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# Standing Committee on Industry, Science and Technology

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**Chair**

**Mr. James Rajotte**

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Thursday, November 2, 2006

• (1530)

[English]

**The Chair (Mr. James Rajotte (Edmonton—Leduc, CPC)):** I call the 26th meeting of the Standing Committee on Industry, Science and Technology to order. Pursuant to Standing Order 108(2), we're continuing our study on the challenges facing the Canadian manufacturing sector.

We have two sessions today. In the first session we have before us the Canadian Steel Producers Association, represented by their president, Ron Watkins—welcome—and by their director, Stephen Sampson, of the Canadian Steel Partnership Council. Welcome, gentlemen.

I understand, Mr. Watkins, you'll be making the presentation. We encourage you to be as brief as possible, but you are allowed up to a maximum of 10 minutes, at which time we'll turn to questions from the members.

Mr. Watkins, you can begin now.

**Mr. Ron Watkins (President, Canadian Steel Producers Association):** Good afternoon, Mr. Chairman, and thank you very much. Good afternoon, members of the committee. *Bonjour, mesdames et messieurs.*

The Canadian Steel Producers Association welcomes this opportunity to add its voice to your deliberations. This is a much-needed and overdue inquiry. Far too many Canadians either take for granted the future of Canada's manufacturing sector or, worse, assume our economy can thrive without a competitive and diversified industrial base.

The steel industry has a direct stake in this issue, both in its own right as a major manufacturing sector and because our customer base includes other manufacturing and resource processing sectors. In turn, our industry is a major customer for many other sectors, from mining to transportation to engineering. Thus, our supply chain relationships extend in both directions.

The CSPA's member companies operate in five provinces, supporting customer needs in the industrial, commercial, residential, consumer, and public sectors across Canada.

[Translation]

With yearly sales of about 13.5 billion dollars, our members employ some 35,000 Canadians to produce 15 to 16 million metric tonnes of steel each year. More than a third of that production is exported, mainly to the US. In the end, however, Canada is a net

importer of steel. Last year, we imported 9.3 million metric tonnes and exported 5.4 million tonnes.

• (1535)

[English]

The CSPA agrees with the challenges identified in the committee's interim report, notably the triple effect of rapid increases in the Canadian dollar, in energy prices, and in global competition. Our companies feel that every day. The industry itself has already made major strides, though the challenges remain serious.

Over the past several years our productivity performance has outstripped the manufacturing average considerably. There is an impressive rate of product innovation. Energy efficiency has been benchmarked at a very high level and we have reduced GHGs and pollutants significantly in absolute as well as intensity terms.

Future progress in all these areas depends on investment and reinvestment in plant and equipment, innovation, and people. It is under-appreciated, in our view, that globalization also means competing for investment as well as for markets. To win needed investment capital, whether that be among countries or within global enterprises, Canada simply needs to offer the conditions to compete against other investment options.

Consequently, the CSPA endorses the key investment measures that have been proposed already by several manufacturing industries to this committee. First, a two-year writeoff for investment in new productive machinery and equipment would accelerate capital stock turnover, leading to improved cost structures and productivity, energy efficiency, and environmental gains. Second is a further reduction in the corporate tax rate to 17% within five to six years. Third, improvements in the SR and ED system would enhance manufacturing innovation performance. And fourth is a tax credit for employer-financed workforce training to strengthen productivity of the existing workforce. This could take the form, for example, of a credit against EI premiums paid by employers.

I'm aware that this committee has been well briefed already on these issues, and you have also considered other issues important to us, including the entire question of energy pricing, availability and reliability, and the need for more rapid development of new and alternative energy sources. We could further discuss the broadly accepted need for improved border infrastructure and processes. Rather than repeat these points in detail, however, I thought I would speak to some topics that have received less attention up to this point.

The first is international trade, and in particular the rapid industrialization of countries such as China and India. For Canada, this is a two-sided coin. Clearly there is a rapidly growing opportunity in these markets, and we agree that Canada needs to pursue them more aggressively. The other side of the coin, however, is the deliberate policy of these countries to develop what they consider critical industries such as steel through direct and indirect subsidies, market protection, and other measures that support their export growth.

A less evident impact on our manufacturing base is the indirect subsidization of exports of steel-containing goods, such as appliances and equipment. These products displace domestic production in North America, both for these sectors and for supplier industries like our own.

China's steel industry is key in this regard. Even with double-digit internal growth, it has rapidly become a major net exporter of steel. This has been developed under a lengthy set of government measures to expand capacity and subsidize exports. The rapid build-up of excess capacity in China and other emerging economies, which invariably view steel as a strategic sector, will result inevitably in market distortions in Canada and elsewhere. These volumes of excess capacity, I would point out, are growing very substantially, as we speak.

Let me be clear, however, that we are not here to propose new forms of trade protection, nor do we seek production subsidies. We do, however, recommend that this committee recognize the importance of applying existing trade rules when unfair trade distorts markets for Canadian manufacturing. Better still would be to address these practices before bigger problems and trade frictions develop.

A second theme, quite different now, is to recognize and build on domestic industrial clusters and supply chain relationships. Although globalization has stretched supply chains geographically, our domestic competitiveness can be strengthened by local or regional clusters of related industries and infrastructure.

• (1540)

Industry sector clusters include suppliers and key customers. They create a broader pool for developing and retaining skilled workforces. They are transportation efficient and they collaborate to develop new technologies, products, and processes. Therefore, we should look for competitive, pragmatic ways to strengthen our industrial clusters within Canada and our domestic industrial and technological linkages. One such opportunity is through research infrastructure. Later today, you will hear the impressive story of AUTO21 when Dr. Frise appears before you.

An important opportunity for the steel industry is the move of the CANMET labs of Natural Resources Canada to Hamilton. This has the opportunity to bring together industry, university, and government technology capabilities to create new Canadian excellence in the areas of materials science and metallurgy.

A third topic I wish to cover is a well-trained adaptable workforce to meet the demanding needs of 21st century manufacturing. First, human resources programs, whether federal or provincial, could focus more directly on the advanced technical skills and sophisti-

cated trades that will be in short supply. Second, as proposed earlier, a tax-based incentive for industrial training would stimulate continuous learning and skills upgrading of the existing workforce.

Third, action is needed at an earlier stage. Too many educators and students have an outdated image of manufacturing. Governments and industry need to work together with them to promote the attractiveness of manufacturing as a career choice for tomorrow's workforce, and we'd certainly be pleased if this committee recommended such actions take place.

Finally, there is the theme of how best to knit all these factors together in support of Canada's medium- and longer-term manufacturing interests. In a nutshell, the development of partnership mechanisms bring together key stakeholders to identify what can be achieved, what actions are needed, and what can improve the prospects for Canadian industrial success.

Industry sector partnerships can take many different forms. However structured, they offer a unique opportunity for Canada to take internal action as a basis for competing globally. Canada has a unique ability to work in this manner, and that can work to our competitive advantage.

The steel sector has been particularly active in this regard. For many years, we have worked with organized labour in the Canadian Steel Trades and Employment Council, which is now developing proposals related to skill needs for the industry. We have an aging workforce in a lot of industry sectors; over 50% of it is over 45.

Internationally, the NAFTA governments and their steel industries have formed the North American Steel Trade Committee, and under the security and prosperity partnership initiatives, we have developed a North American steel strategy, which the three governments have approved.

More recently, the CSPA, together with the federal and provincial governments, established the Canadian Steel Partnership Council, of which Mr. Sampson is the director. The CSPC includes high-level representatives of our governments, our customers, our suppliers, our workers, and academia. The next phase of this process will be to develop a shared long-term vision and initiatives on which stakeholders can act jointly to continue to advance the steel and steel-related industries in Canada.

Mr. Chairman, this concludes my opening remarks. As I said, I undertook to cover the areas I thought were getting less attention than some others. We thank the committee for its attention to our advice, and we look forward to the remainder of our discussion with you today.

**The Chair:** Thank you very much, Mr. Watkins. It was a very substantive presentation. Thank you for that.

We'll now go to questions. Mr. McTeague for six minutes.

**Hon. Dan McTeague (Pickering—Scarborough East, Lib.):** Thank you, Mr. Chair.

Mr. Watkins and Mr. Sampson, thank you for appearing here and being so concise in setting out the views of your industry.

I have a couple of questions that are really overarching concerns. You talked about issues of capacity and what may lie in wait for the industry down the road. To be sure, there have been a number of changes in the industry itself, both in terms of the players and production, what they're producing, and of course valuation in your industry, in which, fortunately for all of us, we're happy to see there has been an appreciation in value of product.

I'm interested in getting your comments in some strategic areas. Within the steel industry, though, it seems to me that we've seen an exit from the market. For instance, Canadians are no longer producing stainless steel. I'd be hard pressed to find a single production, I realize, at the primary level, the base level of producing steel. This tends to be a bit more of a refined section, but it seems to me to be surprising in a nation that has both an abundance of ability...

The last stainless steel company, I believe, was taken over. It was bought out. Now, of course, we're seeing the price of stainless steel going through the roof.

We're also noticing the wider impact this has on other forms of manufacturing. The committee may very well be in touch with one of the many stainless steel aftermarket producers, and they are complaining about the fact that because there is no presence in Canada, that they are subject to the whims of an international market and often Canada is sort of an afterthought with respect to consumption. I'd like to get a little comment on that.

I'm interested as well in the change in the industry itself. Has there been a concern with respect to the change in the ownership of many of the companies? I know we're past the point of Minmetals, but I'm thinking, for instance, of Arcelor's takeover of one of our steel industries in Hamilton.

Perhaps, finally, I'd like just a comment as to whether or not—I say so without reference to being tongue-in-cheek—the October 31 announcements on income trusts will have a negative or a neutral impact on your industry as a whole.

