DARLINGTON NEW NUCLEAR POWER PLANT PROJECT

JOINT REVIEW PANEL

PROJET DE NOUVELLE CENTRALE NUCLÉAIRE DE DARLINGTON

LA COMMISSION D'EXAMEN CONJOINT

HEARING HELD AT

Hope Fellowship Church
Assembly Hall
1685 Bloor Street
Courtice, ON, L1E 2N1

Saturday, March 26, 2011

Volume 6
REVISED

JOINT REVIEW PANEL

Mr. Alan Graham
Ms. Jocelyne Beaudet
Mr. Ken Pereira

Panel Co-Managers

Ms. Debra Myles
Ms. Kelly McGee

Transcription Services By:

International Reporting Inc.
41-5450 Canotek Road
Ottawa, Ontario
K1J 9G2
www.irri.net
1-800-899-0006

ERRATA

Transcript :

Throughout the transcript the spelling Mr. Kavlevar was used when it should have read Mr. Kalevar.

Page 10, line 23

23 conducts its environmental assets and its

Should have read:

23 conducts its environmental assesments and its

Page 42, line 16

16 and the University of UOYT and others was to

Should have read:

16 and the University of UOIT and others was to

Page 45, line 17 and 20

17 electric vehicule and Smart grid development.
18 To that point, another recent
19 initiative facilitated by DSEA is a multi-partner
20 pilot project on electric vehicule and electricity

Should have read:

17 electric vehicle and Smart grid development.
18 To that point, another recent
19 initiative facilitated by DSEA is a multi-partner
20 pilot project on electric vehicle and electricity

Page 195, line 19

18 IEA safeguards with IEA inspectors doing safeguard

Should have read:

18 IAEA safeguards with IAEA inspectors doing safeguard

Page 212, line 8

MR. SWEETNAM: Robert Sweetnam, for the record.

Should have read:

MR. SWEETNAM: Albert Sweetnam, for the record.

TABLE OF CONTENTS / TABLE DES MATIÈRES

TABLE OF CONTENTS / TABLE DES MATIÈRES

Courtice, Ontario

--- Upon commencing at 9:00 a.m.

CHAIRPERSON GRAHAM: Good morning, ladies and gentlemen, and welcome to Day 6.

And turn the remarks over to my co-chair -- co-manager, I should say, Kelly McGee.

Opening Remarks

MS. McGEE: Good morning.

As the chair said, mon nom est Kelly McGee. Welcome to the public hearing of the Joint Review Panel for the Darlington New Nuclear Power Plant Project.

Je suis la co-gestionnaire de la Commission d'examen conjoint du project de nouvelle centrale nucléaire de Darlington.

Secretariat staff are available at the back of the room, please speak with Julie Bouchard if you are scheduled to make a presentation at this session, if you are a registered intervenor and want the permission of the Chair to have a question put to a presenter or if you are not currently registered to participate but now wish to make a statement.

Any request to address the panel

must be discussed with panel secretariat staff first. Opportunities for either questions to a presenter or a brief statement at the end of a session will be provided, time permitting.

We have simultaneous translation; headsets are available at the back of the room. English is on channel 1, la version française est au poste 2.

A written transcript of these proceedings will reflect the language of the speaker.

Please identify yourself before speaking to make the transcripts as meaningful as possible.

Written transcripts are available on the CEAA website, audio files and archived copies of the video webcast are available on the Canadian Nuclear Safety Commission website.

As a courtesy to others in the room please silence your cell phones and other electronic devices.

Mr. Chair?

CHAIRPERSON GRAHAM: Thank you very much, Kelly.

And good morning again, welcome to

everyone joining us in person, through the live audio link or on the internet.

My name is Alan Graham and I am the Chair of the Joint Review Panel.

The other panel members with me today are Madam Beaudet, to my right, and Mr. Ken Pereira to my left.

We will start today's session with an intervention by the Pickering Nuclear Community Advisory Council as submitted under PMD 11P1.76.

And we have Mr. Vincett here this morning, and Mr. Vincett, the floor is yours.

--- PRESENTATION BY MR. VINCETT:

MR. VINCETT: Thank you, Mr. Chairman, and thank you, Members of the Joint Review Panel.

