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Tuesday, June 17, 2008

Chair

Mr. Leon Benoit

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● (1105)

[*English*]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good morning, everyone.

We are continuing our study that resulted from a motion adopted by the committee on June 3, 2008. We're continuing our study of the decision of Atomic Energy of Canada Limited and the government to discontinue the MAPLE reactors project, together with the ramifications of this decision on the supply of isotopes.

We have with us today two witnesses: Michael Binder, president of the Canadian Nuclear Safety Commission; and Nigel Lockyer, director of TRIUMF. Welcome, gentlemen. Thank you both for being here today.

Mr. Binder, do you have a presentation to make?

Dr. Michael Binder (President, Canadian Nuclear Safety Commission): Yes, sir.

The Chair: Go ahead, then.

Dr. Michael Binder: Thank you.

[*Translation*]

My opening remarks are available in both English and French but with your permission, I will present them in English.

[*English*]

What I'll do is I'll flip this slide deck.

I thought it would be good to talk a bit about how the commission operates and works. If you look at slide 2, the Canadian Nuclear Safety Commission is an independent, quasi-judicial administrative tribunal that regulates all nuclear facilities and activities in Canada, from nuclear plants to waste management.

On slide 3—just to reiterate—our core mission is to regulate to protect health, safety, security, and the environment in our international obligations. How do we do this? By setting up a clear regulatory framework, by conducting rigorous and open public hearing and consultation processes, and by relying on our world-class scientists and engineers.

On slide 4, we have pretty modern legislation that enables us to set up regulatory policy, to license nuclear facilities and nuclear activities, and to ensure compliance. It is governed by commissioners appointed by the Governor in Council, and the commissioners are renowned Canadians and experts in their own field. If you turn to the next slide, I actually put their names there so you can see they bring to the table diverse experience in geology, medicine, engineering, mining, etc.

On slide 6 there is a very quick overview of the public hearing that the commission conducts. That particular public hearing allows all the proponents and all interveners and the public to come in front of the commission and argue the merits of a submission. It's a unique kind of public hearing. It has two days of hearings. In day one, the proponent comes in and makes the application. Our own staff make a public analysis of the application and then it's all on the record, and 60 days later all interveners can come in front of the commission and argue the merits of the case. It's a pretty unique kind of process that maximizes the input of all interveners who are interested in the subject.

On slide 7—just to brag a bit about our own staff—there's amazing expertise in the commission, ranging from nuclear engineering and physics, environmental protection, radiology protection, waste management. They basically analyze any submission appearing in front of the commission and propose action, recommend what to do, ensure that the commission's decisions are implemented, and do a pre-audit audit and compliance analysis.

On slide 8—just to try to explain—the nuclear business is a very complicated business. We've set up some pretty extensive criteria for safety and for health. This is just an attempt to tell you the kinds of issues we are dealing with in every application that comes in front of us for a nuclear facility, from operating performance, performance assurance, equipment fitness, analysis, radiation protection, emergency preparedness, site security, etc.

On slide 9—just to state the obvious—the MAPLE project was subject to the same safety criteria as any other nuclear submission that came in front of us. We have exercised diligent regulatory oversight and allowed for AECL to do all the testing they had to do to try to understand the operation of the MAPLE project. It was the decision of AECL to discontinue the MAPLE project, and they'll have to come in front of us for an application for safely decommissioning the MAPLE reactors.

It's similar for the NRU. The NRU was also subject to the same safety criteria that I showed you before. We have conducted compliance and verification inspection, and I'm happy to report that the NRU right now is operating safely.

● (1110)

There is some question about whether the NRU licence will be extended beyond October 2011. The NRU is operating safely now. There is no reason to believe it will not continue to operate safely. The question is, for how long? That will be determined only when AECL appears in front of the commission with a submission that proposes the life extension, with all the things they have to do to make sure the plant is operating safely.

In conclusion, the CNSC regulates operations, but it is not running those operations. Regulators regulate, operators operate. Our role is to make sure, first, that we are protecting the health, safety, and security of Canadians and the environment, and second, that we are implementing Canada's international obligations efficiently.

Thank you.

The Chair: Thank you, Mr. Binder.

We will now go directly to Nigel Lockyer from TRIUMF. Mr. Lockyer, please explain to the committee what your organization is and then go ahead with your presentation.

Dr. Nigel Lockyer (Director, TRIUMF): All right.

My name is Nigel Lockyer. I grew up in southern Ontario, went to high school in Hamilton, and attended York University in Toronto. I did my graduate and post-graduate work in the U.S. I was a professor of physics for 22 years at the University of Pennsylvania. I'm a particle physicist by training, with a strong interest in accelerator physics and medical physics. I am the director of TRIUMF and a professor of physics at UBC.

TRIUMF has a mission statement, and it's just one paragraph:

> TRIUMF is Canada's national laboratory for particle and nuclear physics. It is owned and operated as a joint venture by a consortium of Canadian universities via a contribution through the National Research Council Canada with building capital funds provided by the government of British Columbia. Its mission is:
>
> To make discoveries that address the most compelling questions in particle physics, nuclear physics, nuclear medicine, and material science;
>
> To act as Canada's steward for the advancement of particle accelerators and detection technologies; and
>
> To transfer knowledge, train highly skilled personnel, and commercialize research for the economic, social, environmental and health benefit of all Canadians.

TRIUMF has four programs involving medical isotope production.

We've had a 30-year collaboration with MDS Nordion aiding them to produce 15% of Canada's medical isotopes. We produce 2.5 million patient doses per year. This is done with three small cyclotrons, or particle accelerators, which run essentially 24/7. There are about 90 staff, roughly 50 from MDS Nordion and about 40 from TRIUMF, who operate the cyclotrons. This has been a very successful partnership.

TRIUMF also produces isotopes with its main high-energy cyclotron, the 500 MeV cyclotron, which is the core of the facility. TRIUMF also has produced more than 6,000 patient doses of FDG, a sugar labeled with F-18, for the B.C. Cancer Agency in the last three years. We've done that since they entered into the business of PET screening for cancer patients, including several hundred children. These are produced using another small cyclotron at TRIUMF. The contacts would be Don Wilson and Francois Benard from BCCA.

TRIUMF also produces all the isotopes for the Pacific Parkinson's Research Centre at UBC, which has roughly 1,500 patients a year. That program is led by Dr. Jon Stoessl from UBC and Dr. Tom Ruth from TRIUMF. This is a highly successful 20-year program. Dr. Ruth is a radiochemist and a world expert on the production of medical isotopes. He's served on U.S. academies addressing medical isotope production and so on, so I would recommend him to you as one of Canada's true experts in this field. In this case, we produce primarily F-18 and C-11.

There are about eight operational cyclotrons in Canada in major medical centres and another eight being installed or commissioned, for a total of sixteen. For example, the Ottawa Heart Institute has its own cyclotron for producing medical isotopes, which are primarily focused on PET imaging.

These cyclotrons make isotopes primarily for PET, or positron emission tomography. That's a three-dimensional imaging of the metabolism of the patient. There are about 30 PET scanners in Canada. There are about 300 in the U.S. There are about 400 cyclotrons listed in the IAEA database around the world that are non-commercial. So that's 400 cyclotrons. If you include commercial cyclotrons, you have to guess, but it's about 900 worldwide.

PET is gaining a significant role in cancer screening, because it's able to assess the response to your cancer therapy.

Let me mention SPECT. There are two imaging modalities that are primarily used in nuclear medicine. One is SPECT, which is the older workhorse of the industry. It stands for single photon emission computed tomography. It drives the field today. There are about 900 SPECT cameras in Canada. I'm guessing that you have about eight processes per day, so if I round up, I can say that there are about 10,000 per day in Canada. It's larger than PET by about a factor of ten. PET is more advanced, more expensive, and to me, in the future, is the one that's going to be taking over in the field.

● (1115)

The sales of PET exceeded SPECT in the U.S. last year for the first time, so it gives you a sense that the field is changing.

PET is now purchased in combination with a CT scanner, which is an imaging X-ray, and you can also buy a SPECT with a CT scanner. You buy either a PET/CT or a SPECT/CT.

SPECT uses technetium-99. PET uses primarily FDG. They both can use other things, but they are the two.

The lifetime of FDG—or the half-life, to be more precise—is about two hours. The half life of technetium, as you know, is probably about six hours. The difference there is that SPECT uses technetium-99, which comes from a generator of molybdenum-99, and that generator is distributed around. For the FDG, you just produce it directly.

One final comment about TRIUMF is that its research, internally, is focused primarily on producing unstable isotopes, so in some sense, the business of TRIUMF is producing either this generation of isotopes or the next generation of isotopes.

I'll just stop there and wait for questions.

The Chair: Thank you very much, Dr. Lockyer.

We'll go to questions, but before we do, I'd like to say that Dr. Binder will be leaving at 12:20. As well, Mr. Trost has given notice that he wants to move his motion, so we will go to that in the last part of the meeting.

Now we're going directly to questions. First we have the critic for the official opposition, Mr. Alghabra, for up to seven minutes.

● (1120)

Mr. Omar Alghabra (Mississauga—Erindale, Lib.): Thank you, Mr. Chair.

Good morning, gentlemen. Thank you for coming here.