• (1545)

**Mr. Ron Watkins:** Thank you, Mr. McTeague.

On the first question, not just on stainless but the whole product mix and who makes what, of course, as with a lot of industries, there has been a combination of consolidation and specialization that has developed across the industry. As I pointed out in my remarks, we do compete within North America, and in fact I would contend that we probably have, in some respects, the most open steel market in the world. Certainly we face import competition from other countries, as well as from the U.S.; and equally in the United States, we need to compete with very big companies. None of our steel companies are in the top 50 globally in terms of size, so there's a specialization factor that certainly comes into play there.

Your second question related to the ownership changes in the industry. It continues to be, in some respects, an incomplete novel, frankly. There has indeed been major ownership change in the Canadian steel industry, and it's not just ownership. We did, of

course, have the CCAA proceedings with respect to Stelco, and Algoma before that. The Dofasco situation now sits in kind of an interesting legal situation within the Arcelor framework, broadly defined, but not part of a Mittal-Arcelor combination. So there is no question that we have companies that are under both new ownership and to some extent new management, and we continue to see that develop.

Your final question was with respect to the income trust issue. Frankly, I'm not aware of any particular impact I'd identify today. I certainly haven't had any opportunity to discuss it with any of our members.

**Hon. Dan McTeague:** Thank you for that.

In terms of the facilities you have in Sault Ste. Marie, how precarious is that situation specifically? We've had members of Parliament raise this in the House of Commons now, and it would appear that the facility there is on very shaky terms. Can you describe for this committee why that might be the case? Is it the result of the kinds of subsidies you were referring to earlier, or state overproduction, excess volume and capacity being produced in countries like China?

**Mr. Ron Watkins:** We don't typically go into the details on any particular company's financial performance, but I would say that they have been operating since emerging from CCAA protection. I think they've actually made pretty good progress. The new president, Denis Turcotte, has made quite a good impact. They just released their quarterly results. We received them this morning. They were quite positive.

That said, this is an industry that is constantly globally in transition. I think we're going to see a lot more change. I wouldn't speculate on any particular outcome for any particular company, but they are certainly part of a very dynamic and fluid industry.

**Hon. Dan McTeague:** I have a further question. If we proceed to a two-year accelerated depreciation as requested, would that put us in line with other nations or ahead of other nations?

• (1550)

**Mr. Ron Watkins:** Again, I think the issue becomes in part, where do you stand on effective tax rates for foreign investment? Secondly, our major competitor for investment of course is the United States. As I think you know, it has certainly employed super-depreciation provisions in the past, and this is an attempt to put Canada into a position where we can compete better for those investments.

**The Chair:** Thank you.

We'll go to Monsieur Vincent.

[*Translation*]

**Mr. Robert Vincent (Shefford, BQ):** We've heard the Canadian Steel Producers Association say that some brokers who import steel violate regularly the spirit of Canadian rules relating to countervailing duties and antidumping. Is that still the situation? Are they still operating in this manner?

[*English*]

**Mr. Ron Watkins:** Thank you.

The short answer is that trade remedy and trade actions do remain a significant factor in this business, both in Canada and in other countries. It is the case that within Canada there has been less action of that nature than in, for example, the United States, but there continue to be trade actions brought against countervailing and anti-dumping cases. We just completed this past summer, for example, a review of the hot rolled steel. The review was undertaken by the Canadian International Trade Tribunal, which in this case found in favour of the Canadian companies. It found potential injury and maintained the order.

There are both short- and long-term issues. There are the immediate markets with the pressures from some countries and they continue to be found, either in Canada or other jurisdictions, to be in violation of the trade laws. The long-term issue is the one I referenced in my opening remark, which is this tremendous buildup in global capacity.

China this year will produce over 400 million tonnes of steel and it will have excess capacity of 40 to 50 million tonnes perhaps, probably larger at some point. Again, by comparison, our total production is 15 or 16 million tonnes. It's a growing concern to countries generally that we're on this surge, not just with China but with India and some other emerging economies that are rapidly building capacity at a faster rate than they need. That extra steel always, of course, ends up on the global markets. There is concern certainly continuous in the short term, but there is also the concern that over the long term this capacity buildup will just create more trade pressure.

[Translation]

**Mr. Robert Vincent:** According to our steel processors, their supply problem is to find steel at prices that are reasonable enough for them to be competitive. The problem is that China is able to purchase what it wants and to have its full supply of steel. Here, however, we're not able to buy steel anymore because prices are already too high, and our steel processors keep saying that their raw material is too expensive, that they can't make any profit and that they will have to shut down. Is that the situation today?

[English]

**Mr. Ron Watkins:** Again, with the situation of Canada versus China, for example, I think it's important to bear in mind that a lot of the basic inputs to steelmaking are established on more or less a global basis. For example, scrap steel is shipped to China, but it's purchased on open markets. Sources of energy and other inputs of production are commodity prices by and large that China also faces.

Obviously there's the question that their labour rates must be a lot cheaper than our own. That's true, but the labour content in a tonne of steel is pretty small. It's probably less than a person-day on average in a tonne of steel. They have certain cost advantages in factors like that, but then they face both internal and external transportation costs. Our companies are very much of the view that on a fair basis we can compete in North America in the steel business against China and other countries.

[Translation]

**Mr. Marcel Lussier (Brossard—La Prairie, BQ):** Mr. Watkins, as far as your competitiveness goes, I would like to know how much of this competitiveness is influenced by the environment? Do you

have any data relating to the reduction of greenhouse gases by your companies between 1990 and today? In the future, do you believe that regulations relating to greenhouse gases and pollutants will be a major stress on the competitiveness of our companies?

•(1555)

[English]

**Mr. Ron Watkins:** On stress or pressure, we recognize that an important part of the sustainability equation is the environmental performance of the industry. You referred to comparisons since 1990. If I could just give you some data for our industry, for greenhouse gases total emissions are down 17%, and on an intensity basis it's 29%. That's to the year 2003, which was the last measure I have.

With respect to pollutants, we are down. Benzene is reduced by 75%, NO<sub>x</sub> by 31%, and sulphur dioxide by 76%. We've gone through this period and we continue to compete while making the investments necessary to make those reductions. Overall energy efficiency has improved over 25%, so for quite some time the industry has actually taken very seriously the need to address these problems.

We recognize that obviously there would be a point at which regulatory requirements, depending on what they were, could become a problem, but we've developed an MOU with the federal and Ontario governments with respect to GHGs, and we'll now be into discussions with the government on the provisions under the Clean Air Act to see where that goes.

I think you've heard this from other industry groups as well, Mr. Chairman. There's a much better story on environmental performance across the manufacturing sector than most people might appreciate, and we're certainly a part of that.

**The Chair:** We'll go to Mr. Carrie.

**Mr. Colin Carrie (Oshawa, CPC):** Thanks very much, Mr. Chair.

I'd like to thank you for coming here today.

I'd like to carry on a bit with the questioning about free trade and about NAFTA, and how well we're doing in North America and in other markets. There's a lot of discussion now about free trade agreements that Canada's entering. One in particular is the Korean free trade agreement.

Do you have a position on the Canadian negotiations with Korea free trade?

**Mr. Ron Watkins:** Let me answer that and deal with a couple of dimensions to that question, Mr. Carrie.

First of all, from the point of view of the steel producers in Canada, the markets they serve, and the new products they make in the markets we serve, it's almost exclusively Canada and the U.S. I think over 90% of our exports go to the U.S. We're not going to sell much steel into Korea, which is the world's fifth largest steel-producing country already.

I think the concern on the Korea free trade deal was with respect to areas like market access for Canadian consumers of our steel products, so to speak. I know, for example, the auto parts sector has a specific interest to reduce barriers into Korea, and a more successful auto parts production out of Canada in turn creates the demand opportunity for Canadian steel.

Generally speaking, we would share a lot of the industry's view. We've looked, clearly, for a deal that balanced our industrial interests in a positive way. From a steel customer point of view, it could be quite an important factor for us because, again, the steel that our producers make is seldom used directly by households, for example; it always goes into some other product or into other industries, and that's where the impacts, I think, could be felt.

**Mr. Colin Carrie:** Okay. Very good.

Coming from Oshawa, I was very impressed with the automotive industry, the CAPC—

**Mr. Ron Watkins:** Yes.

**Mr. Colin Carrie:**—organization, and I noticed that you have the Canadian Steel Partnership Council. Could you tell me a little bit about how unique that group, that partnership, is or how it can be utilized or involved to help the government in making policies that would be beneficial to your industry?

**Mr. Ron Watkins:** Absolutely, and I'll turn in a moment to Mr. Sampson to give part of that answer.

As I mentioned in my opening remarks, I believe the partnership council model is a very constructive way, and as I said, I genuinely think it's something Canadians actually can do quite well—bringing together industry, organized labour, governments of course at senior levels, and academia to try to define and develop a perspective on what needs to be done and some practical steps that can be taken with it.

I'm personally very familiar with the CAPC process and I think it has achieved a lot in that regard, not simply what it worked on, but the way it brought the community together. And it goes to that cluster idea that we introduced.

Steve, could you perhaps speak to the subject areas we're looking at within the CSPC. We did just have a meeting with Minister Bernier back in September and we're now very much into the detailed work plan .

• (1600)

**Mr. Stephen Sampson (Director, Canadian Steel Partnership Council, Canadian Steel Producers Association):** Thank you, Ron.

That's right, we have had two meetings as a council. It's been in existence for just about a year. As you know, in terms of other councils, I think it's just in automotive and aerospace, so we're one of three.

Really, the overall goal is to set out a longer-term competitiveness and sustainability vision. We're trying to get away from that sort of short-term focus. From time to time pressures will arise or there will be a crisis issue. Instead, we're trying to go on a long-term basis. What can we do, given that unique group of stakeholders around the table that we all think have an interest in a strong steel industry in

Canada? What can we do together to set out a series of policies that will allow us to really be put on a stronger, almost growth footing to really be able to improve our competitiveness?

So we have working groups, for instance, in human resources, in innovation, market development opportunities, international trends, and investment issues. It's a way to really draw in some of those unique perspectives. And then what we're hoping to do is lay out a series of actually very specific recommendations for not only governments, provincial and federal, but even steps for the industry itself to take so that we can meet some of those targets.

