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Chair

Mr. Leon Benoit

Standing Committee on Natural Resources

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● (1535)

[*English*]

The Vice-Chair (Mr. Alan Tonks (York South—Weston, Lib.)): I call the meeting to order.

This is the 40th meeting of the Standing Committee on Natural Resources. Pursuant to the order of reference of Monday, June 1, 2009, we are discussing Bill C-20, An Act respecting civil liability and compensation for damage in case of a nuclear incident.

Today we are continuing our deliberations. We welcome our guests and witnesses. In the first panel, from 3:30 to 4:30, we have Mr. Rex Loesby, president of Canadian Remote Power Corporation, and from Ontario Power Generation Inc. we have Mr. Albert Sweetnam, executive vice-president and director of nuclear new build, and Mr. Pierre Tremblay, senior site vice-president, Pickering. Welcome.

Through our videoconference technology, from Toronto we have Mr. Norman Rubin, director of nuclear research for Energy Probe. Mr. Rubin, welcome. Are you hearing us okay?

Mr. Norman Rubin (Director, Nuclear Research, Energy Probe): I hear you fine, thank you.

The Vice-Chair (Mr. Alan Tonks): Our second panel will be from 4:30 to 5:30, so we'll just keep an eye on the time, and I'll introduce those guests at that time.

Without any further ado, members, we have a quorum. Again, thank you to our witnesses for being here. Perhaps we can begin with Mr. Rex Loesby, who is the president of the Canadian Remote Power Corporation.

For those who haven't been here before, we have about ten minutes for each of your presentations. We go through our witnesses, and then we have a round of seven minutes for questions and answers; if we have time, we then go to a five-minute round.

Mr. Rex Loesby (President, Canadian Remote Power Corporation): Can you hear me okay?

The Vice-Chair (Mr. Alan Tonks): We sure can. Thank you very much.

Mr. Rex Loesby: Thank you for giving me a few minutes to talk with you about Bill C-20 regarding liability caps for nuclear reactors in Canada.

The bill is of interest to our company as we are working to provide clean and safe electric power to remote communities and mines in Canada through the use of small nuclear power stations.

First, I want to give you a little background on Canadian Remote Power, and then I'll address a concern we have about the regulations that may accompany the bill.

The idea to pursue the use of small reactors grew out of my work for a mineral exploration and development company, Western Troy Capital Resources. We're developing a copper-molybdenum project in a remote area of Quebec, and we found our power costs were going to be very high with a long power line from Hydro-Québec or a diesel power plant. This led us to look at a small reactor as an alternative. We found that a number of countries are developing small reactor designs, but we were surprised to find that in a country where low-cost power is needed in remote areas, no one was pursuing the idea here. So we formed Canadian Remote Power Corporation to do just that.

Now, Canada has a national treasure in its nuclear industry. Its CANDU reactors, along with its nuclear scientists and engineers, have gained world recognition. Over the past 50 years, 45 CANDU reactors have been built around the world, and they have operated without a significant safety incident. Nuclear power is one of the most economical methods to generate electricity, and there are no carbon emissions. Canada can continue to be a world leader in the industry as long as it is willing to encourage the industry and keep its regulatory system consistent with recognized world standards. Canada has the opportunity to play a leading role in the world to reduce carbon emissions.

At Canadian Remote Power we recognized very early that we needed a very strong technical team, and we're very fortunate that good Canadians are available. Your handout lists these folks, along with a bit of their background. I'll highlight one member of the team, just to give you an idea of the calibre of the people we've been able to attract.

Dr. Gary Kugler is on our board of directors and is a member of our technical advisory team. Dr. Kugler is the chairman of the board of Canada's Nuclear Waste Management Organization and is a director of Ontario Power Generation. He was with Atomic Energy of Canada Limited for 34 years.

The question is this. Is there a real need for small nuclear plants in Canada? Currently, electric power for remote communities and mines is generated using diesel engines. These diesel plants generate approximately 17 million tonnes of carbon emissions per year and the electric power produced costs between 25 cents and $2 per kilowatt hour, as compared to what you might pay connected to the grid, about 4 to 10 cents per kilowatt hour. In Nunavut alone, the diesel fuel budget is more than $200 million a year. With small nuclear plants we can eliminate carbon emissions and substantially reduce the power costs for these communities and mines. While we don't believe nuclear plants are the only answer, we believe they can and should be a large part of the solution to the challenges of maintaining and developing sustainable communities in the north.

On the mining side, there are currently eight mines in the north using large diesel power plants. There are projected to be 18 by 2016. These mines are projected to need 400 megawatts of generating capacity. In the Northwest Territories, there are 11 world-class mineral deposits that could be mines if power costs could be reduced. Another application for small nuclear plants is to provide heat for oil sands recovery.

Can small reactors be safe? Well, we're looking at a number of reactor designs. One design is a TRIGA reactor designed by General Atomics in San Diego. In your handout is a picture of a TRIGA reactor. As with all the reactor designs we're considering, the whole installation might require only two acres of land. This design is attractive for two more reasons. First, if there's any unplanned rise in reactor core temperature, the chemistry of the fuel shuts the reaction down. Secondly, there are 67 TRIGA reactors installed around the world. Some have operated since the 1950s. They are installed in hospitals and universities. There has never been a problem.

We're also considering other designs, including Canada's CANDU reactor. There's a Toshiba 4S that we're looking at. Argentina has a CAREM design. We haven't decided which way we're going to go yet.

I will talk about nuclear safety.

● (1540)

You see in your handout a table showing the fatalities over the past 40 years in the United States and the United Kingdom for three major electric power sources: coal, natural gas, and nuclear. This table is from a June 2008 publication of the World Nuclear Association entitled, *Safety of Nuclear Power Reactors*. Chernobyl is not included in this as there was no containment structure at Chernobyl, and there was not an internationally recognized safety regimen in place like there is in Canada. You can see that nuclear energy is by far the safest of the three sources. It's misleading, though, because I haven't included hydro. There are actually 4,000 fatalities in hydro, but those are as a result of boating accidents on the reservoirs. Obviously, if you can do hydro, you want to do hydro.

Technological innovation in all areas of clean energy development will come from both public and private entities and ventures. Canada will be well served if its government can respond to the clean energy challenge by making the regulatory environment as conducive to innovation as possible without compromising public safety. One of those innovations may be small nuclear power reactors.

The regulatory process for permitting such small reactors will be difficult and there are substantial uncertainties in the permitting process. The more these uncertainties and timeframes can be reduced, the more likely it is we will be able to raise funds for our venture. We hope to work with Parliament and the regulatory agencies to reduce the uncertainties and timeframes in many areas, without compromising public safety.

The issue before you today is Bill C-20 , which would bring Canadian regulations more into line with international standards regarding liability caps for nuclear power plants. How might Bill C-20 impact our efforts?

Well, in the past the maximum insurance cap for all reactors, as you know, was $75 million, and existing regulations allowed lower insurance caps for small reactors. The amount of these caps for small reactors is determined by Natural Resources Canada and the Canadian Nuclear Safety Commission through the regulations developed by those agencies. Bill C-20 sets the maximum at $650 million, and the bill has a provision for setting lower caps for small reactors. Paragraph 66(c) reads:

> 66. The Governor in Council may make regulations
>
> (c) fixing an amount of reinsurance for any nuclear installation or for any prescribed class of nuclear installation;

An outline of the regulations related to Bill C-20 has been drafted by Natural Resources Canada. There are provisions in the outline for reduced insurance caps for small reactors, but the caps are not well defined. We've discussed this with the staff at Natural Resources Canada and suggested the regulations should include consistent and better defined caps for all reactors. The staff there has been really responsive and has encouraged us to suggest modifications to the outline.

Our suggestion is to include the language you see in the handout in the regulations. It gets fairly technical, and to keep my presentation short, I won't read through it now. This addition to the regulations will provide a greater level of certainty for developers of nuclear power stations as well as preserve the right of the Governor in Council to modify the liability caps for special circumstances.

How does this affect us? If we do not have that certainty for the insurance caps for our small reactors, we would have to assume pretty much the worst case for our fundraising efforts. If we were required to carry the maximum of $650 million of liability coverage, our insurance underwriter has suggested our premium could be $1 million or more per year for each installation. If the liability is capped using the formula we've suggested, our annual premium would fall to an estimated $100,000, thus improving the overall economic forecast for our business and potentially lowering the power cost to the consumer.

Thank you for taking the time to hear our story and suggested language for the regulations to follow the bill. I would be happy to answer any questions when the time comes.

Thank you.

● (1545)

The Vice-Chair (Mr. Alan Tonks): Thank you very much, Mr. Loesby, for that presentation.

We'll move along to Mr. Albert Sweetnam, the executive vice-president for Nuclear New Build, Ontario Power Generation Inc.

Welcome, Albert.

Mr. Albert Sweetnam (Executive Vice-President, Nuclear New Build, Ontario Power Generation Inc.): Good afternoon, everybody.