For the record, my name is John Vincett. I am the facilitator of the Community Advisory Council to the Pickering Nuclear Generating Station.

And I'm joined here by three members of the CAC; Mr. Jim Dike, a retired chief financial officer, a resident of Ajax, past commodore of the Frenchmen's Bay Yacht Club and chairman of the Pickering Waterfront Coordinating

Committee, and Mr. Craig Freeburn, a resident of Whitby who is currently completing his final year in nuclear engineering, part of the faculty of Energy Systems and Nuclear Science at the University of Ontario Institute of Technology; and, Mr. John Earley, a retired tax accountant, residing in Pickering and the treasurer of the Pickering Eastshore Community Association, as well as being the council's link to the scouting movement in Durham region.

This presentation has received the approval of all who are members of the council at the time of writing, each of whom participated in a number of drafts to arrive at a consensus document.

--- PRESENTATION BY MR. FREEBURN:

MR. FREEBURN: Hi everyone. For the record, my name is Craig Freeburn.

As members of the Durham region community the Pickering Nuclear Community Advisory Council wishes to comment on the environmental impact statement and the application for a licence to prepare a site for the Darlington new build new nuclear power plant project.

A core vehicle for the OPG dialogue with the community the CAC assists

Pickering nuclear generating station in identifying and responding effectively to the concerns of the community.

The group is made up of citizens, representatives of the community and organizations and members of a local government, staff and agencies who examine a wide-range of issues associated with the station and with OPG at a corporate level.

Most members report back to one or more constituencies. Meetings are open to the public and a local media representative attends regularly.

Minutes are posted on the OPG public website and are available through the public libraries in Durham region.

As council members we are volunteers who are not beholden to OPG and can speak to and about the company frankly.

The council maintains a good mix of new and experienced members which makes for continuity in our dialogue with OPG.

We have followed a number environmental assessments related to OPG over the years which puts us in a good position to ask

meaningful questions about EAs.

--- PRESENTATION BY MR. EARLEY:

MR. EARLEY: For the record, my name is John Earley.

The council's involvement in the Pickering B refurbishment environmental assessment process in the years 2006 and 2007 was a particularly enriching experience for me.

We reviewed draft versions of the background paper on the EA methodology to be presented at a stakeholder workshop.

We called for avoidance of jargon and clarification of what is and what is not covered by the study areas. We also provided detailed advice on the agenda and communication aspects of the workshop.

As well, we played an important role in the development of an OPG presentation to explain to stakeholders the Pickering refurbishment environmental assessment's approach to assessing potential human health effects of the project based on the World Health Organization's three dimensional definition of health; physical, social and mental.

We emphasise the importance of

highlighting the social and psychological, as well as the physical aspects of health, and suggested topics to be included or enhanced.

We are pleased to note that our advice was incorporated into OPG's approach to communicate in the environmental assessment methodology to stakeholders. A methodology that is similar for all EAs related to power plant projects.

While the Advisory Council focuses on Pickering nuclear's relationship with the community OPG has always kept the council apprised of developments at the Darlington nuclear generating station and has sought council feedback and advice on these matters.

While we don't take a particular position on the Darlington project we would like to comment on the environmental assessment process that OPG undertook within the community, including the Community Advisory Council.

We found this process to be thorough, transparent, informative and highly effective. The company undertook a wide-range of interactions with relevant local communities to discuss the planning, the data gathering and the

findings of the environmental assessment work.

Thank you.

--- PRESENTATION BY MR. DIKE:

MR. DIKE: For the record, my name is Jim Dike.

Since October 2006 OPG has provided the CAC with a series of briefings and updates on the environmental assessment process. In discussing these presentations over the approximately three-year timeframe of the EA the council raised many questions and issues, some of which require OPG representatives to go back and review information and provide a response at a subsequent meeting.

The details of these discussions are available in the minutes of the Community Advisory Council, posted on the OPG website.

For example, at one point the council raised the issue of a possibility of an earthquake in Durham region and the implications for the nuclear sites.

OPG presented an update on the findings and assessment over many years of seismic hazards at the Pickering and Darlington nuclear generating stations, a response that satisfied the

council.