**Mr. Colin Carrie:** Excellent, very good.

We mentioned a little bit about greenhouse gas emissions. If the government moves forward with, for instance, implementing the ideas of Kyoto or the carbon trading situation, how would that affect the competitiveness of your industry over the long term?

**Mr. Ron Watkins:** I think from the point of view of the steel producers, if you were into a regime where you had to buy credit simply to comply, that's not an investment you're making back into your enterprise.

We have operated very much on the principle of BATEA. You use the best available technologies economically applicable. And so the approach under the MOU that we've signed with the governments would be to, first of all, focus on what we can do to achieve the maximum possible, and as I mentioned, against the backdrop of a lot of progress already.

And then looking out over the longer term, which is part of the clean air plan, what are those breakthrough technologies? To get immense change, you need some breakthrough technologies in the way steel is made. There is participation by the government and the industry in what's called the carbon dioxide breakthrough project run by the International Iron and Steel Institute.

We are part of that as Canada and looking to that as a way to develop complete step functions in the environmental efficiency of the process.

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

We'll go now to Mr. Masse.

**Mr. Brian Masse (Windsor West, NDP):** Thank you, Mr. Chair.

Thank you for your presentation here today.

One of the things I noted in your "Action Required on Multiple Fronts" is that under the heading "Domestically" you've addressed the issue of competitiveness factors through domestic policies; in particular, innovation, skills, energy, environment, and infrastructure. I think you're absolutely correct there.

Canadians will generally support public policy initiatives, be they on clear air or better infrastructure, where they can see value for the general good and as a goal, and it if boosts employment and competitiveness. I'm not informed in depth about the whole project itself, but one of the things that have been talked about is the cogeneration of the Stelco plant and moving that forward. Does that fit within those elements there? I know that in the Hamilton area they argue that obviously this would improve air quality, and they have a significant problem there. Coming from Windsor, Ontario, we have the same thing as well, but where you can't control, you can improve things.

And second to that, it would improve the competitiveness of Stelco itself.

Maybe you can expand upon that situation to see if it falls in line with what you're....

•(1605)

**Mr. Ron Watkins:** The short answer is yes, it does. I think it has the double impact of not simply being better for the environment but also having some bottom-line consequence if we can figure out the way to do it.

There have been issues in cogeneration. I don't speak with expertise in this area, but there are questions, I think, related to how you interconnect with the grid and on what basis, and questions about combination of pricing and about surge power. There's a range of factors that need to get worked through.

Cogen, I know in the case of Stelco, has been one of those projects that can be seen to have a positive impact, but it has to make the hurdle to the next level. I think some combination of regulatory change regarding how it would interact with the grid, along with some of the investment-oriented measures that might make it a more viable proposition could lead to some genuine progress in that area.

I'm not sure if you're aware of this, but just in the last week or two, Algoma announced a cogeneration project in its area, which is a very positive step as well.

**Mr. Brian Masse:** In terms of your partnership council, if there is public support and incentives or grants with conditions for doing such projects with, say in this case, Stelco, or another company, how are those seen by your partnership there? Is there general consensus that as long as there's a fair, open process, public policy initiatives and supports are there that can be used by all? Is that generally how the organization is constructed?

**Mr. Ron Watkins:** It's a bit of an untested proposition, frankly. I think the general view would be, first of all, that programs that are more generally available and those focused on something like cogeneration clearly have a lot of different forms of public benefit associated with them.

What we as an industry, for a very long time, have taken a view against are capital or production subsidies to the industry, because, first of all, we oppose them when they occur in other countries, and secondly, they do change the basis for competition. Projects targeted at environmental enhancement, which obviously could have some competitive benefit as well, I think, would be favourably looked at. But that's kind of the distinction we would draw.

But as I say, we haven't really had to face that in a broad way just yet.

**Mr. Brian Masse:** It'll probably be a good situation to face, though, in respect to challenge, if you get there. I guess that's the new reality. We can continue to complain about other countries' using innovative strategies, often from companies that have one plant in North America and another plant somewhere else. Obviously we have to address that. We're not going to end that practice since it's happening pretty well unilaterally across a number of different countries.

I have one quick question, though, with regard to production by country. You have the ranking there. Canada is sixteenth. Where have we been in the last few years? Have we gone—

**Mr. Ron Watkins:** We've held pretty stable in that range. It's plus or minus a little bit. We're fairly close to Mexico. They may have overtaken us over the last, say, two to three years. But I looked at these data a couple years back; I think we were still number 16 at that point.

**Mr. Brian Masse:** I don't know if it's possible for your organization to say, but I'd be interested to know, maybe over the last five years, who has really moved up or down, or if there have been big shifts or swings. That would be very helpful.

**Mr. Ron Watkins:** We could definitely get you that information. I can tell you that the current number one was not number one five years ago.

**Mr. Brian Masse:** That was the obvious—

**Mr. Ron Watkins:** If you look at the numbers, over a quarter of the global production is by China.

**Mr. Brian Masse:** That's incredible.

Thank you, Mr. Chair.

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

We'll go now to Mr. McTeague.

**Hon. Dan McTeague:** Chair, with your indulgence, I'm not sure if Monsieur Arthur wants to ask a question. I might be able to shorten my questions if he has one. It's up to you.

**The Chair:** I just have Mr. Van Kesteren and Monsieur Arthur.

But if you're willing to do it, that would be great.

**Hon. Dan McTeague:** That's fine.

I have just one question dealing with the percentages of exports versus domestic consumption. I didn't see that in your table. I mean domestic exports of your industry as a whole.

That's really the only question I have.

**Mr. Ron Watkins:** I apologize. That's probably not in the presentation deck, but it's in my remarks.

Our exports last year were in the order of 5.4 million tonnes. Imports were 9.3 million tonnes. So the net trade deficit for steel was about 3.9 million tonnes.

•(1610)

**Hon. Dan McTeague:** Do you have any idea how much your domestic consumption would figure into all of this?



**Mr. Ron Watkins:** Total domestic consumption in Canada is about 18 million to 19 million tonnes.

**Hon. Dan McTeague:** Which would be what percentage? Do you have any idea, roughly?

**Mr. Stephen Sampson:** Last year, imports made up about 51% of the Canadian market.

**Hon. Dan McTeague:** Thank you.

Thank you, Chair.

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

Mr. Van Kesteren.

**Mr. Dave Van Kesteren (Chatham-Kent—Essex, CPC):** Mr. Chair, if it's all right with you, Mr. Arthur can ask a question first, and then I'll take the question last.

**The Chair:** That's all right.

**Mr. André Arthur (Portneuf—Jacques-Cartier, Ind.):** Thank you.

Mr. Watkins, did I understand you well when you said that the free trade agreement with South Korea would have no effect on the Canadian steel industry?

**Mr. Ron Watkins:** Because we basically don't export into Korea at the steel producer level, I'm saying there obviously wouldn't be a direct impact that way. The indirect consequence would be in, first of all, whether it would improve the trade access for our customers going into Korea. The negative version of that, of course, would be if it made it easier for steel-containing goods from Korea to come into Canada. That would affect our customers, which would indirectly affect our market.

**Mr. André Arthur:** I think South Korea is a big producer of steel.

**Mr. Ron Watkins:** It's a major steel producer, yes.

**Mr. André Arthur:** Were you consulted in any way by the Canadian government negotiators about their dealings with South Korea at this time?

**Mr. Ron Watkins:** It was before my time, but there were discussions several months ago. I wasn't involved in them personally, so I couldn't speak to you as to the nature or extent of those discussions.

**Mr. Stephen Sampson:** It would be fair to say, Monsieur Arthur, that we've been kept aware of the status of the negotiations.

**Mr. André Arthur:** And just as a quick question, in what area of steel production is Canada the absolute best in the world?

**Mr. Ron Watkins:** If you spoke to our companies, they'd say many, but I'll certainly give you a couple of primary examples. One is certainly automotive steels. Dofasco and Stelco in particular are very strong.

Secondly, another good example comes with respect to what are called old country tubular goods, which is steel industry jargon for products that are made for the oil and gas exploration and development industries. You have a company like Regina-based IPSCO, for example, which is very strong in this area. In fact, they've developed some new pipeline technologies in that world as well.

But across the board we have a number of other areas of competence. We could send you, for example, a list of the products that are made by each of the steel producers.

**Mr. André Arthur:** My question was about the absolute best in the world.

**Mr. Ron Watkins:** I think I've identified two that I would put there, but our companies are very good at what they do.

**Mr. André Arthur:** I was not expecting a catalogue as an answer.

Thank you very much, sir.

**The Chair:** Mr. Van Kesteren, you have two minutes.

**Mr. Dave Van Kesteren:** Thank you for coming, gentlemen.

I want to follow up on that issue of the best in the world. Are you telling us that you're developing niche markets? Is that what's happening in the steel industry?

**Mr. Ron Watkins:** I'm not sure I'd call them niche markets in the sense that a lot of industries would. It has more to do with specialized steel product. For example, one of the big developments in the steel industry over the last decade was the development of what is called the ultra-light steel automotive body, the ULSAB project.

Of course, in volume terms, it's not a niche at all. It's a very substantial business, but it's a top-of-the-line kind of product for the automotive industry. There will be other sorts of niches and so on, but actually, generally speaking, you want to be in a high-volume business if you're a capital-intensive industry like steel.

**Mr. Dave Van Kesteren:** That seems to be the way the world's going.

**Mr. Ron Watkins:** And I think we'll continue to see that specialization.

**Mr. Dave Van Kesteren:** Can you see a bright light there? Is this something we can compete in and that we can really...?

**Mr. Ron Watkins:** Again, we're firmly convinced that we can compete on a fair basis because of our production systems.

• (1615)

**Mr. Dave Van Kesteren:** I'm a little confused. You need coal and you need the ore, and you tell us that the labour really doesn't make that much difference. Why are we having so much trouble competing with the Chinese and the Koreans—more specifically the Chinese—if it's not a labour issue?

**Mr. Ron Watkins:** I was reading an interesting article today in which people were talking, and one of the comments from an observer from McKinsey was that China seems to be the only country in the world where their export prices are cheaper than their domestic prices.

