SCHOOL OF LAW
CASE WESTERN RESERVE UNIVERSITY

Canada-United States Law Journal

Volume 31 | Issue Article 35

January 2005

Discussion Following the Speeches of Dr. McKeever and Mr. Manning Session 8: Canada and U.S. Approaches to Health Care

Discussion

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MR. McILROY: We are going to head into our question and answer session, and I would ask you all to identify yourself so the reporter can get your names. And after both our speakers have left us with such a warm and fuzzy feeling about how well things are going in the energy sector, I'd like to open this up to questions. Dr. King.

DR. KING: I had a question: I saw a lot of problems here, but I wonder how you resolve them, particularly in the electricity area? I certainly understand the difficulties, but are we taking a risk by not resolving this cross-borders supply of electricity? Is there anything that we need to worry about? Should we sleep at night?

I'm anxious because I got – I was to be honored at the Canadian Bar Association in 2003, and I couldn't get there until two hours late for my speech because I was stuck in Toronto owing to the blackout. So it is very real with me. And that is what I'm concerned about, and what's to be done about it?

DR. McKEEVER: Well, from Ontario's perspective, I think our preoccupation is to ensure that we do our bit, and we avoid making the situation worse, and that we address the issues that confront us now. As I said in my talk, it has implications for the whole system because we are linked into our neighbors. If you ask, in general, what can we do about it, I think deciding on what generation mix Ontario is going to have going forward is the big decision confronting this government. This government has come to us with a challenging promise on its platform. That's to shut down a quarter of its capacity in a system that is already tight for capacity. So the choices available to them are limited. It really rests between natural gas and nuclear power.

Where we are right now is we have contracted for some additional natural gas, but as David said, natural gas prices over the medium and long-term look like they are going to go up. They certainly aren't going to go down to any significant degree, and there are therefore cost implications if you go to natural gas; as well you have the risk of all your eggs in one basket.

On the nuclear side, that's an extremely sensitive political issue in Ontario, as it is elsewhere. There is a strong body of public opinion that thinks we should have no more nuclear power. There is even a significant body of public opinion that thinks we shouldn't be refurbishing the existing ones.

So what are we doing, and what should we do in Ontario? I think we should quickly make decisions so that we can proceed with building the new generation that we need. As I say, that's very much in the political domain right now, and the government has made some decisions. It still has some very tough decisions to make.

On the transmission side, David knows a great deal more about that, continental wide, on the situation, than I do, and I am sure he can address that. But that's an Ontario response to your question, Dr. King.

DR. KING: Can you get long-term contracts on natural gas?

DR. McKEEVER: Yeah. There is enough pipeline capacity, and there is enough gas there in the medium term to meet Ontario's needs. If we replace our coal entirety with natural gas, that would be, I think, 1% of North American demand, if I remember the numbers correctly. So it is not a huge impact on the continental natural gas market, and we do have pipeline capacity. So that shouldn't be an issue in the medium term. But it is an issue in the sense that prices for natural gas are high because lots of jurisdictions want to build – you know, natural gas is the fuel of the moment in generation, and so it is not just a matter of having the physical capacity and being able to get the contracts. It is the price you are going to pay for it, and there are those who argue that we should balance natural gas with some nuclear power to give us some alternatives, which would hopefully put some kind of limit on the price increases that we will experience. But then you are into the question of how much will new nuclear power cost, and there is an extensive debate on that, and you get a significant range of opinions.

MR. McILROY: David?

MR. MANNING: Just very quickly, Dr. King, the disconnect is there – and I am sorry I was quite so negative in my remarks – and FERC is having a conference next week around technologies. The real danger – the trouble is that this great quest for deregulation has been focused on price. It isn't the fact you can get a $29 per month package on your phone every month to call all over the world, it is the fact that since the telecos have deregulated, the services and technologies driven into that business are phenomenal. Same with airlines; same thing with the natural gas business.

As you were able to sell off your capacity, as pipeliners could sell their capacity, and it became valuable, they made more, and they continued to improve the stuff that was there. We don't have that on the electric side. So there are some models that are helpful.

Pat Wood has called this conference to say we got all these high efficiency ceramics. There are all kinds of toys out there for the power grid. Why haven't any of them been deployed? I want to know why. The premier of Newfoundland came down to Boston last year and talked about his hydro resources right where he needed to; in the home of very expensive power.