I will first congratulate Dr. Binder on his appointment as the president of the Canadian Nuclear Safety Commission. I want to take this opportunity to benefit from his experience over the last few months there and see how we can learn, because we are hoping to develop a report on nuclear safety and the supply of isotopes in this committee.

Dr. Binder, there were reports a few months ago that the minister had added to the letter of mandate to the president of the commission to take into account the security of the supply of isotopes. Is that correct?

Dr. Michael Binder: There was a directive that was issued, and it becomes part of our legislation.

Mr. Omar Alghabra: No, the cabinet directive was very broad. In fact, it was complementary to the act itself, which states to take into account public safety and public well-being, but wasn't there a specific letter or recommendation or directive from the minister to the commission, stating that the commission must take into account specifically the supply of isotopes?

Dr. Michael Binder: No. There was a letter of congratulation mentioning trying to work together. I responded by saying that I was looking forward to working together, but there was no direction.

Mr. Omar Alghabra: Okay, good. I just wanted to clarify that, because there were reports that was the intent.

Some things came up during our study that were not noticed in the past. There was a practice occasionally that the department would appoint a deputy minister to the board of directors of a crown corporation. This time we also noticed that the deputy minister of natural resources was on AECL. At the same time, the president of the commission reports to the minister and the department.

I would like you to comment on that. Do you think that might pose a potential, or at least a perception of, conflict of interest? You yourself said in your presentation that the job of the CNSC is to regulate operations, but it is not responsible for those operations; it is AECL that is responsible for those operations. Do you think the fact that both agencies report to the same minister might pose some kind of a potential conflict of interest?

Dr. Michael Binder: The short answer is no. If I understand the legislation, we report to Parliament through the Minister of Natural Resources.

I must tell you that my observation in the five months I've been there is that the commission is staffed with commissioners who are very independent-minded. They are non-bureaucrats. Some of them are retired; some of them have other jobs, day jobs. They consider all applications in front of them very seriously and in great detail.

I've yet to see any way, even if I wanted to, that I or anybody else could influence the collective decision. So far I have not seen any concern from any intervention from ministers.

Mr. Omar Alghabra: I beg to differ, Mr. Binder. We saw the greatest intervention in Canada's history, which was the firing of the independent commissioner when her judgment was not the judgment of the government. That's not to say, as you said, there will be a first or last time an independent body has a different opinion from the government. But we saw what happened when the president disagreed with the government: they fired her. So it's fair to raise this question that there is a potential conflict of interest.

Some of us are considering having the commission report to the Minister of the Environment instead of the Minister of Natural Resources. How do you feel about that?

Dr. Michael Binder: I can't comment on this. This is machinery of government. Other brighter minds than mine will comment on it and decide this. All I can tell you is I've been in government for 37 years. Anybody who thinks they can actually influence me directly is in for a big surprise. I make my own opinions, my own decisions. So far I can tell you I'm very comfortable in our independence and our ability to render decisions independently and on the merit of an application in front of us.

As you know, Parliament is supreme—that's you people—and Parliament has the ability to pass legislation at any time. In fact it's in the act that Parliament can direct the commission. We always are subject to that kind of issue.

● (1125)

Mr. Omar Alghabra: Thank you, Mr. Binder. That's why we're examining this. That's why we're studying this. That's why we're considering all these scenarios.

By the way, potential conflicts of interest are not meant to minimize someone's independence as an individual, or their strong-mindedness, or their integrity. It is for the institution, the setup, for the mechanism itself, so it's protected for the long haul and for other institutions. And I think it is a very important question to consider. The reason I'm asking you this is that you're in a position to offer us advice.

Let me ask this question differently. Do you see that changing the reporting direction to the Minister of the Environment would have any damaging effect on the performance or the effectiveness of the commission?

Dr. Michael Binder: I can't comment. This is a hypothetical situation. Right now I do what is in legislation. Whatever legislation does or any changes to legislation may change our behaviour. Right now it's in the law of the land, and I'm abiding by it.

Mr. Omar Alghabra: Thank you very much.

The Chair: Thank you, Mr. Alghabra.

We now go to the Bloc Québécois, Madame DeBellefeuille, for up to seven minutes.

[*Translation*]

Mrs. Claude DeBellefeuille (Beauharnois—Salaberry, BQ): Mr. Chairman, do you think we'll have time to do two rounds of questions?

[*English*]

The Chair: I can't say, but I would think so.

[*Translation*]

Mrs. Claude DeBellefeuille: Fine.

Welcome and thank you for coming, Mr. Binder. This is the first time I have met you, but I am sure it won't be the last.

We were very touched and troubled by what happened last winter when the former president of the commission was let go. She also had very strong opinions. Despite this, she was relieved of her duties.

I was surprised to learn at our last meeting that the NRU's licence will probably be extended beyond 2011. The company and Atomic Energy of Canada Limited viewed these as modalities and felt that the reactor could probably survive until 2016. This was stated rather confidently.

The main operators perceive this as a fact, but do you not expect that there will be pressure on the Canadian Nuclear Safety Commission to facilitate this licence extension, given that we are in a somewhat difficult situation? We have one old reactor and the MAPLE project has been discontinued.

Mr. Michael Binder: This is a hypothetical situation. I think we need to wait for a specific submission containing a proposal, a recommendation regarding the extension of the NRU's licence. People may talk, but our response will be based on a specific submission. Our goal now is to ensure that the NRU is operating properly.

[*English*]

It is safe. It's operating safely, and as far as we're concerned, until there is a submission in front of us and we're going through the process I just described, with all the recommendations about how long you can in fact operate this facility safely, we will not comment.

● (1130)

[*Translation*]

Mrs. Claude DeBellefeuille: From what I understand, Mr. Binder, the process of abiding by all the rules and standards in order to obtain a licence extension is rather long. We have an old reactor whose licence will expire in 2011 and we need an alternative. We want to know if the Canadian Nuclear Safety Commission will be strong enough and independent enough in order to enforce the law and the safety rules. The commission was already disturbed last winter.

How can taxpayers be sure that extending the life of the NRU reactor will be safe? It makes me think of an old car that is constantly being fixed up. There comes a time when you can no longer continue to fix it. Based on what you know, how much longer can the NRU last? Will it be able to be upgraded indefinitely or will we have to stop using it one day?

Mr. Michael Binder: This won't necessarily be a long process. We are already having discussions with the people from AECL.

[*English*]

We're talking to them right now about the various criteria we need to make an informed decision that the reactor will operate safely. You should know that when we look at all the material coming before us—we look at when the last update was of the various pumps, material, pipes, and the whole security.... In the nuclear business, you are continuously upgrading the equipment: you're replacing old equipment, you're changing and upgrading.

AECL will have to come in front of us and argue the case, whether it will be for a one-, two-, a three-year extension. Our expert staff will assess this. We will seek opinions from other experts. We are now in the process of telling AECL, so that there will be no misunderstanding, what we need to make those decisions.

Those decisions will occur two years from now, so we're giving them ample warning and transparency as to the kinds of criteria we'll be using to assess their submission. We are going to focus on only one thing, and that is whether it is safe.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Binder, everyone agrees that it is possible to upgrade the NRU reactor. I am not a nuclear energy expert, however it seems to me to make sense that one cannot indefinitely upgrade an old reactor. At some point in time, this will no longer be possible. If it could be indefinitely upgraded, then half a billion would not have been invested in the MAPLE reactor, and it simply would have been constantly upgraded. The decision to invest in MAPLE 1 and 2 was made for the purposes of continuity, in order to guarantee an isotope supply.

In order to reassure Quebeckers and Canadians, I would like you to tell us for how long upgrades to the NRU will be possible. One day, this reactor's life will come to an end. One cannot produce new material out of old material forever.

Mr. Michael Binder: Yes, one could, by replacing all the equipment.

[*English*]

Bruce Power, for example, is refurbishing a whole nuclear plant. They stop operations, they change everything in it, and they get another 20 years out of it.

We will not be able to tell you that until we get a submission from AECL that will tell us precisely what they're going to do to make sure that the unit operates, and for how long.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Binder...

[*English*]

The Chair: Merci, Madame DeBellefeuille. Your time is up.

Ms. Bell, you'll have up to seven minutes. Go ahead, please.

Ms. Catherine Bell (Vancouver Island North, NDP): Thank you, Mr. Chair.

Thank you, Mr. Binder and Mr. Lockyer, for attending.

A couple of my questions have already been answered. Being third, that's what happens.

Mr. Binder, you've been in this job for about five months, I think you said. We know that because of the crisis that happened back in November and December of last year, new protocols were put in place for the supply of isotopes in the case of an emergency, because there had been some miscommunication, I guess, or a lack somewhere. From your perspective—and you've probably done an overview of everything—are you confident that the protocols that are in place are sufficient to address an emergency situation, if one were to happen, given that we don't have the MAPLEs coming on line?

● (1135)

Dr. Michael Binder: Just to clarify, the protocol is that the Department of Health is making sure they have some contingency plan in case shortages materialize. Our responsibility is strictly to make sure that the NRU continues to operate for as long as it's safe. We are not responsible for the production of isotopes. It's the AECL and the NRU that actually produce them and give them to MDS and anybody else, such as Nordion.