There are lots of complications in the system. But clearly if there are these big subsidies, cheap financing, and protected markets, a range of factors have been documented that certainly are of a deep concern to us in that particular environment. But on a fair basis, we're prepared to compete with anybody. We just don't want to compete with governments.

**The Chair:** I'm sorry, Mr. Van Kesteren, but your time is up.

Monsieur Lussier.

[Translation]

**Mr. Marcel Lussier:** You've referred to China but you've also mentioned India and I don't see its level of production in your document. Do you have any figures about the steel production of India? What is the rank of India in the list of major steel producers? Is Bangladesh between the 6th and 15th countries which are not mentioned in the table of your first page?

[English]

**Mr. Ron Watkins:** If you'll give me half a minute, I will see if I can quickly find it. I have the publication here, with a lot of the data, and I hope I can very quickly find it for you.

On the top steel-producing countries, you were asking about India, which was number seven in 2005.

[Translation]

**Mr. Marcel Lussier:** Bangladesh.

[English]

**Mr. Ron Watkins:** I don't think Bangladesh is on the list here. I don't have anything below country number 41.

[Translation]

**Mr. Marcel Lussier:** All right. Could you tell me where the steel industries of Ontario get their supply of raw material?

[English]

**Mr. Stephen Sampson:** It comes from Quebec. Mostly integrated mills are the ones that make steel from scratch, so to speak. The sources are iron ore, largely from Quebec and Labrador. There's QCM, Québec Cartier Mining, which is part of the Dofasco group, and Stelco, I believe, is Wabush Mines in the Quebec-Labrador region.

[Translation]

**Mr. Marcel Lussier:** As far as competitiveness is concerned, what share of Quebec imports goes into Ontario? What is the role of those imports as far as costs are concerned, which relates to competitiveness? Since that steel arrives here by sea, how much of the production cost is related to shipping?

[English]

**Mr. Ron Watkins:** I don't have the answer to that question with me. I will try to get back to you on it, if that would be acceptable.

**Mr. Stephen Sampson:** In a general sense, you hit on a very good point, which is the fundamental linkage of areas such as the Quebec North Shore, the St. Lawrence Seaway, and the steelmaking industry in Ontario. It's very tightly linked, and you really can't have one without the other. But I think we could certainly get the statistics for you.

**Mr. Ron Watkins:** It's also important to realize that when you're looking at, for example, Quebec versus Ontario industries, of course, a sizeable proportion of the Ontario industry is not blast furnace or basic oxygen but is electric arc. They work off scrap and other sources of input. It wouldn't have the same linkage, although there may actually be Quebec scrap that goes into Ontario steel and vice versa.

[Translation]

**Mr. Marcel Lussier:** What I also see in the port of Montreal is that scrap, as you call it, leaves Canada for China. Therefore, Ontario is not the only consumer of Quebec scrap. Is that your position?

[English]

**Mr. Ron Watkins:** There's a surprising amount of trade globally in scrap.

We both export and import quite a bit of scrap in Canada. For example, Manitoba Rolling Mills uses old railway cars as a feedstock. Some of it comes from the United States and some of it comes from elsewhere in Canada. It's quite an active market.

• (1620)

[Translation]

**Mr. Marcel Lussier:** I didn't understand. Did you say railroad tracks?

[English]

**Mr. Ron Watkins:** Railroad cars.

[Translation]

**Mr. Marcel Lussier:** No, cars, not tracks.

[English]

**Mr. Ron Watkins:** No, the cars.

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

I know we kept you gentlemen a few minutes longer than we had anticipated, but thank you very much.

Mr. Masse.

**Mr. Brian Masse:** Through you, Mr. Chair, I would like to ask the clerk to get the different departments. We've had testimony again here today about Korean free trade or the trade deal. I'd like to know from the Department of International Trade and the Department of Industry what studies and consultation there has been with different sectors.

I know there was one on autos. I'd like to know if there was one on steel, for example, and any other sectors. I think it would be important information for the committee.

**The Chair:** Okay. Is that both the departments of trade and industry?

**Mr. Brian Masse:** Yes. Thank you.

**The Chair:** Okay. We can request that information.

Thank you very much, gentlemen, for coming. I appreciate the presentations.

We're going to suspend for a minute or two to allow you to gather your things and to allow the new witnesses to come forward. Thank you very much for coming. I appreciate it very much.

• (1620)

(Pause)

• (1625)

**The Chair:** We'll resume our meeting, ladies and gentlemen, and we'll welcome two of our witnesses.

We have, I think most observers would agree, two of the finest academics interfaced with industry in Canada. We have, first of all, from AUTO21, Dr. Peter Frise, who is the CEO and scientific director; and secondly, we have, from the Energy Innovation Network, Dr. Michael Raymont, who's the president and CEO.

Is this your first time here, Dr. Frise?

**Dr. Peter Frise (Chief Executive Officer and Scientific Director, AUTO21 Networks of Centres of Excellence, Auto 21 Inc.):** I actually testified five or six years ago.

**The Chair:** Many members will remember Dr. Raymont when he was here in his capacity as acting director of the National Research Council.

Gentlemen, welcome to both of you.

Dr. Frise.

**Dr. Peter Frise:** Thank you very much. It's an honour and a pleasure to be here.

In my brief, which I'll be referring to in my testimony today, I introduce the AUTO21 network of centres of excellence, which is one of over 20 networks of centres of excellence funded by the Canadian federal government in areas such as manufacturing and engineering topics, health issues, and natural resources issues. I'm going to talk today about the importance of the NCE program to Canada, and in particular AUTO21, and also about what I feel are some issues around Canada's innovation system, which in my view bear a look from the standpoint of improving our ability to compete in the world.

In terms of the socio-economic context, the auto industry, as I'm sure you're well aware, is Canada's largest manufacturing sector. I've given some statistics on the first page of my brief, which I think will fill in some useful numbers for people who may not be familiar with the auto sector.

It's a very dynamic sector. Virtually every statistic to do with the auto sector is huge, and Canada, frankly, is a big player in the auto sector. Since 2000 we have gone from the number five auto-making nation in the world to number eight, but we actually make more cars and trucks now than we did then, by a small number, so we're not losing in terms of absolute production. But we are dropping in position, and that's as a result of the rise of other economies such as China. In that respect, I'd like to really support what the previous speaker said. We have to compete in the world. It's terribly dynamic and things change very fast.

One of the key statistics in page 1 is the amount of overcapacity. If members will note, there is a capacity to produce about 80 million light vehicles in the world per year, but only about 62 million to 64 million are produced, so there is a significant amount of overcapacity. In fact, the amount of overcapacity just about exactly matches the amount of capacity that North America possesses in vehicle assembly, so we need to fight for every automotive job and every automotive piece of output everywhere we can, and Canada has to do that on the basis of innovation. As I point out on page 2 of my brief, we cannot do it by being cheap. We have to do it by being fast, agile, high quality, reliable, and innovative.

I'd just like to move to a general statement about the role of university and public sector research organizations.

It's my view that the role of universities and public sector research organizations is to create new knowledge, to advance the state of the art in a wide range of fields, and to educate people to enhance their employability and stimulate their creative energies. Universities do not make cars and do not make auto parts, and I think it's really important, as we hopefully begin a systematic look at Canada's innovation system, to make sure that everybody is carrying out their role and sticking to their knitting.

AUTO21, I hope people would agree, has been a very good investment for the people of Canada. It's an effective and efficient public-private partnership in every sense of the word. The board of directors is led by...and a majority of the directors are from the private sector, from auto industry companies of one level or another. These are committed, very senior level executives who give a lot of time and energy to governing AUTO21 in an effective and efficient fashion, fully within the boundaries of the rules of the NCE program.

One of the most exciting things about networks of centres of excellence is that they allow a very seamless crossing of disciplinary lines. It's very important, I think, to appreciate how important it is to put the right people to work on the right problems. Not all problems can be solved by people in just one discipline. In fact, some of the most vexing problems really require a multi-disciplinary approach.

For instance, in a vehicle safety issue that we worked on recently, we have a team of nurses, physicians, engineers, physiotherapists, human kinetics people, and some sociologists. I think it's really important that this can take place. Under the usual system of funding in Canada, it's not easy for people who span that breadth of discipline to work together, because the funding councils tend to have relatively rigid mandates. They certainly try hard to break out of that, but I think AUTO21 and organizations like it have an agility that is very useful in attacking those kinds of problems.

● (1630)

That really brings me to the core of my message to the committee. I think there are three issues I would ask the committee to consider, and I hope to elicit your support on these.

The first one I would suggest is probably a regulatory change or something like that, and that's the elimination of the 14-year NCE sunset clause. The way the networks of centres of excellence program is structured in Canada—and it was a Canadian invention in the late eighties—their first mandate is for seven years, and they're able to apply for one more seven-year term.

Let me say at the very outset, and I'll probably say it again, that I do not believe in entitlement, by any stretch of the imagination. AUTO21 has no objection whatsoever to a searching, rigorous, and thorough review of our operations, including a demonstration by us of the value we create for the taxpayers' investment. At the same time, in my view, it makes no sense to work hard to create a good program with value and buy-in from the user sector—the industry—that creates a great educational opportunity for young Canadians and then shut it down because a certain number of years have passed. I just don't think that make sense. Yet that is the way the program is designed now. I think this is a flaw.

In my paper, on pages 4 and 5, I bring out the example of the Australian collaborative research centres program, which was modelled on the Canadian NCE program. In fact, one of their newest collaborative research centres in Australia is the AutoCRC, which is modelled directly on AUTO21. It says that right in their proposal. The Australian program permits networks to continue to apply for successive terms. These are granted, as long as the user sector continues to back it. As long as the user sector is committed—and I mean financially committed too—to leveraging the public sector funding, then the government remains committed. That has enabled Australia to make research progress and contributions and, more importantly, to support their economically key sectors to an extent, in my view, that is way beyond what a country with a population of 21 million or 22 million would normally be able to do. I think it's because their program is designed systematically to succeed and create certain outcomes. I think that's something we really need to look at.