I'm here on behalf of Ontario Power Generation, and I'm joined by my colleague, Pierre Tremblay, who is the senior vice-president of programs and training at OPG. We are here today to support the early adoption and timely passage of Bill C-20. Thank you for inviting us to speak.

We'll leave you with a deck, which you should have in front of you. I'm not actually going to walk through the deck, which covers the background of OPG, our community support, safety and environmental performance, and a brief update on the new bill.

I'll just give you a quick background on OPG. It is Ontario's largest electricity generator. We produce two-thirds of Ontario's electricity and we own all of Ontario's nuclear reactors, including the ones at Bruce. We operate 10 of the nuclear units, we have a very strong safety and environmental record, and our 12,000 staff are an integral part of all our host communities. Four of the five top CANDU reactors in the world in 2008 were owned by OPG. Three of these reactors are at Darlington and one is at Pickering B. In addition, in the first quarter of 2009, Darlington operated at a capacity of 99.99%, as close to perfect as you can get with a nuclear reactor.

Now I'd like to direct your attention to slides 9 to 11 in the deck. I'd like to speak to the point in front of the committee, which is Bill C-20. OPG strongly supports the immediate passage of Bill C-20 because it modernizes the liability framework placing the liability clearly with the operator—where it belongs—it imposes a reasonable limit on the operator's liability, it provides more protection to the public, and it allows our local and international suppliers to support us on a reasonable insurance framework. We also look forward to being involved in the regulatory process. That should include the ability of the utilities to be involved in any changes to the liability limits, the ability to access insurance at competitive rates from Canadian and/or international providers, and a recognition that this is the first step towards Canadian ratification of the Convention on Supplementary Compensation for Nuclear Damage. In summary, OPG supports the early passage of Bill C-20 with the proposed liability limits.

I look forward to answering any questions the committee might have.

Thank you.

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Sweetnam.

Do you wish to add anything, Mr. Tremblay?

Mr. Pierre Tremblay (Senior Vice-President, Nuclear Programs and Training, Ontario Power Generation Inc.): No.

The Vice-Chair (Mr. Alan Tonks): Okay, not at this time. Thank you.

Now we'll go to our video conference connection and Mr. Norman Rubin, who is the director of nuclear research with Energy Probe.

Mr. Rubin, welcome.

Mr. Norman Rubin: Thank you, sir.

I'd like to make four points. I'll start not with my first, in logical order, but with what I think is the shortest; that is, as somebody who has spent more time in court while the Nuclear Liability Act's legality and constitutionality were debated than anybody in your room, I would suggest that neither the Nuclear Liability Act nor its draft successor, Bill C-20, is likely to survive a charter challenge after an accident. That is, if, God forbid, the act is triggered, I believe it will be struck down and the protection it gives to the risk-maker will not actually be there when called upon. I will leave that there for discussion later and go on to my other points.

My first point, logically, can be summarized with the question: why in God's name? If you have an industry that is capable of creating a catastrophic accident, and job number one for a government is presumably to ensure that such a catastrophic accident never happens, and job number two of a government should be to ensure that the consequences of such an accident are mitigated and minimized to the extent possible, and job number three is to ensure that every potential victim of such an accident is taken care of to the extent that they deserve, why in God's name would you limit the liability of the entities that might cause such an accident?

I'd like to point out that one of the useful strains of research in this area is to look at past catastrophes. We can examine, for example, Three Mile Island and Chernobyl in the nuclear area; we can examine the Challenger crash; we can examine when two jumbo jets collided on a runway. And what we find when we look at these catastrophes is that virtually every one of them, when viewed in hindsight, seems to have been caused by a combination of negligence and incompetence. Then the question is how, in a proactive way, looking forward, would you extend the incentives to try to minimize incompetence and negligence going forward? I would suggest that the last thing you should ever consider on a list of what you might do is to tell a number of potentially responsible parties in advance that they will be held blameless and to tell the remaining party that they will be held responsible, but only up to a certain point, regardless of the total bill to clean up the accident and to mitigate the consequences and to give reparations to the victims. Yet that is exactly what the Nuclear Liability Act does at present and exactly what would be preserved in Bill C-20 if it is passed into law.

I'd like to just spend another minute or two on this. Obviously prevention is key, and telling somebody that they aren't responsible is counter to the incentives to prevention; I think this is simply logic. It will be extremely obvious after an accident, although it's now theoretical, thank heavens. In addition, we've done some studies. In fact, for our failed constitutional challenge of the existing Nuclear Liability Act, we commissioned a study on the consequences of a potential nuclear accident, a catastrophe, at a CANDU station. What that found is, obviously, first of all, the size of the release is a key variable in the consequences, but the impact of a given release can vary incredibly hugely, from effectively zero to enormous tens of billions of dollars of damage. The variables that drive that difference are two. One is the weather, over which we have no control, and the second is contingency planning, over which we have a great deal of control. We should have every incentive applied to the risk-makers to ensure that they ensure that contingency plans are as good as possible and as good as they would require if they felt they were going to have to pay the damages in full.

● (1550)

Let me be clear. Contingency plans, getting potential victims out of the way of the radioactive release, turns out to be right up there with the weather in determining whether you have thousands of victims, thousands of casualties, or whether you have perhaps none.

I'd now like to compare Canada with two other states—Germany and Japan, both of which, as I understand it, have imposed unlimited liability on their nuclear operators. I have several questions about this situation. Why do we have to be different? Are their reactors safer than ours, either by design or by operation? Is their emergency planning so much better than ours that their industry doesn't mind operating under unlimited liability? Are their operators simply gutsier? Do they have more nerve than ours? Or is their federal government more independent from the industry that creates the catastrophic risk? In other words, have they simply taken the needs of potential victims as paramount, rather than caving in to the requests of the risk creator?

I think you can tell from the way I framed the question that I have a guess about where the main difference is between Canada and these other countries. I think their governments played hardball and our government did not. Our government behaved, first and foremost, as the shareholder of AECL, as the creator of one of the world's prominent reactor designs, as an international salesman of nuclear reactors around the world. Their governments, in contrast, acted as elected officials, the representatives of the potential victims and the guardians of the environment that would be contaminated in this kind of accident.

I'd like to close with a brief reference to one growing development. We are gradually shifting from a regime in which nuclear reactors are built and operated by governments, or by creatures of governments, like crown corporations, to a regime in which reactors may be built by private entities. It is worth considering how the federal government would act on behalf of potential victims where you couldn't count on a provincial government, for example, to backstop the owner and operator of a reactor.

I believe the main area where the federal government must act is not in limiting liability—liability should be unlimited, limited only by the consequences of a catastrophe. Rather, the federal government can and must mandate a minimum depth of pocket.

● (1555)

There must be assurances that even after the entity that owns and operates a reactor loses the reactor and incurs a massive internal bill and a loss of equity from that, it still has, through a combination of insurance and other instruments, approximately enough money to meet the needs of a credible but worst-case, beyond-design-base accident. I think there's a shadow of that in Bill C-20 and in the Nuclear Liability Act, but I believe it's only a shadow. That is, I believe, an essential role of government.

We are entering a period of a couple of months now when Bruce Power is going to be actively negotiating with the Government of Saskatchewan toward building a new reactor, probably a CANDU. They've set themselves a deadline of December. I always predict failure for these efforts, but it's just conceivable that there actually will be something happening, and some of this will matter. Let's hope that victims will have more than $650 million of compensation available to them, and that the decisions about siting, about emergency planning, and about design will be informed by full liability extending to the private owners of that facility.

Thank you.

● (1600)

The Vice-Chair (Mr. Alan Tonks): Thank you very much, Mr. Rubin.

We'll now go to the members. We'll start with Mr. Regan's questions. You have seven minutes.

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

I'm going to start with you, Mr. Loesby. Am I correct in understanding that you're actually not suggesting any amendments to this bill in terms of what you're concerned about?

Mr. Rex Loesby: That's correct. In discussions with Natural Resources Canada and the Canadian Nuclear Safety Commission, they said that basically they didn't want to see a change to the bill. They wanted discretion to set the regulations, as they have done in the past, so all we want to do here today is put into the record of the deliberations on the bill that it is our request that the standards for small reactors be better defined in those regulations that they set.

Hon. Geoff Regan: Thank you.

Mr. Sweetnam, we've heard from a number of witnesses that we should amend this bill to create unlimited liability, as is the case in some countries. We know there are higher levels of liability elsewhere, and you heard Mr. Rubin ask why we have to be different. Would you like to answer that question? Perhaps you may have other comments as well.

Mr. Albert Sweetnam: I don't know if I can answer the question, but I'll try to address the issue.

The problem is that the capacities of the utilities and operators and insurance companies are not unlimited. Therefore, at some level, all countries provide backstops for third-party liability in some way. This is certainly the case in the European nuclear liability conventions, as well as in the U.S. There's no such thing as no liability. The backstops are provided because you couldn't get an insurance that had no liability limit on it.

Hon. Geoff Regan: Thank you.