The one thing we've put in place is that if we become aware of a shutdown, either planned or unplanned, we will alert everybody that it's coming. There will be no unknowns, if you like, in this; everybody will know, if we believe a shutdown is coming, and will know it immediately.

Ms. Catherine Bell: Thank you.

Mr. Lockyer, you said you have a contract with Nordion for 30 years. They supply how many percent?

Dr. Nigel Lockyer: They supply 15%.

Ms. Catherine Bell: Okay, I did hear it right.

Given that, could this percentage, if needed, be increased?

Dr. Nigel Lockyer: That's a good question, but we do not produce technetium-99, which is the isotope that, as I said, is the workhorse of the industry. We produce primarily isotopes for.... They are produced for SPECT, but also for PET. It's not exactly what you need for replacing the output of the NRU.

Ms. Catherine Bell: Right.

Is there a possibility that this capacity could be built in some other way?

Dr. Nigel Lockyer: That's a question of an alternative production method for technetium-99, so I have a few things I could say about that. Let me simply say that the present method to make technetium-99 is to make moly-99. Moly-99 is the so-called generator, then from moly-99 it decays into technetium-99. The present method that's used, I think, is the best. It's the best method out there.

It takes highly enriched uranium, uranium 235, and uses a neutron to fission it, and that's how you make the moly-99. What you end up with is something that has what's called a very high specific activity. In other words, most of the unit of mass you're working with is almost entirely radioactive, so it's very pure.

There are alternative methods that are used. The most common method is to use moly-98 to start with, rather than uranium 235. Moly has two long-lived elements, moly-98 and moly-100, so they're the two you could use as a target. So the moly-98 could absorb a neutron and it becomes moly-99. That's pretty simple. The issue is that the absorption of that neutron is six times less likely than the fission of the uranium 235 that makes the moly-99 with the procedure we use now. That means you end up with a sample of technetium-99, which has what's called low specific activity, so the issue becomes how do you deal with that.

One option is to use a higher-flux reactor. The NRU reactor has about 10^{13} neutrons per centimetre squared per second. The Oak Ridge reactor is 100 times more intense. So you can compensate for neutron flux that way. That's used throughout the world now in other places, but it's not the preferred method because of the low specific activity.

There are other issues associated with low specific activity that you have to worry about, which is that it gets contaminated in this process of eluding the technetium-99 off of the moly-99 column. You basically take the moly-99, put it in a saline solution and pull off the technetium-99. That's a straightforward technique, but it has a bit of contamination in it, and that's where the regulation comes in.

The comparison of those two techniques, both of which use reactors, is that the present technique has very high specific activity; the alternative has low specific activity. The present technique requires highly enriched uranium; the alternative requires highly enriched moly-98. There's an advantage in that. That's not a weapons material, for example. The present technique generates a lot of radioactive waste; the other method does not—it has very little waste associated with it. You can make some other isotopes with the present method that you cannot make with the alternative method. So there's the balance. You could do it, but it's not as good.

The other approach is with accelerators. I don't know if you're running out of time here—

● (1140)

Ms. Catherine Bell: Probably.

Dr. Nigel Lockyer: Yes, but maybe I should continue, because somebody else will be interested.

For accelerator production, you can think of an accelerator as a source of neutrons, like a reactor. The difference is that an accelerator, I would say, is easier to build and it's easier to regulate. If you turn it off, it goes off—that kind of thing. So you could imagine making moly-99 by simply mimicking a reactor. You take the highly enriched uranium and you would put the neutrons in it, not from a reactor but from an accelerator. The problem with that method, I think, is it's pretty expensive. That would be the drawback to it, but you could do it. There's no reason you couldn't do it; it's simply money.

The other approach, which I think is more interesting, is to start with moly-100 and use an electronic accelerator, which would then generate photons and you would use the photon to remove one of the neutrons. So moly-100 goes to moly-99. Remember, earlier I added a neutron to 98; now I'm subtracting one. It's the same issue as before: low specific activity. Can you build that accelerator? Yes. Is it relatively inexpensive? Yes. So what is the issue? The issue again is the low specific activity. I think that's the issue that has to be solved.

The Chair: Thank you, Ms. Bell and Mr. Lockyer.

Ms. Gallant.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Thank you, Mr. Chairman.

Mr. Binder, it's refreshing to have a CNSC president who has an understanding of the science upon which you are regulating an industry.

I'm interested in the CNSC decision-making process and the relationship between the office of the president and the other members of the CNSC board. How regular is contact between the president and the board?

Dr. Michael Binder: On every matter associated with public hearings, it is continual. We all get the same documentation. We all get notices of hearings, staff assessments, etc. In addition, I share with them a lot of the common papers, international agreements, what's going on, environmental scans, things of that nature. They are part of the whole commission. However, they are part-time, so we try to make sure that we get the best out of them. This means making sure that they are well briefed for the public hearing.

We webcast all our meetings, so it's available to the public. If you have nothing to do for 12 hours, you can listen to some compelling presentations and some very tough questioning of witnesses about designs, assumptions, and safety.

● (1145)

Mrs. Cheryl Gallant: So you are situated in the CNSC office, and the board members are spread out across the country. You communicate with them electronically, I take it.

Dr. Michael Binder: Normally, but in public hearings we all come together.

Mrs. Cheryl Gallant: Does the flow of information from the commission pass through the president to the board members, or do board members receive information directly from staff?

Dr. Michael Binder: We have a secretary who is in charge of the tribunal business. He sends the applications directly to all of us at almost the same time.

Mrs. Cheryl Gallant: What role does a communication director play in the flow of information to the board and members of the public, including parliamentarians?

Dr. Michael Binder: We try to be as transparent as possible, and any of the proponent material coming in front of us is posted. They have to allow us to post any of the interventions. Everything else is in the public domain. We're trying to put as much information as we have on the public record.

Mrs. Cheryl Gallant: So the information comes in and then gets posted raw, so to speak, for people to see?

Dr. Michael Binder: Absolutely.

Mrs. Cheryl Gallant: Who is the current communications director for the CNSC?

Dr. Michael Binder: We have Sharron Ellis, who is sitting right here.

Mrs. Cheryl Gallant: One of the points raised by a previous CNSC president was the need to listen to the experts, heed the professionals. Yet on more than one occasion the record shows that recommendations of the professional staff at the CNSC were disregarded. When the science and the fact-based evidence support the staff recommendations, would political considerations ever factor into licensing decisions?

Dr. Michael Binder: I haven't seen any such cases.

Some people believe that because it's labelled a science it's black and white, easy to understand, right or wrong. It isn't like that. If it were, we wouldn't have the MAPLE issue. The MAPLE problem was that they couldn't understand the physics inside the core. That's why we're having this particular difficulty.

The tribunal, the staff, the proponent, the interveners—all of them bring different scientific perspectives to the table. We have a tribunal to take all of this into account in making a decision. They are probabilistic issues. We are talking about things that have a probabilistic outcome, and one has to make some judgment calls. This is a very long-winded way of telling you that, wherever possible, we take our staff into account and try to base our decisions on science.

Mrs. Cheryl Gallant: What are the circumstances under which the board would override staff recommendations when making a decision?

Dr. Michael Binder: I wouldn't use language like “override”. The staff itself provide options.

For example, you have to do a trade-off between keeping something for how long versus the probability of an incident happening. So you have to always weigh probable trade-offs between one particular aspect and another. And many times staff tell us, “Here is option 1; here is option 2; here are the various probabilities associated with one or the other.”

Mrs. Cheryl Gallant: Okay, we may come back to that issue.

When hearings are held, are all members of the CNSC board present?

Dr. Michael Binder: So far they have been, but they don't necessarily have to be. We can have hearings with fewer than the maximum seven members.

Mrs. Cheryl Gallant: So how is it decided what number or who will be present at a hearing?

Dr. Michael Binder: I ask who wants to participate, and I have the authority to create a tribunal that is smaller. Until now, in the five months I have been there, I have asked, and anybody who wanted to participate actually participated.

● (1150)

Mrs. Cheryl Gallant: What are the rules of attendance, if any, with the board members? If the board members are required to be at a hearing and they don't attend, are there rules on whether or not they're still going to be a member of the board?

Dr. Michael Binder: Not to my knowledge. They get paid per hearing; they get per diem and travel, etc. But so far every time they wanted to attend, they attended. I haven't had this problem to date.

Mrs. Cheryl Gallant: There is a CNSC office on site at AECL in Chalk River. Would you describe how the staff on location convey the observations, reports, or the general flow of information to the board members?

Dr. Michael Binder: They have staff in there. There is a manager who oversees compliance with all the rules of the plant. And if there is an incident—let's assume there is an on-plant shutdown—there is something called SDR, which is a particular incident-reporting that automatically goes to all commission members, and they then deal with this in a public hearing.

The Chair: Thank you, Ms. Gallant. Your time is up.

We go now to the five-minute rounds, starting with the official opposition. Mr. St. Amand, you have up to five minutes.

Mr. Lloyd St. Amand (Brant, Lib.): Thank you very much, Mr. Chair.

Thank you, gentlemen, for coming this morning.

Is it Mr. or Dr. Binder?

Dr. Michael Binder: I answer to both.

Mr. Alan Tonks (York South—Weston, Lib.): Except if it's an emergency.

Mr. Lloyd St. Amand: You have been the president of CNSC for five months now, is that right?