Again, I do not believe in entitlement. If AUTO21 stops working properly, stops creating value, and if the industry stops supporting it, I will be the first one to suggest that it be shut down.

The other thing I would like to talk about very briefly is the issue of collaboration and cooperation among the various research funding programs. I have some examples in my brief that I would draw your attention to. The way it is right now, you basically apply for equipment money from one source, and people support money from another source. Those two programs don't really communicate very well. I think that's a flaw. Again, we need a systematic approach here.

Finally, I feel programs that create value and work well should really have inflationary increases in their funding to allow them to remain current and competitive. Just as business has to compete worldwide, researchers have to compete worldwide for the best people, the best equipment, and the best ideas. I think Canada has done a great deal of work over the last number of years in supporting research and innovation, but I think there's a lot more to be done.

I would urge the committee at this juncture to call for a systematic review of how all the programs work and how they interlock, to try to ensure that things happen in a way that makes sense.

I think I'm out of time. Thank you very much.

• (1635)

**The Chair:** Thank you very much, Dr. Frise.

We're going to go to Dr. Raymont for a 10-minute opening statement.

**Dr. Michael Raymont (President and Chief Executive Officer, Energy Innovation Network):** Thank you very much, Mr. Chairman and members of the committee. It's a pleasure for me to speak to you this afternoon, and I thank you for the opportunity.

As the chair suggested, my career has been a combination of things. Most recently I spent some time in Ottawa with the National Research Council, but prior to that, I was in the venture capital business as an entrepreneur. Essentially all of it has been in technology commercialization and technology innovation.

I come here today representing an organization called EnergyINet. We are a not-for-profit, non-lobby, impartial consortium of government and industry devoted to the acceleration of energy technology innovation.

There is nothing particularly I'm asking today other than to try to present you with a picture of energy innovation in Canada and where it isn't as effective as it should be, and with some suggestions on how it can be improved.

First of all, it's obvious that energy supply and availability and security in the right form, in the right place, at the right time, to the right customers is critical to our industrial sector and in fact to our society as a whole. And you've no doubt heard this from many witnesses over the past few months. What I'd like to do is address a few comments to energy itself and why it's so important, and then talk about why innovation in the energy industry is not being pursued as effectively as it might be.

The first main slide, at the bottom of the first page, deals with an undeniable and essential link between energy consumption and economic prosperity. While we might alter the angle of that curve, there is no doubt that if we want to move from the bottom left corner of the page, we have to consume more energy, whether we like it or not. This is part of sustainability, and I use the word "sustainability" here to include economic sustainability and sustainability of our society and our way of life, in addition to the usual use of the term, which is just about environmental sustainability.

So is energy a bane or a boon? Well, as I've said, energy consumption correlates very strongly to our GDP and living standards, and it's clearly very important for a healthy manufacturing sector. One of the key points I'd like to make today is that energy production and consumption per se do not contribute meaningfully to global warming. If we took every joule of energy that is produced and converted it to heat—and thermodynamics determines that most of it is converted to heat—we would not warm the temperature of the planet by more than one-tenth or two of a degree. The byproducts of energy consumption and production are what contribute to global warming.

So increased energy use is not axiomatically problematic, and it is not contrary to responsible usage, sustainability, or a sound environmental set of policies. Indeed, energy helps solve many of the global world problems, whether they be social or environmental.

Desalination requires energy, carbon dioxide sequestration requires energy, and so on. So I put it to you that we should be actively accelerating energy production technologies while mitigating the byproducts of production and use to prevent further environmental deterioration. And this applies to both fossil and renewable and alternate fuels.

Rising energy global demand is driven not just by Canada—in fact, it is driven by Canada only in a minor way—but particularly by countries like China and India, and you've seen the statistics I've shown there. It is inevitable that global consumption of energy will rise. The good news is that, actually, we have plenty of energy resources in the world. It's simply a question of how we exploit and use them.

So really, some energy supply conclusions would be that we have sufficient energy resources in this world for hundreds of years, if not indefinitely. But the extraction technologies and the byproducts of these industries are problematic. There is no magic bullet solution. Every energy source will be needed, and fossil fuels—carbon energy sources—in particular will supply most of the world's energy needs for the next 100 to 200 years. There is no way around that.

Renewable energy sources will accelerate rapidly, and should, but they will comprise no more than about 20% of the world's energy consumption by 2050 if we do a good job of energy innovation.

• (1640)

So we have a couple of options in front of us. We can carry on with business as usual, which will lead to increasing geopolitical tensions, supply disruptions, deteriorating environmental and climate change, and increased market and supply instability, or we can enter an era of responsible and sustainable energy supply while we focus on fossil fuels, in particular, although we reduce their carbon footprint and we reduce collateral resource requirements, and by that I mean things like water. We need to integrate all energy sources with distribution networks and markets into a “systems thinking” approach to energy. We need to accelerate the development of unconventional and alternate energy resources, so that those can come on stream to gradually transition to a greener type of energy. And that puts a strong emphasis on energy technology development and deployment, but also on a responsive regulatory environment and a more certain and stable business environment, where the long-term investments in energy technology and energy technology projects can be made.

Again, I comment that we need to recognize that fossil fuels will supply most of the world's energy for the next hundred years or so—we do need to recognize that—but that technology can do a tremendous amount to help mitigate any of the difficulties of using fossil fuels. To point out how technology can be used, I've given one example in the slide, the picture of resources—these are North Sea resources—that were first identified in 1976. The three different-coloured curves—I think they're in black and white in your copies—show just how technology alone doubled and doubled again the reserves that were available from that field.

Our challenge, therefore, is not how to use less energy, although I'm not arguing against energy efficiency and energy conservation as part of our solution to our energy challenges, but how to unleash technology innovation to increase energy supply while minimizing its environmental impacts. The solution to that is to integrate and balance an innovation supply chain for effective solutions delivery.

What do we mean by an innovation supply chain? What is it? On the next page, there's a slightly complex graphic, for which I apologize, but it shows how ideas eventually transform into products, from the bottom left to top right, and produce an economic benefit. That is a supply chain. It starts with knowledge and ends with a product with economic benefit. If we don't have a supply chain that works in exactly the same way as the traditional supply chains work, but a knowledge supply chain with good, integrated linkages and different performers along the way, we will not achieve the economic benefits from the millions of dollars that are spent at the front end of this process.

To compare Canada's innovation performance, take a look at the chart down below. This shows work that is conducted by a group consisting of both me and Lipsey from Simon Fraser, and even Michael Porter is involved with it. We actually present some metrics under which Canada is scaled against some of the best innovative economies in the world. And you see the best practice statistics suggesting an R and D ratio of three parts private to one part public. It isn't clear in that slide, but it should be three parts private sector R and D to one part public. You see where Canada's ratio is.

The result is that what we have in Canada is an imbalance of knowledge push over market pull. We have supply-side innovation economics—i.e., discover it and they will come. We do not have an integrated innovation supply chain. We do not share common vision and objectives between the parties involved in the innovation supply chain. We do not have holistic policies. We have more than 200 government programs focused on innovation, but almost all of them are too small or too difficult to apply for, as I note from my private sector colleagues. The organizations involved are diffuse and uncoordinated. And finally, the metrics and benchmarks we use are not agreed to or are different, depending on different parties. I can give examples of that. So we have an imbalanced supply chain, which is ineffective in delivering economic benefits, given the enormous amount of effort we've put into the front end.

Part of this is a funding dilemma. The next graph shows that the government provides most of the front end, where ideas are formed in university and government labs, while the private sector invests most of the money at the product end—hardly a surprise. The problem is that you have a gap in the middle, where funding for the most difficult part of innovation and technology transfer and technology commercialization, namely pilot plant and demonstration phase and the commercialization phase, is the most weakly funded. This is simply because it's an area where there's increased political risk. The numbers are high and the number of projects is small, so people get accused of picking winners and perhaps putting \$100 million into something that doesn't work. But at the same time, it's also the area where the private sector perceives their highest financial risk to be. And so it requires, absolutely, a partnership between both.

• (1645)

The energy industry is one that doesn't differentiate its products. It produces commodities like gasolines or electrons, and so on and so forth, and therefore it's very difficult for them to see the returns from being highly innovative when their non-innovative competitor next door produces exactly the same product that can't be differentiated.

Finally, to summarize on what government should do in improving the innovation cycle, it is, above all, to share technology innovation and implementation risks, possibly by insurance mechanisms, and to strengthen Canada's innovation supply chain to improve the outputs of technological innovation. By focusing those on the energy industry, I can assure you that we will generate huge technology exports and contribute more perhaps to global sustainability than by any other cause.

Thank you, Mr. Chairman, for the opportunity to address the committee.

**The Chair:** Thank you very much, Dr. Raymont.

We'll start right off with Ms. Kadis for six minutes.

**Mrs. Susan Kadis (Thornhill, Lib.):** Thank you, Chair.

Thank you, and welcome, gentlemen.

I'm particularly interested—and you touched on it already in some of your comments—in the R and D in the areas of alternative energy in our universities. What are your views on the status of that and the resulting research—again, that's been referred to—on how well it's being properly transferred and used in our industry?

First, Dr. Frise.

**Dr. Peter Frise:** AUTO21 does quite a lot of work on energy-related issues in manufacturing both to improve the energy efficiency of processes and to develop new materials that will basically take weight out of the car and yet retain safety, which is a critical issue; and that will impact the energy consumption of the vehicle while retaining safety. It's important to never let go of that. Then we work on direct energy-related issues such as fuel economy, vehicle emissions, things like that. We have innovative work in clean diesels and fuel cells and alternate fuels and so on.

We have what I would term a very effective program. It's been internationally peer-reviewed and judged to be of very high quality. The key thing—and I think my colleague would support me here—is to connect the people creating the knowledge with the people who can eventually put it to use. If that is done, Canadian researchers can compete with any researchers in the world, and the implementation by Canadian companies will be top-notch.