We've heard some concern that this bill gives vast regulatory power to the minister and that changes can be made to the regulations without consultation. We've heard that concern, I think, from Hydro-Québec, and we may hear it from others. The concern would be not just in relation to Hydro-Québec or to companies; it could perhaps be in relation to others not being consulted or not having any input before regulations are changed.

Does that raise a concern for any of the witnesses? Would you suggest amendments in that regard? We'll start with Mr. Sweetnam, and then Mr. Loesby, and then Mr. Rubin if we have time.

Mr. Albert Sweetnam: As Mr. Loesby said, we've had discussions with the ministry and we feel quite comfortable that we would be able to address our concerns through the regulatory process. One of the issues is that we would like to be consulted if the minister decides to change the liabilities in the act. Our understanding is that we would be able to address these concerns during the regulatory process, so no amendments to the bill would be required.

Hon. Geoff Regan: Would you like to comment, Mr. Loesby?

Mr. Rex Loesby: I have no comment.

Hon. Geoff Regan: Would you comment, Mr. Rubin?

Mr. Norman Rubin: I have no comment.

Hon. Geoff Regan: Mr. Rubin, if this bill were to be defeated—in fact, if it were to be amended—it would probably mean that the government would not proceed with it when it went back to the House. If that happens, or if this bill is defeated, we will be left with the status quo, which is a limit of $75 million. Is that situation better than passing a bill that raises the limit to $650 million?

Mr. Norman Rubin: There are two branches to my answer. One is that if I'm right, if there were an accident, the act would not survive a charter challenge, in which case it doesn't matter. And the other is that if I'm wrong, the act would survive. And obviously if it would survive, the $650 million is more than $75 million and closer to what a catastrophe might cost. So sure, all things being equal, I suppose if the good were not the worst enemy of the best, or vice versa, if the best were not—you know what I mean—it'd be nice to get an instant amendment to $650 million and then talk about what should really happen. But I don't think that's how it works in the real world.

● (1605)

Hon. Geoff Regan: Thank you.

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Regan.

Madame Brunelle, we will go to you now, please.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Good afternoon, Mr. Rubin.

You said that Bill C-20 would not survive a charter challenge. Are you referring to the Charter of Rights? Is it the compensation amount compared to that of damages that would be challenged? Could you clarify what you mean?

[*English*]

Mr. Norman Rubin: Energy Probe and our co-plaintiffs pursued a number of avenues under sections 7 and 15 of the charter. They had to do with the security of the person, that in taking away normal incentives for safety, the existing act and its successor violate that part of the charter. That's one line of argument.

There are a number of lines of argumentation under which limiting liability and limiting compensation amounts would be seen as violating the charter rights of victims. We lost that case in large part, I would say, because our arguments were seen as theoretical and academic and what if. After an accident, they would not be seen as theoretical or academic or what if; they would be all too real.

[*Translation*]

Ms. Paule Brunelle: Why would you want to limit the liability of those who would create such a catastrophic accident? You are leading us to say that we should increase the limit. I would like to ask you a question which has been on my mind since the beginning of our deliberations on Bill C-20. To what level should we raise it and what is the cost of a catastrophic accident?

If there was an accident in Pickering, could the people from Ontario Power Generation tell me who would be impacted and how much that might cost?

[*English*]

Mr. Norman Rubin: The good news is that there is no need to answer that question.

In the normal course of events, those who cause damage have no protection. If they go bankrupt because they created more damage than they're worth, then they go bankrupt. And that is why lawsuits for damage recovery often have multiple defendants, because it is possible, in a large case, that the first defendant will be bankrupted. So be it.

We heard Mr. Sweetnam say that the capacity of the owner and operator is not unlimited, the capacity to pay. Well, unfortunately, the capacity to create damages is unlimited. So there's a mismatch. That is why we need some mandatory insurance, or “depth of pocket” as I've called it, but we do not need to couple that, to join that, with a limit on liability. There is no reason to tell victims that they are limited, or to tell the operators in advance that we forgive them over some arbitrary number. There is no reason to put in that number, except as a favour to the risk-maker.

[*Translation*]

Ms. Paule Brunelle: Mr. Sweetnam, do you wish to add a comment?

[*English*]

Mr. Albert Sweetnam: Thank you. I would.

I'd like to address specifically the comments that were made associated with the magnitude of an incident. And I'd like to actually quote from the Canadian Nuclear Safety Commission, which as you know is the nuclear regulator in Canada.

The Canadian Nuclear Safety Commission, in its reasons for a decision, responded as follows to an intervenor who raised concerns on the insufficiency of Canada's nuclear liability regime at the Pickering B environmental assessment hearing, which was held on January 23, 2009. What they reported was as follows:

> CNSC staff reported that an analysis on costs associated with "design-based accidents", conducted in 2005 by CNSC and Natural Resources Canada (NRCan) for Darlington and Gentilly-2 NGSs, taking into account different scenarios and types of radionuclides releases, estimated the clean-up cost of an accident at about $100 million and in most of the scenarios under $10 million.

That's a direct quotation from their report.

Thank you.

● (1610)

The Vice-Chair (Mr. Alan Tonks): Thank you.

Madame Brunelle, you have another minute and a half.

[*Translation*]

Ms. Paule Brunelle: Mr. Loesby, you said that the civil liability limit of $650 million is too high for small facilities like yours. The insurance cost is too high but in your estimation, what would be the cost of the damages that might be caused by one of your reactors?

[*English*]

Mr. Rex Loesby: There was a comment from Mr. Rubin, too, who said that a private entity might be an operator of a nuclear reactor. Under the Canadian Nuclear Safety Commission regulations that we would have to adhere to, we would have to demonstrate that we as an organization had the capability to manage, operate, and so on, a reactor that is safe.

I think it goes to any type of risk that might be out there. If you want zero risk, we can't do that. What's the likelihood of a reactor incident? If you look at the requirements of the analysis of safety for reactors in general, you're looking at the probability of an incident happening once in one million years as something that may be acceptable. They'd like to see a better record than that. A small reactor has to be less of a problem than a big reactor.

When has there been a release of radiation from any nuclear reactor that had a reasonable safety regimen in place and a containment structure?

The Vice-Chair (Mr. Alan Tonks): Thank you, Madame Brunelle.

Thank you, Mr. Loesby.

We'll now go to Mr. Rafferty, for seven minutes, please.

Mr. John Rafferty (Thunder Bay—Rainy River, NDP): Thank you very much. It's a pleasure to be here.

I'd like to start with Mr. Sweetnam, please.

Would the liability issue determine where you get your power from? For example, if there were unlimited liability, would OPG change how they searched for power to meet the needs of Ontario? Or would you continue with nuclear?

Mr. Albert Sweetnam: There are two parts to that question. First of all, to operate a nuclear reactor in Ontario, or in Canada, you have to meet the regulations of the CNSC. One of those regulations is that we comply with this act. If it's impossible to comply with the act because of the unlimited liability set and the inability of the utilities and the insurance companies to deal with an unlimited liability, then you would have a situation where we could not operate legally in Canada. We would have to shut down the reactors, and so would Bruce, and so would Gentilly and the New Brunswick reactor, simply because the CNSC requires you to comply with the act, and if you can't comply with the act, you can't operate, and if you can't get insurance or you can't get some sort of coverage on unlimited liability, you'll be forced to shut down.

Would we look for different sources of generation of electricity? We are presently doing that. At OPG, in the first quarter of 2009, 90% of our electricity was generated from non-emitting sources. We intend to keep that record and increase it. The way we're doing it is by looking at more hydroelectric development. Obviously those are limited. We think we have located a few additional ones in which we intend to invest. In addition to that, we are looking at the possibilities of converting some of our fossil plants to biomass. Again that's a little way down the road, but we have already approved an investment in that area.

I hope that helps with your question.

● (1615)

Mr. John Rafferty: Thank you.

Mr. Tremblay, I don't want you to be left out. You've come all this way, so I'd like to ask a few questions.

Pickering, of course, is one of the oldest plants. How does proximity to populated areas affect liability now?

Mr. Pierre Tremblay: First of all, I was introduced as the site vice-president for Pickering, which I no longer am, but I was the site vice-president for Pickering B and I re-licensed that plant in 2008. Clearly I've spent my 32-year career making an event that would require access to the act highly unlikely and focusing our attention on safety and prevention and having a strong safety focus. We're very proud of Pickering, the plant and our relationship with the community.

Clearly, as the density of the population around the Pickering plant has increased, we have changed and modified our emergency contingencies and plans and factored that into our overall game plan for the facility. It does have an impact, as it does at the Darlington facility that we operate as well. It's a matter of contingency planning, and preparing and accommodating the changes in the community.

Mr. John Rafferty: Just briefly, is security an issue with an old plant like that, or if it was, what has been done to improve that?

