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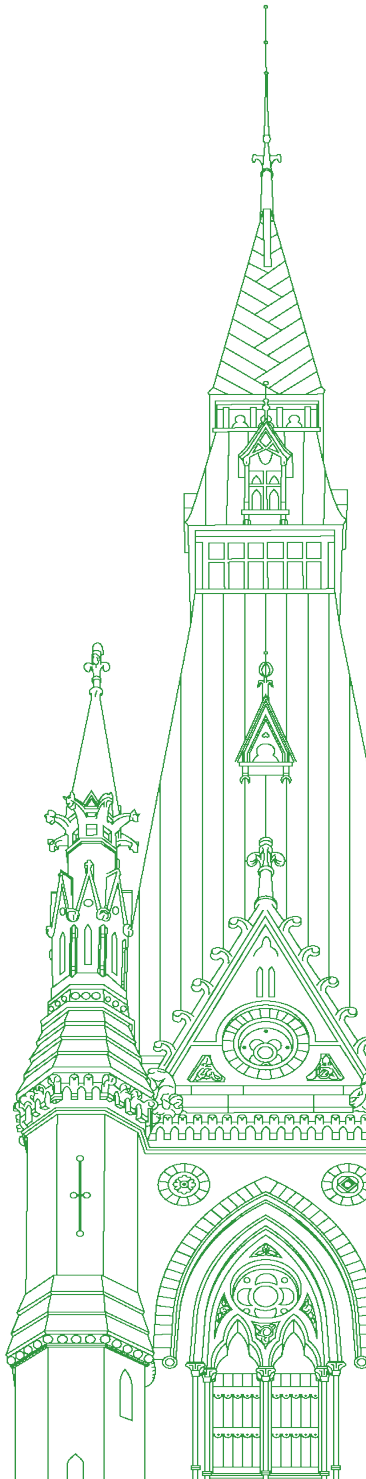

Chair: Mr. Francis Scarpaleggia

Standing Committee on Environment and Sustainable Development

Tuesday, February 15, 2022

● (1135)

[*English*]

The Chair (Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.)): I call this meeting to order. It's the fifth meeting of the House of Commons Standing Committee on Environment and Sustainable Development in this 44th Parliament.

For the benefit of the witnesses—because members are well aware of this—please keep your mikes off, unless you are speaking to the committee. When you've finished speaking, whether it's your opening statement or an answer to a question, put your mike on mute again.

For the people in the room, we maintain two metres of physical distancing and wear a mask when circulating. There's hand sanitizer available in the room, as well as some wipes and so on.

Before we get started, I would like to ask the committee members if we have agreement to adopt the subcommittee report.

Some hon. members: Agreed.

The Chair: It looks like there is agreement. That's fantastic. The subcommittee report is adopted.

Today, we'll be extending our meeting until about 11:30 because of the vote. We have two panels. The first panel includes three witnesses. I would ask the witnesses to be aware of the time. You have five minutes, but anything under that is greatly appreciated by me and other members of the committee.

We have with us today, appearing as an individual, Mr. Thomas Isaacs, who is a consultant in California. I'm told, Mr. Isaacs, that the temperature here in Ottawa is similar to the temperature in California, or is that just wishful thinking on our part? I think it's wishful thinking on our part. It's a very cold day in the world's second coldest capital.

We also have from Bruce Power, James Scongack, chief development officer and executive vice-president of operations. From the Canadian Coalition for Nuclear Responsibility, we have Mr. Gordon Edwards, who is president of the coalition.

We'll start with you, Mr. Isaacs, for five minutes please.

Mr. Thomas Isaacs (Private Consultant, As an Individual): Thank you very much. It's a pleasure to be here.

I want to thank you for the opportunity to participate in this panel on nuclear waste governance in Canada. I'll try to be brief.

My name in Tom Isaacs and I am a citizen of the United States living in sunny California. I worked on the program for the management of used nuclear fuel in the U.S. Department of Energy for many years and have had the opportunity to work with and advise similar programs in other countries, including the Canadian Nuclear Waste Management Organization.

Almost 20 years ago, I was a member of the original team assembled by the NWMO to identify and evaluate options for Canada's plans to manage used nuclear fuel, and I've advised NWMO on a number of other occasions. I've also visited a number of the communities that have expressed interest in having Canada potentially host a nuclear waste repository, largely to inform them about my experiences in similar programs in other countries. I currently chair the NWMO site selection review group to provide oversight and advice on the appropriateness and fairness of their ultimate repository site selection process.

In 2010, the U.S. stopped its nuclear waste management program and created the Blue Ribbon Commission on America's Nuclear Future to make recommendations on how to restart a U.S. program that had better chances of success. I was the lead advisor for that Blue Ribbon Commission report, and many of its recommendations reflected what we saw as best practices being carried out in places like Canada, as well as Finland and Sweden.

I believe strongly that all countries that rely on nuclear power for part of their energy mix have a responsibility to begin preparations for the ultimate disposition of the resulting used fuel. This generation has an obligation to provide solutions for this used fuel, not to simply pass it on to future generations as their burden. I am pleased that NWMO plays an active role in meeting this obligation for Canada.

Thank you very much. I'm happy to respond to any questions.

The Chair: Thank you, Mr. Isaacs.

We'll go now to Mr. Scongack from Bruce Power. You have five minutes.

Mr. James Scongack (Chief Development Officer and Executive Vice President, Operations, Bruce Power): Thank you very much, Mr. Chair. I appreciate the opportunity to appear before the committee today.

I have a few items I do want to cover in my introductory remarks, but before I do so, I want to recognize that I am presenting today from the traditional territories of the Saugeen Ojibway Nation and the traditional harvesting territories of the Métis Nation of Ontario and the Historic Saugeen Métis. Our facility at Bruce Power is also located on those traditional territories.

I serve as the chair of the Canadian Nuclear Isotope Council, an organization that is a coalition of over 70 organizations across Canada that are committed to asserting Canada's historic role as a producer, developer and exporter of life-saving medical isotopes, which are used in the sterilization of medical equipment and the sterilization of personal protective equipment, in the vaccine production and manufacturing process and also in the diagnosis and treatment of cancer.

For generations, Canada has provided global leadership in this space, and I understand that this is an area of study that this committee is also looking at, so I am looking forward today to discussing Canada's role as what I call an “isotope superpower”.

The organization for which I work is a world-leading provider of cobalt-60. Just last month, we harvested enough cobalt-60 to sterilize 10 billion pairs of COVID swabs and medical gloves all over the world. This is a leadership position that Canada has.

We also recently installed a new delivery system on our Canadian CANDU reactors to produce an isotope called Lutetium-177, which is used to treat neuroendocrine tumours in brain cancer. In this particular project, what is unique about it as well is the fact that we've partnered with the Saugeen Ojibway Nation through a “fighting cancer together” initiative.

Why am I starting with that? It's because what we really are talking about at this committee and broadly in this discussion are the by-products from the production of medical isotopes or the by-products from nuclear power generation. If we are going to fight climate change as a society, we need every clean energy source in the tool box to do so.

Here in Ontario, one of the things we are immensely proud of as the Province of Ontario, as you may have seen over the weekend, is the demolition of our last remaining coal plant in the province. You know, there are a lot of people talking about climate change; there are not many people doing a lot about it. It's not policy papers; it's actual things that happen in the real world to reduce emissions. You can look at the work we've done here in the province of Ontario to phase out the use of coal-fired electricity. That's one of the largest climate change reduction initiatives in the world. Seventy per cent of that energy to replace coal in the province of Ontario came from our nuclear fleet at Bruce Power.

Why am I saying that? Because when we look at the by-products of what comes from the production of nuclear energy or the production of medical isotopes, we have to look at this from a broader perspective. There is an old saying that I often like to quote, which is that you should not idolize or demonize any energy source. If we are going to fight climate change, if we are going to tackle some of the most significant public policy and societal challenges we have, we would look at our array of energy sources and determine the right mix.

Part of looking at energy sources and determining the right mix is managing the by-products from the production of nuclear energy and the production of medical isotopes. We have a plan in Canada that is funded and well managed, and I can tell you that at a site, in the case of Bruce Power, we spend a tremendous amount of time, effort and innovation in reducing the amount of waste we produce.

We adopt a reduce, reuse and recycle approach, and while the committee is looking at alternate waste disposal, we need to look at it just like we do when we teach our kids when they are young what to do in terms of the blue bin recycling. For any industry that has a by-product, the first thing they need to look as is, how do you reduce that? The second thing they need to look at is how you reuse or recycle it, and then, whatever by-product is left, they need to look at how is it safely disposed of.

I've worked for my entire career in the nuclear industry, and I am very proud of the fact that we're one of the few industries to have that plan. As the previous panellist said, there have been many countries that haven't gotten this right, countries that consistently had political intervention in this space. We have a well-funded, well-developed plan in Canada and it's time that we allowed that plan to get implemented through the processes that are in place.

I'm immensely proud of the work our industry has done, and I look forward to answering questions from members of the committee today.

Thanks again for having me here, Mr. Chair.

● (1140)

The Chair: Thank you, Mr. Scongack.

We'll go now to Gordon Edwards of the Canadian Coalition for Nuclear Responsibility.

Mr. Edwards, go ahead.

Dr. Gordon Edwards (President, Canadian Coalition for Nuclear Responsibility): I welcome this opportunity to talk to parliamentarians about nuclear waste governance in Canada. Parliament should no longer be excluded from nuclear debates. Parliamentary involvement will be extremely important going forward, as the age of nuclear waste is just beginning now and will stretch forward for hundreds of thousands of years. Your oversight is needed to ensure that public interest is protected for thousands of years to come.

Parliament has ultimate responsibility for seeing that public monies are properly spent and not wasted, and that the health and welfare of Canadians and the environment are well protected. There is no assurance that these goals will be met, given the long time frame, if the industry that created the waste is in effect given the sole authority to deal with it.

The industry has a serious conflict of interest. It views nuclear waste as a major public relations problem, a stumbling block. They don't want to get rid of the waste and forget about it, but they would if they could. It can't be done, because radioactivity is a form of nuclear energy that cannot be shut off, so what they do is they downplay it. They have other fish to fry. At the last committee hearing and at this one as well, industry spokesmen are clearly much more interested in singing the praises of nuclear power and selling the idea of new reactors than saying anything useful about nuclear waste.

For the first 30 years of the nuclear age, political leaders and the public did not even know nuclear waste existed, since the industry portrayed the technology as perfectly clean and safe. Now we hear that it's a blue box. We seem to be in some kind of time warp, as new nuclear reactors are being promoted with absolutely no discussion of the radioactive waste they will create. NWMO is not in the habit of telling the whole truth about radioactive waste either.

Without good governance, the costs of radioactive waste management will skyrocket. Contaminated sites in Hanford, Washington and Sellafield, England are now estimated to cost more than $100 billion Canadian each for cleanup. Here in Canada, negligence at Chalk River and Port Hope has resulted in a federal radioactive waste liability in excess of $16 billion. Since a consortium of multinational corporations took charge in 2015, working under the Crown corporation AECL, the cost of the federal waste management program has quadrupled from less than $1 billion in the six years before the consortium to more than $4 billion in the following six years.

Surely it is Parliament's responsibility to oversee these expenditures and insist on proper accountability. Bear in mind that some of the corporations that run the consortium, SNC-Lavalin, Fluor and Jacobs, have a checkered history including fraud, bribery and illegal political donations.

The consortium favours quick and dirty methods. It plans to dump a million tonnes of radioactive waste in a surface landfill less than one kilometre from the Ottawa River despite opposition from the over 140 municipalities downstream, including the Montreal agglomeration. It also plans to bury the dangerous radioactive carcasses of two defunct reactors right beside major rivers instead of dismantling them, as was originally proposed and approved by the CNSC. These three projects are in violation of strong warnings issued by the International Atomic Energy Agency.