The problem we run into—and I really support what my colleague said—is when researchers are working in isolation without a place for the knowledge to go. This idea that knowledge is good school of thought and that if you create the knowledge they will come—I'm sorry, it just doesn't work that well.

**Mrs. Susan Kadis:** In your view, it's not just a function of funding, although I'm sure that's an important aspect of it, but also of closing that gap and the collaboration.

**Dr. Peter Frise:** I think before more funding is applied, a more effective program design has to be developed.

**Mrs. Susan Kadis:** As you've mentioned, there are examples you feel should be replicated that have been successful and built on.

If I have more time, I'm interested to ask Mr. Raymont about biomass energy and why it's not considered at this point a more significant component of Canada's energy supply.

**Dr. Michael Raymont:** There are two issues really with biomass energy. One is that biomass can only be collected and transported economically over very short distances. So think of a 20-mile or 30-mile radius around some type of a processing plant that will produce a useful energy byproduct.

The second thing is that the variability of the feedstock is very substantial. There are, however, processes being developed today that will much more economically work on small unit quantities of stuff, be it corn stover or waste wood, and so on and so forth. I think

you'll appreciate that you couldn't collect all of B.C.'s supply of wood waste and send it to a central processing plant. It would simply be uneconomic and impractical.

The other issue is that the outputs from biomass energy processes need to be integrated into the conventional energy infrastructure we have, and this is a challenge for all renewables and all alternate sources of energy. Sure, there are significant technological challenges in developing those processes themselves, but above all it is being able to get the outputs of those, be they biodiesel or electricity or whatever else, integrated into the pipeline and wire networks we have in this country, so they can be delivered to consumers, as consumers are used to receiving them.

● (1650)

**The Chair:** Thank you Mrs. Kadis.

We'll go to Monsieur Vincent.

[*Translation*]

**Mr. Robert Vincent:** You said that there are many government programs, 200 as a matter of fact, which are too difficult to implement. Could you give us some examples that would explain why we are unable to make use of existing programs?

[*English*]

**Dr. Michael Raymont:** In general they're far too diffuse. They have maybe a very narrow focus, and the typical amount of money is very small. As I indicated in my comments, the biggest difficulty in the commercialization phase is to put together demonstration projects that are high risk that the industry private sector alone cannot fund, but that might be \$10 million or \$100 million projects.

For many of the programs I refer to here you can get \$500,000, \$200,000, or \$1 million, but it might take a 44-page document to get it. So frankly, a lot of small companies simply don't have the time, energy, and ability to stick with it, to apply through such a complex system for such small grants that would have such small impacts on the latter stages of commercialization. They help with early science, but not the latter stages of commercialization.

[*Translation*]

**Mr. Robert Vincent:** Do you believe that it would be preferable to have fewer programs but that they be better targeted and more accessible? At least, in that way, that money could be used for research and development.

[*English*]

**Dr. Michael Raymont:** Yes, but I would argue that they need to be agglomerated. We don't need 200 programs, and one program would be far too simplistic. We need perhaps 20 programs where significant dollars would be available and targeted to different areas.

My comments should not be taken as arguing against the need for basic research in the early stages of research. We absolutely need that, but in general in Canada we have put \$11.7 billion of new funding into university and basic research. That's excellent for both training people and providing the raw material for commercialization. But unless we provide significant funding, partnering and, as my colleague pointed out, a new paradigm or a new way of actually commercializing technology, we're going to find that the investment in basic research develops virtually nothing in economic benefit to this country.

[Translation]

**Mr. Marcel Lussier:** Mr. Frise, you've referred to research on materials. In the automobile industry, there is a lot of talk about using magnesium and aluminum. What is the status of research on using magnesium and aluminum to build automobiles?

[English]

**Dr. Peter Frise:** AUTO21 has done a great deal of research in both magnesium and aluminum. We have worked on new casting and forging processes for these materials. We have worked on sheet aluminum and sheet magnesium, which would allow the production of very lightweight body structures. The key is to always retain safety while using these lighter-weight materials.

We have also worked on joining these materials, which is quite a challenging thing to do because, contrary to popular belief, they will actually corrode extremely quickly if you don't do the right things with them.

I would like to offer a very brief remark about a key government initiative that's been announced, and that's the move of the materials technology laboratory of Natural Resources Canada from Booth Street to Hamilton, Ontario. I think this is an excellent initiative. It's exactly the right thing to do, because it puts those people and their resources right in the middle of where they can best be accessed by researchers and industrial people across the country. It gives them a new facility that will help keep Canada competitive.

The materials industry in Canada is quite fundamental to how everything else we do in this country works, so I really want to support that.

• (1655)

[Translation]

**Mr. Marcel Lussier:** My question is for Mr. Raymond.

This document is extremely provocative because you don't believe at all that we could be able to reduce our dependence on oil. I believe this is absolutely contrary to the position of Canadian and Quebec environmental organizations about the use of oil as a source of energy. How do you feel working against the youth movement of today? You're completely out to lunch.

[English]

**Dr. Michael Raymond:** Whose opinion do you mean? What I've said there is not about oil; I have said that Canada can and should produce more energy. It's not a question of oil. I am not here to represent the oil industry. I represent no industry whatsoever.

What I'm telling you is that you will fundamentally change society in a way that I don't think the economy can stand if policies are

brought into place to limit or reduce the quantities of energy that this country consumes. We can alter the gradient of the curve of energy consumption, but I can tell you that on a global basis there is absolutely no doubt the world will consume more energy—vastly more energy—in the future than it does today.

I am certainly not against energy conservation measures in any way, shape, or form, and indeed one of the major programs in our organization is energy conservation, but as I said, that is only one of a combination of magic bullets. To actually reduce energy production and still have and enjoy the society and the social benefits and the health care benefits and everything else that we enjoy today is simply not possible.

We see in Quebec that Hydro-Québec has announced, rightly, an increase in hydro production and an increase in corresponding wind power. That's a perfect combination of, as I said, energy production being increased in a responsible way, and that's what we argue for. Energy production and consumption per se are not bad, and they will not destroy this planet; it is the byproducts of them that will. If we mitigate the byproducts, we can go on increasing energy intensity, enjoy prosperity, and help underdeveloped countries enjoy prosperity too, and that is a fact. It sounds controversial because most people won't acknowledge it, but if you read the blue ribbon panel that was just released, they make exactly the same point: energy intensity is not bad; it is the byproducts of energy that cause the problem.

**The Chair:** Thank you.

We'll go to Mr. Carrie for six minutes.

**Mr. Colin Carrie:** Thank you very much, Mr. Chair.

I'm really welcoming your comments talking about partnering between academia and industry and government and really taking a look at a new paradigm, because I feel what I've learned—and I've visited AUTO21 down there—is that we're going to win by innovation, human resources, and looking at this multi-disciplinary approach.

I do have some questions for you. Specifically, if we can talk auto industry for a minute, the entire auto manufacturing industry in Canada is foreign owned, the assembly part of it. We have GM, Ford, Chrysler, Honda, Toyota. Since they are foreign owned, quite often their R and D is done in the home country. I was wondering, how can the federal government help increase the R and D here in Canada as opposed to having this go overseas?

You mentioned Australia. Are they actually doing better than we are now or are they just climbing up the ladder as well?

**Dr. Peter Frise:** Thank you very much for your question.

First of all, you're right. The OEMs, the automakers, are foreign owned, but what has been found—and this has been the case for a long time, and each of the OEMs is a little different in this respect—is that of the five companies, the Canadian arms of at least a couple of these companies have very strong research and development mandates within their companies.

They have to compete internally for those mandates, but the folks in Oshawa at the General Motors' regional engineering centre, the people in Windsor with DaimlerChrysler Canada's ARDC, and the soon-to-be-opened Ford innovation centre in Oakville, and also the international truck and engine innovation centre in Windsor have competed very successfully within their respective companies to be the people on a certain issue. No company would have all its R and D in just one place.

The other key point to make is that research and development activity in the world in more recent times and into the future tends to follow the talent. That's where it goes. It goes to where the people are available, who have the knowledge and the energy and the insight to make contributions. Whether those people live in our country or in somebody else's country, that's where the work will go.

So we find within AUTO21 that we're drawing interest from elsewhere in the world to access Canadian talent and know-how, and the trick is to do that without giving it away. The fact of the matter is that I think the talent we generate here will bring investment to Canada and be a net benefit.

Finally, in the parts part of the sector there are quite a large number of Canadian-owned companies whose headquarters operations are in our country, and we need to support those folks very strongly to make sure they keep their innovation activities here and employ our young people.

• (1700)

**Mr. Colin Carrie:** You mentioned support, which leads me to my next question. You talk about these public-private partnerships. Sometimes it's known as a dirty word, but it seems to be working very well for you. How can the federal government encourage greater investments in these partnerships? Do you like the tax cuts that have been put forward? Traditionally there have been subsidies, things along those lines. What can the government do to help encourage more of these partnerships?

**Dr. Peter Frise:** Let me preface my remarks by saying I'm not an expert in economics or in trade. But I will tell you this, from my observations of the automotive sector around the world—sorry, I would also say I'm a taxpayer, so I have a problem with excess spending. That's why I keep emphasizing that we don't object to strong reviews at all.

But at the same time, I think that being dogmatically against having public and private sector operations working together is just unwise, because every other jurisdiction in the world, especially in large industries like automotive, are doing it. If we don't do it, our lunch will be eaten for us by somebody else. We don't have a choice. If we don't form these partnerships and keep them vibrant and healthy with continued sustained investments over a long period of time, we will lose every battle.

The statistics have shown...and I don't have hard numbers here, but I heard at the CAPC meeting last week that the typical payback period for many of these public sector investments in automotive facilities is in the three- to five-year range. Then those investments are sustained for many years after that, with employment and tax revenue from employment and all that sort of thing.

This works. That's why everybody else is doing it. So we need to as well.