Mr. Pierre Tremblay: One of the files that I carry on behalf of the nuclear fleet is the plant security program. Since 9/11, the OPG program has developed substantially. We've enhanced the security of our facilities, and with the oversight of the Canadian Nuclear Safety Commission, we have significantly enhanced the security of our facilities. I can assure you that we are safe and secure at OPG.

Mr. John Rafferty: Mr. Rubin, I'd like to ask you a couple of questions, please.

Are you aware of any other subsidies to the cap on the liability cost? In fact, what a $650 million cap amounts to is a subsidy to the nuclear industry. Are you aware of any other situations in any other countries where this exists?

Mr. Norman Rubin: Yes, there are liability limits in other countries. They're set at various levels. Some may be more outrageous than Canada's. Those aren't the ones I'm focusing on. If the industry internationally has proven it is capable of operating without a liability limit, then that's where I want to focus and that's where I have focused.

If I can add one other point, Ontario Power Generation has proven it can operate with unlimited liability because it does so now with its hydroelectric facilities, including a dam that is hovering upstream of Ottawa, and including in its gas facilities its natural-gas-fired generating stations, some of which are in highly populated environments. There is no law from the federal government or the provincial government that caps their liability. Their liability is only capped by the damage their plant might do on a bad day, so we're not talking about requiring an infinite insurance policy. That might be impossible, but just saying that victims will have the right to compensation without limit, only limited by their damages, that seems to me common sense, and that shouldn't stop OPG from doing anything. If it does, it's because they're scared of what their plant might do on a bad day, and if they're scared, you should be scared.

● (1620)

The Vice-Chair (Mr. Alan Tonks): Mr. Rafferty, we're out of time on that one, but we might be able to come around on that.

Mr. John Rafferty: Thank you.

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Rubin.

We'll go to Mr. Trost.

Mr. Brad Trost (Saskatoon—Humboldt, CPC): Thank you, Mr. Chair.

I'll start with one of the most basic questions. In OPG's deck here, it says “timely passage of Bill C-20 is essential”. Could you elaborate—briefly, of course—on what particular elements make this bill essential to OPG?

Mr. Albert Sweetnam: I'll start, and then I'll let Pierre finish.

For us to have the correct service providers in the industry, these service providers need to be protected from the liabilities associated with the extreme possibility that a nuclear incident could occur. To do this, we need to have the bill passed. If we don't have this done, we don't have the competitive aspect that's associated with putting out contracts in the industry, because only a limited number of companies would respond. This is one of the major issues.

In addition to that, as you know, until it was suspended, Ontario was contemplating a new build, and one of the requirements of the bidders is that this act would be passed. The reason for that, again, is for them to be clear that a nuclear incident is the responsibility of the operator. Certain parts of the present act allow that responsibility to seep away from the nuclear operator, potentially to suppliers and sub-suppliers and sub-sub-suppliers, so even the little guy on the street could be impacted in an overall lawsuit if something like this happened. This is why it's essential that the bill be passed as soon as possible.

Pierre.

Mr. Brad Trost: To summarize, not only would there be costs and difficulties for future reactors, current reactors are having their costs pushed up because only a limited number of suppliers can bid on contracts, service contracts, support contracts, etc. That would be fair to say?

Mr. Albert Sweetnam: That's exactly right. That's what the experience is with the current refurbishments that are going on in Canada and the potential refurbishments that OPG intends to carry on at all facilities.

Mr. Brad Trost: Thank you.

Mr. Allen is a bit of an accountant, so he pointed this out to me and asked me to ask this question.

OPG, if you had to shut down your reactors, what would be the stranded costs of the reactors if you couldn't get unlimited liability insurance? How much would that impact power rates in a province like Ontario? I'm assuming it would also impact other provinces like New Brunswick, etc. Do you have any idea how much of your asset value that would be stranded would be worth? How much would you have to up the rates then, importing power and selling it?

Mr. Pierre Tremblay: The impact of premature closure of the plants would be significant. Obviously, the plant has tens of billions of dollars of assets. The Pickering site employs about 3,000 employees, the Darlington site about 1,600 staff, so it would have a very significant impact on the overall economy, and certainly on the region.

Mr. Brad Trost: So if we had a situation where we couldn't get insurance for these plants, there would be tens of billions of dollars of stranded assets, and the costs of those stranded assets would then be forced into the pricing of Ontario Power.

Mr. Pierre Tremblay: Yes. It would certainly create a major problem for us in terms of dealing with that.

Mr. Brad Trost: Yes, and I'm assuming that the employees at Pickering and Bruce would have to be looking for work somewhere else as well.

Turning my questions to Mr. Loesby, I was wondering, as we were talking about unlimited liability, how that would affect you and your potential plans for smaller reactors. Under your proposal there would be a graduated scale for the smaller reactors, and regulation, but if it were unlimited, the possibility would be that there would be no graduated scale. What would happen to your plans if there were unlimited liability put into this legislation?

Mr. Rex Loesby: As I said, we would have to assume the worst case. Again, obviously, the people down the stream from us, the people providing the supplies and parts and everything, would have to be concerned about their exposure. I think having something in place is what we need, something that's certain.

● (1625)

Mr. Brad Trost: Is it possible that unlimited liability could essentially kill your business model?

Mr. Rex Loesby: Yes, absolutely.

Mr. Brad Trost: So your plans to help remote Canada and Nunavut keep down their fossil fuel use and then fuel bills...that would be eliminated.

Mr. Rex Loesby: Yes. We're in a competitive environment. Just a reduction in carbon emissions is probably not enough to say that we're going to be able to do this. We have to show these communities that we're going to lower their costs as well as cut their carbon emissions to zero.

Mr. Brad Trost: If you'll forgive me, since I've seen this bill three times now—I've been a member of this committee in one form or another since 2004—I have a few personal questions about the small reactors that may not be directly related to this bill.

What sorts of timelines are you looking at for developing your idea? How much of this is off-the-shelf technology and how much will you specifically design? On cost-competitiveness, I know you don't want to get into those numbers so your competitors can do the calculations, but what sorts of ballpark numbers can you at least talk about?

Mr. Rex Loesby: I can tell you that, as we said, the power costs for the northern communities can be anywhere from 25¢ to $2. Most of them are in the 50¢ to 80¢ range because the $2 reflects the fly-in type of fuel.

We've done our modelling, and we can make this work, we think, at 20¢ per kilowatt hour. Essentially, the first prototype that we would develop is going to be about $200 million, we figure. Then, if we can develop installations for $100 million on a 25-megawatt system, the model works. It doesn't work for each installation if our insurance costs are $1 million and higher. We can keep those costs in line if our insurance costs are less than that.

Mr. Brad Trost: Is this mostly off-the-shelf technology or are you doing considerable modification?

Mr. Rex Loesby: The Toshiba 4S reactor is one that is well advanced. Then there are the preliminary submissions to the Nuclear Regulatory Commission in the U.S. Of course, the CANDU is something that's been around for 50 years. The TRIGA reactor has been around for 50 years, but not as a power reactor; it has always been a research reactor.

We're looking at combinations of using the excess capacity from the reactor to make hydrogen, then ship that hydrogen to the smaller villages, and use fuel cells to generate electricity for the small communities.

The Vice-Chair (Mr. Alan Tonks): Okay, Mr. Trost. I'm going to have to interject now. We're out of time on this round.

I'm noting that the time is now 4:30. We had indicated that we would come to 4:30 and then introduce the next panel. On behalf of the committee, if it's in agreement, I think I'll thank our witnesses for this particular part of the panel discussion, and we'll take a minute or two just to get ready for the next video conference.

Once again, thank you to our witnesses for being here before the committee.

● (1625)

(Pause)

● (1630)

The Vice-Chair (Mr. Alan Tonks): I ask members to take their seats, please, and witnesses to take your seats. Thank you.

Members of the committee, we're now going to reconvene and continue with the second part of our agenda. We're pleased to welcome Mr. Christopher Heysel, from McMaster University, who is the director of the nuclear operations and facilities at McMaster Nuclear Reactor. Welcome, Mr. Heysel.

Also, from the Nuclear Insurance Association of Canada, we welcome Mr. Dermot Murphy, who is the manager, Madam Colleen DeMerchant, who is the assistant manager, and Mr. John Walker, who is legal counsel, Walker Sorensen LLP.

On our video conference we have Mr. Simon Carroll, program officer for the Swedish Biodiversity Centre. Mr. Carroll, you're a long way away, but we welcome you and we're very pleased to have you as part of our panel discussion. I guess it's good evening, is it?

Mr. Simon Carroll (Programme Officer, Swedish Biodiversity Centre, As an Individual): Yes, that's right. Thank you.

The Vice-Chair (Mr. Alan Tonks): What we'll do is start at the top of the list as I introduced people on behalf of the committee.

Mr. Heysel, from McMaster University, would you like to make a statement now? We take about ten minutes for our witness input and then we go to a seven-minute round of questions and answers with our members.

Mr. Heysel.

Mr. Christopher Heysel (Director, Nuclear Operations and Facilities, McMaster Nuclear Reactor, McMaster University): Thank you.