Throughout the EA period OPG has always answered our questions to our satisfaction and in a forthright and open manner. As well, CAC council members participated in a number of open houses and workshops related to the environmental assessment. Through these interactions, we have all gained a solid understanding of the potential environmental challenges arising from the Darlington project and the methodologies used for managing those challenges.

The CAC is concerned that the planning of the closing of the Pickering site, coupled with the delays in mandating the new nuclear development at Darlington, puts at risk Ontario's ability to meet electrical needs in the long term. The phasing out of OPG's coal-fired plants, well a very positive step in itself, adds to the challenge of providing other sources of generation in a timely manner.

We compliment the CNSC and the CEAA for pressing forward in the rate authority process with a view to making a timely decision on the safety and environmental acceptability of the new nuclear power plant at Darlington. We believe

OPG has done an effective job of representing the process through development of a generic case as a means to test the environmental suitability. The correspondence between the Joint Review Panel and OPG regarding the environmental assessment which we have been able to follow through the panel's website, indicates that both the judicial authority and the proponent have answered challenging questions by portraying a range of data honestly and effectively. Thank you.

CHAIRPERSON GRAHAM: Thank you very much Mr. Vincett, for your presentation, and your team's presentation. We -- the process now is we go to questions from our panel members and I'll start off with Mr. Pereira.

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman. Thank you very much for the presentation. It's comforting to know that the -- a community association like yourselves -- advisory council like yourselves, is able to provide input and influence the way Ontario Power Generation conducts its environmental assessments and its activities in the community.

So as I note from your -- your

panel member document P-176 -- P-1.76, the council does provide advice on a number of topics, one of them being the effects of Pickering nuclear operations on the environmental health, safety, social and economic interests of the community. And I note that you provide some input to Ontario Power Generation on concerns about health effects and your referenced the World Health Organization guidance on -- on the subject. Did the World Health Organization guidance reflect the concerns in your community fairly well or were there other concerns in the community about health effects and environmental effects of -- of having a generating station in your community?

MR. VINCETT: Let me try starting that and ask anyone to jump in that would like to. For the record, John Vincett. The World Health Organization process really provided a framework. Comments from the advisory council tended to be on the relative balance of those items in the framework rather than trying to expand the framework itself. Particular attention was given to the mental health area at the panel discussion, feeling that to be a -- a larger topic than perhaps was indicated in the framework and perhaps related

to the possibility of an evacuation requirement. I don't know if any of the others would like to --

MR. EARLEY: With respect to the recent emergency in Japan --

CHAIRPERSON GRAHAM: Pardon me, sir, each time would you introduce your name for -- for the transcripts?

MR. EARLEY: For the record, my name is John Earley. With respect to the recent emergency in Japan, the council has learned that only one or two persons, residents in the immediate community of South Pickering have expressed any concern or even requested knowledge of where to obtain the KI iodine pills. This suggests that the OPG has done a very good job of alerting the community and keeping the community informed of what is happening with the OPG's nuclear facility and that there is a very low level of concern from the population in that area.

MEMBER PEREIRA: Okay, my -- my next question, again, the same part of your panel member document, and it says:

> "The council focuses on and provides advice on a number of issues, one of them being

waste management activities on and off the site."

So in that area, does the council have any concerns or any recommendations that you have provided on issues that OPG might address in the future?

MR. VINCETT: For the record, John Vincett. If we were to go back maybe five years in the council's history there were a number of questions about waste management activities brought forward to the table. The logical solution for that was to generate a -- a visit to the site and have an understanding of how the process worked. Probably two-thirds, maybe a little more of council members attended two sessions. One at the waste management handling facility and a second at the new facility which has been created to store the dry storage units.

People on the council, I think, were -- got a very good understanding of how the process worked as a result of that. And we also have added to the table an OPG management person from waste management who attends not every meeting, but most meetings and certainly any meeting where waste management is on the agenda.

And we are in the process of planning at the present time, a visit to the Bruce Community where another waste management facility is in place and we did host a -- a visit from representatives of the Community Advisory Council there at a meeting two years ago with the council.

MEMBER PEREIRA: And so just from that interaction, are there continuing concerns in your council about waste management on and off the site or have all the concerns been resolved by clarification and information that you received?