Elliott Spitzer is having a meeting next week, a public meeting right beside the energy plant, which is in Indian Point in New York – major nuclear, 2000 megawatts, but there are twenty-five million people who live in the region. So he is having a conference there on how you can replace it. They used to say, "Shut it down." Now, he is saying, "How can it be replaced?," which, of course, is the Ontario mentor around the coal power. We don't talk

about shutting down coal, we talk about replacing coal. And that, of course, politically, is helpful.

But at least these conversations are now starting to go on. And I think what's going to happen is when the price continues to drive like this, when the price gets high enough, there will be enough noise that I think a more political solution will be advantageous. The Premier of Newfoundland is having a conference up there at the end of August and, beside the political piece, he is inviting up utility CEOs and energy CEOs to visit. That makes a fair amount of sense. He is trying to drive the debate into his home territory and get a few people who are serving three or four million customers to focus on what he has got to offer.

Are we going to see a line for the Lower Churchill? Maybe so. Did the Prime Minister recently not talk about grid strengthening across Canada? Take advantage of some of –

DR. McKEEVER: Just to pick you up on that, David, that's a very good point. The Lower Churchill River, which is in Labrador, has potential for new development, and Newfoundland has issued a request for proposals for that development, for part of it anyway. And Ontario is one of the bidders in a consortium with Hydro Quebec and SNC Lavalin, a major Canadian consulting company. If our bid is successful, under our proposal, we would get a third of the electricity from that. It would be wheeled back to Ontario through Quebec.

So there is stuff going on there, and then that's part of the answer to your question, Dr. King. The East-West grid is beginning to appear in Canadian conversations. The Canadian federal government in its recent Kyoto budget funding announcement, they announced funding for about 8 to $10 billion for Kyoto related issues, and $3 billion of that is aimed at initiatives, such as the East-West grid, and that means that provincial governments can see a pot of federal money there, and that always causes provincial hearts to beat a little faster, when there is federal money available, and heightens interest.

MR. MANNING: The conversation never got off the ground at $2 gas, but where will it go at $7 gas? That's my question.

MR. McILROY: Larry Herman.

MR. HERMAN: As I understand it in North America – Canada and the United States – the future power needs will have to involve a mix of hydro; natural gas; nuclear; and some coal, with a lowering of the coal component. Nuclear energy seems to me to be a factor in ensuring adequate capacity to meet the need certainly of Ontario, and in the United States as well. Could you comment a little bit on whether government is providing the leadership necessary to convince people, the population in both countries, that nuclear energy must be a factor in meeting future energy needs?

In Ontario, as Garry has pointed out, we are refurbishing our 20 units, I think, or we will have to refurbish 20 units. Three are down now.

DR. McKEEVER: Yeah. There is one currently being refurbished, and there are four more, which are under discussion for refurbishment.

MR. HERMAN: Under discussion – But given the light of the generating station, we have to talk about refurbishment, but there has been no discussion about new build, and I would like to know what the situation is in the U.S. and in Canada for new-build nuclear generators.

MR. MANNING: If I could start that because there is a lot going on. First of all, I just want to point out at this conference that a lot of the refurbishing, or a significant component of Ontario's refurbishing, is being done by Encore, led by Frank McGinness. It is a Connecticut-based company, and Frank was a classmate of mine in law school at Alberta. So I think that's an interesting spin on things.

Yeah, there has been a tremendous focus on nuclear within the Bush Administration. It is more than just political. There have been two consortiums, which have been formed, of major utilities like us. We are not participating in this because, quite frankly, we have a nuclear plant in our heritage that should have cost $500 million, and cost $5 billion. It ran for one day and was shut down, and one of the most fascinating tours that you could have in the world is to walk through our mothballed nuclear plant sitting on Long Island, and it is a movie set beyond all comparison. But what happened, there was an arrogant utility that thought they could get it done, even though the people were protesting, and the protesting went on for so many years, and they continued to redesign and fight, so nuclear is toast in the Northeast. However, in other parts of the U.S., I think there is a real shot.

MR. HERMAN: Sorry. You mean new nuclear or even refurbishment?