Dr. Michael Binder: Right.

Mr. Lloyd St. Amand: And you were a commissioner on the commission for some period of time before that?

Dr. Michael Binder: No, it's the same time, the same five months.

Mr. Lloyd St. Amand: The same five months. Okay, so you're brand-new to the Canadian Nuclear Safety Commission.

Dr. Michael Binder: That is correct.

Mr. Lloyd St. Amand: And did you, during your previous career, follow the workings at all of CNSC?

Dr. Michael Binder: No.

Mr. Lloyd St. Amand: Did you know fellow commission members before five months ago?

Dr. Michael Binder: The only commissioner I knew was the ex-president.

Mr. Lloyd St. Amand: Ms. Keen.

Dr. Michael Binder: Ms. Keen.

Mr. Lloyd St. Amand: And for how long had you known Ms. Keen?

Dr. Michael Binder: In fact we were colleagues for a few months in the Department of Industry.

Mr. Lloyd St. Amand: Sorry, in...?

Dr. Michael Binder: In Industry Canada.

Mr. Lloyd St. Amand: Okay, fair enough.

So based upon your working relationship with Ms. Keen, were you surprised when she was fired as president of the commission?

Dr. Michael Binder: Yes.

Mr. Lloyd St. Amand: And I presume you were surprised because the impression you had formed of her was of a competent, professional individual.

Dr. Michael Binder: She was an ADM in Industry Canada and she had responsibility for something completely different from my area of responsibility. I was doing something else. So I don't know anything about her working competency, but she seemed fine.

Mr. Lloyd St. Amand: Right. But you had heard nothing by way of substantiated rumours that she wasn't doing the job effectively.

Dr. Michael Binder: No.

Mr. Lloyd St. Amand: Nothing at all like that?

Dr. Michael Binder: No, I didn't follow the matter.

Mr. Lloyd St. Amand: When AECL unilaterally made the decision to discontinue the MAPLE project, what was your reaction to that, Dr. Binder?

Dr. Michael Binder: I wasn't surprised, because, as I've said before, they were not able to explain the physics of their reactor. They've been trying very hard and doing all kinds of experiments to try to understand how it operates—the physics of it and that different configuration. Different pressures and different things change the configuration.

They've been trying for a long time to understand and predict its behaviour, because without being able to predict its behaviour, you cannot assure safety, because you don't know what's going to happen.

Our staff, along with them, have been trying to figure out what it is, to allow them to experiment with this. It's been years and years, and still to this day, there is no answer. So I was not surprised—

Mr. Lloyd St. Amand: The reason I ask, Doctor, is that MDS Nordion was, in their phrasing, very surprised, to the point of being shocked at the decision by AECL to discontinue the reactor. Were you aware of that?

● (1155)

Dr. Michael Binder: Yes, I've heard the testimony, but I think that the surprise was that the scientists couldn't fix it. That's the surprise.

Mr. Lloyd St. Amand: Dr. Lockyer, if I can ask you, sir, what was your reaction to the decision by AECL to discontinue the MAPLE project?

Dr. Nigel Lockyer: I didn't follow it from the beginning, so I don't consider myself an expert on it. It was mere interest. I read it. I listened to it. I read the testimony here.

Mr. Lloyd St. Amand: In your considered or expert opinion, is the MAPLE project definitely a no go?

Dr. Nigel Lockyer: It seems as though you've spent a long time trying to make it work. That's what I would say. And you've spent a lot of money trying to make it work.

Mr. Lloyd St. Amand: Right.

Dr. Nigel Lockyer: I would never say it's a no go, but it's a question of how much time and effort you want to put into it.

The Chair: Mr. Tonks, you have time for one question.

Mr. Alan Tonks: It's really on the line of the question.

Mr. Binder, you said the behaviour of the MAPLE 1 reactor differed from the model projections. I guess the surprise is that you've outlined the expertise of the CNSB staff and so on, and the question is why it took so long, even if it was just from a safety point of view, which is your mandate.

Dr. Michael Binder: Right.

Mr. Alan Tonks: Out of that particular regulatory piece of the process, was anything put back to AECL with respect to the MAPLE on the practical aspects of whether it was going to be possible?

Dr. Michael Binder: No. Safety was not the driver for discontinuing the MAPLE. Lack of understanding of how it operates was.

Again I come back to people believing that science is a slam-dunk—you know, you can do this, and it's no problem. This was never done in that small a configuration with AECL.

Yes, it's surprising that they couldn't figure it out, absolutely, but that's the problem with science. You sometimes don't get it.

The Chair: Thank you, Mr. St. Amand and Mr. Tonks.

We go now to Monsieur Ouellet for up to five minutes.

[*Translation*]

Mr. Christian Ouellet (Brome—Missisquoi, BQ): Thank you, Mr. Chairman. Thank you to the witnesses for coming today.

Mr. Binder, a little earlier you said that the current reactor could be upgraded safely. If it is completely upgraded, then according to you it could be productive and safe.

Was there any point in investing half a billion dollars in the MAPLE reactor if the former reactor could be refitted?

Mr. Michael Binder: It's always a question of money. It could be refitted but that would be more costly than building new reactors. Furthermore, we decided to build a reactor specifically for the production of isotopes. Refitting the NRUs could be very costly, so we'll see.

Mr. Christian Ouellet: There seems to be a culture of silence in the nuclear industry. You said that with respect to the commission's meetings, everything is posted and public, but that is not the case for the Chalk River plants or reactor. It's almost as if we were dealing with nuclear weapons in the army, but that's not the case.

Is there a public information protocol for incidents or accidents in Chalk River or elsewhere? Has a protocol been adopted by the CNSC?

Mr. Michael Binder: Absolutely. Every incident has to be reported within a formal process. It is tabled before the courts and it becomes public.

Mr. Christian Ouellet: Does that protocol specify the time period between the accident or incident and public disclosure? Are we talking about hours, days or weeks?

Mr. Michael Binder: We receive the information as quickly as possible. It becomes public as soon as there is a public meeting. That is where there may be a delay.

● (1200)

Mr. Christian Ouellet: Could a week go by before people living near Darlington, de Gentilly or Chalk River become aware that something has happened?

Mr. Michael Binder: Yes, that could happen.

Mr. Christian Ouellet: Who decides internally, who has that authority? Is it you or someone from the plant who is sufficiently aware of the risk that radiation poses for the environment and for individuals? Who decides whether the public will be alerted immediately or not?

Mr. Michael Binder: If it is very dangerous, there are certain protocols. They specify how people will be informed. If it is very dangerous, there is a protocol for that and it is public. We're talking about an incident such as closing reactors for unforeseen reasons.

Mr. Christian Ouellet: Is that disclosure based on the amount of radiation or not? Is it because radiation will leak into the atmosphere?

Mr. Michael Binder: Yes, if there is a radiation leak, it is absolutely necessary to alert everyone, but that doesn't happen.

Mr. Christian Ouellet: Mr. Binder, without there necessarily being an explosion, gases within the concrete cell can be radioactive. That is the case in Gentilly and that was the case in Darlington, and people were not alerted. Where does it go? It can't go anywhere else but into the air.

[*English*]

Dr. Michael Binder: All I can say is on my watch over the last five months there have been a couple of significant development reports, or SDRs. An SDR is a document that absolutely has to be tabled in front of the commission and talks about a particular incident. If it's an incident that in any way threatens the environment or the public, there's a protocol for making it public with the community.

[*Translation*]

Mr. Christian Ouellet: I come back to my question. You have a document. If the MAPLE reactor had exploded when the start-up button was pressed, how many hours would have passed before people living around Chalk River became aware of this?

Mr. Michael Binder: I am not familiar with the details of the protocol, but I know there is one. I could send it to the committee.

Mr. Christian Ouellet: Yes, I would like you to table it; it would be very interesting to know this. In some cases, a week has gone by. In the month of April, something happened at Gentilly and a week went by before this was disclosed to the public. The mayor learned about it the following morning in a restaurant, Mr. Binder.

[*English*]

Dr. Michael Binder: Sorry, I'm not familiar with the incident you're talking about. But of the incidents I've been around, we did not have any where a release occurred that threatened either the employees or the environment.

All nuclear plants have a protocol for communicating emergency issues to the public. It's a very well-defined kind of process. I will gladly table it and share it with this committee.

The Chair: Merci, Monsieur Ouellet. Your time is up.

We'll go to Mr. Trost for up to five minutes.

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

My first question is for Dr. Binder.

When you look at the various priorities you have here—nuclear power plants, waste management facilities, uranium fuel fabricators, processing, etc.—your organization ultimately has to do a bit of prioritizing. How does it go about prioritizing? What takes precedence? Do you divide your staff into teams that look after certain institutions? Is it a first-come, first-served basis? Because a nuclear power plant and a research facility are going to land somewhat differently on the scale of possible effects.

Dr. Michael Binder: Well, it's actually an excellent question, which troubled me when I arrived.

This particular sector has been somewhat in a sleep mode for the last 30 years in terms of doing new things. Right now all of a sudden there is hyperactivity—an interest in mining, in maybe new builds, in refurbishment—so we had to prioritize internally.

We also are growing. In fact, in the last few years we have been recruiting more staff, and we have created more jobs that look after mines, after new builds, and new designs, etc. We've done all of the above by re-prioritizing, and we're growing by recruiting new staff.