MR. DIKE: We -- Kim Dike for the record. We feel that the clarification and information we have been provided is -- has adequately, from our point of view, relieved our -- any concerns that we had over waste management. It's not a perfect solution in the world, but it's, you know -- from our purposes, short term it is a good solution.

MEMBER PEREIRA: Thank you. I'll go on to another topic. In -- in your PMD, towards the end, you talk about through your interaction with Ontario Power Generation, you have obtained a -- a good understanding of the potential environmental challenges arising from the

Darlington project and the methodologies for managing those challenges. First -- the first question is engaging in this, are you also in contact with the community in Clarington who will be the host community; are you -- are they sharing with you their concerns; are you providing to them the issues that you have identified? And -- and the second part, is -- so you have a good understanding about -- from your perspective -- the community perspective, the potential environmental challenges, what are those challenges from your perspective that -- that would arise from expanding a generating station in -- in this region -- expanding meaning building more reactors?

MR. VINCETT: For the record, John Vincett. Let me try and work on the first question. One of the issues for a group that is specifically working with one -- one generating station, the Pickering station, is the whole question of should we or should we not even have involvement in -- in what is or isn't going on at Darlington?

And -- and that is something that the council has been very sensitive about and I have been asked by the council on two occasions to

check with the processes related to Darlington, that in stepping in to say something to the Joint Review Panel, Pickering isn't stepping on somebody else's toes.

The message we've had back has been one of, well, no, it's logical. You are involved; you have people from -- from the area. There's people from as far away as -- as Whitby and -- and towards Peterborough on -- on the council. So people are logically involved in that. Also this council -- the Pickering Council has had extensive experience with OPG on environmental assessment matters over a number of years. It has, in fact, done some work in helping OPG shape their approach to environmental assessment.

So it was considered to be quite logical for this group to be involved in an intervention of this type by the folks at Darlington.

Maybe I would ask John and Jim and perhaps Craig to come on the question of the challenges that you see for the environmental issues.

MR. EARLEY: For the record, my name is John Earley.

Recently, the Pickering Council was invited and participated in a tour of the Darlington facility. There, we received openness and frankness from the nuclear staff. We had a very entertaining and enjoyable tour and we came away feeling that everything was being responsibly managed.

With respect to the concerns and interest of the local community, I have to say I really am not aware, other than what I've read in the press.

Thank you.

MEMBER PEREIRA: From your point of view, what would be the environmental concerns, the challenges for building a new nuclear station in your region? Because you are really in the same region. It's not really that distant from where your council operates.

MR. EARLEY: For the record, my name is John Earley.

The only concerns that I have heard is the increase in traffic and what the actual construction process will demand in the way of cooperation from the local community.

With respect to it as a nuclear

facility, it seems to have exactly the same response as building any new commercial or industrial enterprise.

MR. VINCETT: If I might add, Mr. Pereira, I believe one of the key challenges that Council members felt that was facing the project on the tour was the enormous volume of land movement that had to take place and the implications that would have for traffic in the region and just the physical size of potential options was also a question.

MEMBER PEREIRA: Just to expand on that, are there any concerns in your community on the impacts on the lake? Lake Ontario, obviously, that affects your area as well because it's not a great distance from the Darlington site.

MR. VINCETT: For the record, John Vincett.

Certainly impacts on the lake have been discussed at the Council table regularly. There have been discussions about fish and how fish are managed. There's been considerable discussion about algae and how algae does or doesn't get into the plant and the various mechanisms for preventing that from happening and the considerable physical

effort that that barrier takes to maintain.

Council members are aware of other concerns in the broader community about fishing issues -- we certainly have heard those at other hearings -- and is interested in pursuing that further and has, I think, challenged OPG management to come back with issues on how fish is being managed.

One feature of the tour of Darlington, it demonstrated to council members there is a very different way of water entering the site at Darlington. I suspect that there is a large model there on site which shows you how fish are diverted. That was seen to be a good thing by Council members.

Jim, I don't know from your waterfront perspective if you have anything to add on the fish?

MR. DIKE: Jim Dike, for the record.

We obviously are always very concerned about the inhabitants of the lake, whether they're actually fish or any other type of species, and as a result of that we work closely with the local conservation authorities and I think

OPG has been working with them as well.