MR. MANNING: Well, new nuclear is toast. Refurbishing is a real question mark. There is – there have been a couple of plants in the Connecticut region that have not had the best record, and they will have an uphill climb; other parts of the U.S., not so much. But there is, in fact, Canadian technology being deployed at one of these two consortiums. So you have more than one company per group. So that's a good sign. You have got tremendous enthusiasm in the federal government, and the Energy Bill, which may pass this time, spends a lot of time on nuclear.

But whether or not – whether the population has been brought on, I'm not sure. You have to open every conversation with renewables to get into the room. Can you do that? But then the renewables bridge to non-emitting nuclear, I think, is not being adequately made by the spokespersons.

Now, my only worry is it is a little too much Texas; it is a little too forceful. Pete DeMenccio and the president of the administration are pushing nuclear a bit too hard. You have to create the sucking sound a little bit based on need, and that still hasn't – they haven't figured that out, but I think it is coming.

DR. McKEEVER: The issue of new nuclear capacity is a fascinating one politically in Ontario and in Canada. As David says, even refurbishment is a tough issue in the Northeast. In Ontario, the refurbishment certainly has caused problems. The first unit to be refurbished was enormously expensive and cost triple the budget and triple the time. The second one is going much better, and is scheduled to come on stream in October.

As David says, in Ontario, there is an additional dimension to this challenge, and that is that this government is opposed to coal. It is opposed to coal in all its shapes and forms in electricity generation. The government's position is that there is no such thing as clean coal. In the United States, the clean coal option is still open because the Bush Administration is quite enthusiastic about clean coal, and there is no aversion to it across the country. Ohio produces 90% of its power from coal, so it seems highly likely that clean coal is going to be part of the solution in the U.S. for the foreseeable future.

So in Ontario, you have ruled out coal. There are no more big hydro sites. You can get some hydro from Newfoundland, and some from Quebec and Manitoba. We are working on that, too. But you are talking 1000 to 1500 megawatts in each case, and we are looking at a 25,000 megawatt challenge.

MR. HERMAN: I thought it was 35.

DR. McKEEVER: No. It is 25. It is 10 nuclear, 7500 coal, and 6500 new growth between now and 2020. So the parallel to that is a government which has recently elected a Liberal government whose caucus, I would suspect, contains a number of people who think nuclear is not a good thing and who would be nervous to the government of which they are members coming out full bore for nuclear.

I think there is a significant amount of public education to be done, and I don't think it is a decision that is going to be made before the end of this year in Ontario. I can't see it happening politically within that time. That's my judgment.

MR. HERMAN: That's what I am talking about. I understand the new nuclear takes ten years to go through the approval process. Is that about right?

DR. McKEEVER: That's probably slightly optimistic.

MR. HERMAN: In the U.S. and in Canada.

DR. McKEEVER: As I say, in Ontario, any decision would have to begin with a significant political debate, and that would be a tough debate, and then you have to go through all the environmental approvals and licensing.

MR. MANNING: But just one quick analogy on that: Liquid Natural Gas (LNG) is a big, big issue coming in on the record now, and it is because some of the domestic production is tired. Shinger Energy started at $2 a share a year and a half ago, and they have now got two plants that will be, in fact, operational in the Gulf of Mexico, and their stock price is at about eighty bucks in a period of a year and a half.

We have been fighting long and hard, and I think we may succeed to enhance our LNG import in Providence, Rhode Island, against some opposition. So you can build a LNG tank on the Gulf of Mexico. It is very difficult to do it in the highly populated Northeast. Nuclear will take the same route. They will be looking for regions that are more supportive because of jobs and that kind of opportunity. So, I think if they are smart about the geography and smart enough about the communication, and start to be driven more by the environmental community who will accept some of the inherent advantages and the safety issues dealt with, then I put it on a parallel track with LNG. LNG is all about safety; its advantage to the fuel. Nuclear, as is oil, is all about safety. There is an advantage to the fuel, so we will see where it goes.

MR. McILROY: There is question in the back to my right.

MR. DORCHAK: Andy Dorchak for David Manning: Is new source review still an issue, and if so, how do you fix it without abolishing it or ignoring it?

MR. MANNING: New source review is not being ignored. It is a very controversial area as you know. Herman.

MR. HERMAN: Explain what it is.