Radioactive waste governance is a non-partisan issue; party affiliation is irrelevant, nor does it matter whether you support nuclear power or do not support it, because we are all in the same boat when it comes to radioactive waste. We have to do the best we can to keep these dangerous radioactive poisons out of the environment of living things forever.

Here are some things that Parliament can do. Number one, we need a nuclear waste management and decommissioning agency that is independent of industry and of agencies that promote the industry such as NRCan. That was a unanimous recommendation of the Seaborn panel after a 10-year environmental assessment process. That waste agency should report to Parliament regularly, not just to the minister.

Number two, CNSC, our nuclear regulator, should not be under the minister of Natural Resources but under Environment Canada. This will help remedy the predicament that CNSC has been captured by the industry it is regulating. CNSC should also report directly to Parliament on a regular basis.

Number three, amnesia is a bad policy. Heritage Canada should be archiving complete records of the radioactive legacies that we are leaving to future generations starting now. This necessity has been stressed by the OECD Nuclear Energy Agency for over a decade, but here in Canada, it is not done.

● (1145)

Number four, reprocessing used nuclear fuel to extract plutonium should be banned. It complicates waste management and is a dangerous step towards proliferation of weapons.

Number five, rolling stewardship is an alternative to abandonment and should be seriously considered by Parliament. Abandonment is irresponsible; three final repositories have experienced failure so far.

Finally, the current legacy of uranium mining in Canada is 218 million tonnes of radioactive sand that must be kept out of the environment for at least one-million years. Parliamentary action is needed to keep these uranium wastes on the political agenda.

Parliamentarians, Canadians need your help.

● (1150)

The Chair: Our time is up, Mr. Edwards. Thank you.

There'll be a time to make statements and comments and to answer questions.

[*Translation*]

We will now begin the first round of questions. Each member will have six minutes to speak.

Mr. Mazier, you have the floor.

[*English*]

Mr. Dan Mazier (Dauphin—Swan River—Neepawa, CPC): Thank you, Mr. Chair.

Thank you to the witnesses for coming out this morning.

I'll go to Mr. Isaacs first.

You've worked with nuclear waste management over the years. Do you believe that the consultations they are undertaking right now are done very thoroughly?

Mr. Thomas Isaacs: In my experience, Mr. Mazier—I assume you're talking about the Nuclear Waste Management Organization—I have seen an extraordinary attempt by NWMO to engage with communities of interest over an extended period of time to educate them, inform them, try to understand their concerns and to try to establish relationships that will stand the test of time, because any ultimate partnership, which is required to develop such a facility, will have to span generations.

This is not, as was mentioned earlier, a quick and dirty process. This has to be a very thorough and carefully considered process.

Mr. Dan Mazier: What really impressed me was how they included all stakeholders from every angle. The communities wanted them. At the end of the day, they had to make sure that they were all in.

Also, could you expand on the potential beneficial outcome that nuclear partnerships with indigenous communities could have? For example, what could be the beneficial results with those communities if they partnered with the nuclear industry?

Mr. Thomas Isaacs: I can tell you in general how I think these things have to occur. I've often said that I think there are three things that are important if a community is going to have the kind of trust and confidence that they need in order to move forward in this.

First, you have to believe that the party that you're dealing with is competent and has a track record of competence. Being competent, however, isn't enough.

Second, you have to believe that when a party, whether it's NWMO or any organization, makes decisions, they have the best interests of the community in mind and will make decisions in concert with that.

Third, and very importantly, you have to listen and then respond. It's not good enough for an organization or an individual to say, “Well, I understand your concerned about something, but trust me. I'm a scientist. I know best.” If a community has questions or concerns, they have to be responded to.

To answer your question, the ways in which NWMO or any organization will help indigenous communities or others is by working together to build a relationship of trust, partnership and understanding. The communities themselves have to take the lead in deciding what they want their future to be. It is then the role of the NWMO, in my view, to work closely and continuously with the community to help them achieve the vision that they have for themselves. Whether that's more money, more education, more public services, whatever that community feels it needs—opportunities so that the young people will want to stay there, whatever it is—they have to be flexible and adaptable to try to meet that community in the space where it resides in terms of where it wants to go and what it sees is important for its future.

The Chair: Mr. Mazier, I am told that your party has requested that we do a little switch here, where you get five minutes and then Mr. Davidson gets six.

We have about a minute left.

Mr. Dan Mazier: Mr. Scongack, did you have any comments on that?

Mr. James Scongack: It's a really appropriate question. The only thing I would add to this is really taking a step back and recognizing the independent quasi-judicial regulatory process that we have in Canada. Any nuclear facility, whether it's an operating nuclear facility or a waste facility, does fall under the jurisdiction of the Canadian Nuclear Safety Commission. That is a very open, transparent process.

As I noted, it is quasi-judicial, but also within that process is embedded community engagement, consultation and the licence renewal process.

If you look at this from an international perspective, the Canadian Nuclear Safety Commission internationally is a tremendously respected independent regulator. Not only is this important at the front of the process, but once this facility is licensed and operating, it's a critical ongoing component for both indigenous and non-indigenous communities.

● (1155)

The Chair: Thank you.

We'll go now to Ms. Thompson for six minutes.

Ms. Joanne Thompson (St. John's East, Lib.): Thank you.

I want to follow through with the last question, and probably in the same order, Mr. Isaacs, if you wouldn't mind being the first to answer.

Certainly I understand the relationships with indigenous communities based on trust and partnership, understanding and collaboration, but to drill down a little more specifically, in the 2021 mandate letter for the Minister of Environment and Climate Change, the minister was asked to deliver results on the following commitment:

> Recognize the “right to a healthy environment” in federal law and introduce legislation to require the development of an environmental justice strategy and the examination of the link between race, socio-economic status and exposure to environmental risk.

With this strategy in examination, would you mind speaking more specifically to the issues of nuclear waste storage on indigenous lands?

Mr. Thomas Isaacs: It would be somewhat inappropriate for me to try to drill down into the specific instances in Canada of the relationships, because I don't have deep experience in dealing with those communities, although I have visited a couple of them.

I'm a strong proponent of the fact that we need to find ways to take extra measures to understand and respond to injustices that have occurred in the past that might translate into limitations on the ability of certain communities to participate fully or to understand fully, or to benefit fully from the prospects of a program like this.

The NWMO's stated judgment that they will only site this in a place where they have a willing and informed community is probably a good point of departure for this. I think the “informed” aspect comes first, finding ways to make sure that communities are aware of and informed about and have the opportunity to engage with and are given the resources to build their own capacity to deal with this in a responsible way. That is what I would suggest.

Beyond that, I'm a little hesitant to prescribe what I think needs to be done in that regard.

Ms. Joanne Thompson: Thank you.

I don't know if anyone else wants to jump in. Clearly this is work that must have happened, and I'm confident has happened, but what I'm really trying to put out on the table and what I'd like the witnesses to speak to more specifically is where the mitigation is for the prevention of any type of harm to human health, and specifically about what has been put in place to safeguard against what is clearly an environmental disaster

Mr. James Scongack: Maybe I can start.

I live right next to a community that's undergoing this process now, so I think it's important to unpack the process and how people are engaged and how those questions are answered.

The most important thing to understand first and foremost is that the NWMO hasn't selected a site yet. They're going through that process for a willing host. That willing host includes indigenous and non-indigenous communities, so there's that dialogue process under way.

Once the NWMO selects a preferred site, that site will be subject to the impact assessment process, which is a multi-year environmental impact assessment process that will deal with all of those, whether they're socio-economic, environmental, safety or community—all of those items in a multi-year process. Once that process is complete, the NWMO needs to progress through a licensing process through the Canadian Nuclear Safety Commission to progress the project, but also to operate that particular facility; and that process also has all of those check marks.

It's a really good question, because we shouldn't look at this as a decision in one point in time. We should look at it as an early dialogue for a willing host, but there's a consistent set of accountability around safety, environmental protection and public engagement. It's not a “one and done”.

As somebody who works for an operator of a nuclear plant that was built 30 or 40 years ago, I think we still do that today. We are still earning that confidence today, and I think that's often one of the challenges we run into in this debate.

● (1200)

Dr. Gordon Edwards: I think the Canadian Parliament should be working for the Canadian people and not only for the nuclear industry.

The problem is that the industry gives people, including parliamentarians, what is essentially pablum rather than actual detailed information. I talked to the South Bruce willing host community candidate. There were people on that panel for seven years and they had never once been told by the NWMO that in order to get the waste underground it has to be unpackaged and repackaged using robotic equipment on the site of the waste. They were not told this. They had also never heard the words “radioactive iodine” or “radioactive cesium”. They never heard about the specific radioactive poisons that are contained in the fuel.

What's happening is a sales pitch. That's what we're having right here today, in fact. We're having a sales pitch and Parliament is supposed to just sit back, be reassured and not actually take an active interest in listening to both sides of the question or listening to people from those communities who are unhappy with what's going on to see if their unhappiness has any basis in fact.

[*Translation*]

The Chair: Thank you.

Ms. Pauzé, you now have the floor for six minutes.

Ms. Monique Pauzé (Repentigny, BQ): Thank you, Mr. Chair.

Following on from what Mr. Edwards said, I would point out that NWMO only manages 10% of nuclear waste. So the other 90% needs to be taken into account.

Mr. Edwards, I would like you to tell us about the polluter pays principle in particular, according to which the polluters themselves determine the solutions.

[*English*]

Dr. Gordon Edwards: I think the polluter pays principle is very important. I believe that the polluter should pay, but not necessarily be in charge. They shouldn't be driving the bus. Somebody else who has only the health and welfare of the Canadian citizens and the Canadian environment...should be running the show.

Yes, the polluter should pay. The polluter should not pay according to what he considers he can get away with, but rather what the protection of the environment and the citizens require.

For example, although these gentlemen today are talking only about one type of fuel waste—that is the radiative fuel from a nuclear reactor—there are other types of low and intermediate-level waste. There are 218 million tonnes of radioactive waste left over from uranium mining in Canada. All of these wastes have to be looked after and they all have to be dealt with. It's going to be expensive, but if you pay the correct money today by people who have the correct motives then you can safeguard the future.

To give an example, when they talk about building a radioactive waste mound at Chalk River that is five to six stories high and that is going to last forever, how can any future generation start making repairs to that mound once it starts disintegrating? It would be far better to have these things properly packaged, properly labelled, and able to be repackaged and relabelled as time goes on with all of the information detailed and archived for future generations to consult, so that they know the problems that they're dealing with.

We've seen many examples where waste has been buried and when they start digging it up, they're surprised at what they find because nobody told them these things were there. This is happening at Port Hope today, for example.

Lack of care in the process leads to greater costs later.

[*Translation*]

Ms. Monique Pauzé: Mr. Edwards, thank you very much for talking about Chalk River. I would now like to ask you another question.

One witness said that the process followed by the Canadian Nuclear Safety Commission was an independent regulatory process.

I'd like your opinion on that, given that you've worked for 40 years in the nuclear field and have extensive knowledge of the subject.

[*English*]

Dr. Gordon Edwards: I think it would be useful if the CNSC—the Canadian Nuclear Safety Commission—reported directly to Parliament on a regular basis. Parliament could summon people who have dealt with the commission and have been unhappy with their findings so that some light can be shone on this matter.

The experience of most interveners is that the commission has what appears to be an open process, but in fact they never refuse to grant a licence. In fact, in their entire history they have never once refused to grant a licence that has been requested of them.

It's rather ironic that the people who speak most highly of the CNSC are the people they're supposed to be regulating. You would think that the people who they are regulating would be complaining about them as being harsh taskmasters, but they're actually not actually harsh taskmasters. Instead of being like a referee in the hockey game, they're like the coach. They don't send them to the penalty box; they just give them a talking to.

