economies, then the impact is significantly different.

Hon. Geoff Regan: Mr. Dillon, I just want to be clear. I note that some lawyers have an economic background as well. Do you have an economic background as well?

Mr. John Dillon: No, I'm not trained as an economist.

Hon. Geoff Regan: I don't mean to accost you with that question. I want to understand the context of what you're saying for my own benefit.

Mr. John Dillon: We have several economists who work for us.

Hon. Geoff Regan: Let me ask Mr. d'Aquino, Ms. Rahbar, and Mr. Sawyer something. Last week we had witnesses here on a science panel, including members of the Intergovernmental Panel on Climate Change, who argued to us that we need to stabilize emissions worldwide by 2015.

What's your view on when we need to stabilize emissions and how urgent this is?

Mr. Thomas d'Aquino: On the issue of how urgent it is, I can only respond and say that if you take worst-case scenarios, you would say you'd want to be able to do it at least by 2020, but sooner would be better. The reality is that's not going to happen. All you have to do is look at a China that for the last 12 years has exceeded 10% real GDP, after you look at an India that in the last five years has seen growth rates of 7% to 8% to 9%, and then look at the Brazils, the Mexicos, the Indonesias, and on and on you go.

This is one of the reasons I know all of us have wrestled with what I would call the moral argument, that wealthy nations have built their riches, and now, why is it that we should presume the developing countries should pick up the responsibility?

I have a different answer to that question. While I'm very sympathetic to the moral argument that we in the west should consume less and give more room to the developing world to grow faster, I think in fact there is a very different answer to that question.

I visit China on a regular basis. The Chinese will take dramatic action to curtail greenhouse gases and to implement energy efficient technologies. Why? It's not because they want to be good to you or me or to say they're good citizens, but they will do it because they have no choice.

If you have visited China—and I expect you have—you will know that 16 of the 20 most polluted cities in the world happen to be Chinese cities. The majority of Chinese soil is toxic. The majority of Chinese rivers are toxic. These people love their children and grandchildren just as much as we do, and that is one of the reasons, in a number of areas, we're already starting to see startling leaps in technology.

So the issue of whether we should be making room for them and whether they should just simply jump ahead and pay no attention is not going to be relevant, because these people have to live, just the way we do.

But in answer to your question, we will not see stabilization by 2015, and what will that mean? I don't know what it will mean, but to come back to something that—

Hon. Geoff Regan: That wasn't my question.

In your view, do you disagree with that as a deadline?

Mr. Thomas d'Aquino: In my view, all of us should be pushing in the same direction as quickly as we possibly can, and if that means we get to a point where we can achieve stabilization by the year 2030, I will be a very happy camper. But to suggest that it will happen by 2015 is living in a dream world. It simply will not happen.

The Chair: Thank you.

Mr. Watson, please.

● (1725)

Mr. Jeff Watson (Essex, CPC): Thank you, Mr. Chair, and thank you to our witnesses.

I think we're into some very interesting discussion here. I have a number of questions. I'm afraid I'm not going to have enough time to ask them. But I want to start with the targets, because this bill is predominantly about targets.

We've heard that they're scientific targets, reflecting, of course, the IPCC's targets—targets that were assigned, though, interestingly enough, only to developed countries. There was a decision made not to model targets for developing countries, and that decision was not based on scientific considerations—that is, whether there was enough data to quantify them—but on a values judgment. So the discussion about scientific targets in this particular bill has to be questioned on whether they are entirely based on science.

I agree that there is a problem here, but there is a legitimate discussion for policy-makers in this country about what Canadian targets should look like and whether or not we should be putting pressure on developing countries to assume targets. That's based on values decisions, so I think that is an important component of this.

But since we're here about the economics, Mr. Sawyer, every economic modelling is based, of course, on the assumptions you're putting in, and what you put in determines what you're going to get out of your analysis.