Good afternoon, ladies and gentlemen, committee members, and fellow witnesses.

My name is Chris Heysel and I am the director of nuclear operations and facilities at McMaster University in Hamilton, Ontario.

First, l would like to say how grateful and appreciative I am to be here to have this opportunity to address the committee today. I was invited to speak to the committee to give a university perspective of the proposed changes to Bill C-20 and how these changes will impact Canadian university research reactors.

In Canada today there are six remaining university research reactors: the five-megawatt pool reactor at McMaster University and the smaller, 20-kilowatt Slowpoke facilities at the University of Alberta, the Royal Military College, the University of Saskatchewan, École Polytechnique, and Dalhousie.

Every country whose energy mix includes nuclear generation uses university research reactors to help educate and train those highly qualified individuals needed to design, operate and license its nuclear fleet. Indeed, the first step in any nation's journey toward nuclear energy begins with a research reactor. These facilities provide the initial and ongoing education and training for the scientists and engineers that are needed to launch and sustain a nuclear industry.

The McMaster nuclear reactor—indeed all university reactors exist to support the education and research missions of their parent institutions. While it is common to refer to these research reactors as university facilities, they are truly part of our national infrastructure and should be viewed as Canadian assets.

The McMaster nuclear reactor serves our education mission at the university by giving undergraduate and graduate students studying physics, nuclear engineering, material sciences, medical physics, and health physics a hands-on educational experience. As part of their curriculum, these students attend laboratory courses using the reactor and associated facilities to enhance their theoretical studies through actual experiments and interactions. These students represent the future intellectual capital for Canada's wide and diverse nuclear industries, capital that today is in short supply and in extremely high demand.

McMaster University also tours approximately 1,500 high school students through our facility each year. The open pool design at McMaster is the only facility in the country where one can actually see an operating reactor. Prior to coming to McMaster, the closest most of these students will have come to nuclear technology is driving along Highway 401 and seeing the large concrete structures of our nuclear power plants standing behind the intimidating security fences that surround these sites. This is a somewhat daunting sight for these young Canadians, but by touring the McMaster nuclear reactor and seeing the signature blue glow of the core, the mystery shrouding nuclear technology is quickly lifted and students are left with a better sense of how the technology works, and hopefully with an interest to further their education at the university level in a science or engineering discipline.

Research is also one of the critical missions of Canada's nuclear university reactors. These truly unique and powerful research tools provide academia and students with the opportunity to further their investigations in a variety of areas of interest. These fields include nuclear engineering, material sciences, radio-chemistry, radio-biology, geosciences, environmental sciences, archeometry, medical and health physics and medical isotope research and development.

In addition to supporting the research and education missions for our respective institutions, university research reactors provide a wide variety of irradiation services supporting important Canadian industries such as mining, environmental monitoring, automotive, oil and gas, aeronautics, and radio-pharmaceuticals.

With over 20 years of experience in operation of research reactors, I am provided with a thorough understanding of the costs associated with operating these facilities. In order for university reactors to cover their operating costs, they provide services and products to various industries and users. While we do a good job at keeping our costs in check, we do have to compete with like facilities when selling our services.

Despite their increasing importance and relevance, with the exception of RMC, university research reactors receive no government funding to cover operating, maintenance, decommissioning, insurance, or the fuel costs necessary to keep these national facilities in service. This is why even small changes to Bill C-20 are directly very important to university research reactors.

● (1635)

In the absence of federal funding, in order to survive, university research reactors need to generate income by providing a wide range of services and products to markets that are also served by our two main competitors, namely, the AECL facilities at Chalk River and the U.S. research reactors south of the border.

AECL, as a crown corporation, receives a major portion of its operating funds from the federal government. Hence, fuel disposal costs, salaries, decommissioning costs, and liability insurance are all ultimately federally funded. South of the border, U.S. research reactors are loaned their fuel from the Department of Energy. Hence, fuel and fuel disposal costs are borne by the federal government. In addition, unlike Canadian facilities, decommissioning funds are not a requirement for operating facilities as long as university trust funds have adequate equity to cover these future liabilities. This is an opportunity not open to Canadian universities.

More relevant, nuclear liability is capped at $250,000 for these non-profit educational facilities, with the balance to a maximum of $500 million covered federally. This $250,000 figure was the original amount set by the Price-Anderson Act and has remained unchanged in subsequent revisions to the act in recognition of the fundamental national importance of university research reactors.

In reality, it is extremely difficult to compete with U.S. research reactors when their prices for services do not carry the costs associated with reactor fuel, fuel disposal, decommissioning, and the Canadian levels of liability coverage. Competing with AECL is even more unfair.

Despite the growing demands on Canadian universities' research reactors to provide highly qualified personnel to the nuclear power and medical isotope industries, the ability of these facilities to continue to generate the funds necessary to sustain operation continues to be eroded. The changes contemplated to Bill C-20 constitute one more example of how Canada is unwittingly allowing this erosion to continue. The proposed changes would require Canadian universities to carry liability insurance at a level 15 times that of our U.S. counterparts. We are currently carrying a liability six times that required south of the border. Such an increase places Canadian university research reactors on an unlevel playing field with AECL and our U.S. counterparts.

Despite the difficulties we face at our Canadian university research reactor facilities, I'm proud of the contributions we continue to make to our nation from a training and research perspective. These are important outcomes that must be maintained now and well into the future.

In conclusion, I would ask that the members consider the fact that we are already being asked to carry a liability limit in excess of that required of our counterparts to the south and urge the members to amend the bill to place our facilities on an equal footing with those in the U.S. In parting, I implore the committee members to reflect on the fact that research reactors at universities here in Canada are non-profit, non-government-funded entities whose sole purpose is to support the scientific and educational mandates of our nation.

Thank you.

● (1640)

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Heysel.

We'll now go to Mr. Dermot Murphy, a manager at the Nuclear Insurance Association of Canada.

Mr. Dermot Murphy (Manager, Nuclear Insurance Association of Canada): Thank you, Mr. Chairman.

My name is Dermot Murphy. I manage the Nuclear Insurance Association of Canada, also known as NIAC.

As Chairman Tonks pointed out, I'm joined today by Colleen DeMerchant, the assistant manager, and John Walker, of Walker Sorensen, our legal counsel.

As advised when last we met with the committee, NIAC was established in 1958 in response to the need to provide adequate insurance coverage arising from the peaceful development of nuclear power in Canada. NIAC provides statutory coverage to nuclear power operators and others, as required by Canada's Nuclear Liability Act, of up to $75 million Canadian.

NIAC is a pool of property casualty insurers who operate in Canada. Each insurer who is a member of NIAC insures a percentage of the policy limit. It is important to note that insurers provide highly secure protection. Each member of NIAC is regulated by the Canadian office of the Office of the Superintendent of Financial Institutions, known as OSFI, which requires insurance to be very well capitalized indeed. NIAC insurers have a combined $10 billion in capital, approximately, which relates to a hundred times the current limit of the operators' nuclear liability policy.

A pool is a mechanism whereby a number of insurers agree to appoint a common agent to underwrite, jointly, a particular risk or class of business. It is commonly used when the risks needing insurance are few in number, require a spread of risk, or present some particularly hazardous exposure that would otherwise be impossible to insure.

Insurance is a true risk-transfer mechanism that has proven to be cost-effective, but more importantly, does not impact upon nuclear power operators' balance sheets at the time of loss.

We've observed that one of the main questions raised in the speeches during the second reading of Bill C-20 is whether $650 million Canadian is an appropriate limit on operator liability. The issue of the appropriateness of the limit of liability and the issue of how much the amount of insurance each operator should be required to purchase can be seen as independent issues. However, it would not seem appropriate to require operators to purchase more liability insurance than is available in the nuclear insurance market.

In our appearance before the committee last time, we advised the committee that the insurance market could provide $650 million Canadian in capacity. I am now pleased to report that it appears likely, barring any unforeseen events, that the nuclear insurance market will be able to provide $1 billion Canadian in capacity.

A question we are frequently asked is exactly how much nuclear liability insurance costs. Currently, for a $75 million limit, the approximate cost is $200,000 Canadian per nuclear reactor. This, by the way, is the equivalent of the cost of insuring approximately 130 automobiles in Ontario that have full coverage and limits of $1 million.

Previously we advised this committee that the cost of providing the $650 million limit, which is about nine times the existing level, would be approximately four to six times the cost of providing the $75 million limit. We estimate that the cost of providing the $1 billion limit, which is 13 times the current limit, may be approximately in the five to eight times range as compared to the cost of providing the existing $75 million limit.

We very much appreciate this opportunity to discuss nuclear insurance with this committee, and we welcome any questions in due course.

Thank you, Mr. Chair.

● (1645)

The Vice-Chair (Mr. Alan Tonks): Good. Thank you, Mr. Murphy.

Do your two colleagues wish to add anything at this time? Okay, thank you.

That will bring us now to our video conference input from Mr. Carroll, who is a program officer with the Swedish Biodiversity Centre.