MR. MANNING: Oh, I'm sorry. My apologies. There is a situation here of older plants: You go in to fix up your older plant, and you want to tweak it, make it more productive, and do what you have to do. New source review says if you are creating, in fact, a new source of power, it has to meet current standards. So that plant, which may be fifty years old, if you want to get another 10% of your production out of it by enhancing it or repowering some component, you have to bring the entire plant up to current environmental standards. The good news is that that drives some investment, and some plants are brought up to current standards, and the air is much cleaner. The bad news is old plants are, therefore, being written off, or alternatively, some obvious examples, which might reduce emissions and might make the plant more efficient, are being avoided or bypassed because of that.

There is real enthusiasm on the part of the federal administration in the U.S. to drive new source review out so that you can, in fact, improve any existing energy infrastructure because we have a shortage of power today, but all of the attorneys general in the U.S. Northeast have now sued to make new source review illegal.

So all I can say, as you pointed out, much of the power right around us here is generated with coal, over 90%. But the emissions from the Ohio Valley take twenty-four hours to get to New York, and New York's air quality issues are, in part, driven by that importation of emissions. So that's what's driving the Northeast's focus on new source review. Their focus is on the Ohio Valley because there is some very, very stringent – I mean, when we tried to – we have a certified plant that we would like to start to build. It runs

on natural gas, or it would if we built it. We tried to have oil as a backup fuel. We got blown away. The community would not tolerate any oil, even though the tank had a triple wall tank. They would not tolerate oil being stored on site. So we could only run on natural gas, so contrast that with the coal plants.

MR. McILROY: David Crane has a question.

MR. CRANE: I think it was Lester Thurow who said, "The role of government is to represent the future to the present," and this strikes me as one of the most difficult issues where leadership, as Larry [Herman] mentioned, is essential. If governments are not willing to explain to the public what is at stake here and prepare them, then we have a problem.

But my question has to do with nuclear energy, and that is that since the construction of plants in an earlier era, has the technology advanced very significantly in terms of performance, cost, and reliability? In other words, have we been maintaining a level of research and development and nuclear technology itself to have a higher level of confidence above the cost and performance side, and related to that, is this not something that, in fact, is a global issue? In other words, the Chinese, the Indians, everybody else is going to have to adopt more nuclear power if we want to deal with the climate change issue in a serious way. So are there not opportunities where we could, in fact, combine the global R & D budget, if you like, to really advance this technology?

MR. MANNING: One minute and then Garry can respond.

Certainly, in the U.S., a great deal has been made of new technology. This is nothing new. The fuel rods are replaced by people. There are different fuel technologies, different containment technologies, which, of course, are being deployed or are ready to be deployed. I should say that.

In the U.S., unfortunately, they have not got their head around the storage question. Nevada, for reasons which are quite obvious, is not enthusiastic about hosting the nuclear waste site, and unfortunately, and as you probably are aware, the U.S. Government has collected enormous millions of dollars from the utility industry to pay for the creation of centralized storage of waste.

So the good news is, on the production side, I think the technology is evolving. The waste containment story has been mired for some years, and I think that's the limit, and we are hearing more now about ways of storing waste on-site.

But I am going to kick this over to Garry.

DR. McKEEVER: Yes. The big issue is storage of waste. Atomic Energy of Canada Ltd. (AECL), which is a company owned by the federal government of Canada, which developed the CANDU technology, has produced a number of generations of this technology. The most recent technology that

has been installed has been installed in China. AECL constantly reminds us that it was installed on budget and on time.

I think there have been significant improvements in the materials used in the plants. What happened with the first generation in Ontario was that they discovered that after a certain number of years, there was significant breakdown in various parts of the equipment due to basically weakness in the materials, and they have addressed many of those issues.

They have another generation on the drawing board, which they are attempting to sell, and that is a dimension to the nuclear issue, kind of a side track, but going back to an earlier question, that is a dimension to the nuclear political debate in Canada in that the technology used in Canada is owned by a federal company, the taxpayer owns the company, and there is a significant taxpayer investment in that company. So the federal government approaches the issue with not – not only with a purely political perspective, but also with the perspective of an investor who is invested heavily in nuclear technology already. But I would say David's answer sums it up well. There has been a significant improvement in the actual technology around the plants, materials, and so forth, but the waste storage issue remains, and is as difficult as ever, I would say, and as sensitive as ever.

MR. GREEN: Is that primarily a technology issue or a political not-in-my-backyard issue?

DR. McKEEVER: It is both. The stuff is dangerous and has to be stored under extremely rigorously monitored conditions, and there is a powerful not-in-my-backyard reaction to storing it in any jurisdiction.