● (1205)

[*Translation*]

Ms. Monique Pauzé: Thank you.

Finally, I'd like to ask you two questions about conflicts of interest at Atomic Energy of Canada Limited.

First of all, do you have anything to say on that subject?

I'm going to ask you the second question right now.

Do we need a law to ban the import of nuclear waste into Canada?

[*English*]

Dr. Gordon Edwards: Both of those questions are very important.

The conflict of interest arises, for example.... To give you an example in another country, in Germany, the industry was using an underground waste repository for low- and intermediate-level waste, called the “Asse II” salt mine. It was leaking radioactive poisons into groundwater and surface water for more than 10 years before anybody spoke up about it, because they had a conflict of interest. They didn't want to give the industry a bad name by revealing that this repository was a failure. Now the government of Germany is spending the equivalent of about $5.7 billion to get all of that radioactive waste out of the repository and back to the surface, and it's going to be dangerous and costly work.

This conflict of interest means that we have to have people who are devoted only to the health and safety of the environment, not to the promotion of the nuclear industry. We have to avoid not only conflict of interest, which is real, but even the appearance of conflict of interest. As long as everything reports to the one minister who is responsible for promoting uranium expansion and nuclear expansion—that is, the natural resources minister—we're in a bad situation.

The Chair: There are 15 seconds left.

[*Translation*]

Ms. Monique Pauzé: Mr. Edwards, do we need a law to ban the import of nuclear waste?

[*English*]

The Chair: Be very brief, Mr. Edwards. Please give a yes-or-no answer.

Dr. Gordon Edwards: Yes. We need regulation for that. We need a law that dictates that. It is said so by NWMO, but without any basis in law.

Mr. James Scongack: Mr. Chair, if I could add one very quick thing to the question, I would suggest—

The Chair: Mr. Scongack, our time is up. I'm sorry.

Mr. James Scongack: I'm sorry, sir.

The Chair: That's okay.

Ms. Collins, you have six minutes.

Ms. Laurel Collins (Victoria, NDP): Thank you so much, Mr. Chair.

My first question is for Mr. Edwards.

Regulatory independence is my most pressing concern, though I'm going to follow up on a few questions posed by Madame Pauzé.

In your opening remarks, you mentioned the Seaborn panel, which unanimously recommended that Canada create an independent, arm’s-length radioactive waste organization in 1998. The Liberal government at the time ignored that recommendation and established the Nuclear Waste Management Organization.

I was really sad that you weren't here in the last panel. I asked the president and chief executive officer of the NWMO if she thought the Canadian Nuclear Safety Commission should be reporting to the Minister of Environment, instead of the Minister of Natural Resources, to mitigate this potential conflict of interest. I was surprised that she firmly said no. You'd think that you would hear that firm “no” from someone with an interest in keeping that conflict of interest alive.

I wanted to see if you had any response to her comment that it was not necessary.

Dr. Gordon Edwards: My main concern is that Parliament has been excluded from nuclear debates from day one. They go ahead with the nuclear operation as if it is a state within a state that doesn't have to be accountable to Parliament. It has to be and should be in a healthy society. This is particularly the case when we deal with radioactive waste. With regard to nuclear safety, the industry has a stake in keeping the reactors safe. It's for their protection, as well as anybody else's.

When it comes to radioactive waste, it's really future generations who are going to bear the burden. By the way, the industry is not always going to be here, so it's going to become a legacy for future generations. We have to think about that, and we have to start working now to prepare for that eventuality. This has to be seen as a transition from an industry problem to a societal problem, and one that is, essentially, never-ending. It's certainly multi-generational.

It's very important that we pass legislation now and investigate thoroughly to see whether those long-term interests are truly being looked after by listening to the people who have complaints to make. Let's see if those complaints are justified.

There are, after all, three underground repositories for radioactive waste—only three—that have operated, and all three of them have failed.

● (1210)

Ms. Laurel Collins: Mr. Edwards, on the issue of the NWMO, since it's not a government department—it's exempt from access to information requests and not subject to the same accountability for its decisions—I'm curious whether you think there is an issue of transparency here.

Dr. Gordon Edwards: I think there is an issue of transparency. As I say, the people who are in these small isolated communities, which oftentimes have no more than a thousand people, are being given millions of dollars just for listening to the NWMO year after year after year. But in all of the years, in all of the monthly meetings, NWMO has not bothered to explain to them exactly what the radioactive wastes are, what the radioactive materials are and why they're considered harmful.

If they're so harmful that they can't be left where they are at the reactor sites, why do they suddenly become safe when they're transported up into these remote communities? I don't believe the NWMO is doing a good job of.... The people are not having an opportunity to truly be educated. Really, they're receiving a sales pitch punctuated with scientific studies that support that sales pitch.

Ms. Laurel Collins: What would be the policies and strategies that would ensure that when this is happening, when we have engagement with indigenous peoples, with the Canadian public and with civil society, it's not simply formulated by a kind of sales pitch or industry influence?

Dr. Gordon Edwards: I think Parliament can play an important role here. One of the important roles for Parliament is simply to bring things to public attention through parliamentary debate. Parliament has never debated the nuclear issue and has never had a full debate as to the pros and cons. In fact, when my organization started, we wrote an open letter—I'll send a copy to the committee—to Prime Minister Pierre Elliott Trudeau asking precisely for a national debate on both the benefits and the risks of nuclear power for the sake of everybody, so that citizens and parliamentarians alike could understand what the upsides and the downsides were.

We've never had that. Consequently, Parliament, you might say, is basically flying blind and has to rubber-stamp decisions made by others that are not publicly debated or subjected to any truly democratic process.

Ms. Laurel Collins: On something as serious as managing nuclear waste, credibility and public trust are so vitally important. The review of Canada's nuclear waste policies and development of waste management strategies has been under way since November 2020. In your opinion, has the process been open and transparent? Have all Canadians been given equal opportunity to participate?

Dr. Gordon Edwards: What's happened is similar to what happens at the CNSC. Everybody is given an opportunity to say what they have to say, but it's more in the spirit of getting it off your chest. These recommendations are simply not taken seriously by the government.

I believe there were some 400 submissions to the nuclear waste review panel that you're talking about, the one that's looking for a new, more acceptable radioactive waste policy. By the way, this is being managed by the one department that is promoting nuclear power, which is Natural Resources, but—

The Chair: Okay. We're going to have to go to Mr. Davidson now, unfortunately.

Well, it's not unfortunate that we have to go to Mr. Davidson. It's unfortunate that we have to interrupt this discussion.

Voices: Oh, oh!

The Chair: It's always a pleasure to hear from Mr. Davidson.

Mr. Scot Davidson (York—Simcoe, CPC): Mr. Chair, you're a beauty. Thanks.

Good morning, witnesses, and thanks for coming this morning.

You know, there are pros and cons to everything. I was on my way here—I guess this question is for you, James—and there was an ad on the bus shelter. It talked about Bruce Power isotopes and cobalt-60, a medical isotope produced at Bruce Power as an essential element in the treatment of cancer. I stepped out of the bus shelter and talked to a few people walking down the road. I said, “I just want to talk nuclear power for a second, about some of the great innovations. Do you know what an isotope is, or helium, or cobalt-60?” People were looking at me cross-eyed, James, I have to be honest with you.

I just wonder if you could talk about companies like Bruce Power and what you're doing and what nuclear power does for Canadians and saving lives. A lot of people on the street, I'm going to say boots on the ground, just don't realize what nuclear power does.

● (1215)

Mr. James Scongack: I think it's a great question. I always like to say that facts are our friends. It concerns me that members of the committee hear a lot of misinformation and items that are not built with facts. There's nothing worse than developing policy when we're not talking facts.

If I take a step back, nuclear power right now in the province of Ontario is generating 60% of our power. It's the main power source that allowed us to phase out the use of coal. We're producing life-saving medical isotopes. We're providing isotopes that are used around the world in sterilization, and we do this under an independent....

By the way, the Canadian Nuclear Safety Commission does report to Parliament through the Minister of Natural Resources, so I'd encourage people to read the Nuclear Safety and Control Act. We do it safely and we do it reliably, but we also do it recognizing, sir, that we produce a by-product. That is a by-product that we reduce, we reuse and we recycle. Any of that remaining by-product we fully fund through independent regulation. It's included in our cost of generation.

One thing I would say is that we do not do enough effective communication. Any time we engage with people.... You know, I live right next to a nuclear plant. I grew up right next to a nuclear plant. My father worked at the nuclear plant. People who are engaged in the industry and understand these facts tend to be very supportive. I think we have a lot of work still to do to get our message out and get the facts out about the industry.

Mr. Scot Davidson: Thanks.

I just wonder what initiatives you think the nuclear field can do to make the public more aware. Whether it's turning on your TV or whether it's saving a life in a hospital, there are various things the nuclear industry does. Could you tell us more about that?

Mr. James Scongack: The first thing I would like to see is a really important energy debate in this country. Often when we have that energy debate, we think of everything in absolutes: It's either all nuclear or all renewables, all oil and gas or all hydro. The truth is, when you're building public policy, you're looking at all of these factors and finding the right balance.

I have to admit, as somebody who works in the industry in the energy sector, I think we need to have a very balanced debate and discussion and not make all of these about binary choices. They're about building that right mix, and I think policy-makers like you in the debates in Parliament and in the issues we're looking at need to take this out of sound-bite politics and talk about these things very seriously.

Talk about issues like what we would do to treat cancer patients without nuclear power. We'd still be burning coal-fired electricity in Ontario. What does that mean? Does that mean that nuclear can meet all of our energy needs? Of course it doesn't, but it means that we need to have a balanced, responsible discussion.

Mr. Scot Davidson: A balanced approach, for sure....

I am happy to hear your words this morning about Canada being a global leader in this field. I think it's very important and something that we don't hear enough about, Canada being a global leader, so I am happy to hear those words.

Do you see any path to net zero in 2050 without nuclear power?

Mr. James Scongack: I don't think anybody sees a path forward to net zero without nuclear power. If we are going to tackle climate change, we need every tool in the tool box on the table. If this is as serious as we all think it is—and I am at the front of the line saying that it's serious—we need to look at every tool in the tool box. It would be a massive mistake to not have nuclear on the table.

We need options. Options are absolutely critical when you're dealing with a challenge, so does it mean that nuclear is all the solution? No, sir, it does not, but it's certainly part of the solution, as demonstrated in Ontario through the phase-out of coal.

Mr. Scot Davidson: That is a good point. Just like fighting COVID-19, we need every tool in the tool box.

To follow up on Madame Pauzé's question, you wanted to speak about legislation, and I think you ran out of time. I just wonder if you have a comment on that, James.

Mr. James Scongack: The first thing I would say, after listening to the discussion, is that I would respectfully encourage all members of the committee to consider the number of pieces of legislation in place, the Nuclear Safety and Control Act, legislation with respect to fuel and the Impact Assessment Act. A lot of the questions you have are covered in current legislation.

We're having this discussion about whether we should have legislation. I think you should look at the existing legislation that is in place today, such as the Nuclear Safety and Control Act as a starting point, because I think that's the foundation on which you're going to build.

If legislation needs to be reviewed, it needs to be reviewed, but a lot of the questions and concerns you have are covered in legislation. I'm somebody who lives and breathes it every day.

● (1220)

Mr. Scot Davidson: Thanks very much.

Again, thanks to all the witnesses this morning.

The Chair: Thank you.

We'll go to Mr. Weiler for five minutes, please.

Mr. Patrick Weiler (West Vancouver—Sunshine Coast—Sea to Sky Country, Lib.): Thank you, Mr. Chair.

I'd also like to thank all of the witnesses for joining today and for their great testimony up to this point.

I want to continue with Mr. Scongack.

You talked quite effusively about some of the economic opportunities with medical isotopes, among other things. I wonder if you could expand on whether you have a sense of what that economic opportunity is overall and how that translates between companies and the public, particularly in Canada right now.