● (1205)

Mr. Bradley Trost: I realize that what you look at is based out of legislation of the Canadian Nuclear Safety and Control Act. Do you sometimes find when you're looking at certain aspects of your mandate that there is a certain degree of duplication with other governments or other government departments?

Specifically on your noting of the mining issue—uranium mining affects my province, Saskatchewan, most definitely—are there areas where you overlap and perhaps do similar things to what provincial environment departments could do? In your opinion, if that overlap could be legislatively taken away, would that free up resources for other priorities?

Dr. Michael Binder: Again, it's an excellent question. I can tell you we try to avoid overlap whenever we can. In Saskatchewan—it's funny you should mention it—we have a protocol with the Government of Saskatchewan to in fact not overlap, to do joint environmental assessment, labour safety, using the mining protocol of the Government of Saskatchewan, wherever possible, absolutely.

So we cooperate. In fact, we create joint environmental assessment panels whenever we can.

Mr. Bradley Trost: Effectively, if it were written into the legislation, you could delegate most or all of your authority or what you need to do over to the Government of Saskatchewan. You do believe that they would have the expertise to completely handle the mining issues. Is there something specific about uranium, with the radiation, that couldn't be handled by a normal provincial environment office, mining office?

Dr. Michael Binder: Our experience has been that the provinces want us to be partners with them because we are the nuclear...exactly the mission you mentioned. Nuclear is a federal responsibility and it requires some specialized expertise.

Mr. Bradley Trost: I understand what you're saying, but at the same time, some potash mines have higher radiation. You can get higher radiation exposure from potash mines than you can from certain uranium mines. So there's a potential there for some flexibility.

Dr. Michael Binder: In Saskatchewan, the richness of the uranium mine is such that—

Mr. Bradley Trost: I understand. It's sometimes so hot they can't go in, to send people.

Dr. Michael Binder: Right. So far I can tell you we have a very good working relationship with the Saskatchewan government, and in fact they're quite happy for us to continue to work with them on this thing.

Mr. Bradley Trost: But it could free up staff for other priorities, if you could delegate more of that to them.

Dr. Michael Binder: We delegate as much as we can.

Mr. Bradley Trost: Okay.

My question is now to Dr. Lockyer.

You were discussing a bit about the various elements that could or could not be produced by accelerators, etc. I realize this is probably too new of a question. Has TRIUMF...? Are you aware of any other organization that has been developing plans to begin to move into the gap that the MAPLE would have filled? At what stage or what level are those plans, if they exist? Or have any plans been made to begin to move forward in that way?

Dr. Nigel Lockyer: I can't be very precise on that, but the answer is yes. There are a number of efforts in the U.S. to do this. There are people who have approached me in Canada to do this, who would like to see these alternative methods pursued. It's a mixture of expertise that has to come together to decide whether it's worth while.

We've been discussing at TRIUMF whether we should have a workshop or something like this that brings together the expertise of the accelerator community, the chemistry, the radio-chemistry, to see just how viable these other methods are.

So the answer is yes, everybody is looking at it. There's quite a bit of interest.

Mr. Bradley Trost: From your experience, would it be more of a scientific question they're having problems with, or is this more of a business model financial question?

Dr. Nigel Lockyer: If you're talking to me, it's a scientific question.

Mr. Bradley Trost: You do interact with other people in your organization.

Dr. Nigel Lockyer: Absolutely. In fact, it's the business people who have asked us whether there are alternatives. Both sides of the equation, if you like, are interested in this. It comes down to all those issues. The people I've spoken to feel that there are challenges to doing it other ways. A multi-year research project is more like a development project.

● (1210)

The Chair: Thank you, Mr. Trost. Your time is up.

We have time for one more round, although Mr. Binder will be leaving partway through.

Starting with the official opposition, Mr. Boshcoff for up to five minutes.

Mr. Ken Boshcoff (Thunder Bay—Rainy River, Lib.): Thank you very much.

You mentioned in your presentation, Dr. Lockyer, that in Canada there were 400 cyclotron or particle accelerators and 900 worldwide. Is that approximate?

Dr. Nigel Lockyer: I said there were 400 cyclotrons worldwide that were not commercial. If you include commercial, there are about 900. That's an estimate, because you don't really know how many commercial ones there are.

Mr. Ken Boshcoff: How many of those two categories would we have in Canada?

Dr. Nigel Lockyer: I think I said for medical purposes in Canada, those that are being used and those about to be used, it is 16.

Mr. Ken Boshcoff: The difference between medical and research, is it night and day? Is it adaptable, or does it require sizeable investments?

Dr. Nigel Lockyer: Big medical centres want both. They want to produce isotopes for clinical use and the doctors want to do research with them at the same time. They have a dual function.

Mr. Ken Boshcoff: The optimal facility would be one that is currently doing some form of research that has that, preferably a cancer research centre that maybe has the concrete walls and the protection, a medical school, a hospital or university—would it be that kind of conglomerate?

Dr. Nigel Lockyer: I would say a major medical centre is where you have this activity.

Mr. Ken Boshcoff: When you mention the business inquiries, is it coming from different types of people who are interested and maybe financing this at some of those sites, perhaps?

Dr. Nigel Lockyer: It wasn't so much financing. There are people who have patents on producing, for example, technetium-99, or moly-99, using accelerators.

Mr. Ken Boshcoff: When MDS Nordion mentioned their sizeable investment in the MAPLE project, would they have any proprietary rights in terms of being able to take whatever they've invested and apply it to a situation such as yours, or would that expand isotope production?

Dr. Nigel Lockyer: I'm not sure exactly what you're asking, but my general feeling is that since we've worked so closely with MDS Nordion in the past, in anything we would do we would want them to be involved, because that's their business. They're experts on many aspects of it. As you know, there's a business model associated with it, and it's not only the production issues.

I think you can produce it, but that's not the issue. The issue is if you can produce it pure enough. Then, all the other things being satisfied—meaning cost, for example—would be a big factor.

Mr. Ken Boshcoff: Could any operation start up in Canada essentially from scratch, not associated with MDS Nordion or TRIUMF, even if they had some of the other components, such as research and hospital and medical school? Could they start up and develop a competitive isotope production facility?

Dr. Nigel Lockyer: I don't think there's anywhere in Canada with the know-how that even approximates what TRIUMF has. TRIUMF has a very large group of people who are experts in design, production, and building of accelerators. There's nothing like that anywhere else in Canada. But the U.S., Europe, and Asia could.

Mr. Ken Boshcoff: With the events of last November and December, have you heard of things in the United States or in the rest of the world in terms of filling the vacuum in market share?

Dr. Nigel Lockyer: We read the same newspapers, probably, so the answer is yes to that. The University of Missouri has a reactor, and they're looking to produce moly-99 and they're trying to get funding to do that. They don't at the moment, but there's certainly a movement to do that.

There has been a recent national academy study on the production of medical isotope, even before the issues came up with the NRU. There's always this tension of using highly enriched uranium to produce them as well, but we have a special deal, as you know.

● (1215)

Mr. Ken Boshcoff: What is the world demand? Is it insatiable? If we produced more facilities and produced more, would it all be used? In terms of capacity, is there a limit for research, for clinical, for any other experimental uses or pure health reasons?

Dr. Nigel Lockyer: That's a good question. My impression from talking with people at MDS Nordion is that for technetium-99 it's kind of flat. It's not a growing field.

I made a comment earlier about PET. It's growing where I expect the growth to be—in centres wanting small cyclotrons to produce the isotopes locally for PET scanners rather than for SPECT.

The Chair: Thank you, Mr. Boshcoff. Your time is up.

We go now to Madame DeBellefeuille for up to five minutes.

[*Translation*]

Mrs. Claude DeBellefeuille: Thank you, Mr. Chairman.

My question is for Mr. Binder.

Mr. Binder, if you were to conclude that the NRU reactor no longer met safety standards, but under the new guidelines you had to take the health of Canadians into account, you would have to choose between health and safety.

Would you be willing to shut down the NRU reactor even if you could end up in the same situation as your predecessor?

[*English*]

Dr. Michael Binder: That is a very difficult question. It's a hypothetical question. We will have to weigh security and safety with health issues. That will be part of the process; the tribunal will have to make a decision.

So I won't give you an answer now to a hypothetical question. We absolutely have to make sure that the safety of Canadians is protected, but in deciding what the safety is we have to also take into account....

Everybody has to understand that we're talking about substituting the NRU. But the NRU is...the volume of moly that they're producing is unmatched by anybody else. It's another consideration that will go into the decision-making process.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Binder, this is a new guideline and therefore it has not had to be enforced. During the isotope crisis, there was information being exchanged between Health Canada, the Department of Natural Resources, Atomic Energy of Canada Limited and the Canadian Nuclear Safety Commission. It wasn't straightforward. A communications protocol was issued, but there was not a clear picture of isotope needs throughout Canada. The data was not available.

If something were to happen today, would you have a protocol that would give you quick access to information on the need for isotopes, in order to be able to do a health and safety analysis based on accurate and true data?

Everywhere we have heard witnesses from the health sector and everyone had their own perspective of these needs depending on their province, whether it be British Columbia, Ontario or Quebec.