Welcome, Mr. Carroll, again.

Mr. Simon Carroll: Thank you, and thank you very much for inviting me to appear before your committee today.

I've been working with nuclear liability and compensation issues for about 20 years, mainly in the context of the international conventions and the development of national legislation in Europe. It's from this international perspective that I've looked at the provisions of Bill C-20.

In my presentation today I will argue that the proposed liability limit is too low and not in line with relevant international standards. However, having just listened to Mr. Murphy's intervention, I can see that the proposal from the insurance industry would bring it more in line with what exists internationally.

However, the bill as it stands today already appears insufficient and out of date. In my opinion, the bill as it stands today would not establish a modern comprehensive nuclear liability and compensation framework for Canada. There can be no doubt that the current Nuclear Liability Act needs updating. The bill aims to do this mainly by providing a new definition of damage and a significant increase in nuclear operator liability.

I agree that the bill would provide an improved definition of damage and an appropriate scope of damage to be compensated. These provisions are in line with those found in current international instruments and in contemporary national legislation in other countries with major nuclear power programs. These are clear improvements, and I will not discuss them further in this presentation.

The increase in the liability limit to $650 million Canadian is perhaps the most noticeable feature of the bill. At first glance, the proposed increase appears considerable. As was mentioned earlier, it's a nine-fold increase, although taking into account the inflation since 1976, I understand that this figure should now be around $350 million Canadian. However, the amount looks insufficient compared to what would be needed following a nuclear accident. There is no single internationally accepted methodology for assessing the economic damage that might result following a nuclear accident. Therefore, estimates of such damage vary widely, but whatever approaches are taken to calculate the possible damage, it is clear to me that $650 million Canadian would not be sufficient to compensate for damage from a moderately large nuclear accident. On that basis alone, I would argue that the proposed liability limit is inadequate.

This, I should note, is with respect to nuclear power reactors, and I take on board the comments about research reactors made earlier.

There are two other explanations that have been offered for the proposed liability limit, that they're in line with current practice internationally and that there is a need to settle them within the capacity of the insurance market. I do not consider this to be fully the case.

In claiming that the new liability limit is comparable to those found internationally, the basis for comparison is not clearly made. I would suggest that the only meaningful comparison should be with international instruments and national legislation that is applicable in countries with a similar standard of economic situation to Canada and with a similarly developed nuclear power program. On this basis, the relevant international instrument is the OECD's Paris Convention. The Paris Convention is open to any OECD member state and it has attracted membership from much of western Europe. In 2004 it was amended by a protocol intended to modernize this instrument. This protocol requires a minimum operator liability of about $1,100 million Canadian. This is the minimum standard that nuclear operators in western Europe are now expected to meet, and this minimum far exceeds the upper limit proposed in the bill. Indeed, a state that would apply the proposed Canadian liability limit would not be able to ratify the protocol to the Paris Convention. The proposed limit is simply too low.

● (1650)

It is also worth noting that the 2004 protocol to the Paris Convention removes any requirement for an upper limit on operator liability. A number of Paris Convention states already have in place, or are considering, unlimited liability for their reactor operators. This is already the case in Switzerland and Germany, and has been for some time. It is also the case in Finland, where a large reactor is presently under construction.

Earlier this month a Swedish government inquiry stated that there are “overriding reasons for introducing unlimited liability for the nuclear power industry in Sweden”, and it proposed amending legislation accordingly. Outside of the Paris Convention framework, Japan also imposes unlimited liability on nuclear reactor operators.

It is true that there is a finite capacity of the insurance market, in Canada and elsewhere. However, there is no inherent reason to bind operator liability to this limited insurance. There are other ways to provide additional credible, verifiable financial securities for compensation in the event of an accident. By failing to consider such possibilities, the bill unnecessarily limits operator liability to what can be provided by the insurance market.

One approach developed elsewhere to provide additional compensation funds is the pooling of operators' resources, not insurance pools. The principal advantage of an operator pooling system is that large sums of private money—not public funds—can readily be made available to compensate victims. Perhaps the most familiar example of this is the United States, where by combining third-party insurance with an operator pooling mechanism, the total compensation made available per incident is over $10 billion U.S.

Operator pooling was introduced in Germany in 2002. This was because the financial security required from nuclear reactor operators was raised to nearly $4,000 million Canadian per incident. That amount far exceeds the capacity of the German insurance market. The solution developed to meet this goal was to combine individual operator insurance with an additional mutual agreement between German reactor owners. Each partner agrees to contribute to the total financial security required, based on that share of ownership with the German reactor fleet. The partners must also demonstrate to regulators each year that the promised funds would be available if needed, and the ultimate liability of the operator remains unlimited. In the event that the damage caused exceeds the financing available, other assets of the operator are available to add to the compensation amounts, including recourse against the assets of reactor owners if necessary.

Earlier this month, a Swedish government inquiry proposed a similar approach to that being used in Germany; that is, a combination of individual third-party operator insurance combined with an additional mutual agreement. It proposed that the nuclear operators be required to ensure a fund of $1,900 million Canadian per accident. The reactor operators' liability would also be unlimited. The Swedish inquiry favoured such an approach as it was economically efficient and also provided reassurance that the nuclear industry would be responsible for the major costs of a nuclear accident. I would note that the Swedish proposal is in the context of a planned new investment in Swedish nuclear power.

In conclusion, I would like to reiterate three points. Yes, I believe the bill would improve on current Canadian nuclear liability legislation in some respects. However, the proposed new operator liability limit of $650 million is not comparable to minimum liability obligations found in the most relevant international instrument and does not compare well with compensation funds in other western countries with major nuclear power programs. Taken together, key provisions of the bill appear insufficient and out-of-date already, when compared with those found in contemporary nuclear liability legislation elsewhere. Thus, in its present form, in my view, the bill would not establish a modern comprehensive nuclear liability and compensation framework for Canada.

Thank you very much once again for this opportunity to appear before your committee.

● (1655)

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Carroll, for your presentation.

We'll now move to the question and answer portion of our meeting, starting with Mr. Regan for seven minutes. We'll try to make the full round on the seven-minute question period.

Mr. Regan.

Hon. Geoff Regan: Thank you very much, Mr. Chairman.

Thank you to the witnesses for appearing before us today and appearing from a long distance this evening, in Sweden.

Mr. Heysel, I hope I'm pronouncing your name correctly.

Mr. Christopher Heysel: Yes.

Hon. Geoff Regan: Thank you.

You talked about the U.S. cap of $250,000. What is the cap that applies to you at the moment?

Mr. Christopher Heysel: Currently McMaster's cap is $1.5 million.

Hon. Geoff Regan: What is the cap that applies to the other universities?

Mr. Christopher Heysel: I'm not aware of what the other universities pay.

Hon. Geoff Regan: Do you know how it's determined, or the basis? Is it per megawatt?

Mr. Christopher Heysel: I'm not sure how it's arrived at.

Hon. Geoff Regan: If I understand correctly, you're saying that the result of this bill would be to raise your cap from $1.5 million to $4 million approximately.

Mr. Christopher Heysel: About $3.6 million, I understand.

Hon. Geoff Regan: Is this because of the bill itself, or the regulations the department is talking about with you?

Mr. Christopher Heysel: I think that's the number I was informed as being the target for McMaster.

Hon. Geoff Regan: The reason I ask is that my next question is whether you have any proposal in relation to an amendment to the bill that might deal with this problem.

Mr. Christopher Heysel: I don't have an amendment prepared. I was contacted last week, so I'm just trying to get up to speed with both the proposed bill in Canada and some of the international experience.

Hon. Geoff Regan: We've heard from some witnesses that there ought to be unlimited liability. What would the impact of that be on your operations?

Mr. Christopher Heysel: It would shut down all research reactors at universities in Canada.

Hon. Geoff Regan: Would this bill and the proposed plan from the government have any impact on your proposal, which you brought forward to us last spring, to produce isotopes?

Mr. Christopher Heysel: It would increase the costs of the ability to produce isotopes. I'm not sure if we'd be reassessed on the new activities and our limit would change, but I would see it affecting our bottom line to make these isotopes.

Hon. Geoff Regan: Has the government followed up on your proposal to make isotopes?

● (1700)

Mr. Christopher Heysel: We were asked to submit an expression of interest to the expert panel, which I understand is currently reviewing the various proposals in order to get back to the government in November.

Hon. Geoff Regan: So you haven't had an answer at this stage.

Mr. Walker, I think you were here for the first part of the meeting.

Mr. John Walker (Legal Counsel, Walker Sorensen LLP, Nuclear Insurance Association of Canada): Yes, I was.

Hon. Geoff Regan: You heard the comments about the charter argument.

Mr. John Walker: No, I'm sorry, I did not.

Hon. Geoff Regan: There was a suggestion from the witness, who was on by teleconference in the first session, that in his view if this bill passed, it, or the existing law, would be struck aside in the event of an accident on the basis of security to the person. Under the charter, someone who was claiming the level was too low and was seeking to exceed that level of damages, perhaps in a class action suit, could set aside this law. Do you have a view on that?