Mr. James Scongack: Thanks. I'm happy to discuss medical isotopes.

The first thing I think we need to recognize is that there are only two ways of producing medical isotopes, through cyclotron technology like that amazing company called TRIUMF, out of British Columbia, which we have a very close partnership with. There are cyclotrons and reactors at universities and other institutions in Canada.

Not to get into physics 101, but the types of isotopes you can make in a nuclear reactor, like cobalt or lutetium, you can't make in a cyclotron. The types of isotopes you can make in a cyclotron, you can't make in a nuclear reactor. We need both, and that's why we have the Canadian Nuclear Isotope Council.

If you think about energy, an isotope is a modern form of energy that is used in modern health care across the world. As developing countries continue to move more people into the middle class and give people more access to cancer diagnostics and treatment, with more people fighting COVID-19 who need sterilized medical equipment, the demand for medical isotopes is going to increase. Canada is uniquely positioned to provide those isotopes.

On the reactor side, through our power reactors like the ones we operate at Bruce Power but also through our cyclotrons at areas like the University of British Columbia and TRIUMF Innovations—and they're both needed—it is a multi-billion dollar opportunity.

It will mean that we will have clinical trials come to Canada, so Canadians can have access to some of the best cancer treatments.

I happen to chair an organization in Ontario called the Pediatric Oncology Group of Ontario, where we help families and kids with cancer. What I want as a parent and as a Canadian is to see everybody in the world have access to those kinds of cancer treatments, but I want Canada to be the world leader in medical isotopes in cancer treatment, and we can do that through our isotope advantage.

Mr. Patrick Weiler: Thank you, Mr. Scongack.

I want to look at it from the flip side now. You mentioned in your testimony already that the management of nuclear waste is going to be borne by the companies themselves.

Could you expand on that and explain to the committee why that's not going to be borne by the public down the road?

Mr. James Scongack: Exactly. I think it's a great comment.

The first thing I would say is that we pay for the waste we produce now and in the future. Independently, the Canadian Nuclear Safety Commission requires any licensee of a nuclear plant to have fully funded the cost of the waste—not just today, but going into the future—and the eventual decommissioning of our facility. We're the only industry in the world you can point to with that.

For Bruce Power, after we reduce, reuse, recycle, minimize and all those things, whatever final product or waste we produce.... Mr. Edwards made a comment that we set the cost of the waste. I guarantee you that we don't. The cost of the waste is set through this independent process and we pay for it. That goes in an isolated bank account. It's not a government IOU bank account. It goes in an isolated bank account that we have nothing to do with. That is to fully fund the cost of that liability long term. There are tens of billions of dollars that will build up over time in that.

We pay for the waste as we generate it, as we should. In fact, I believe that Parliament should be looking at what we do in nuclear as a model for other industries. What other industry can you point to that can say they safely manage their waste and they fully pay for it?

By the way, I know where every cubic metre of waste is that our facility has produced in 40 or 50 years. Name one other industry that does that. I think that's something Parliament should look at.

Mr. Patrick Weiler: Thanks for that.

My next question is for Mr. Isaacs.

You mentioned that the Blue Ribbon Commission had assessed Canada's regulatory structure and saw that there are many best practices there.

I was hoping you could explain where Canada is showing leadership in these best practices and where there are examples where Canada diverges from these international best practices.

Mr. Thomas Isaacs: Thank you for the question.

I would say the principle recommendation of the Blue Ribbon Commission was that in looking for a site, you needed to use a consent-based approach. You should build a site in a location where the communities that were going to be affected by it understand the implications and are willing to be the host voluntarily.

That was the first recommendation of the Blue Ribbon Commission that was largely reflective of the approach that was taken by the Nuclear Waste Management Organization.

● (1225)

The Chair: Thanks very much.

[*Translation*]

Ms. Pauzé, you have the floor for two and a half minutes.

Ms. Monique Pauzé: Thank you, Mr. Chair.

I will put the question again to Mr. Gordon Edwards.

Canada is continually referred to as a leader and a model in terms of nuclear waste management and best practices.

Mr. Edwards, as someone who has 40 years of experience in the field, what do you have to say about that?

[*English*]

Dr. Gordon Edwards: I didn't realize that this was going to be a panel on the glories of nuclear power rather than on radioactive waste governance. I thought we were going to be focusing on radioactive waste governance.

Regardless of what benefits or not that nuclear power has, the wastes are going to be here forever and they have to be dealt with. That's really what the question should be.

The International Atomic Energy Agency says that it's wrong to bury radioactive reactors right where they are, on site. They should be dismantled and the waste should be taken off site. They should be packaged and so on. That's a feature of radioactive waste governance.

Here in Canada, the consortium is planning to do exactly the opposite. They are even going to rip up our contract to dismantle these reactors, which was already approved by the CNSC. Instead, they are going to bury them right beside major rivers—the Ottawa River and the Winnipeg River. These reactors remain dangerously radioactive for thousands of years after the reactor is shut down.

There is more than one kind of waste. I think we have been focusing on certain aspects of waste and not all of them.

It's important to realize also that the Seaborn panel was the result of a 10-year environmental assessment program, yet their unanimous recommendation was turned down by the Liberal government of the day, which was the Chrétien government.

Now we have to look at all other kinds of waste as well. We need to have an agency that is really not an arm of the industry. The problem here is that, just as you have seen today, the people in the industry are far more excited and interested in talking about what their technology can offer to Canadians while it's operating, rather than the legacy that it's leaving behind.

We're seeing the same thing in our country. Parliament can really help to highlight the public interest.

The Chair: Thank you.

We'll go to Ms. Collins now, please.

Ms. Laurel Collins: Thank you, Mr. Chair.

To you, Mr. Edwards, in Ignace, Ontario, the Toronto Star reported that the NWMO was offering money to local landowners willing to co-operate. I'm a bit concerned about the consultation process to identify willing, informed host communities. There's no Canadian case law definition of a “willing host” or similar concepts specific to high-level waste.

Given the regional impacts of nuclear waste, is it concerning to you that the NWMO is offering funds to individual landowners? They're ideally supposed to be working with willing host communities.

Dr. Gordon Edwards: What is a willing host community? If you talk about the Ignace situation, the actual disposal site they're looking at is at Revell Lake, which is not in Ignace, but is halfway between Ignace and another major city on the Trans-Canada Highway. It should be a regional matter.

There's also going to be transportation of this waste on the highways leading up to that region. These transportations are going to be going on for many decades. Moreover, when they get to these regions, they're going to have to unpackage the radioactive waste bundle by bundle and repackage it in smaller containers. This has to be done with robotic equipment behind six-foot-thick leaded glass windows. People were not told about this until just last year, when I brought it up during one of my presentations.

People are being given incentives, they're being given money, but they're not being given the information about what kind of downsides they might have to deal with. I think that it's only fair that full and informed consent be, in fact, that: fully informed.

● (1230)

Ms. Laurel Collins: Thank you so much.

This a quick yes-or-no question for Mr. Scongack and Mr. Isaacs.

Going back to the question of this potential for conflict of interest, it seems to be a no-brainer to switch the reporting to the Minister of Environment, because there would not be even the perception of a conflict of interest. Would either of you be opposed to the reporting to Parliament going through the Minister of Environment, instead of the Minister of Natural Resources?

The Chair: As Ms. Collins requested, give a yes-or-no answer, please.

Ms. Laurel Collins: The question is: Would you mind if it went to the Minister of Environment?

The Chair: Answer yes or no, please.

Mr. James Scongack: Unfortunately, the problem is that there aren't yes or no answers. Currently, it reports to Parliament through the Minister of Environment. When it comes to the impact assessment process, it's with the Minister of Environment. There are a few different components here, so I think that's—

The Chair: It's a complex question.

Mr. James Scongack: —worthy of more discussion.

The Chair: Okay.

Who else did you ask?

Mr. Isaacs, answer yes or no.

Mr. Thomas Isaacs: I would simply say that the time doesn't allow me to answer that fully. I'd rather not.

The Chair: Thank you very much.

We now go to Mr. Albas, for five minutes.

Mr. Dan Albas (Central Okanagan—Similkameen—Nicola, CPC): Thank you, Mr. Chair.

I thought we were going to be moving to the second panel.

The Chair: We can do that, if you'd like.

Mr. Dan Albas: No. I'll get a question in. I was—

The Chair: If you can keep it under five minutes, I'd be eternally grateful, as your chair.

Mr. Dan Albas: Thank you.

Maybe we could hear a bit more from Dr. Isaacs in regard to the question that was just posed.

Dr. Isaacs, what do you think it would require in the reporting relationship right now? Should it be the Minister of Environment? Do you have anything to offer in regard to that?

Mr. Thomas Isaacs: I am not intimately familiar with the lash-up of responsibility in the Canadian Parliament. I believe there should be an independent oversight of the activities. I think it should be monitored by Parliament and it should be done in a way that perceived as being competent and free of conflicts of interest.

It's not something that I have enough expertise on to tell you whether or not the current system is appropriate.

Mr. Dan Albas: The current arrangements that the Nuclear Waste Management Organization has.... You believe it's independent in terms of its mandate. Is that correct?

Mr. Thomas Isaacs: Absolutely. It's independent. It has to meet the licensing requirements of an independent regulator. It has a board of oversight and a board of directors. In my experience, it is at a place where the accountability is totally appropriate.

Mr. Dan Albas: Great, thank you.

I'll go to Bruce Power briefly. Again, you seem to say there were some complications with the path that some have said. Should a particular minister be in charge or should be Parliament?

Maybe you could expand upon that.

Mr. James Scongack: There are three dimensions to this. There is the independent regulator, the Canadian Nuclear Safety Commission, that will license the operation of a waste facility. They are quasi-judicial, and under the Nuclear Safety and Control Act, report to Parliament through the Minister of Natural Resources. That's point one.

The Nuclear Waste Management Organization is an independent organization that reports to the Minister of Natural Resources as well.

You have the Minister of Environment, who has accountability for the Impact Assessment Act. Any project with one of these large facilities that we're talking about here, debating today, would go through an impact assessment process. Obviously there would be interaction with the independent CNSC in that.

When we're thinking about these things, we really need to be clear what we're talking about and looking at those items in those buckets.

Mr. Dan Albas: In regard to the current governance structure, look, Madame Pauzé is a parliamentarian I respect. She has brought forward a motion to have the environment committee study this area, so to say there is not ongoing ability by Parliament to weigh in and to check in to make sure that we have the best governance possible and to consult experts such as some of the panel that are here today....

Do you believe the current framework we have works well and that there are ongoing ways for parliamentarians to check to see if things can be made better? Is that correct?

Mr. James Scongack: Yes, absolutely.

As a Canadian, I think it is really good that our public officials are taking the time to review governance. Any good organization always reviews its governance and makes sure whether it's working as effectively as it needs to. I think that's an important exercise.

As it relates to nuclear waste policy, as we need to move forward and get moving on some of these particular items, there are rigorous processes in place that involve all of those government agencies and engage Canadians, and what I would strongly recommend the committee consider is to really go through a project. Take the South Bruce project and walk through the entire regulatory process as you're looking at the governance and convince yourselves.

I think it's a very rigorous process. In fact, there are so many hand-offs in the process you wonder, for Canadians and people trying to engage, if there are actually too many hand-offs, frankly. That's what concerns me more as a citizen.

It's good that you're doing a review of the governance process, but I would walk through some examples and try to not have a pro-nuclear or anti-nuclear debate. Walk through the process and try to understand what it is that you're trying to actually resolve here.

● (1235)

The Chair: Thank you.

We'll go to Mr. Duguid now, please.

Mr. Terry Duguid (Winnipeg South, Lib.): Mr. Chair, I'm going to give my time to Mr. Longfield.