Are you able to answer that question? Do you have a source of information that would quickly give you an accurate picture of the need for isotopes throughout Canada?

Mr. Michael Binder: No, I do not have that data because these are trade secrets.

[*English*]

There are companies out there, from MDS Nordion to a couple of other ones, who are trying to source the isotopes elsewhere. I know that Health Canada now is studying the issue.

All we are looking into is whether a particular reactor, if it continues to operate, will operate safely. That's really our mandate. It is not our mandate to assure a supply of isotopes. It has to be very clear: our mandate is to make sure that we take the production of isotopes as an input into our decision with respect to keeping a particular site open. It is not for us to go around and check to see where other supplies of isotopes will come from.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Binder, if you had to assess the threat to the health of Canadians and compare that to safety risks, you would have to have a very clear picture of Quebeckers' and Canadians' need for isotopes. Otherwise, how could you decide whether you shut down a plant or not?

● (1220)

[*English*]

Dr. Michael Binder: AECL will come in front of us, and we'll argue the pros and cons, and interveners from the medical associations and governments can come and argue their case for and against. We will take all of this under advisement and make a decision.

The Chair: Merci, Madame DeBellefeuille.

We go to Mr. Allen now.

Mr. Binder, I see that you have to leave. It's twenty after.

Dr. Michael Binder: I'm sorry. I promise you that if you want me, I will be back.

The Chair: Okay. Thank you very much for coming. We appreciate it very much.

Mr. Mike Allen (Tobique—Mactaquac, CPC): I had three questions, Mr. Chair, but I guess two of them are now off the table, as Mr. Binder's leaving. I'll go to Mr. Lockyer on the question I have.

You mentioned that in the U.S.—correct me if I got this wrong—PET has exceeded the SPECT for usage in the U.S.

Dr. Nigel Lockyer: It is sales—sales last year.

Mr. Mike Allen: Okay. What is driving this change, whereby the majority of it is PET-related, here in Canada?

Dr. Nigel Lockyer: It's a good question.

PET, if we call it a modality, is a more modern modality. It has better resolution, better precision. It has, I would say, taken off in the cancer world, and it's becoming very popular for cancer screening. It has the potential of new molecules being developed for targeting specific metabolic activity in your body, so it has received a lot of research interest. All of the major medical centres have them now. The growth in the last few years in the U.S. has been very big.

Mr. Mike Allen: You said that in Canada there are 10,000 procedures per day?

Dr. Nigel Lockyer: Yes. The estimate was that there were about 900 cameras and maybe eight treatments per day per camera, so I was rounding it up for you.

Mr. Mike Allen: All right. Do you see a similar trend to this happening in Canada? Is it more expensive?

Dr. Nigel Lockyer: For PET to take off, first of all you need access to the isotopes that are made by cyclotrons. So you have to make the investment for cyclotrons, and that's not going to be made in every hospital. Every hospital can afford a SPECT. The SPECT camera is fairly small and fairly straightforward. At the moment, PET hasn't gone into what I would call mass production mode. Cyclotrons are not in mass production, although there are quite a few around the world, as you can see.

Until the market pressure gives you a PET scanner that's cheaper and cyclotrons that are cheaper and easier to handle—you don't need a large technical staff to look after them—that transition will move along, but it's not going to take off. I would have said that if you looked at the field ten years from now it might be very different. That's my guess.

Mr. Mike Allen: Who are the key players in supplying that equipment? As you say, it's not mass-produced or anything like that. Who are the suppliers?

Dr. Nigel Lockyer: There are a number of major companies that make cyclotrons now. IBA is probably the largest company; it's a Belgian company. GE Healthcare makes cyclotrons; there's a Japanese company that makes them; there's a Canadian company that makes cyclotrons in Vancouver, Ebco . So it's a pretty healthy business, I would say. As for PET scanners, there are again a number of companies around the world that make PET scanners too.

Mr. Mike Allen: You mentioned ten years. Do you believe the market's going to drive us more toward that kind of technology?

Dr. Nigel Lockyer: Yes, I do.

Mr. Mike Allen: Thank you, Mr. Chair.

The Chair: Thank you, Mr. Allen.

Is there anyone else from the Conservative Party?

Okay. We'll go, then, just for a short question, to Ms. Bell, and then to any Liberal who would like ask questions, if there is anyone.

Ms. Bell, go ahead.

Ms. Catherine Bell: Thank you.

Just following up on Mr. Allen's line of questioning, which is where I wanted to go, is it wise, then, given the change in technology and the change we're going to see in the future, to be building the old-style reactors, the old technology, and investing all that money, when we can see that the market is changing and the usage is changing?

● (1225)

Dr. Nigel Lockyer: I think that may be the question you have to decide. I'm somewhat biased towards PET—I might as well just tell you that—so I think the answer is I that see it as where the field is going. It's a question of how big it becomes and whether it really replaces SPECT, because SPECT, as I said, can be in every hospital. It's in every operating room. It's very prevalent. So the question is, what will be the demand for it?

My suspicion is that it is not a growing demand, that at best it's a flat demand. Then the question will be whether it rolls off. I just don't know enough to be able to answer that question.

The Chair: Thank you, Ms. Bell.

Are there any further questions?

Seeing none, thank you very much for coming today, Dr. Lockyer. We do appreciate that and the very interesting information you have given us. It will be helpful to us. Thank you very much.

I've been given notice of the motion, which we will get to in a minute, but Mr. Anderson had indicated he has something he'd like to ask the committee about.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): Mr. Chair, I talked to some of the committee members, and I think we may have agreement here. I'd like to invite the committee to a reception from 11:30 to 1:00 in my office on Thursday in lieu of a meeting. I talked to the critics. They seemed to be okay with that, so I just wanted to check and make sure the committee was in favour of that. I think we have one witness or whatever, so that would mean cancelling that as well. It is whatever the committee decides here. I think we had some agreement. I just wanted to make sure.

The Chair: I will just put it to the committee. Is there agreement to that?

Mr. St. Amand.

Mr. Lloyd St. Amand: I can't recall the name of the witness or from what distance he or she was coming.

The Chair: The one thing about the witness, of course, is it seems somewhat uncertain that the House will be sitting on Thursday, in which case the witness would be cancelled. It may not be as serious a consideration as otherwise might be.

Mr. Lloyd St. Amand: That may be, but who was the witness?

The Chair: Yes, who was the witness?

The Clerk of the Committee (Mr. Chad Mariage): Mr. Chair, the witness was Daniel Rozon, from École polytechnique in Montreal. So he's coming from Montreal.

Mr. Lloyd St. Amand: All right.

The Chair: Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Chairman, before we proceed with Mr. Trost's motion, I would just like to remind you of something. I am not satisfied with the response from the Department of Natural Resources. This department does not seem to take our request seriously. We asked for two documents on ecoENERGY when the deputy minister, Ms. Doyle, appeared. Furthermore, Mr. Bigras had asked for an environmental strategic analysis when he replaced Mr. Ouellet. I think that we have been patient. Almost two months have gone by and I am wondering what the obstacle is. Perhaps Mr. Anderson could answer this. I do not believe that the clerk has had any news either.

[*English*]

The Chair: Mr. Anderson, have you anything to say on that?

Mr. David Anderson: My first question is whether we decided not to have a meeting on Thursday.

The Chair: Yes, there seems to be agreement to that, so I think I can say we will go ahead with your proposal on Thursday.

Mr. David Anderson: If they'll give me the specifics of what they've asked for, I'm willing to take that request forward and just see what's going on with that.

The Chair: It is the second time she has requested this, so we will pursue it, for sure.

Mr. Anderson, thank you for that.

Mr. St. Amand.

Mr. Lloyd St. Amand: I just wondered, in terms of the completion of the study by the analysts, where we are with that.

Mr. Jean-Luc Bourdages (Committee Researcher): Mr. Chair, we have all received the chronology of the events that would be part of that report and we are still working on a draft, ideally waiting for some instructions about where we would go. We have a fairly detailed draft at this point, but we would still need to include everything we've heard over the last two weeks or so.

The Chair: Mr. Lockyer, you are certainly free to go. I thought I had indicated that, but maybe it was not clear enough. Have a good day.

You've heard the answer from the analyst. Is there anything further on that, or can we get to the motion now?

On the motion, could you start by reading the motion into the record, Mr. Trost? Then we'll have any discussion on that and possibly get to a vote on it.

Mr. Bradley Trost: The motion is that the committee report the following to the House at the earliest opportunity:

> A carbon tax is a trick. It will raise the price of everything, including food, electricity, home heating, and gas at the pumps. It will devastate young families, seniors, and people on a fixed income; destroy jobs; and in this time of global economic uncertainty it will have a negative impact on Canada's traditional industries, like forestry, and will eliminate jobs. The committee recommends, therefore, that the federal government reject any plans for new carbon taxes.

Mr. Chair, I am more than willing to amend it to eliminate a lot of the more flowery language in the centre. I would be more than willing if the committee would see fit to amend it so that it says that the committee report the following to the House at the earliest opportunity—

● (1230)

The Chair: Mr. Trost, you can't amend your own motion.

Mr. Bradley Trost: I'm noting what my amendment would be and what I would be willing to accept.

The Chair: You can certainly do that in the discussion.

You're allowed to speak to your motion first. Go ahead and speak to your motion, Mr. Trost.