Mr. John Walker: I know I'm a lawyer, but unfortunately I have not examined that issue.

Hon. Geoff Regan: Has your colleague?

Ms. Colleen DeMerchant (Assistant Manager, Nuclear Insurance Association of Canada): No.

Hon. Geoff Regan: I see. Okay, sorry.

We've heard from some people that the bill should allow operators to go outside Canada to find insurers and not be tied down with a single insurer.

Mr. Murphy, do you have any views on this?

Mr. Dermot Murphy: Thank you, Mr. Regan.

NIAC was appointed as an approved insurer many, many years ago with respect to the liability coverage. As I mentioned earlier in my comments, every insurer, as a member of NIAC, and other nuclear insuring pools meet the stringent financial requirements of their insurance regulators. One would assume that the same level of financial scrutiny would be used to assess any new insurer applying to become an approved insurer in Canada.

Hon. Geoff Regan: All right.

Can you give the committee an idea of what you insure and do not insure? For example, I understand that the industry does not insure things like psychological trauma and that in the case of an accident it would fall to the Government of Canada by default. Is that accurate? Can you elaborate on what you do and do not insure?

Mr. Dermot Murphy: I'll defer to Mr. John Walker, if I may.

Hon. Geoff Regan: That is a good question for the lawyers.

Mr. John Walker: Yes, there is a possibility. The insurers have indicated a reluctance to insure psychological trauma and claims that are brought against the operator after 10 years but before the 30-year prescription period has expired.

Insurers, however, are working very hard behind the scenes to try to find a way to insure the exposure for psychological trauma. It does not look as if insurers will be prepared, at this time, to insure claims that arise after 10 years. Those would have to be re-insured by the federal government under what's called Coverage B under the policy that's issued to the operators.

Hon. Geoff Regan: Thank you.

Mr. Murphy or Mr. Walker, can you explain how terrorist threats have impacted your business of insuring this industry? I'm thinking, for example, of the fact that we have the Pickering reactor, which is close to Toronto, and it was reported that the so-called Toronto 18 were in fact targeting that plant. I guess the question is how this relatively new risk has impacted your industry when you're looking at how you're going to try to insure these end operators. And what liability would arise from an attack versus an accident?

Mr. Dermot Murphy: If I may, Mr. Chairman, in the aftermath of the World Trade Centre attack, the availability of insurance coverage for terrorism simply evaporated. It was no longer available. Since then, in the absence of any significant terrorism act involving nuclear facilities, certainly, the market appetite has come back and we are in a position to provide a limited amount of terrorism coverage.

At the present time, NIAC insures 20% of the required terrorism coverage and the government picks up the balance.

● (1705)

The Vice-Chair (Mr. Alan Tonks): Mr. Murphy, I'm going to have to interject at this point because we won't get everybody in if I don't bring this to a conclusion. Thank you for that answer.

Thank you, Mr. Regan.

Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle: Thank you, Mr. Chair.

Mr. Heysel, I am happy that my colleague asked you this question. Last time we met, it was on the subject of isotope production and we found your proposal interesting. If I understand this correctly, you are still waiting for an answer to the proposal you submitted to the government for the production of isotopes.

[*English*]

Mr. Christopher Heysel: Yes, that's correct. We were invited to submit our proposal that we'd discussed formally to the expert panel in July. It's my understanding that they're reviewing our proposal, along with the 20 other proposals, and are to report back to the government this month.

[*Translation*]

Ms. Paule Brunelle: You are talking about 20 other proposals. Then it means that we are not lacking solutions in Canada. It is good to know.

You told us that non-profit reactors have their liability limited to $250,000. However, McMaster is not a non-profit reactor as it must be self-financing.

[*English*]

Mr. Christopher Heysel: Yes, I'd consider our reactor to be non-profit. There aren't any shareholders. Any funding we're able to generate through providing services and products helps offset the costs, and the university would make up the additional costs to make our budget balance. So I consider ourselves the exact same configuration that a U.S. reactor would be—a non-profit entity.

[*Translation*]

Ms. Paule Brunelle: Then the liability should be limited to $250,000. This is what you are saying?

[*English*]

Mr. Christopher Heysel: I believe that would be the right amount to put us on the same playing field as our U.S. counterparts, yes.

[*Translation*]

Ms. Paule Brunelle: Thank you.

Mr. Murphy, several of our witnesses have suggested, like Mr. Carroll today, that the liability level is too low compared to international standards. There was a reference to the OECD's Paris Convention, which I am not familiar with, unfortunately. What is your view about it?

As an insurer, I suppose that if you have set a limit of $650 million, there was a reason for it. We were given some idea of the costs, which seem very high to me, that will follow an increase of the limit.

What could you say to those who are suggesting that the liability limit is too low in Bill C-20?

[*English*]

Mr. Dermot Murphy: I'd like to cast my response in the context of the insured limit. I do not necessarily agree with the witness from Sweden. At $650 million Canadian, we are well positioned in comparison with other jurisdictions. I'd like to share with you and place in context some of these other limits of liability. In the U.S., the insured limit is $300 million U.S. I am in possession of information that they may be considering bringing that to $375 million U.S. In the United Kingdom, the limit of liability insured is £140 million or $248 million Canadian, which is considerably lower than our proposed $650 million. You've heard from the witness from Sweden the levels of insurance covered there. In Germany the insured limit is €260 million, about $400 million Canadian. Yes, they do have a mutual agreement beyond that.

A lot of times, because of our proximity to the United States, people compare Canada and the U.S. and ask how they can muster over $11 billion of “capacity”. They are not differentiating between the insured limit, which is the business that NIAC is in, and the unfunded pooling mechanism that they have. Not to elaborate too much, but the formula in the United States requires that an amount of $112 million be paid per reactor. There are 104 reactors in the U.S.; hence the additional coverage of $11 billion. This is an unfunded pool. The levies would have to be charged after the occurrence of a very significant nuclear incident. They have a seven-year period to pay into this amount.

So in answer to your question, Madam, and some of the comments made by other persons giving testimony, the $650 million limit is not inadequate when compared with that of some of the major western countries.

● (1710)

[*Translation*]

Ms. Paule Brunelle: Thank you.

Do I have some time left?

[*English*]

The Vice-Chair (Mr. Alan Tonks): You have one minute.

[*Translation*]

Ms. Paule Brunelle: Insurers take into account the level of risk. Would it be possible, for instance, to have higher safety norms so that the cost of insurance might be less? Is that a possibility or is it impossible in the nuclear industry?

[*English*]

Mr. Dermot Murphy: I have said on many occasions that I am not aware of any industry in the world that is more heavily regulated, with any higher safety norms, with any more extensive training and commitment to safety and the protection of persons and property than the nuclear operators insurance environment.

[*Translation*]

Ms. Paule Brunelle: Thank you.

[*English*]

The Vice-Chair (Mr. Alan Tonks): Thank you, Madam Brunelle.

Thank you, Mr. Murphy.

We'll go to Mr. Rafferty.

Mr. John Rafferty: Thank you, Chair.

Mr. Walker, we heard earlier that nuclear accidents to date have been caused by a combination of negligence and incompetence. As a lawyer, would you think it would be fair to limit liability to an entity if an accident were to happen because of negligence and incompetence?

Mr. John Walker: The classical answer would be no. I guess there are countervailing arguments in the nuclear environment. We represent nuclear insurers, and we're trying to make a distinction between the limit of insurance and the outright limit of liability of the operator. I'm going to step outside the bounds of what we view as our area of expertise. You have to consider that in Canada, except for one operator, these are provincial government entities, or agencies of provincial governments. If you asked them to carry unlimited liability, you're simply making provincial governments, the people of the province that a reactor is in, bear that risk. You are not really shifting it from the public purse to a private purse. What would be the social utility of bankrupting one of these utilities with unlimited liability? We still need the electricity. If you make them liable for an unlimited amount and you bankrupt them, what have you achieved?

I want to close by saying that those are extemporaneous comments beyond our real scope.

Mr. John Rafferty: I thank you for those.

Mr. Murphy, on the dollar cost for protection of the public, I might have the insurance industry or NIAC's role wrong, but does it not get less expensive the more coverage you have?

Mr. Dermot Murphy: As is demonstrated by the indications of premium multiples I provided, yes. The new limit equates to 13.3 times the $75 million, so it's $650 million. Our estimated range of how much it will cost is somewhere between five and eight times.

As an example, and I believe Chairman Tonks indicated this in a previous meeting, for a person who has $1 million coverage on his automobile and it costs *x* number of dollars, if he increases to $2 million liability, it's not twice as expensive, it's a multiple thereof.

Mr. John Rafferty: Would NIAC support a $1 billion liability?