We have it temporarily stored, part of it near the Bruce Nuclear site in Kincarden, but there is an ongoing study to make a final decision as to what the long-term storage is going to be, and that study hasn't been completed yet, but it will be by the end of the year. There will be a recommendation by the end of the year.

MR. McILROY: Dr. King?

DR. KING: Yeah. In listening to this discussion, I drew a comparison between the private sector and the public sector. I think Garry's story is very understandable, but it seems to me that the political environment intervened on a continuing basis, and at least in David Manning's story, you had to deal with it on the outside. I always deal with problems such as this myself as what's the ultimate best absolutely for solving these problems? For instance, is it good to have the political intervention as you progress – in other words, you said that you were making progress a certain way, and then you had an election, and then you start all over again. I am concerned about which is the best way, or best forum, to handle this.

DR. McKEEVER: Well, again answering I guess from an Ontario perspective, I don't think the political dimension can ever be taken out of something as major to society as infrastructure, and that has such profound envi-

ronmental implications as does the construction of nuclear plants, the operation of coal plants, and the operation of gas plants. These are hugely sensitive issues.

In a jurisdiction with a population density that has increased significantly since the Second World War, everybody in Ontario, almost everybody in Ontario, lives in the southern extreme of the province, and all of our nuclear stations are in that part of the province.

You know, is there a perfect answer? I don't think there is. I think the answer is that tough decisions will have to be made and the public will have to be educated. But if they want the light switch to go on when they flick it and want their computers and machinery to come on when they want them, they are going to have to make a sacrifice. And, that sacrifice is going to be the construction of new plants. Right now we are not there in Ontario. That challenge hasn't been picked up fully by the political level, but if there is a good answer out there, the first stage of reaching that answer is a public debate to educate the public and the politicians about the choices we have available to us. That point has been made by Larry.

MR. MANNING: Dr. King, if I could just give one more quick case study in answer to your question: We had to build a power plant in New York City. New York City is still a severe low pocket. We come very close to losing in a hot summer environment; we come very close to losing the City. And, nobody was building a power plant. There hadn't been a significant plant built there for decades. We had a massive existing plant. We scrubbed the stacks, took out 350 megawatts of emissions. We built a combined cycle natural-gas powered plant in the parking lot, which normally takes six acres; we built it on two acres, 2.2 acres. We gave some fuel cells to the community. We did an air quality study for Queens. Everybody said, "Don't do that. Queens' air is horrible." We said, "Well, yes, let's do the air quality study and demonstrate that."

So we got our plant done with the support of the environmental community, and part of the challenge that the energy industry faces right now is a lack of understanding on the part of the people, a lack of political leadership, and a lack of corporate leadership, but it is also, you know, who will they believe? Who will the people believe? They are not necessarily going to believe the politicians. They are not going to believe George Bush that nuclear plants are safe. They are not necessarily going to believe the manufacturer, but they will, perhaps, believe some of the NGOs that have been driving the renewable industries; who have been driving these solutions.

So I still think in my naive way that there is a collaborative conversation which will evolve. People like Elliott Spitzer, who has got a platform and who has got great media savvy, he will start to engage in this issue. People in Canada will start to see the opportunity because they have some assets up there. So we will not be government led, I don't believe. I also don't think it

will be exclusively market led. It has to be hybrid, but I do think when the people start to pay more than they are comfortable paying and they start to look for some advice, they will look to see who they can believe.

MR. McILROY: We have time for another couple of questions before we wrap up. Morris?

MR. SHANKER: Two questions: One, nuclear is widespread in other parts of the world. Can we learn anything from them and how they store their nuclear fuel? I understand they have different techniques for doing it than we do, but could we learn something from them?

Secondly, Henry, I think at this very conference some years ago, I think someone associated with Consolidated Edison was talking about the possibility of hydrogen as a generating mechanism. Any comments on that?

MR. MANNING: Yeah. There is far – the research – the R & D budget for oil and gas technology in the U.S. has been zeroed out. But there are massive dollars going into hydrogen research right now in the United States, and so the President, as you probably heard a couple years ago, created the hydrogen economy as one of his energy goals. Some of us in the industry would have preferred a couple of baby steps before we do that leap. So there is a tremendous focus on hydrogen going on in the U.S. federal government right now. That is very true.