Mr. Bradley Trost: That's what I'm doing, Mr. Chair.

The Chair: Excellent.

Mr. Bradley Trost: I'm just saying that on further reflection, I think that if I were to word it again, it would say that the committee report the following to the House at the earliest opportunity:

> A carbon tax will have a negative impact on Canada's traditional industries, like forestry, and will eliminate jobs. The committee therefore recommends that the federal government reject any plans for new carbon taxes.

Basically, the reason for the motion, very simply, Mr. Chair, is that this is a committee of natural resources. We deal with industries that are very energy-intensive in Canada. We all know that putting taxes on any of these industries will make them less competitive, and will make it more difficult for them to promote well-being to Canada's economy. Therefore, I would like it to be put on record that this committee is opposed to a carbon tax.

My understanding is that the agriculture committee today, with support from three different parties, voted to support a similar motion.

The Chair: Thank you, Mr. Trost.

The motion is in order. Proper notice has been given.

The members have heard the discussion from Mr. Trost. We do have a list. We have Mr. Alghabra, Mr. Boshcoff, Ms. Bell, and Monsieur Ouellet so far.

Unless you want to go directly to a vote on this, Mr. Alghabra, go ahead, please.

Mr. Omar Alghabra: As much as I want to go to a vote, Mr. Chair, I can't resist offering my reflections, as the member has done himself.

Obviously the member is having some remorse about how he worded the original motion, but he still has not been able to save himself. Look, this is ridiculous, especially the first sentence—"A carbon tax is a trick".

First, Mr. Chair, let me clarify something he said, which was wrong. The agriculture committee did not pass a similar motion. The agriculture committee amended the motion and voted to conduct a study on carbon tax. The PMO and the Conservative Party are spreading lies, because they were not aware that the motion was amended. I want to help Mr. Trost so he doesn't commit the same mistake again.

Let me say, Mr. Chair, this motion is a trick on its own. If the member is saying pricing carbon is the wrong way to go, I want to advise him to speak to the Minister of the Environment, the Minister of Finance, and the Prime Minister, who, under their environmental plan, are putting a carbon price up to $65 a tonne. It's in their economic forecasting. So if he wants to go through this motion, he needs to know he's actually condemning his government and its policy.

That being said, this motion is part of the style of this government. Initially they went after Ontario. Now they're going after British Columbia, which, by the way, has implemented a neutral carbon tax, which was complimented by the Minister of the Environment. Now this member of his party is saying it should be condemned.

The Conservative Party appears to be completely confused and not sure what to do about this issue, and I'm not surprised. But that being said, it goes without saying that this motion is inaccurate; it is ridiculous, over-the-top partisan, and I will not be supporting it.

Thank you.

The Chair: Thank you, Mr. Alghabra.

Mr. Boshcoff.

● (1235)

Mr. Ken Boshcoff: Just about an hour and a half ago we went through a very similar motion. I know that there's a cross-committee campaign with similar types of motions all across the parliamentary structure. I voted against the resolution because I was appalled at the process and the very nature. So I essentially had a protest vote that these types of things would be coming forward.

I have just learned that there has been a media release saying that somehow we are divided. I can only emphasize that if you wanted to make me angry, you really have, because this is an abuse of democracy. It's outrageously false. I guess we could have done the same thing that we did to the Prime Minister when Mr. Harris issued his release about how he was the hero of the forest industry and thought of something that none of us had done and convinced the Prime Minister and the minister to conduct a study into the forest industry. If it wasn't so laughable, we probably would have pursued it.

Can anybody here tell me why all of these types of resolutions were received or sent out within a 36-hour process? Is it the most absolutely amazing set of coincidences or not? In the previous committee, natural resources, the NDP member made some very good points in speaking against this, as did the Bloc. They were much more direct in terms of the understanding of campaigning on political policy and trying to distort. I find that the resolution before us.... I guess Mr. Trost really understands how childish it looks now that he sees it in print.

Mr. Chair, I think this is another attempt to disrupt the work of the committee, to slow down the committee work in general. We know that just like Mr. Poilievre's comments on Wednesday with regard to first nations, this is probably directed by the Prime Minister. This isn't an isolated case. There is certainly enough evidence, and it was confirmed yesterday in the House by the member from Peterborough that in the finance committee a similar resolution had come forward.

This is a dishonouring of the committee process that this is happening across committees and that these are being adapted. So I feel quite offended by it all, especially this recent media release. I just want you to know you can try to dance around it in terms of trying to fix this thing up, but it's a pure embarrassment for you and your party.

The Chair: Now to Ms. Bell.

Ms. Catherine Bell: Thank you, Mr. Chair.

It's my understanding that this motion has come up at other committees, specifically finance and transport. I think the way it's worded would be ruled out of order because it's argumentative. In an effort to save Mr. Trost, I'm going to propose an amendment. I'll read it slowly so that it can be translated. Delete everything after "opportunity" and replace with:

> This committee recognizes that we are living in a world where carbon must be constrained and priced, and further recognizes that the rising price of gas and energy impacts middle-income and lower-income Canadians and makes life less affordable. Therefore the committee recommends that the government put a price on carbon, based on the polluter-pay principle, and invest in programs and develop innovative technologies to help Canadians reduce their carbon footprint and their energy bills.

Mr. David Anderson: On a point of order, Mr. Chair, that clearly has to be ruled out of order. That takes us in a completely different direction from the original motion. The content of it is completely different from what we had in the other motion.

● (1240)

The Chair: I'm considering that right now, Mr. Anderson. That's a point I have to have a close look at, for sure.

Ms. Bell, do you have that written down so we can have a look at it?

Ms. Catherine Bell: Yes.

The Chair: Ms. Bell, I believe, as Mr. Anderson has noted, that this is out of order. It entirely changes the direction and the intent of the motion. I'm going to disallow that.

I'm going to continue with the debate on—

Ms. Catherine Bell: I challenge your decision on that.

The Chair: Okay. We now go directly to a vote.

The question is that the decision of the chair be sustained.

Mr. Omar Alghabra: Can you just read the proposed amendment?

The Chair: I'll have the clerk read it. Go ahead.

The Clerk: The proposal would be to delete all the words after "opportunity" and replace them with the following:

> This committee recognizes that we are living in a world where carbon must be constrained and priced, and further recognizes that the rising price of gas and energy impacts middle-income and lower-income Canadians and makes life less affordable. Therefore the committee recommends that the government put a price on carbon, based on the polluter-pay principle, and invest in programs and develop innovative technologies to help Canadians reduce their carbon footprint and their energy bills.

[*Translation*]

Mr. Christian Ouellet: Mr. Chairman, could I please be given an explanation about this?

[*English*]

The Chair: Monsieur Ouellet, go ahead.

[*Translation*]

Mr. Christian Ouellet: I simply wanted to say that this is completely different—

[*English*]

The Chair: Actually, we have to—

[*Translation*]

Mr. Christian Ouellet: Before voting—

[*English*]

The Chair: We have to put the question now, because the chair's decision has been challenged.

The question is whether the decision of the chair shall be sustained. We will go directly to a vote on that.

(Ruling of the chair sustained)

● (1245)

The Chair: Monsieur Ouellet, for discussion on the motion.

Mr. Christian Ouellet: On the motion, okay.

Mr. David Anderson: On the amended motion?

The Chair: There's no amendment, just on the motion.

[*Translation*]

Mr. Christian Ouellet: Mr. Chairman, perhaps we could deal with that and then deal with the other motion afterwards. It is so different. Personally, I would like to talk about that one.

[*English*]

The Chair: The discussion is on the original motion, unamended.

[*Translation*]

Mr. Christian Ouellet: This motion talks about devastating effects. It says that the tax would devastate people. I question that statement because I believe that it is climate change, rather, that would be devastating.

The carbon tax, whether it would be right or wrong, is simply a way to deal with, or not, climate change. I think that it is completely misleading to claim that a carbon tax would be devastating. It does not say that climate change would be devastating.

It says that the tax would be devastating for families, seniors and people on a fixed income but there is no mention of the environment. There will be huge and devastating effects on the environment. Why is that not mentioned? It makes no sense. The environment will be the first to suffer. If jobs are lost, a carbon tax will not be a significant factor.

This morning, Air Canada said that it wants to lay off 2,000 people. There is no carbon tax, this is simply due to fuel and oil prices. A carbon tax will not eliminate jobs, but the fact that we are moving towards a change in our society will have consequences. There is climate change, and the cost of oil, for the many reasons we are aware of, is beyond the government's control.

If most countries see a carbon tax as being a solution, then why don't we? I am throwing out the question. What will make prices go up: climate change, or the carbon tax? Is it better to collectively invest in order to change the attitudes of consumers or to wait for the collapse of a part of our society, a part of the economy, because of a severe lack of fuel or because of huge storms? Should we start assessing how we can change this or should we just allow climate change, storms and fuel prices to happen? We aren't dealing with the true problem, which is greenhouse gases. It makes perfect sense to speak about this here. It is not the carbon tax that is going to change this situation. The situation is deteriorating. A carbon tax can help change people's attitudes or not. We will have to see, that is another topic.

I refuse to say that a carbon tax will be devastating and will eliminate jobs. That is false, absolutely false.