Mr. Dermot Murphy: Are we capable of providing that level of insurance coverage? Yes, as I said earlier, barring any unforeseen circumstances, our research has shown that in conjunction with two other major pools we partner with—the British pool, Nuclear Risk Insurers, and the U.S. pool, American Nuclear Insurers—we can muster capacity up to the tune of approximately $1 billion.

● (1715)

Mr. John Rafferty: Thank you, Mr. Murphy.

A question for Mr. Carroll. You said that Germany has unlimited liability, Switzerland does, and I think you said Finland does. We heard from the previous panel that companies would close if unlimited liability were imposed upon them. They would close shop, they would be finished, they would be done.

When they brought in unlimited liability in Germany, how many power plants closed?

Mr. Simon Carroll: Because of the change in the liability, none.

Mr. John Rafferty: Did any close in Switzerland?

Mr. Simon Carroll: As a result of the change in liability, none.

Mr. John Rafferty: Could you briefly clarify some other liability regimes that some other countries have, just for comparison?

Mr. Simon Carroll: Yes. In doing so, could I refer to a comment made by Mr. Murphy? He rightly pointed out that in some countries the amount provided by insurers is comparable, but the liability imposed on the operator is very different and higher. In addition, in the case of the country I live in, Sweden, the insurance market can cover €700 million, which is about $1,100 million Canadian. But the amount insurers can cover does vary from country to country. As Mr. Murphy said, the insurance market is very tightly regulated, and the capacity varies.

To go to your question, in Spain, since 2007, the liability has been at $1,100 million Canadian. There's a proposal being considered by the Spanish legislature now to raise it to €1,200 million. I don't have the conversion in my head, but that's a significant increase, to around $2 billion Canadian, I guess. The United Kingdom is in the process of amending its legislation and it would impose operator liability of €700 million, again about $1,100 million Canadian.

Just to reiterate the point I tried to make earlier, the Paris Convention, as amended by the protocol, sets a minimum level of liability of $1,100 million Canadian. Above that is what is being explored now by an increasing number of European countries.

Mr. John Rafferty: Do I have time for one quick question here?

The Vice-Chair (Mr. Alan Tonks): You have 45 seconds.

Mr. John Rafferty: Okay.

Mr. Carroll, you indicated with the Paris Convention that Canada, because of our Liability Act, currently wouldn't be invited to be a signatory. Do you think it would be important for Canada to be a signatory to that convention?

Mr. Simon Carroll: I don't think that's a question I could really answer. However, I would say that the comparison with the Paris Convention is relevant because the Paris Convention sets a base for developed economies with major nuclear programs of what is considered a reasonable minimum level of responsibility by the industry. I think that is an ambition Canada should have, and the bill in its current form misses that ambition by a large margin. Therefore, I think it's inadequate. That's why I think you should be looking at revising that figure.

The Vice-Chair (Mr. Alan Tonks): Thank you, Mr. Rafferty and Mr. Carroll.

We'll now go to Mr. Anderson for seven minutes.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): Thank you, Mr. Chair.

Mr. Rafferty started off talking about our previous witness and some of his declarations about how accidents are caused. He also made a couple of other comments, and I'd like the insurance folks' reaction to this.

I think he left the implication that operators are being held completely blameless by this legislation. Would that be your impression? I think he actually used the phrase that this leaves the operators blameless. Do you agree with that?

● (1720)

Mr. John Walker: This legislation would channel all liability to the operators. It makes them completely liable for any loss up to the maximum limit in the legislation.

Mr. David Anderson: It seems to me that there is an aspect of unlimited liability that can actually remove the responsibility from the operators if they find themselves in a situation in which nothing but the value of the plant is left. The liability comes back to that. There's no value there beyond the plant, and they have no responsibility beyond that, whereas this requires them to carry $650 million in insurance and will cover, according to the work that's been done, virtually any situation that would take place.

Mr. John Walker: Their limit of liability would be $650 million under the current act, and they would be required to carry $650 million of insurance. Beyond that they would not be liable, and they would be able to continue operating their plant with their current assets, assuming the plant was operable.

Mr. David Anderson: I think another implication he made was that they're basically free to create unlimited damage as well through this. My question to you is, would you be insuring them if you believed that was the case?

Ms. Colleen DeMerchant: Not at all.

Mr. David Anderson: Mr. Regan talked about the charter of rights. When we were here the other day, the CNSC was saying that there has been CNSC regulation for around 63 years, and there have been no incidents in this country. I think we need to come back to that and realize that we have a strong safety record in this country. Our safety record certainly should play into the aspect of responsibility and liability that's required. Is that fair to say?

Ms. Colleen DeMerchant: We believe that excellent nuclear regulator oversight and excellent operator responsibility, coupled with responsible insurers of high-quality capital, are the answer to meeting the public's requirements for good protection under this regime.

Mr. David Anderson: Do you believe our safety standards meet or exceed international expectations?

Ms. Colleen DeMerchant: From the surveys that we conduct on the stations, we are of the opinion that our stations are operated to a very high standard.

Mr. David Anderson: Mr. Heysel, you say you have a non-profit reactor, and I think that's true. I'm wondering how much commercial activity takes place with your reactors. Is there a fair amount of commercial activity, or is that all university research? What would be the proportion there?

Mr. Christopher Heysel: Probably about 90% of our costs are borne by commercial or service provision. The amount of money we receive from researchers, user fees, and that type of income stream is fairly low.

Mr. David Anderson: A fairly large aspect of what you're doing has a commercial component to it.

Mr. Christopher Heysel: That's correct.

Mr. David Anderson: I understand that your insurance coverage has been about $1.5 million. I assume that's been in place for decades and came in with the Nuclear Liability Act. Is that correct?

Mr. Christopher Heysel: That's correct.

Mr. David Anderson: The government has been picking up about $73 million of that. You're suggesting that this change in the act is going to slightly more than double your requirement for insurance, to about $3.6 million. The government would pick up $646 million of reinsurance on that.

Mr. Christopher Heysel: That's correct.

Mr. David Anderson: You made the point that you think that's too high. You actually made the suggestion that you'd like it reduced to $250,000.

Mr. Christopher Heysel: That's correct.

Mr. David Anderson: You paid $1.5 million for 30 years and you find it reasonable to make a request that it be reduced to $250,000?

Mr. Christopher Heysel: I think my argument is based on the evolution of other factors that have come into play. We now have other costs, such as decommissioning and fuel costs, which put us at a really unfair advantage to the other research reactors out there. So I'd like to level the playing field on all of those costs to the facilities.

Hon. Geoff Regan: He means disadvantage.

Mr. David Anderson: You mean disadvantage, right?

Mr. Christopher Heysel: Yes, disadvantage.

Mr. David Anderson: Going from $1.5 million to $3.6 million in coverage, do you have any idea what that does to your insurance costs?

Mr. Christopher Heysel: I haven't got an estimate of it yet, but I think it'll be a PY for me.

Mr. David Anderson: This bill has been here three times. Can you tell me why this has never been an issue until today?

Mr. Christopher Heysel: I haven't been asked, until last Thursday, to appear before the committee.

● (1725)

Mr. David Anderson: So you weren't aware until last week, or whatever, that this would be an issue?

Mr. Christopher Heysel: I was aware of the bill, but I wasn't aware I had a voice to speak to this committee.

Mr. David Anderson: Okay.

Now, Mr. Loesby made a suggestion. His was, actually, I think, asking for a requirement to provide $1 million insurance for each megawatt. That would be quite a bit higher than what you're proposing here. Do you find his request to be unreasonable, then?

Mr. Christopher Heysel: I didn't hear his presentation. I wasn't sure if he's proposing a non-profit entity for his reactor.

Mr. David Anderson: Okay.

I think, Mr. Chair, we have some other business to do, so I can leave it at that if you want.

The Vice-Chair (Mr. Alan Tonks): Yes, we do. You have a few more seconds, but if you wish....

Mr. David Anderson: That's fine.

The Vice-Chair (Mr. Alan Tonks): All right. Okay.

Well, on behalf of the committee, thank you to our witnesses. Particularly Mr. Carroll, in from Sweden, thank you so much. I know that you may seem rather distant, in terms of the deliberations here, but we appreciated your input, as we did all the witnesses here.

So thank you very much for being here.

Members of committee, we're going to deal with the motion that Mr. Regan is going to bring forward.

Mr. Regan, you're giving notice.

Hon. Geoff Regan: Thank you, Mr. Chairman.

I move that the Minister of Natural Resources be invited to appear before this committee before December 7, 2009, to discuss the supplementary estimates of the Department of Natural Resources.

The Vice-Chair (Mr. Alan Tonks): You've heard the motion.

Mr. Anderson.

Mr. David Anderson: Thank you, Mr. Chair.

Certainly, should this pass, we would be willing to take the invitation to the minister. She's just here recently, of course, but we'll certainly take it to her. We would all love to discuss the supplementary estimates, I'm sure.

The Vice-Chair (Mr. Alan Tonks): Is there any further discussion?

(Motion agreed to)

Some hon. members: On division.

The Chair: On division.

The meeting is adjourned.

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