The Chair: Go ahead, Mr. Longfield.

Mr. Lloyd Longfield (Guelph, Lib.): Thank you, Chair; and thanks, Mr. Duguid, for sharing time with me.

I'll continue with Mr. Scongack on an article that I've just read from TVO, which says that in the past week Bruce Nuclear has announced a plan to explore the development of fusion power, fusion as an opportunity to possibly reduce radioactivity of nuclear waste. It discusses the potential of fusion as both an energy source and a way to reduce radioactive waste.

Could you comment on that opportunity? In your presentation you talked about reducing and reusing waste coming out of the nuclear plants.

Mr. James Scongack: Definitely. As I mentioned earlier, it's a good question. If we're going to fight climate change, if we're going to achieve net zero by 2050, we need every tool in the tool box. Therefore, we're thrilled to have partnered with a great company out of British Columbia, General Fusion, that is advancing what I call “21st century fusion technology”. We've entered into a partnership agreement with them in terms of engaging on technical resources. We obviously have a very strong, deep workforce, whether it's engineering or project management, all the types of skills you would need to advance a new technology.

This is really about trying to put another tool in the tool box in the fight against climate change. Do I believe nuclear is competing with fusion, or fusion is competing with nuclear, or frankly, we're competing with renewables? I don't. This was really more about saying as Canadians, how do we bring that technical know-how we have together to see what this is?

If somebody is going to develop fusion power, I want it to be Canadians. We can lead in these areas, because not only is there a climate-change imperative, but there's an economic imperative and a jobs imperative. I want those skills and those capabilities to stay here in Canada.

If I could be so bold, I want it to stay in Bruce, Grey and Huron Counties where I live, where I think this technology is. If we're going to build a commercial plant, let's put it in Bruce, Grey and Huron Counties.

Mr. Lloyd Longfield: Great. Thank you.

Having local universities working on that, such as McMaster and the partners that you have, and the University of Guelph—

Mr. James Scongack: Sorry. Even more importantly, as a grad of the University of Guelph, that's right in our backyard. That's an institution that I would raise as well.

Mr. Lloyd Longfield: Terrific. I was just going to mention the University of Guelph, which won't come as a surprise to any of the other members of Parliament here.

The University of Guelph is looking at eDNA monitoring, the DNA monitoring of the biodiversity around nuclear storage—things like your plant, where we're looking at fish, changes in the environment around fish stocks, or changes in biodiversity. Part of the regulatory process is collecting data on impact. If we look at Chalk River or others, there's a very strong regulatory requirement to look at impact using such tools as eDNA.

Sharing that data is something that the University of Guelph has asked for. I had a recent conversation with the University of Guelph on this, and they're saying there's a lot of private data or data that's held by non-research institutes. Could you comment on the sharing of data with research institutes?

Mr. James Scongack: Absolutely.

First, on the work we do with post-secondary institutions, especially in the environmental area, we share that openly. We have no reason not to. I think it's very important for our research institutions to share data, but to the previous member's question around public confidence, how do we take some of this data and put it into a context for people that is understandable? Sometimes I find we're data rich but information poor. So how do we do that?

One other thing I would note about the Canadian Nuclear Safety Commission is that in certain areas they also have independent monitoring. While we do our own environmental monitoring and we report on that, and we work on that with some of the best and the brightest across Canada at institutions, the CNSC also have their own independent monitoring program. That data is available.

I think it's very important that we share this. The more information gets shared, it builds public confidence. I think we can do a better job of putting that information in a form that is understandable to the non-specific clinical people who are working in that area.

● (1240)

Mr. Lloyd Longfield: I have about 40 seconds left here.

Just thinking of other uses of that data, it could be helping indigenous communities with water quality or with the quality of the food and the impacts on toxins within their food chain. This data could help in a lot of other ways.

Mr. James Scongack: I think sharing data is really important. In fact, we've partnered with the Saugeen Ojibway Nation on what we call a cesoastal waters monitoring program, to do that monitoring together. I think there are huge opportuniti for indigenous communities to have businesses in this area and actually do the monitoring for industry performance.

The Chair: Thank you very much.

I'd like to thank all our witnesses for a very interesting discussion.

We will take a brief break while we bring in the next panel and keep going. I'll suspend temporarily and we'll come back in a few minutes.

[*Translation*]

Ms. Monique Pauzé: I just want to ask you for a clarification, Mr. Chair.

The Chair: You have the floor, Ms. Pauzé.

Ms. Monique Pauzé: Will we still have an hour with the second panel of witnesses?

The Chair: It is up to the members of the committee to decide. As for me, I am willing to continue for another hour so that everyone can take advantage of the time reserved for the question period.

I am prepared to continue until 1:45 p.m. at the latest. The decision will be up to the committee, no doubt, but that is my objective.

● (1245)

Ms. Monique Pauzé: It would be mine as well, especially since it will probably be the only time we have French-speaking witnesses.

The Chair: All right; noted.

Thank you.

● (1245)

(Pause)

● (1245)

The Chair: Colleagues, time is running out quickly, so we will continue the meeting.

Three witnesses will be making an opening statement, and they will have five minutes to speak. However, we would be very grateful if they could be brief.

Chief Niganobe, you have the floor.

[*English*]

Chief Reg Niganobe (Grand Council Chief, Anishinabek Nation, Chiefs of Ontario): Thank you, Mr. Chair.

[*Witness spoke in Anishinaabemowin as follows:*]

Aanii. Boozhoo Kaawingey, ndizhnikaaz Misswezhaging ndoonjibaa nameh ndodem.

[*Witness provided the following translation:*]

Hello. Greetings to the one who is searching. I am from the Mississauga First Nation. I am from the Sturgeon clan.

[*English*]

Good afternoon. My name is Reg Niganobe. I'm the elected Grand Council Chief of the Anishinabek nation and part of the Sturgeon clan.

I join you today from the home territory of Mississauga first nation. My community is no stranger to the nuclear industry, as we are the host for Cameco's Blind River refinery, which rests on the east bank of the Mississaugi River.

I have been asked to present to you on behalf of Ontario Regional Chief, Glen Hare, on the importance of this committee's responsibility to respect indigenous rights.

The Chiefs of Ontario support 133 first nations in Ontario, including the 39 that I represent in the Anishinabek nation. Guided by the chiefs in assembly, they uphold the self-determination efforts of the Anishinabek, Mushkegowuk, Onkwehonwe and Lenape peoples in protecting and exercising their inherent and treaty rights.

As Anishinaabe people, we don't acknowledge land. We honour and we protect it along with the air and the waters.

I'm not afforded the time today to be able to describe the history of our efforts to manage and maintain our territories and homeland. Since time immemorial, each of the 133 first nation communities in Ontario have endeavoured to fulfill our traditional legal responsibilities by ensuring that our decisions are made with the best interests of the next seven generations. We must be collective in decisions about the land, think only of future generations, and allow this inherent responsibility to determine our decisions.

It is the custom of the Anishinabek nation to recite the Ngo Dwe Waangizid, but due to the time restrictions, I will recite a line that speaks to how we consider this revitalization of our nation-to-nation relationship based on the number 45 of the TRC calls to action: *Debenjiged kiimiingona dedbinwe wi naagdowendiwin*, which means to us that the Creator gave us sovereignty to govern ourselves.

Limited time frames to present on these important issues are not in the best spirit of reconciliation, and the Anishinabek would like to highlight in our conversations that how nuclear fuel is stored, transported, consumed or disposed of must have deep engagement and consultation with all affected indigenous nations.

Canada has ignored the role of traditional ecological knowledge systems before and has been subject to judicial review. Involving indigenous rights holders during the decision-making processes and not at the end will help rebuild our relationship and avoid costly and lengthy legal challenges. In fact, indigenous communities have expressed dismay of the time frames for the development of nuclear policies, which seem to be moving ahead very quickly even though we are still in the midst of a pandemic. If there is to be authentic and fair engagement, indigenous nations must be able to co-design the process.

The Anishinabek nation and the Iroquois caucus have agreed on the five principles on nuclear waste.

First, there should be no abandonment but rather a policy of perpetual stewardship. Climate change has made weather events unpredictable; therefore, human-made storage must be resilient to ensure that radioactive materials stay out of the food we eat, the water we drink, the air we breathe and the land we live on.

Second, the best possible containment must be used with adaptable packaging to align with changing environmental conditions.

Third, it should be monitored and retrievable in a relationship of continuous guardianship. Information and resources must be passed from one generation to the next to ensure that any signs of leakage are able to be addressed.

The fourth principle declares that nuclear waste should be away from major water bodies. When we poison our waterways, we poison ourselves. Rivers and lakes are the blood and lungs of mother earth.

Finally, exports and imports of waste should be forbidden except in truly exceptional cases after full consultation with all those whose lands and waters are being put at risk.

In closing, I want to impress upon everyone that it is our inherent responsibility as an Anishinabe to preserve and protect mother earth, not just for us but for all living beings who live upon it. We hold the Government of Canada to account to respect the rights of first nations, including all 133 in Ontario. No decisions concerning nuclear waste storage, the development of small modular reactors, transportation or decommissioning can be made absent of our free, prior and informed consent, as set out in article 29.2 of UNDRIP. The government must consider all indigenous nations as per our section 35 rights outlined in the charter. Transparency and full disclosure are essential but not a substitute for full engagement.

Meegwetch.

● (1250)

The Chair: Thank you, Chief Niganobe.

We will go to Professor Donev for a maximum of five minutes, please.

Professor Jason Donev (Senior Instructor, Department of Physics and Astronomy, University of Calgary, As an Individual): Thank you.

To open, in the spirit of reconciliation, I want to acknowledge that I live, work and play on the traditional territories of the Blackfoot Confederacy—the Siksika, Kainai, Piikani—the Tsuut'ina, the Îyâxe Nakoda Nations, the Métis Nation region 3, and I want to acknowledge all who make their homes in the Treaty 7 region of southern Alberta.

I teach nuclear, solar, hydro power and a general course on energy at the University of Calgary. I run a free online encyclopedia that covers the entire energy sector. As far as we know, it's most used web-based resource dedicated to explaining energy issues to adults in the world. I'm also a reviewer for the IPCC's report to the United Nations.

Society needs aggressive decarbonization and nuclear power is essential to that process.

I'm often asked if I would live on top of a deep geologic repository. Yes, and I would raise my family there.

My wife and I moved to Alberta to raise our family specifically because we thought this province would be getting nuclear power. Most of the 70,000 Canadians working in the nuclear sector live and raise their families around nuclear reactors and with radioactive materials like spent nuclear fuel.

Aren't radioactive materials dangerous? Canadian nuclear technology has saved millions of lives. Radioactive materials for medicine and many industrial applications are a societal good, but radioactive material must be handled carefully at every stage.

The Government of Canada regulates the use of radioactive materials. These regulations keep workers, the public and the environment safe. The Canadian nuclear industry has an extraordinary record of safety, safe practice and compliance.

Power plants have stored spent fuel on site for decades. Over the decades of storage, the radioactivity naturally dies down, making the fuel easier to handle. Unlike most types of waste, spent nuclear fuel gets less hazardous with age, rather than more hazardous. The waiting was prudent.

The NWMO developed a robust plan. The science and technology are sound and thoroughly tested. The waste can be moved to either site they're considering safely and stored safely. Why not leave it on the surface? Every country in the world that faces the decision of what to do with spent nuclear fuel has said the same thing: Put it safely underground, out of the weather that we're talking about. We are the society that benefited from the power. We are the society that must dispose of the waste.

Will new nuclear reactors technology make more electricity and transform the spent fuels? Maybe. We should aggressively fund research and development to deploy a suite of nuclear reactors that can burn this waste to make more carbon-free electricity. However, even those reactors still generate waste that will eventually lead to long-term needs for storage—probably underground. In the mean time, it is responsible to move forward with a plan of building a long-term disposal site until these reactors exist.