[*English*]

The Chair: Merci, Monsieur Ouellet.

We go now to Ms. Gallant, and we have Mr. Anderson and Madame DeBellefeuille on the list.

Ms. Gallant.

Mrs. Cheryl Gallant: Thank you, Mr. Chairman.

I agree with Mr. Alghabra that the carbon tax is ridiculous, but I do wish to correct the record, in that the Standing Committee on Agriculture put forth the motion that they study the negative effects of a carbon tax or a broad-based environment tax.

Despite the election promise by the Ontario premier to close coal-fired plants for electricity, their lives have actually been extended as a consequence of more than a decade of darkness in the previous Liberal government, whereby they starved the nuclear industry. Consequently, the electrical—

● (1250)

Mr. Lloyd St. Amand: A point of order, Mr. Chair.

The Chair: On a point of order, Mr. St. Amand. Go ahead.

Mr. Lloyd St. Amand: We're now delving into the area of provincial jurisdiction. I'm not immediately seeing the relevance of these comments to the issue at hand.

Mrs. Cheryl Gallant: If you listen—

The Chair: Mr. St. Amand, I think it is relevant. I'll listen and make sure I'm comfortable that it continues to be, but she has made the connection to the motion we're debating.

Please go ahead, Ms. Gallant.

Mrs. Cheryl Gallant: The provinces, as well as the opposition federally, have proposed a carbon tax, and there will be a compounded effect. The single toughest input expense that the lumber industry puts forth is the cost of fuel, and in the sawmills the electricity. I don't know what certain members of the opposition have against the forestry industry, but in my riding of Renfrew—Nipissing—Pembroke we have a model for forestry and we sequester—

The Chair: Point of order, Mr. Boshcoff.

Mr. Ken Boshcoff: I think a point like that, after a unanimous report to Parliament from this committee, would be viewed as either moronic, idiotic, or sub-intelligent.

The Chair: That's out of order, Mr. Boshcoff.

Go ahead, Ms. Gallant.

Mr. Ken Boshcoff: I'm only trying to be helpful.

Mrs. Cheryl Gallant: Younger forests sequester more carbon from the environment, and that seems to be the goal of what is trying to be accomplished, getting the carbon out of the atmosphere. So I would support the motion, since helping the forestry industry will overall encourage a reduction in sequestration of carbon from the environment.

The Chair: Thank you, Ms. Gallant.

Mr. Anderson.

Mr. David Anderson: Mr. Chair, we want to work with the opposition, as always, and because we had some support at the agriculture committee we'd like to work in a way that would allow the opposition, particularly the three Liberals who voted with the government on the motion at the agriculture committee, to be able to do the same here. Mr. Tonks was not at the agriculture committee and is the only one who's innocent here, but he can join Mr. Alghabra, Mr. St. Amand, and myself.

In the spirit of cooperation, I would like to pose a friendly amendment along the lines that Mr. Trost had suggested that will remove some of the text from our motion. So it would read that the committee report the following to the House at the earliest opportunity:

> A carbon tax will have a negative impact on Canada's traditional industries, like forestry, and will eliminate jobs. The committee recommends, therefore, that the federal government reject any plans for new carbon taxes.

Actually, I have good hope that this would pass. I hope it will with the support of the official opposition. I was actually surprised to hear the Bloc now, Mr. Ouellet, expressing support for a nationwide carbon tax. I think that's something that should be noted as well. Hopefully they'll vote with us anyway.

I'd like to put the question if we can.

The Chair: Thank you, Mr. Anderson. We will now go to discussion on the amendment to the motion.

Any discussion on the amendment? Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Could you read it back to me in French?

[*English*]

The Chair: We will reread it; we have it written here.

[*Translation*]

The Clerk: I can read it slowly in English or I can attempt to read it in French.

Mrs. Claude DeBellefeuille: I would like to have the best translation possible.

[*English*]

The Clerk: Okay:

> A carbon tax will have a negative impact on Canada's traditional industries, like forestry, and will eliminate jobs. The committee recommends, therefore, that the federal government reject any plans for new carbon taxes.

The Chair: Okay, Madame DeBellefeuille? You've heard it?

[*Translation*]

Mrs. Claude DeBellefeuille: Yes.

[*English*]

The Chair: All right. Is there any further discussion on the amendment to the motion? If not, let's go to the question.

(Amendment negatived)

The Chair: We will go now to the motion as presented. Madame DeBellefeuille, you are on the list for that. I also have Mr. Allen.

● (1255)

[*Translation*]

Mrs. Claude DeBellefeuille: Mr. Chair, when I read the motion, I was somewhat pleased because I understood that Mr. Trost could actually have feelings. In fact, I perceive a lot of emotion in his motion. During our study on forests, he was rather stoic, but I see that he is capable, when he experiences an outburst of feeling, of drafting a rather charged text.

Because he has allowed himself to give in to his emotions, I will not be able to support this motion, Mr. Chair. I would now ask that we proceed with the vote.

[*English*]

The Chair: There seems to be a lot of love in the room right now.

Let's go to Mr. Allen, and then to Monsieur Ouellet.

Mr. Mike Allen: Thank you, Mr. Chair.

I'm very surprised that the opposition voted down the amendment, for a couple of reasons. Number one, as Mr. Boshcoff pointed out, we came out of our forestry study with a consensus report, and we talked about some of the things that are going to be needed in the forest industry. I'm very surprised that people didn't pick up on the impact this will have on rural Canada and on the forest industries, because when you look at the major input costs in the forest industry, you're talking about the person who is going out there with their power saw, with their fuel. You're talking about the person who's taking a bunch of folks out in their four-wheel-drive, who's going to have to buy fuel. You're talking about the folks who are running the skidders, who are going to have to buy fuel. There are all of these impacts.

And while I'll grant you that some of the mills have converted to using biomass, once the costs start working their way back into the food chain or to the inputs that are coming into those mills, a carbon tax on the fuel is going to grind these people right to a halt.

I'm just amazed to be hearing some of the statements I'm hearing, especially when other countries now are very much debating how positive these carbon taxes are—as is rural B.C., as well.

Mr. Chair, I'm very surprised, considering the unanimous report we had on the forest industry, in which we wanted to make 23 recommendations to improve the industry, and now here we are looking to go away from a recommendation that would help, versus absolutely destroying the industry.

Thank you, Mr. Chair.

The Chair: Okay, Mr. Allen.

Mr. Ouellet.

[*Translation*]

Mr. Christian Ouellet: Mr. Chair, I never said that I supported the tax nor that I was opposed to it. I said that we have to ask ourselves the question and that the most important thing was to tackle climate change. That is what will bring about a change in society. The tax is precisely something...

I agree with Mr. Allen that we must consider this. This is not something that we can just throw out spontaneously. You can't simply be for or against it. I agree with him, and several countries are studying this. Why don't we take the time to study this rather than coming to a decision right now? I do not think we have to have a clear precise opinion on this motion immediately. This is a very complex subject and we have to look at what the consequences of a carbon tax would be.

Should we do as Quebec, as British Columbia, or as Europe is proposing? There are so many ways of acting. What are we talking about when we talk about a carbon tax? We do not know, but we are about to vote for or against!

To claim that we actually have enough information to support or oppose the motion makes no sense. I am against the motion because it does not give us a true picture. The motion does not deal with climate change and it does not focus on the environment. In my opinion this is simply playing political games. The motion is trying to make us believe that this would lead to a horrible situation and that families will suffer, etc.

However, it does not say that there has to be a change in society or in attitudes. However, big countries like China are actually tackling that first, that is, an attitude change. But that is not stated.The effects of the tax are being talked about first.

[*English*]

The Chair: Merci, Monsieur Ouellet.

Ms. Bell had asked to be recognized, and then Mr. Trost.

Ms. Catherine Bell: I have a quick question before we go to a vote.

Is the government planning on introducing new carbon taxes? I just wonder why we need this motion if the government is not.

● (1300)

The Chair: This is a motion that certainly doesn't call for a carbon tax.

Ms. Catherine Bell: It's asking to reject any plans, so I'm just wondering, does the federal government have plans?

The Chair: The question is out there.

Mr. Trost.

Mr. Bradley Trost: Mr. Chair, I'm opposed to all taxes. I've never met one I've liked yet.

I'm more than prepared, so let's go to a vote on this.

The Chair: Mr. Anderson, you're the last person on the list here.

Mr. David Anderson: I have quite a bit to say here. I don't think we need to go to a vote immediately. So I'm going to have my say, and I don't know if the meeting is going to continue or not, but that would be up to the chairman.

The Chair: We're not going to get to a vote if there is a discussion, because we do have to end the meeting. I have an appointment right now.

Mr. David Anderson: I'm willing to adjourn and come back to this later.

The Chair: I think we're going to have to do that, seeing that this debate looks like it would continue.

Thank you, everybody. In the eventuality that the House does break before Thursday, have a good summer. In either case, we look forward to seeing you at an informal meeting in Mr. Anderson's office. I'm sure he'll send a notice out for that.

Go ahead, Mr. Anderson.

Mr. David Anderson: I want people to know that it's open to the staff who work here but also to the staff who have been coming out to our meetings. So if the MPs want to bring their staff members who have been coming to the committee meetings with them, they're very welcome to come as well.

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

The meeting is adjourned.

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