**Mr. Colin Carrie:** All right. Do I have time for another quick question?

**The Chair:** About 30 seconds.

**Mr. Colin Carrie:** Mr. Raymont, I really liked your Canadian innovation scorecard. Well, I didn't really like it, but I'm looking at the ratio. Finland and the United States seem to be doing much better at attracting private investment in R and D. Can you give us an idea of how you think we can help improve that?

You talk about shared technology, strengthening Canada's innovation supply. How do you think the federal government can help improve those numbers? I'm not seeing great R and D ratios from Canada.

**Dr. Michael Raymont:** Absolutely true. Since this ratio is probably the most critical metric of all to a healthy innovation system, one could cynically say that if the private sector isn't going to put up the R and D dollars, the government should put up less to bring that balance back to three to one, because that three to one, or in fact greater than three to one, has been shown to be absolutely optimal for an innovative economy.

But having said that, I'm not arguing necessarily for less contribution. It's focused contribution in the right way. If you involve the industry very directly in what the activity is, you will find that they will be willing to put more money into R and D. I don't think it takes any single policy—and again, I'm not a tax expert, but looking at, for example, SR and EDs alone, it's a non-holistic way of looking at it and all you will do is affect one portion of the supply chain. You have to look at the whole supply chain and see how you can encourage more R and D by the private sector.

A short-term move in the right direction would be to provide more private sector governance into some public sector funding such that you would have more market pull influence as well as technology push. You need both. You cannot do it with one or the other; you need both. But as I've shown, we have an imbalance between technology push and market pull.

So let me give you an example. I was at CANMET's lab in Devon yesterday, giving a talk there. I walked out with some industry people who said, "Fantastic facility. Great, extremely bright people. Not working on problems that are of interest to us. Why is it being done?"

So if you focused that money and that facility on more of a partnership and said, "We'll put in the money. You put in the money, private sector, but you get to drive the agenda that pulls the technology to answer the challenges you face", I think you'd find they'd come on board pretty fast.

• (1705)

**The Chair:** Thank you, Dr. Raymont.

I know Dr. Frise has indicated, but we're well over time. Is it possible to...? Okay, let's go on to Mr. Masse.

**Mr. Brian Masse:** Thank you, Mr. Chair.



To continue with the automotive sector, it's a good comment to note that a number of vehicle assembly productions are hanging in there to a certain degree, but we're losing our market share and are being climbed over by a few other countries.

Industrial strategies and sectoral strategies are some of the propositions that have been noted by the industry to be there. What's happening in other countries? I know that you speak abroad. What's happening with some of those countries that are now competing for the share of the market that we're losing over here?

**Dr. Peter Frise:** Again, I'm afraid I'm not an expert in policy abroad, but from what I see, they seem to have a systemic approach to everything. I had a minute with the former prime minister of Finland in Kyoto a couple of years ago at a conference, and I asked, how did you transform Nokia from a company that made tires in 1988 to the world's leading cell phone company now?

He said, we got our biggest company together with all the leaders of the country and we decided that in the future it would be better to be rich than to be poor, and the way to be rich would be to ship products that are worth dollars per gram rather than pennies per tonne, so that's what we did. And he said, it's our money, it's our country, and we did it.

I think that kind of bold approach is really what's needed. They created a system that was directed to create a certain set of outcomes.

I totally agree with Dr. Raymont that if you get the researchers working on the right issues, industry will jump right in. I think that's been the problem in Canada's innovation system. We've let our people.... Oh, let's not go there. I think it's important that researchers direct their energy to important problems.

**Mr. Brian Masse:** You noted that you're 21 of a group of projects that have worked over the years and the sunset clause is the current mandate. What happens to those projects when they enter into their second phase, they're being successful and their private proponents support them? What happens after two or three years in their second phase? Is it then that the operations start to wind down on everybody; is it like air out of a balloon?

**Dr. Peter Frise:** Different things have happened, I think, but from my questions of networks in their second phase, they generally wind down fairly quickly after the end of the second phase. A lot of activities continue, which is very worthwhile, but I think it becomes difficult to maintain the tight focus on key problems, because people then seek other sources of funding—which is the norm for research people—and perhaps the other programs that they work with are not as tightly focused on a sector's key issues.

I think things begin to diffuse, and I think that's the problem. In fact, I was told by an Australian official that that's why they didn't do that, because they want to keep that focus.

• (1710)

**Mr. Brian Masse:** Is it fair to say that applies not only in terms of partners, but also even the staffing, the researchers themselves who have been leaving these departments, who start to look at other options as well because it's concluding?

**Dr. Peter Frise:** Well, that's right. I think that's likely, and it may even be that they could leave the country for better funding elsewhere.

**Mr. Brian Masse:** Mr. Raymont, going to the Canadian innovation scorecard that you have, in many of our industries...in manufacturing there are some winners, but there are also negative challenges that led to the study here today. Some of our industries have had record profits and have done quite well. Why aren't we doing better in terms of research and development and being able to capitalize on those businesses that have done well during some of these times?

**Dr. Michael Raymont:** I don't think it's only a question of an industry making profits as to whether they choose to reinvest. If they can continue to make those profits, why would they invest more in R and D? So some industries and some sectors are more R and D intensive than others.

As I said before, where industries won't move—because if they're private sector they have shareholder responsibility and fiduciary responsibility to those shareholders—is back into projects that are such high risk that they cannot see a return. Simply because they have more money doesn't mean they'll go and blow their shareholders' money because they can't think of anything else to do with it. So they will buy more certain production and expand and so on and so forth. It doesn't necessarily mean they'll move into riskier and riskier areas.

The only reason they're going to move into risk is that they have some kind of partner to work with who will share that risk with them and/or they're forced into those risky areas because, in the case of the energy industry, conventional supplies and reserves are running out, and then the risk does come high.

**Mr. Brian Masse:** That's an excellent point. With that, do you believe there is a sufficient role? The public obviously wants a return on some of their research and development, especially if they do some type of incentive or subsidization or taxation policy. Whatever you want to call it, wherever you want it to be, whether it is Canada or the United States, it's all the same stuff. It's about supporting industry, or at least developing or providing some type of assistance to it.

With regard to infrastructure, for example, as an incentive, if there were a public role to those organizations or companies that are looking at developing increased R and D facilities, would that be seen as a linchpin or a way to get at more research and development? I know the public supports a lot of that. How would you think that would go over in terms of attracting more R and D? It's something that we used in Windsor to get DaimlerChrysler as part of the research and development. It was land as well as some servicing, specific things that also had other public-good purposes.

**Dr. Michael Raymont:** I think some of those can work. I'm always a little concerned about too much capital going into buildings and equipment, because people are probably one of the most critical resources of all. I'll come back again to the importance of making certain you have that complete supply chain. I really do want to emphasize that; if you have a facility in a building that focuses on research, but there isn't any thought as to what's going to happen to the output of that research, there's no point in doing it.

Call me non-Canadian if you want, but I have personally, as an entrepreneur, taken Canadian companies south of the border because, although the research was done up here, it couldn't be commercialized up here. And boy, when I got south of the border, could I make money for my shareholders, and they were the people to whom I had the obligation. There was one particular company that we later sold to Smith and Nephew for \$180 million; I couldn't even get it financed in Canada.

**Mr. Brian Masse:** So it's like Michigan does a series of products a company can look at to pull off the shelf that the government might be supportive of, whether it's human resources, infrastructure, or other capital.

**Dr. Michael Raymont:** Correct. What we're doing in this country, in my view, right now is planting an awful lot of wheat and not harvesting it. We need to figure out the complete system, from planting to fertilizing to harvesting to upgrading to pasta or bread or whatever. If we just plant the wheat, others come in, harvest it, and use it to compete against us.

**The Chair:** Thank you.

We'll go now to Mr. McTeague.

**Hon. Dan McTeague:** There were some very interesting points from both of you, and I want to thank you for those.

I will refer to two comments. You made one, Dr. Frise, about our country, our money, with respect to Nokia's experiment in Finland and success around the world with respect to cell phones. Dr. Raymont, you made the other, with respect to having had some success in commercializing south of the border.

I've often been tested, and we find ourselves struggling as a committee, to wonder whether it's a question of economy of scale in Canada or whether it's a lack of coordination, as you've suggested, Dr. Raymont, between the various programs that are out there—or might it just be the fact that it is impossible to build the kind of strategy that would see coordination among many of the sectors of industry, simply because the industries, to a large extent, are controlled by decisions made well outside of Canada?

This not a cry to the good old days of nationalism, but to respect the fact that almost every country you've used as an analysis here has leader industries. Their head offices are located in those countries and their decisions are made in those countries to the largest extent. There can be the kinds of synergies in which new products are brought forward. I've often looked at the drug industry to recognize that very few world mandates are coming from them, yet there is research and development; much of it is done in order to correspond to Canada's drug patent laws as far as being able to put forward your product goes.

In relation specifically to energy and to automotive, having worked with and been public relations director for Toyota Canada for a number of years, I find it passing strange that there, while they may not have direct government subsidies and protection of their market, which is a whole other issue, they do deal with the paradigm of the *keiretsu*, in which one company trades within a variety of other companies. There is a trade relationship that you can't penetrate; it serves very much as if it is almost a strong state-related organization or operation. I don't see how Canada can get around

something like that, given that many of the decisions with respect to its automotive industry—and I speak from first-hand experience with my company—were made in other parts of the world.

Specifically on the question of innovation, if a company were to come forward and, for instance, be able to dim those lights by 50%, you wouldn't be able to appreciate the change in terms of the light that it emits. It seems to me that kind of technology could be backed, but the reality for companies that may have those kinds of inventions is that most believe they should in fact commercialize south of the border, where there are capital markets and access to the capital to do these things.

How would you grow or coordinate Canada's economy, given the current economic landscape in terms of who controls what in our key sectors? How do you coordinate such an outcome when decisions and capital markets tend to be outside this country?

● (1715)

**Dr. Michael Raymont:** I'll speak to one aspect of that and I'll leave my colleague to address other aspects.

I'm really glad you've raised this, because I think this is a critical issue for Canada too. One, with 32 million people, we have to give up on the idea that we can be everything to everybody and be competitive in every sector of the economy globally. We have to focus. I know the expression "picking winners" is not a popular one. We don't have to do that. What we have to do is back excellence, which we already have in this country.