The nuclear piece, if you watch Japan, you watch France, you watch other countries, which are nuclear laden, they, too, are struggling in terms of the future of power. So I don't think people are shopping around the country – around the world. I do think it is absolutely a very closely focused issue, and that's why I don't think people take great comfort. As I indicated, some of the most successful countries in deploying power are going through that reconsideration, which I think is hard.

MR. McILROY: Garry, anything to add to that?

DR. McKEEVER: No. I think David has answered it very well. I have nothing really to add to that.

MR. McILROY: Well, we have got one last question.

MR. DELVECCHIO: Yeah. Rocco Delvecchio. Short-term and a long-term question: Short-term, what are the technical sorts of facts on burning coal? Alberta alleges – I know they have very good technology that allows you to burn coal almost as clean as natural gas, and I just wondered what the facts are.

Second, on the long-term, how come there is not more discussion about fusion as an ultimate source of energy in terms of where the nuclear energy sector may go? And finally a comment on hydrogen: There is a talk about the hydrogen economy, but few talk about where the hydrogen will come from. Electricity, for example, is a major source for generating hydrogen. So, three-part question, or at least two questions and a comment.

DR. McKEEVER: Let me have a go at the coal one from an Ontario perspective again. The government's position is that it acknowledges that there are technologies out there that can control and limit toxic emissions from coal, but there is very little that can be done about the greenhouse gas emissions, carbon dioxide, and that's the line the government has taken in response to the question, why don't you go with clean coal?

There are, as you say, technologies there that can take much of the toxic stuff out of coal emissions, but the Kyoto gases are still a big issue. Maybe I will leave it to David to talk about some of the other stuff.

MR. MANNING: If I can just pick up, speaking first about the actual use of coal, a couple of issues there: There are a lot of advances in Coal Gasification Combined Cycle, CGCC. We don't read nearly enough about that right now, but the idea of capturing the energy in coal, creating a gas, burning that gas in the combined-cycle turbine where the waste heat is recaptured and put into another turbine, that's pretty much a perfect world in the eyes of many because coal is still relatively cheap.

Now, the Koreans, Japanese, they have been deploying plants. I think that certainly is going to be happening. It will happen here. The challenge we have in terms of coal use right now, I think, is mercury. I think climate change in Kyoto, and that that disconnect is going to be a big issue. If you talk to the coal advocates in Washington, D.C., they will say there will either be a solution on sequestration, that sequestration will work, and we will be able to make some advances there, or else McCain and others will come down hard on the climate change issue, and we will be over here.

So, if you are investing in coal plants today, that's kind of the split. Now, what's happened in current pricing is that a lot of companies have announced new coal. Where I am struggling – I don't see yet a solution on the mercury technology. The standards they are trying to achieve – the analogy was if you fill the Houston Astrodome with ping pong balls, you would have to – and thirty of those ping pong balls would be mercury – you would have to find all but three, and I am not convinced from what I read that that technology is there yet. But I do know that the concern about mercury and the concern about mercury in fish, you know, over 50% of the water courses in the U.S., you can't eat the fish from those rivers and lakes. That, I think, is the issue that has to be overcome there.

On the hydrogen piece very quickly, the logical and easy source of hydrogen right now is natural gas. So your source is still very expensive. There are other challenges. It is a volatile fuel. The dream is that the logical source would be water, but it is so energy intense to deliberate hydrogen from water –

DR. McKEEVER: You need a nuclear plant to do it.

MR. MANNING: Pardon?

DR. McKEEVER: You need a nuclear plant to do it, to produce the electricity.

MR. MANNING: Exactly. And that's what people have said about the oil sands, is that oil sands will run forever in a Kyoto world. We just have to have nuclear figures to heat the water to break up the molecules.

MR. McILROY: Well, on that happy note, I see it is 10:30. I go back to my warm and fuzzy feeling that I had after their presentation, and I don't feel any warmer or fuzzier after this Q & A session.

I think, as was pointed out, one of the key things about this conference is to discuss problems that are really going to manifest themselves over the next five or ten years, and this one is definitely on the radar screen. I see storm clouds on the horizon. I see a lack of government leadership. I see a lack of public education, and I see a lot of tough going before we get this thing sorted out.

So please join me in thanking Garry and David. I think they both taught us a lot and left us with a lot of food for thought. Thank you very much.

(Session concluded.)