How do we know it won't leak?

Radiation is like light from a flashlight. A few metres of rock stops the radiation. The 500 metres of rock that is proposed will stop all of the radiation. Where environmental concerns get tricky is that radioactive material could be spread through water in the environment. Water could move those little flashlights. The system is designed to limit water in the repository. No water in, no water out. The fuel is a ceramic that doesn't dissolve in water, in a bundle that's watertight, in a used fuel container that's watertight, in a bentonite clay box that absorbs water, isolated from the biosphere by half a kilometre of solid rock.

How do we know it will stay stable for a million years? Geologists see natural systems around the world that kept their radioactive materials isolated from the surface biosphere hundreds of time longer than necessary, without any engineering. The engineering works with nature to be even more confident the radioactive material will stay put.

Why bother? Our world needs energy to feed, clothe and care for its people. It needs more energy than ever before. However, five-sixths of that comes from burning fossil fuels, which are changing the climate in disastrous ways. The worlds needs nuclear power along with hydro, wind and solar to meet the challenging world of the 21st century.

Thank you for your attention.

The Chair: Thank you very much, Professor.

[*Translation*]

Who will be speaking on behalf of the Ralliement contre la pollution radioactive?

Will it be Mr. Provost or Ms. Charbonneau?

Ms. Ginette Charbonneau (Physicist and Spokesperson, Ralliement contre la pollution radioactive): I'll start, and I'll tell you about our recommendations first. Then, Mr. Provost will talk about the historical issues in radioactive waste management.

● (1255)

The Chair: All right.

You have five minutes in total.

Ms. Ginette Charbonneau: Thank you.

My name is Ginette Charbonneau, and I am a physicist. I am a spokesperson for the Ralliement contre la pollution radioactive.

I will first present our recommendations. The Government of Canada is the main promoter of the nuclear industry that it created itself, but it does not care enough about the rigorous management of radioactive waste. Its recipe remains the same: exploit all the profitable aspects of the nuclear industry, defer waste management costs as long as possible, and deny any risk of nuclear proliferation.

There is a conflict of interest. That is why we recommend, firstly, that one department deal with the nuclear industry, and another deal with radioactive waste management. We propose that the management of radioactive waste should be the responsibility of the Department of the Environment and Climate Change. We would also like the Canadian Nuclear Safety Commission to report to Parliament and report to the Department of Environment and Climate Change.

Second, we recommend that Canada retain the polluter pays principle. The polluter must deal with his waste, but in our view it is not up to him to decide on solutions. The current regulations are too general and the commission should be tougher and impose rules. After all, it is the regulator. We don't want the fox to be in charge of the henhouse.

Third, we recommend that all licensees be required to provide a detailed inventory listing radioactive contaminants and describing their radioactivity. We are not talking about a construction company, but we are talking about radioactivity. Even small volumes can generate a lot of radioactivity. We would therefore like this to be more precise, because at present, it is the polluters who adopt their own waste classification, and this is a real Tower of Babel. It's a hindrance to identifying risks and solutions across Canada.

Fourth, we recommend that Canada give the highest priority to a solution for intermediate level radioactive waste. For years, no planning has been done for intermediate level waste, and this opens the door to incredible abuse. For example, the demonstration nuclear reactor in Rolphton cannot be dismantled because there is no place to put the waste. Therefore, they want to bury the reactor in a tomb. The problem is that it will sink in a few years, and this goes against the guidelines of the International Atomic Energy Agency, or IAEA.

Fifth, we recommend that Canada ban the import of foreign radioactive waste, even for medical sources. We are not against medical radioisotopes, because that is a good thing, but why do we have to repatriate radioactive waste from around the world? This waste represents about 98% of the radioactivity that will be at Chalk River. Selling radioisotopes is a good thing, but repatriating waste when Canada can't even manage its own waste is an outrageous abuse.

Sixth, we recommend that the Canadian Nuclear Safety Commission stop misleading the public by including highly radioactive waste among low-level waste. Cobalt-60 sources are an example. In addition, definitions are being changed, giving the impression, on paper, that intermediate-level waste inventories are being reduced. The impression is given that from 2017 to 2022, the inventory of intermediate level waste at Chalk River was reduced by 95%. This doesn't add up.

Seventh, we call for a regional environmental risk assessment along the Ottawa River. Each project is considered individually, but overall, radioactivity is increasing, and so are the risks. So we need to assess all the projects together in a regional assessment.

I now hand over to my colleague Mr. Gilles Provost.

The Chair: You have 20 seconds, Mr. Provost.

Mr. Gilles Provost (Retired Journalist and Spokesperson, Ralliement contre la pollution radioactive): All right.

Ms. Charbonneau has presented our solutions, and I'm ready to talk about the problems and horror stories that justify those solutions in response to questions.

● (1300)

The Chair: Thank you for your co-operation, Mr. Provost. We are very grateful to you.

[*English*]

I might shave some time off during the rounds of questioning, but we'll start with Mr. Dreeshen for six minutes, please.

Mr. Earl Dreeshen (Red Deer—Mountain View, CPC): Thank you very much, Mr. Chair; and thank you to all the witnesses who are here today.

I'm a former math and physics teacher. I taught for 34 years in high school. That was a great discussion of nuclear energy, and of course all forms of energy, which I think are important. In the last panel, witness Scongack, from Bruce Power, stated something that I've advocated for years; that is, we shouldn't idolize nor should we demonize any energy source.

Mr. Donev, the fact that it's part of what your educational program is all about is very significant. I look at things as trying to bring the full life cycle point of view into the discussion, whether it be hydro, solar or oil and gas, and so on. That's really one of the things that I think are rather important.

From your research, though, can you speak to the significance of nuclear energy on the road to net zero, and can you expand upon the new technologies and innovations with the nuclear industry that can help us get a little closer to this goal?

I know you spoke of significance of the TRIUMF life science program, and of course the University of Calgary is associated with that.

I wonder if you could tie those two things together.

Thank you.

Prof. Jason Donev: Absolutely.

We are facing a huge problem going forward in trying to eliminate carbon dioxide being emitted into the atmosphere. This is a huge problem. It's actually almost beyond the scope of imagination how much oil, gas and coal gets used in putting C02 into the atmosphere. Nuclear has been able to completely decarbonize, or not completely decarbonize, but take out all the coal from Ontario. That's the only jurisdiction that has ever removed all its coal-fired power plants.

When Germany recently decided to decommission nuclear reactors, I was not at all surprised that their C02 went up. A lot of environmental policies that are seeking to try to protect the environment are actually making things worse.

We absolutely need to be aggressive in deploying nuclear reactors. The nuclear industry has expressed interest in small modular nuclear reactors—

The Chair: Sorry, Mr. Donev.

[*Translation*]

Ms. Pauzé, did you raise your hand?

Ms. Monique Pauzé: Yes, Mr. Chair.

I would like to raise a point of order.

Our motion is not about carbon neutrality, it is about nuclear waste. So I would like to refocus the discussion, please.

The Chair: Noted.

This is still a fairly broad discussion, because we are talking about the cost-benefit ratio. However, I would ask the witnesses to consider Ms. Pauzé's comment.

[*English*]

Go ahead, Professor Donev.

Prof. Jason Donev: Thank you, Madame Pauzé. I'll try to focus on that.

All forms of energy production produce waste. Nuclear's waste is more hazardous on a per kilogram basis, but on energy delivered it is actually less hazardous. Coal produces tremendous amounts of waste. The amount of waste produced by our coal, our oil and our natural gas every week worldwide, if it were elephants, would stack from the earth to the moon. That's roughly 10 days of waste from coal, oil and natural gas. The waste from solar, from wind and from hydro is enormous compared to the waste from nuclear.

As the previous panellist, James Scongack, pointed out, the nuclear industry is actually keeping track of all its waste. While it is hazardous and must be handled safely, Canada has done a good job of managing that waste. As we go forward addressing the issues of climate change, nuclear is a key part. As was said earlier, we can't demonize nor can we idolize any form of waste or any form of power generation, but nuclear power is surprisingly safe, reliable and absolutely essential going forward.

I'm speaking as somebody who actually teaches university courses on both hydro and solar. Those are also necessary. We can't do this with nuclear alone, but we can't do it without nuclear. Nuclear power, especially the upcoming technologies of small modular reactors, will require us to continue to be actively engaged in what kinds of wastes and how those wastes—

Mr. Earl Dreeshen: Thank you, Professor Donev.

If I could interject, I appreciate you filling in parts of the question that had come from the Bloc member, but I'd like to get back to the small modular reactors and the discussion you have. I'd like to go back and speak to the importance of education, not just to researchers at university but to the public in general.

How do you think we can get that message across?

● (1305)

Prof. Jason Donev: I spend a lot of time worrying about that. Thank you for that question.

There's a lot of misinformation about nuclear, and I think one of the reasons is that there are very few courses at universities or even high schools that properly deal with energy as an entire issue. With the exception of the courses that I have at the University of Calgary and a course at Mount Royal, I'm unaware of any university course in Canada that is talking about nuclear power as part of our energy mix for people outside of engineering departments. Our nuclear engineers get trained on this, but people outside of nuclear engineering, even people within physics departments, often don't understand how nuclear reactors work or how solar panels work, for that matter.

I believe that we should be broadly educating people and I would like to see that happen.

The Chair: Okay. Thank you.

Mr. Longfield, it's over to you. Again, if you could keep your eye on the time, that would be great. Thank you.

Go ahead, Mr. Longfield.

Mr. Lloyd Longfield: Thanks.

I'm sending my time over to Ms. Taylor Roy.

The Chair: Go ahead, Ms. Taylor Roy.

Ms. Leah Taylor Roy (Aurora—Oak Ridges—Richmond Hill, Lib.): Thank you very much, Mr. Chair.

Thank you to all of the witnesses for being here this morning.

We've had some very interesting conversations. One of the things I'd like to go back to on the issue of waste is the issue of education and the idea of full, informed consent.

Mr. Niganobe, can you comment on whether you feel that with the proposals for nuclear waste facilities, the indigenous communities are fully informed and that their consent is being obtained in these processes that we have going forward right now?

Chief Reg Niganobe: That's a pretty complex question, because we heard from a lot of witnesses previously about how indigenous communities need to be engaged, but none of those individuals were indigenous or represented indigenous communities, and that's part of the root of the problem.

These processes can't move forward without full and deep engagement. Many communities have disagreed that these processes are welcoming and accessible at this current time, especially for indigenous peoples. Whatever process you are going through now, whether it be the Canadian Nuclear Safety Commission or the Nuclear Waste Management Organization, they definitely aren't working in our favour.

I heard you highlight the opportunity for jobs and those sorts of things earlier, but part of that issue is that you highlight it as an opportunity for work and jobs, all these sorts of things, and different economic benefits. For communities that are far behind the Canadian standard in terms of infrastructure, housing and all these other sorts of different things—forgotten communities—it's coercion at this point.

Indigenous nations that are impacted are the ones that will be the final decision-making authority on any project. The Anishinabek Nation and other nations in Ontario have their own forms of government that have been interrupted by colonialism. The opportunity to return to these systems will allow for more consensus on development projects as we rebuild our traditional legal systems, but Canada could start the work on creating an effective and broad consultation policy, co-developed with indigenous communities that would be applied to the need for any consultation.

Ms. Leah Taylor Roy: Thank you very much.

I have a follow up question on that, because we have the Canadian Nuclear Safety Commission's "Compendium of Indigenous Consultation and Engagement Practices".

Do you feel that the framework that was established is appropriate? Has it taken into consideration the things you mentioned in terms of developing it with first nations?

Chief Reg Niganobe: That's complex, too. You can develop anything you want, but part of it is the understanding with and the basis on which you come to us for consultation and who you send to us for consultation.