When I was in Ottawa, I wasn't the most popular person advocating the following view. As I grow older and my hair gets thinner and greyer, social policy that says we should help those who can't help themselves makes complete sense to me. That's part of Canada, great, and I fully support it. But an economic policy that says we should help companies that can't help themselves strikes me as daft, except for maybe transitional issues.

If we're going to compete globally, we have to help those companies that are already the strong pillars of our economy, to make them continue to be the best in the world. I heard "the best in the world" mentioned earlier. If we can't be the best in the world, then let's accept that we're not going to win that one and back those things where we can be.

Let me take the energy industry.

**Hon. Dan McTeague:** If I could hold you for a moment there, the only industries that I see that have that kind of scale and have those kinds of decisions are ones that are regulated. Outside of those, we're not talking about a lot of industries that are indigenous to Canada.

**Dr. Michael Raymont:** Absolutely, the energy industry, for one. I would say it is one of the strongest energy industries in the world. We have superb schools and superb research facilities. We have companies that are looked to around the world. We have the world's greatest energy resources in Canada, plus the endowment of those energy resources. And I'm not just talking about oil and gas, or even oil sands. I'm talking about renewable opportunities and I'm talking about hydro opportunities.

We're a world leader in hydro. Instead of saying, "That's fine, then we're going to support some industry that's a loser", why don't we continue to support being the best in the world in hydro and support continuing to be the best in the world?

What it argues for is putting technology behind what you're already good at, what is a great strength of your economy, not for trying to do a little bit of everything and being mediocre at everything by trying to do that. I would argue that for energy.

Forestry is another example. We talked about Finland, but forestry is an example of where we haven't put in any effort. If we put our biotech effort behind pine-beetle-resistant trees, Douglas fir that will grow twice as fast in British Columbia's climatic environment, and trees that have longer and stronger fibres, then we would have a highly competitive forest industry. Instead of being sold to Sweden and Finland half the time, we would be able to reclaim that industry.

We haven't backed the industries we had that were strong. We ignored them and we've lost out. So I would argue strongly for a focus on things we're good at.

• (1720)

**The Chair:** Thank you very much, Mr. McTeague.

Dr. Frise.

**Dr. Peter Frise:** Very briefly on Finland, Finland has 5.6 million people who speak a language nobody else speaks. They are really isolated. They are economically dominated by huge countries all around them. Their weather is even crummier than ours. But they've done really well because they just decided to do it. So I'm afraid I can't accept that we can't do it because of economies of scale and things like that and, yes, we're small. We're not small. I'm sorry, we're really big, and I think we have to think of ourselves that way.

I agree fully that we have to back the strongest, back quality, back agility, back speed. Those are all really important. In all things, balance—balance in working with new sectors on new imaginative ideas and in working with existing established sectors, because that's where most Canadians work, and that's not likely to change very soon.

**The Chair:** Thank you.

We'll go to Mr. Shipley.

**Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC):** Thank you, Mr. Chair.

Thank you, Dr. Frise and Mr. Raymont. I found this intriguing, and I actually wish it was a lot longer.

I think you touched on something just now, in that a lot of the things we do are about balance. Sometimes politically we forget the balance of what we have to actually deal with.

On regulatory change, one of your recommendations was the elimination of the 14-year NCE sunset clause, the funding. What other barriers do you see there, and what can we do to help?

**Dr. Peter Frise:** Frankly, I don't know why that clause is there, and I don't know within whose control it exists. I'd like to know that, and I'll try to find out.

But in terms of other issues, I would say that in general Canadian programs—not just the NCE program—take a long time to decide to do something.

Mr. Raymont mentioned this as well, where you have somebody having to write a 44-page document to get a couple of hundred thousand dollars. In research circles, it's often suggested that hundreds of people are competing for dozens of dollars.

The full proposal for the Australian CRC, the AutoCRC, was about 20 pages long, and the proposal for AUTO21 was three telephone books. Now again, I don't mind a searching, rigorous process, but it takes an awfully long time to get any answers on anything.

We're up for renewal next year, and I'm confident we're going to stomp all over this thing and do a great job. But it's going to really stall the progress of our organization for many months, going through the whole process of creating a new proposal and so on, and we have to kind of stop everything while we do that. Then there's a long decision-making process, and then the decision is announced.

The whole process will take almost 20 months. Yet we have a five-and-a-half-year track record; we have external audits, which are clean; we have an independent board of directors that's very demanding; and we have fully peer-reviewed researchers at 40 universities across Canada, supervising 500 graduate students who depend on this funding. Yet we're going to stall everything for 20 months while we decide whether or not to do it some more.

That's the kind of thing we run into.

**Mr. Bev Shipley:** Yes, you talk about those types of things as others—whether it's municipalities, in terms of the regulatory.... Getting grants has become very cumbersome, and I'm hoping we will be able to do something about the efficiency with which these things move forward. That would be our objective, I believe.

Do you also believe that in terms of private sector funding and research and development, they carrying their weight?

• (1725)

**Dr. Peter Frise:** They certainly do in AUTO21. Our federal grant—and let me say I think it's a superb program, that the NCE program is absolutely great—is \$5.8 million per year, which, when it was awarded in 2001, was 96% of what we asked for. So we were absolutely thrilled to get it.

At the time, industry was committing \$2.99 million of the funding to our suite of research projects. This was a ratio of \$3 million to \$5.8 million, which was good. Of the \$2.99 million, about 60% was cash, and the rest was valuable in-kind contributions. At the present time, I believe the industry contributions are about \$6.5 million, up from \$2.99 million, and our grant has remained the same at \$5.8 million.

I'm not complaining about the \$5.8 million, but it seems a shame that we have to turn down projects that industry would like to fund. Again, one of the goals of government programs is to get industry to invest and partner with the public sector, and help educate people and so on—get researchers working on relevant projects. We have had to turn some of those down because our grant money wasn't sufficient to partner with them.

**Mr. Bev Shipley:** I have a question for both of you then. Is the government doing too much in a political direction in terms of research and development, rather than on the partnership innovation for our research and development?

**Dr. Michael Raymont:** I'm sorry, is it doing too much?

**Mr. Bev Shipley:** Is it your stance that government gives too much direction in terms of research and development, in terms of moving ahead with an economic drive, rather than building partnerships with the industries that will lead to more innovation in terms of research and development?

**Dr. Michael Raymont:** I certainly believe, and I think I've spoken to the fact, that anything from the middle of that innovation cycle on—from the supply chain on, and even earlier—should be market pull. Therefore you absolutely need partnerships, and strongly so.

The private sector market need doesn't eliminate the need for federal dollars. But it does mean the governance over those dollars, and the direction of what they're spent on, should be primarily input by industry, because otherwise you're solving a problem that nobody needs solved.

**Mr. Bev Shipley:** Right, yes.

**Dr. Peter Frise:** I would agree with that, and perhaps even go further. In my view, what the government should do is determine, in consultation with key stakeholders, what the goals of the enterprise are. What's the outcome that we want to achieve? I would suggest that it's a workforce that is able to be agile, fast, high-quality, and reliable, and that we need to achieve an economy that is competitive, strong, and agile. You would then design the programs to have those outcomes and provide the funding that will leverage private sector investments and encourage private sector investments. And then the government should just stand back.

In my view, the existing governance mechanisms are absolutely adequate. My board knows what the rules are, they don't let me get one inch outside of them, and I'm fine with that. The NCE program office monitors the program very carefully, and I'm fine with that. I don't feel the government pressures us to take on or not take on certain things, and I'm fine with that. So I think the whole thing really works very well.

But what may be lacking—and I think Mr. Raymont would agree—is an overall look at what we are trying to achieve here with all of these various programs, and then a means to drive them in that direction.

**Mr. Bev Shipley:** Mr. Chairman, am I out of time?

**The Chair:** You're over time, yes. Thank you very much, Mr. Shipley.

**Mr. André Arthur:** Mr. Chair, on a point of order, I would like to ask for the unanimous consent of the committee to extend this meeting by thirty minutes. We can excuse members who want to leave.

**The Chair:** We could certainly reinstate members. And there is another option. Dr. Frise is in Windsor, so we could add him to the witness list in Windsor. Dr. Raymont is in Calgary, so we may be able to convince him to come up to Edmonton on November 24.

I don't have unanimous consent.

**Mr. André Arthur:** Absolutely. I tried.

**The Chair:** Do I have unanimous consent?

**Hon. Dan McTeague:** I don't have a problem with continuing. I just won't be here. I don't know whether you need quorum.

**The Chair:** Do I have consent to continue? The other thing is that the witnesses have to agree. If it's just me, Monsieur Arthur, and the witnesses....

• (1730)

**Hon. Dan McTeague:** Maybe you could ask them to come back to one of the forums we're holding across the country.

**The Chair:** That's what I was mentioning, Dr. Frise in Windsor and Dr. Raymont in Edmonton.

Mr. Masse.

**Mr. Brian Masse:** I know we were talking earlier, committee-wise. I would just suggest that it would be more appropriate to tour AUTO21, if our schedule permits, as opposed to Dr. Frise's testimony. I'm sure we can get questions to him on a regular basis, but to see AUTO21.... You've seen it. It's a very different experience that really actually drives home the connection between commercialization and innovation.

**The Chair:** When I was there last, he let me build my own car.

**Mr. Brian Masse:** How successful was that, Mr. Chair?

**The Chair:** It was tremendous, yes.

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

**Mr. Brian Masse:** At least it was domestically built.

**The Chair:** Gentlemen, we've never had a motion to extend time, so I think that shows the interest that members have. We'd love to have you back in the future if you're amenable to that, and we will certainly try to add you to our schedule of November 20 to November 24, when we hope to be travelling across the country.

If there's any further information or recommendations that you would like to put forward to the committee, please submit that material to me or the clerk and we will ensure that it's discussed as we move toward our final report, which hopefully will be done by the first or second week of December.

Thank you very much for coming.

We're adjourned.







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