I think the Waterkeepers have come out to Pickering and looked at some of the issues that have been worked on there. They're not 100 percent resolved, but they're significantly better than they have been. And I think cooperatively, between the Conservation Authority, the OPG and people like the Lake Ontario Waterkeepers providing input, there will be a satisfactory solution to that.

MEMBER PEREIRA: Thank you very much for your comments.

Thank you, Mr. Chairman.

CHAIRPERSON GRAHAM: Thank you, Mr. Pereira.

Madame Beaudet?

MEMBER BEAUDET: Thank you, Mr. Chairman.

Part of my question was already answered to some extend when you said you had concerns of stepping in the Darlington area, because I looked at the members and I couldn't see anybody from Darlington.

You have a representative from Durham. Would that bring the concerns from the

citizens of Darlington?

MR. VINCETT: For the record, John Vincett.

We do have some members of the Council who are appointed by different bodies. The Conservation Authority would be one; Region of Durham is another.

Certainly the Region of Durham is represented at the Council and where people actually live in the area is quite broad in Durham Region. It's not just people in Pickering. In fact, sometimes in trying to maintain the balance of the Council, we worry that we have too many people from too far away for the Pickering site.

So I think it's the feeling of the Council that while it's not trying to replicate a committee working with Darlington directly, there is certainly some good knowledge of the broader community at the table.

MEMBER BEAUDET: Thank you.

My other question would be with OPG. I looked in the technical support document, the one on communication, and I was trying to find a group that would be equivalent to this Council. I'd like to be corrected, but there doesn't seem

yet to be a group that exists in the Darlington area. That's the first part of my question.

The second part would be then how do you determine the targets, for instance, that you set yourself in your sustainable reporting and how do you make sure that they are meaningful? Do you have sort of an equivalent group that would come on a regular basis and a group that is structured with a board and objectives that could always come back and give feedback on the targets that you set as your challenges?

MR. SWEETNAM: Albert Sweetnam for the record.

I'll ask Donna Pawlowski to address your question.

MS. PAWLOWSKI: Donna Pawlowski, for the record. Good morning.

The first question you asked is, is there an equivalent to the Pickering Community Advisory Council for the Darlington site, and there is the Darlington Site Planning Committee, and we referred to that in the communications in consultation TSD, which was established a number of years ago to assist the site in planning the use of the lands that aren't required for power production

purposes. And so they were a group that includes local residents, elected officials and staff from the Darlington Nuclear Generating Station and they've been very effective and helpful to the Darlington senior management.

That community group is being transformed now in recognition of this project going forward to represent a committee more similar to the Pickering Community Advisory Council.

So the terms of reference are currently being drafted and the scope and the responsibilities of that committee will be broadened to incorporate a number of activities, including, I would like to add -- they will have a key role in monitoring and overseeing the EA follow-up program. So they'll receive regular reports on the EA follow-up program to ensure that there is some public oversight of how we're meeting those targets.

MEMBER BEAUDET: I think the distinction here with the Council is that they are completely independent. Am I correct in saying that?

And it seems that the group that you would have is not spontaneously coming from the

community. I'd like to hear more about that.

I mean, it's a group that -- it's very helpful. I mean, I'm not saying it's not the thing you should do or not do.

But was the council in Pickering a spontaneous creation of people who had concerns? Was it from the population or was -- did you have at first staff from OPG?

MR. VINCETT: For the record, John Vincett.

Madam Beaudet, I believe that the initiative for the Community Advisory Council at Pickering was really -- it's approximately 11 years ago now, maybe 12. There was some real concerns in the community at that time.

A process took place to create a group that was called the Community Working Group, and this was an attempt to bring together people that were expressing concerns and try and capture those concerns in some kind of a logical and meaningful way, and these were matters that had been brought out at CNSC hearings and there was a general rumbling in the community of concerns.

Some of those concerns were about safety. Some of those concerns were about

communications activities between the site and the community.

Through a process the Community Working Group captured all of the issues in, I think it was a two-day workshop, and what was created from that was something called the 160 Issues. The 160 Issues was a huge list of issues that the community had and the 160 Issues were -- and it was OPG -- or then it was Ontario Hydro but then OPG -- took on the role of responding to those 160 issues.