My community was part of this NWMO process at one point and one of the panellists who the NWMO had sent on their behalf remarked to our community that, "We could explain it to you, but you wouldn't understand it anyway. We'll give you all the information and you wouldn't understand it."

There really has to be.... Whom you send on the part of your delegation and your behalf as Canada or your organization helps determine these processes. You could have all these processes, but depending on who you send...it makes a lot of difference.

● (1310)

Ms. Leah Taylor Roy: I understand that. Thank you very much.

I have one more question about the consultation. I understand that the NWMO goes to a host community, or tries to find a community that would like to host a disposal site. We've heard from previous witnesses that in fact money is offered sometimes to landowners within the community. Do you feel that just within the community is sufficient, or do you feel it has to be more of a regional approach? I'm thinking of the Chalk River near the Ottawa River—the Chalk River location near rivers. Do you feel that a regional approach would be better in trying to determine where these facilities should be located?

Chief Reg Niganobe: It is absolutely a regional approach, and you should take a regional approach. That is how indigenous nations have always approached anything—through our kinship, our relationships, our nations themselves, our clan-based system. We all have a connection to each other and we all have a responsibility to each other, and we have a responsibility to the land. We have a responsibility to all of our relations and into the future for the next seven generations. Therefore we do take a regional approach in these discussions, and that's what is needed. Like I said before the interruption, how we come to that decision-making process and determination through our different clan systems of governance are affected in that way. But should those be implemented again, we could definitely come to those consensus decisions on if it could be a yes or if it could be a no.

The Chair: Thank you very much.

Madame Pauzé.

[*Translation*]

Ms. Monique Pauzé: Thank you, Mr. Chair.

I also thank all our witnesses for their testimony.

I would like to put a question to Mr. Provost, who ended his last intervention with some horror stories.

Mr. Provost, what are the implications of the lack of solutions in relation to intermediate level waste?

What are the implications of the new categorization of activity levels of radioactive waste? I am sure you have some stories to tell in this regard.

Mr. Gilles Provost: In fact, it is because there are no intermediate level waste storage facilities that we are forced to pour concrete over the old NPD plant and Canada's first CANDU nuclear reactor. Not only is there no place to store the waste, but there are no plans to even create such storage facilities.

Canada has been using nuclear power for 75 years, but it has no permanent storage facility, not for low-level waste, not for intermediate-level waste, and not for high-level waste. Storage is always temporary. The lack of solutions means that we have to delay the dismantling of the plants, the dismantling of the facilities.

Changes to definitions were also discussed. Canadian Nuclear Laboratories and the Canadian Nuclear Safety Commission have been saying all along that the future waste management facility near the surface of Chalk River will be used to store intermediate level waste. In fact, 98% of the radioactivity in this waste mound comes from cobalt-60. This radioactive material certainly does not fall into the low-level waste category.

The definitions have been completely changed along the way. As several speakers have mentioned, cobalt-60 is wonderful. Cobalt-60 kills microbes, sterilizes laboratory instruments and destroys cancer cells. However, it is also very dangerous because it is highly radioactive. It only takes two kilos of cobalt-60 to produce 98% of the radioactivity in the dump. There will be about 1,500,000 tonnes of radioactive waste. So this is highly radioactive waste.

They say there's only going to be low-level waste, but the public is being lied to. The Canadian Nuclear Safety Commission has a legal responsibility to provide Canadians with credible and unbiased information, but it is complicit in this false information.

● (1315)

Ms. Monique Pauzé: In your opinion, should the import of all radioactive waste into Canada be stopped?

Mr. Gilles Provost: Yes.

Ms. Monique Pauzé: So do we need a law to prevent its importation?

Mr. Gilles Provost: Yes.

At the moment, Canada sells cobalt-60 and agrees to take it back afterwards. So it's going to be the world's cobalt-60 dumping ground, precisely at the Chalk River near-surface storage facility, where there's supposed to be only low-level waste.

Ms. Monique Pauzé: Thank you, Mr. Provost.

Ms. Charbonneau, the Canadian Nuclear Safety Commission is responsible for protecting citizens and the environment from the risks arising from nuclear energy and radioactive pollutants.

Why do you say it is not credible in this role?

Ms. Ginette Charbonneau: First, it advocated for small modular reactors to be exempt from environmental assessment. Yet the commission is supposed to protect us.

Then it wants to authorize plans to bury reactors, even though this is contrary to International Atomic Energy Agency guidelines.

Moreover, when it examines new projects for the so-called small modular reactors, it does not even consider the nature of the waste they will produce or whether it can be stored in a deep geological layer. In fact, the commission only examines the supplier's concept, which does not take into account the nature of the waste at all. This should not be decided at the licensing stage, but at the prototype design stage.

Finally, the commission is not prescriptive enough. It leaves it to the polluters to decide on the classification of waste and the management solution. Sometimes this solution is neither expensive nor good, and it does not protect the public.

The Chair: You have 30 seconds left to make a comment, Ms. Pauzé.

Ms. Monique Pauzé: Ms. Charbonneau, what do you think of the consultation undertaken by Natural Resources Canada on the new radioactive waste policy?

The Chair: I would ask you to respond in 15 seconds, Ms. Charbonneau.

Ms. Ginette Charbonneau: The department has not addressed the significant comments received from the public. In addition, the minister mandated the NWMO to consult on the strategy arising from the policy before it was formulated, which is not rational.

The Chair: Thank you.

Ms. Collins, you have the floor.

[*English*]

Ms. Laurel Collins: Ms. Charbonneau, did you want to finish that thought, if there is anything else on that process?

● (1320)

[*Translation*]

Ms. Ginette Charbonneau: Thank you.

We worked very hard on this consultation. We have held seminars and we have been very conscientious. To our surprise, however, the Department did not take our comments into account. Yet it was a serious process. It is not for civil servants to decide at this stage to maintain the status quo. Otherwise, what is the point of consultation?

When the minister gave the NWMO the mandate, he included so many restrictions that only 10% of Canada's radioactive waste will be covered by the proposed solutions, which makes no sense. The strategy does not even take into account projects that have been licensed.

Furthermore, the department does not even address the waste produced by small modular reactors. Why are these small modular reactors so protected in Canada?

[*English*]

Ms. Laurel Collins: Ms. Charbonneau, I'm sorry to interrupt, but I have some other questions.

Chief Niganobe, I want to follow up on some of the questions asked by Ms. Taylor Roy.

Indigenous people must be consulted in selecting sites or issuing regulatory approvals for the long-term disposal of nuclear waste, but I'm curious how you would characterize those consultations related to nuclear waste management so far.

Specifically, you had mentioned timelines. In your opinion, have indigenous peoples been engaged in a manner and on a timeline determined by those communities that choose to participate?

Chief Reg Niganobe: Something you have to bear in mind on the difference between Canadian governance and Anishinabe and other indigenous communities is that individuals don't delegate their decision-making authority to others.

When Canadians vote, of course, they empower members of Parliament with their trust to make decisions on their behalf, whereas in Anishinabe, people take a more direct approach. They never delegate their authority to make decisions that affect the entire community. It's done as a whole and it's done as discussion. That's how we get to either a yes or a no. We inform our own processes within that in terms of creating laws, creating parameters around things and those sorts of things. It takes in a whole discussion around the social, the economic, the land, the people and everything. It encompasses a whole decision-making matrix and process. Everybody gets to speak. That's where we get rid of that delegation of authority.

I guess to put it this way, Canada has to take steps to ensure that the entire community is involved in decision-making to meaningfully consult.

Like I've said before, it's about rebuilding indigenous systems of governance that were interrupted by colonialism. That's how you'll get to your yes or your no from us. That's how we can have our full engagement. To us, that is full engagement, fully informed processes and discussions. In the Anishinabe way we may not all agree, but at a point we come to a consensus of yes or no, all together.

Ms. Laurel Collins: Thank you so much.

We spoke in the previous panel a little bit about willing host communities and about how certain landowners were being paid money in the consultation process. You spoke a bit about the need for a regional approach.

From your perspective, from an equitable ethics perspective and from an indigenous perspective, what does it mean to be willing hosts? Could you also expand a bit on your comments around coercion?

Chief Reg Niganobe: Yes.

As you're well aware and as you see in the news, a lot of indigenous nations or first nations—some here in Ontario and especially in northern Ontario and along the route—struggle just to get clean water, despite their location. They might be in proximity to southern Ontario where you would assume they would have clean water and all the infrastructure in the world to be able to help do that, but that's not necessarily the case. Some of them are just coming online now for clean water and these sort of things.

Of course, the Indian Act, as you are fully aware, has hindered the growth and the possibilities of communities both economically and socially. That coercion tactic of offering money, hundreds of thousands of dollars and the potential to have these jobs sounds like a benefit to the communities, but they're being forced to take it because there is no other way out. The Indian Act hasn't gone anywhere and it's not moving anywhere.

It needs to be addressed, like I said before, to help make these decisions. These sort of things must be removed, so that communities can move forward and not be coerced into doing what they need to survive. To survive, they have choice—either their community or their money and their land.

Ms. Laurel Collins: Has indigenous knowledge been valued in the process of the selection of nuclear waste storage sites, in your opinion?

The Chair: Answer very briefly please, Chief.

Chief Reg Niganobe: I'll just say that part of the NWMO's reconciliation policy says:

> The NWMO understands that Indigenous Knowledge, together with western science, is part of good decision-making when built on a foundation of trust and sharing of information in a respectful manner.

However, as I related earlier, some engagement was very condescending. There was no exchange of knowledge that considered the importance of our traditional knowledge about the land, about the spiritual value inherent in specific places or our indigenous rights to gather on those lands.

The Chair: Thank you very much.

We'll go to the second round. We want to be done at 12:45, so I'm going to make it four, four, two, two, four and four. Of course, you can go for less than four minutes if you want.

We'll start with Mr. Mazier.

Mr. Dan Mazier: Thank you, Mr. Chair.

Professor Donev, the science seems quite clear that nuclear energy is safe and environmentally sustainable, but a lot of Canadians out there are still rather skeptical of this form of energy.

Why do you think that is? How can the government better promote nuclear energy as a safe form of energy?

● (1325)

Prof. Jason Donev: Radiation is scary. It is understood within the scientific community really well and, as was said in previous panels, which I've watched, we just haven't talked about it terribly well.

When you hear about radiation, which certainly relates to the waste that we're talking about, you hear about it in comics, comic book movies or on *The Simpsons*. There's this perception that nuclear waste is green glowing goo.

This is what a fuel pellet would actually look like. This is a piece of plastic; it's not an actual fuel pellet. It's a ceramic. It doesn't melt in water. It doesn't dissolve in water. It would then sit in something like this. This is what nuclear waste looks like. This is what a fuel bundle looks like.

I think it's really necessary for Canadians to understand that this is what it looks like. It's not the green glowing goo of *The Simpsons*.

Mr. Dan Mazier: How do you think the government can better promote this energy?

Prof. Jason Donev: I think it's getting clarity about more jobs. The nuclear industry is actually facing a grey-out. That means there's an awful lot of people in the nuclear industry who are in the process of retiring, and so forth.

It's getting conversations started at the technical schools specifically. There's a huge need not just for scientists, but really for plumbers and pipefitters, welders and so forth, and starting to talk about it, starting to talk about nuclear energy as a carbon-free source of energy.

We have a lot of hydro. Provinces such as Quebec have an awful lot of access to hydroelectricity. In Alberta, where I live, we don't have access to hydro like that; we just don't have the right geology for it.

It's starting to talk about it, having more of these conversations within Parliament, having a full discussion on the parliamentary floor about the advantages of Canadian nuclear reactors, getting more indigenous education and consultation conversations going. I would really like to see more indigenous voices brought to the table to have these conversations about nuclear power, because we should absolutely be talking about this more. I think as we talk about it more, the fear will actually subside.