I want to ask you a sector-specific question. Have you done any modelling on effects to the auto industry, for example, and would you be prepared to if you haven't?

Mr. David Sawyer: The auto industry is an interesting case. No, I haven't specifically modelled that sector, but it is in the model, and it comes under other manufacturing or light manufacturing.

On the emissions from that sector, from production, there's no issue, really. It is really about selling cars and the transportation side, and what you do there. It seems to me that sector is very insensitive to the emission price, and that explains why emission standards and ethanol fuel standards are really being driven forward.

Mr. Jeff Watson: Exactly.

By GDP assessments, do you mean simply the cost of compliance, or do those include the income replacement cost you talked about? There is job loss and increased costs for energy, for example, that eat into fixed income for seniors. Are those costs reflected in your analysis of cost, for example?

Mr. David Sawyer: No, they're not.

GDP is not a great number or a great estimator of national welfare, meaning well-being. The model does kick that sort of information out, and the numbers aren't large, so you can think about it. Those are the types of questions that need to be asked and answered.

Mr. Jeff Watson: Have you any guess at quantifying that number, or is there any kind of—

Mr. David Sawyer: Which number would that be?

Mr. Jeff Watson: I mean the income replacement costs to getting ready.

Mr. David Sawyer: We don't have numbers for lost income, but you could look at the burden on households, and you could look at the burden on the various income strata—deciles they call them—to see the impact. Then if there is an impact, say in the cement industry, one designs policy to address it. You cut a cheque to the pensioner to deal with their rising energy costs.

Mr. Jeff Watson: Do economists do any modelling? For example, if these high-paying jobs are lost in the short term, there are effects for charitable giving in communities. The auto industries, for example, are some of the highest charitable givers. For those types of replacement costs, the government may have to step in and fund additional services, for example. Are those costs reflected in your analysis?

Mr. David Sawyer: No.

Mr. Jeff Watson: Okay.

Regarding price signals, let's talk automotive for a second. Thirty-five miles per gallon is the standard for the new U.S. reform CAFE, and that has to be achieved in two vehicle product cycles. If we harmonized with that type of regulation, for example, it would send a very definite price signal to the auto industry, one I don't have a specific number for. I don't know whether that's something you could model. That will affect transportation choices for Canadians: vehicle choice, materials, technologies, manufacturing locations, and changes to collective bargaining agreements potentially. There are a lot.

What I'm getting at, in terms of economic modelling, is that if you want to capture costs, there are a lot of costs that could be captured in here. Are some of those things addressed? Those are additional corollary things that we have to consider.

Mr. David Sawyer: No. This is the notion that sectoral impacts matter. At the national level, there is not a big impact. Again, those types of questions have to be looked at. One has to think about them and then one has to basically design a policy to address them.

Mr. Jeff Watson: Mr. d'Aquino, to come to your point about the profound transformative change—35 miles per gallon, for example—there are only two vehicles that match that target: one is a Honda Fit and the other is the Toyota Yaris. For those of us, say, with a family like mine, with five kids and a wife, we have a long way to go, and to do that in two product cycles we would begin to see how we must grapple with enormous short-term costs. I think that's something policy-makers have to be concerned about. I think we could all see the gains of spreading this out over the long term, but when we're talking about economic costs, we have to understand what the transformation is going to look like and factor that into our policy decisions.

Thank you, Mr. Chair.

● (1730)

The Chair: Thank you, Mr. Watson, and thank you, panel.

This has certainly been one of our better panels, I think, and I think everybody has learned something from this. If I had to summarize, what I heard was that we need to involve 100% of all people and all industries, and probably the other message might be “let's get on with it”.

I would like to thank you, panel.

I would like to remind the members that we have been invited to the EU ambassador's for dinner on Wednesday. I trust you all received that invitation in your office when it was sent out. It's next Wednesday. If you are interested, if you could let Norm know, he will pass that on to the ambassador.

Thank you very much. The meeting is adjourned.

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