This was an immense task. It actually took us 10 years to work through the 160 issues, and each of the 160 issues was brought before the council and addressed by OPG, and I was very impressed with the council's ability to stick with all of those issues. And approximately 18 months ago we were able to have a little dinner to say "Wow, we finally got through the 160 issues."

So my view would be that the 160 issues were the reason why the council evolved in the way that it did.

And perhaps -- Jim, you were on the original working group.

MR. DIKE: The environment has

changed considerably -- for the record, Jim Dike.

The environment has changed considerably since the 160 items were raised. The attitude towards the council and towards the community from what was Ontario Hydro and now passed to OPG has changed considerably. There is a much more cooperative and very open method of dealing with the community.

We have, through a number of years, been able to work more closely with the OPG people. I think we've been able to offer them advice, especially in the communication area, that they have taken to heart and they have changed some of their procedures and the result is the community feels much more comfortable, and I think OPG feels much more comfortable with the community as well.

MEMBER BEAUDET: I'd like to pursue a little bit with OPG about this new committee that you are forming.

If there are some issues and people want to go out for independent advice or further studies, do they have a budget for that? I mean, do you provide a budget so that there could be some independent reaction?

MS. SWAMI: Laurie Swami, for the

record.

In our working with a number of committees in the community we have established the ability to fund additional studies, if that's necessary, and to the satisfaction of the community.

I think that when Dr. Kyle was here earlier from Durham Region he described a study that Waterloo did looking at the tritium analysis that was performed to ensure that there was satisfaction in the community that the analysis was performed to a high standard and met QA requirements or quality assurance requirements.

Those are the types of studies that we would be involved in.

During this environmental assessment we funded the municipal peer reviews as another example, where we worked with the community to ensure that adequate independent experts were available to review the studies and to ensure that we were following normal industry practices and met their requirements.

So in a number of cases we would do that. We don't necessarily set aside a budget to do it but as issues arise we deal with them on a

case-by-case basis, and we have done that in the past.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you, Madam Beaudet.

I have a couple of questions. First of all, have you any advice or is there any advice on lessons learned from the history at Pickering, as to things like -- and I know the record has not always been stellar at Pickering with regard to fish impingement and so on, and so on, and other issues that have come up at Pickering that would relate to the process we're going through today.

Have you any lessons learned to provide to the committee that -- to the panel that might be relevant to today and what a new build and how it affects the community?

MR. VINCETT: For the record, John Vincett.

I think that one of the things that has been obvious to committee members over the decade that I've been involved with the council is almost like a sea change in the management style of the senior VP's that come out and work with the

committee.

We meet 10 times a year for approximately three hours each time, so we get 30 hours of senior VP time over a year, which is probably about two days of their working day, right, or three.

We feel actually quite privileged to have that access, and that means that if the council is asking a question we're very likely to get an answer right there and then because they are very knowledgeable about all aspects of not just the plant but OPG. It also means that the seniority is there to ensure that the question gets answered lower down the chain.

So we maintain a log of all the different issues that get raised and how effectively they are answered, and it's quite a long story, I don't have the number in front of me, but it's something like 275 issues raised in 10 years of which 11 are still outstanding and the majority of those are from the last year.

So there is a very effective way of getting back to people with the questions that are asked and I would think that's one really important point.

I'll ask John and then Jim to comment on that.

MR. EARLEY: For the record, my name is John Earley.

I have very little to add to that which Mr. Vincett has told you. I feel very privileged to be a member of the council. I report back regularly to the community group which I represent there. And as I have said, they are very happy with the information which we receive from Ontario Power.

For example, there was a water leak only a week or so ago and that received immediate coverage in the local press. There were communications to each member of the Advisory Council on the effect or the non-effect, rather, of this leak, which we were able, in turn, to provide to our own community organizations.

When I met with my organization, the East Shore Community Association, which is immediately surrounding the nuclear plant, people just thanked me and thanked OPG for providing the information and they were very comfortable and assured that they had been given all of the facts and it was nothing to worry about.

MR. DIKE: Jim Dike, for the record.