Mr. Dan Mazier: That's a really nice segue into my next question.

There was a lecture that you gave where you referred to a framework of FEAR. Can you expand on that and explain it to the committee here?

The Chair: You have 45 seconds. Thanks.

Prof. Jason Donev: “False evidence appearing real” is a wonderful acronym for fear and that's what happens with nuclear. We hear “nuclear” as if it's the worst poison in the world. The phrase, “I wouldn't touch it like it was plutonium” speaks to our false evidence appearing real and we need to start facing everyone and responding. The nuclear industry has done, traditionally, a terrible job at this. They're trying to move forward and I'd like to see them work with the government to have more of these conversations about what people's fears are so we can separate out the false evidence appearing real from legitimate concerns and legitimate hazards.

This is dangerous stuff, but we know how to handle it safely.

The Chair: Thank you.

Okay. We'll go to Mr. Duguid now, for four minutes, please.

Mr. Terry Duguid: Thank you, Mr. Chair. I'll try to be brief.

I have two questions: one for Chief Niganobe; and the other for Professor Donev.

My question to Chief Niganobe is that I wonder whether he has followed some of the major development projects in our north, particularly in Nunavut and the Northwest Territories. I'm thinking about projects like Agnico Eagle, involving the Inuit communities. Community benefit agreements were negotiated, with employment quotas. The communities play a very strong role in monitoring.

Are there lessons there for your communities, and other indigenous communities in my home province of Manitoba, and whether that may apply to nuclear development as you're considering it?

Then, to Professor Donev, I'm a University of Calgary graduate, by the way. I spent too much time in “The Den”. I wonder if you could comment on Norway and Sweden. Norway apparently has been successful in siting nuclear waste, and Sweden is on its way. What would have been some of the keys to success in dealing with nuclear waste?

First, Chief Niganobe, I'll go over to you. Have you any thoughts on success in the north and whether those principles would be applicable in your region?

● (1330)

Chief Reg Niganobe: That's a very good question, but I think to start that question you have to understand that there's a difference between the Indian Act system where we are located and what's taking place in the north with their own agreements that they've set up, up there.

Of course, we do have treaties in this area that impact the relationship between Canada and the first nations that have signed on to the different treaties. That's the regional approach again, and the resource revenue-sharing approach and all these different things where our communities should be able to do these sorts of things but they're not, because of the confines in the Indian Act and because of the economic sanctions and constraints that are put on us through the Indian Act.

These agreements sound great, they sound perfect and they sound awesome to anybody who is not under the Indian Act, who isn't forced into these agreements because of these constraints that we have placed upon us.

This is the only way out for us; those sorts of agreements and contracts are the only thing forward and the only remedy we have—which goes back to the coercion part again.

Mr. Terry Duguid: Go ahead, Professor.

Prof. Jason Donev: Norway, Sweden, Finland and all 30-some countries that have nuclear power have to deal with the spent nuclear fuel, and not just the spent nuclear fuel, but the intermediate- and low-level wastes that have been produced as well. This is an issue. Every form of energy has waste.

What's really exciting about what's happening in Norway, Sweden and, for that matter, Finland, is that they are a little further along in the process than Canada is. That's less true of Finland. What they're doing is working together. That's one of the really nice things about the nuclear industry. The nuclear industry will say things like there's only one nuclear industry and it's in every country.

The best practices from these Nordic countries are being shared with Canada and other countries, and the scientists and engineers are talking with each other about how the deep geologic repositories that they're planning on building there are giving them information that we in Canada can—

The Chair: Thank you very much.

[*Translation*]

Ms. Pauzé, you have the floor for two minutes.

Ms. Monique Pauzé: Thank you, Mr. Chair.

Chief Niganobe, your communities were not part of the decision-making process. They were included at the end. I listened carefully to your comments, and one of the things you said was that it was a paternalistic process. In terms of the money received, you even used a very strong word. You talked about coercion.

Did all the reconciliation principles put forward make you feel manipulated?

[*English*]

Chief Reg Niganobe: No. There is much work that needs to be done there. We still have a long way to go. There is some that has been done, but there is still a long way to go.

Like I said, the imposition of the Indian Act and all of these different things that are in our way.... That's not to say that we can't come to agreements and we can't come to decisions. There are several co-developed projects right here in Ontario, right here within the 39 communities I represent, like a hydroelectric project in Dokis First Nation going forward that has the “run-of-the-river”.

That was a community decision that the first nation came to on their own, so these sorts of things can be done. However, it's that relationship between Canada and the first nations that needs to be repaired. You need to view us as equal partners, because you are treaty partners with us. We are on the same level. We view it that way; you do not. Hopefully, we can get back to that level again.

[*Translation*]

The Chair: You have time for a brief comment, Ms. Pauzé.

Ms. Monique Pauzé: Okay.

Chief Niganobe, are the indigenous communities you represent and other civil society groups unanimous about the five principles you mentioned?

[*English*]

The Chair: Give a yes-or-no answer, please, Chief Niganobe.

I'm sorry about the brevity.

Chief Reg Niganobe: Those ones were adopted in Ontario with 133 first nations in Ontario. They were voted upon by the leadership of the 133 first nations, so they do agree with the—

● (1335)

The Chair: Thank you very much.

Go ahead, Ms. Collins.

Ms. Laurel Collins: Thank you so much.

I'll continue with my questions to Chief Niganobe.

One of the things that came up in the previous panel and in some of the conversations here is around the potential conflict of interest. One of the issues that I'm really interested in is regulatory independence.

From what you've heard so far and from your perspective, do you have any thoughts or comments on the need to mitigate the risks for potential conflicts of interest? Do you think that would impact any of the nation to nation communication, consultation and the relationship that is happening so far when it comes to managing nuclear waste?

Chief Reg Niganobe: Yes, absolutely. There always has to be oversight. Even within our own systems, there is always oversight. Our own Anishinabe governance systems are historical systems. There is always independent oversight. There are always those mediators who help make decisions between two separate parties. Within our clan-based system, we have a clan that does that sort of mitigation process.

Yes, it would impact it; very much so. I am in agreement that there needs to be some sort of oversight in that manner.

Ms. Laurel Collins: Yes. You're speaking of the ways in which our government can learn from your government.

The International Atomic Energy Agency's integrated regulatory review service did a peer review of Canada's radioactive waste policies in 2019 and found that Canada's policies and strategies for management of radioactive waste were inadequate.

Here in my home province of British Columbia, I'm “zooming in” from the homelands of the Lekwungen-speaking peoples. We have been experiencing extreme impacts from climate change. Thinking about future generations and the management of this waste, I'm curious what your thoughts are from an indigenous perspective.

The Chair: Unfortunately, we're over the two-minute mark. There might be another opportunity to address that question.

We'll go to Mr. Albas now for four minutes.

Mr. Dan Albas: I want to say, first of all, thank you to all of our witnesses today.

Mr. Provost, I have a question. You said earlier that you believe that the exportation—or is it the importation—of cobalt-60 should be halted. Maybe I missed a detail.

[*Translation*]

Mr. Gilles Provost: Canada exports cobalt-60, then imports the waste. The Canadian public is unaware that all of this highly radioactive cobalt-60 comes back home at the end of its useful life and is subsequently transferred to storage facilities at Chalk River, for example.

In the tens of thousands of pages of the environmental assessment, the study of the Chalk River dump, there is never a mention of cobalt-60 sealed sources. This is the main source of radioactivity throughout the dump.

It is clear that Canada does not want to tell the public how much...

[*English*]

Mr. Dan Albas: I think you've clarified that.

My question though is, where is the world supposed to get its cobalt-60? Obviously, cobalt-60 is an immensely used medical isotope, and Canada supplies 90%. Where would they, then, source it?

[*Translation*]

Mr. Gilles Provost: I think Canada can continue to export cobalt-60; it's not a problem. Each country, once it has purchased it, should, however, manage the waste itself.

There are solutions. I am thinking, for example, of the deep drilling that is proposed by the International Atomic Energy Agency. Countries can easily manage small amounts of waste. But bringing all this waste back to Canada and storing it on a hill near the Ottawa River, without ever informing the public, is a deceptive way to proceed. Canada should not be doing this, in my opinion.

[*English*]

Mr. Dan Albas: Again, sir, you still have to answer the problem. Where would the world get its isotopes for this purpose?

Canada has made this because our CANDU reactors utilize heavy water and natural uranium. If they get it from someone else....

Again, I believe in the polluter pays principle. I believe there's a premium that's brought in. I really doubt we would be able to produce isotopes affordably for Canadian hospitals if suddenly we weren't allowed to export those.

I take your point that you don't like the use of it, but the problem is a very real one. What would be used instead? I'd like to hear you say that.

● (1340)

[*Translation*]

Mr. Gilles Provost: Sometimes you can use accelerators. My point is that Canada may well continue to sell them, but then the buyers have to manage their own waste. I have nothing against Canada exporting it, if countries want to buy it, but they have to be responsible for their waste. They're the ones using the cobalt-60. Canada then brings the waste back into the country without ever informing the public.

We manage to debate for four years where this waste is going to go, but we never mention its existence. This is bad faith, and it is acting deceptively—

[*English*]

Mr. Dan Albas: I do appreciate there's a difference of opinion on this, sir.

At the end of the day I trust Canada. We are a responsible country, and we have the technical expertise that can go along to dealing with something that has a half-life of 5.27 years. Unless there is a viable alternative, I would just suggest that the current arrangement seems to be proper for me. We produce, and then we take care of a very important isotope.

The Chair: We're over time.

We have Ms. Thompson for four minutes or less, please.

Ms. Joanne Thompson: Thank you. I'll go quickly.

Professor Donev, I have a question for you.

The Canadian Nuclear Safety Commission is nearing its decision on the environmental assessment of the near-surface disposal facility at Chalk River. Do you think public confidence in the proposed disposal site would be increased if the proponent, the Canadian Nuclear Laboratories, requested having the assessment done under the Impact Assessment Act, as opposed to continuing with an assessment conducted under the Canadian Environmental Assessment Act?

Prof. Jason Donev: I don't know that the public's confidence in this would actually be swayed one way or the other, truthfully. I don't really see that's what's going to inform the public. Feelings are feelings. The facts are the facts, but the feelings are the feelings, and it feels like what you've asked me is how would the feelings be if the facts were slightly different. I don't actually think it would have any impact on public confidence, truthfully.

Ms. Joanne Thompson: Let me ask you this. What do you think is needed, first of all, to ensure that the information going to the public is indeed the information that is defendable as evidence-based? Also, how is it that we frame it so that, to your earlier point, as the general public we are dealing with facts and not fear and myth and the things that really confuse arguments going forward?

Prof. Jason Donev: The Canadian Nuclear Safety Commission, which does report to Parliament but through Natural Resources, is a well-respected international body.

I'm sorry, I don't actually know. I don't think there is a magical solution for just suddenly making everything fine. Perceptions take time to change.

There had been a different deep geologic repository that was proposed at the Bruce site, and there hadn't been sufficient indigenous consultation with that. As a result, people didn't feel comfortable.

The nice thing about the situation, though, is that it's not an urgent problem. It's important. It needs to be dealt with, but it's not an urgent problem in that it needs to be dealt with right now, so if the public consultation winds up halting this process it's not like people are going to be in danger while the conversations continue.

I'm not sure if that fully addresses your question or not.

Ms. Joanne Thompson: It's very helpful. Thank you.

It's back to you, Mr. Chair. I'm finished.

The Chair: Thank you. We finished a minute early at 1:44 instead of 1:45, so I thank all the witnesses for their succinct and informative comments, and the questioners for their pointed questions.

This has been a very interesting panel, as was the one before.

To the witnesses, your testimony will inform our report in one way or another, and we really thank you for taking the time today to be with us. I'm sure you look forward as much as we do to the publication of the report at some point.

On that, I would like to adjourn.