One of the things that I'd like to comment on is the method which the meetings take place. The site Vice-President reports at the beginning of the meeting and it's then open to general questions before the specific issues of that meeting take place. So there are topics that come up that are planned in advance to deal with the 11 issues that are still outstanding and other issues that come up.

But we get a chance to ask some very direct questions of the Senior VP, with media present. Sometimes that's an interesting exercise in terms of -- me, I have a financial background so I'm more interested in the financial and environmental things than some other people.

But it's quite interesting to see the people who have gone through the location in terms of the plant as far as people who have been vice-president, including the current president of OPG, Tom Mitchell, who went through the same rigorous program that some of the people do now.

And we enjoy having the opportunity to ask questions. Some of them are a

little bit off left field, but they don't back away from answering the questions other than the ones that are very political in nature.

And we think that's a good thing for the council to be able to sit there and ask questions very directly and get reasonably good answers very fast.

Thank you.

MR. VINCETT: So perhaps, in summary, the key lesson would be ---

CHAIRPERSON GRAHAM: Mr. Vincett ---

MR. VINCETT: I'm sorry, John Vincett, for the record.

Perhaps in summary, the key lesson would be to create forums in which dialogue is encouraged and see that as an opportunity to communicate rather than an opportunity to be defensive.

CHAIRPERSON GRAHAM: Thank you.

What I was really -- and I don't want to belabour this -- what I was really looking for is what might have been major issues that might help us -- and I'm thinking of things like -- well, I mentioned fish impingement -- but I also mean

like urban planning. Pickering, you're residential, and urban sprawl has come right up almost to the gates of the plant.

Lessons learned as to what we as a panel could gather today from your presentation that might be helpful in developing the proper recommendations that would go forward and that was -- and, I mean, I don't want to get into the 100 and some issues that you faced and the 11 outstanding.

Is there some direction you can say is, was that a major issue and how did you address urban sprawl, how did you address fish impingement and so on; that those lessons could be better addressed here at Darlington?

MR. VINCETT: For the record, John Vincett.

I think, Mr. Chairman, if we had the whole council here and I would put your question to them, I suspect I'd hear at least two answers.

One would be that lessons have been learned between Pickering and Darlington about how to do water intakes in a way that are less difficult for fish.

I think that the council would probably be saying, well, if you're starting a new process, how do you deal with the fish effectively so that that doesn't become a large issue into the future. After all, there are different technologies and new learning has been taking place about that. I think that would be a key question.

I think the second question would be, how does -- and recognizing that security has been a different kind of issue more recently than it used to be -- how do you deal with your perimeter in an effective way and what is the appropriate kind of buffer zone -- would probably be a planning question.

And in thinking about that, at Pickering there was, at one point, a suggestion that an area of land that was assigned as kind of -- not wilderness, but an opportunity for different animals to pass through effectively -- and there was at one point a suggestion that wouldn't it be a neat idea to put an office on that building -- on that site.

And that issue came before the council and the council, I think, was quite quick to remind OPG of commitments that had been made

about Ontario Hydro, about maintaining a corridor for animals on the waterfront.

Similar discussions came up when buildings were also built, office buildings, close to the Pickering site.

So there's a strong interest in planning issues, and we've also heard a lot at the council table about, how do you plan for traffic. Not just local traffic but also traffic that's related to shift work.

I don't know if anyone would like to add to that?

MR. DIKE: Jim Dike, for the record.

One of the things that we learned, and can probably pass to the council, is be very cautious of what happens during the construction period.

I think OPG has learned a lot from the process that they've been going through, but what happens during construction is a disruption of what normally is taking place in the community, and I think working with the community and being very much a part of the solution, OPG could do a very job on that based on our experience with them and

what we've been able to help them with in the past.

Thank you.

CHAIRPERSON GRAHAM: Thank you.

Just one other question that I have is, in a lot of the intervenors there's been a lot of questions raised whether there's need to build another nuclear power plant in the Province of Ontario and why not use more environmentally friendly types of energy production; wind, solar, et cetera.

Has that ever been one of the issues that you have looked at and has come to you as a why not or trade-off situation?

Has that ever been looked at by your group?

MR. VINCETT: For the record, John Vincett.

Let me start and I'll ask Jim to carry on because I know this is an area of strong interest for him.

We see charts in different presentations that show a dip. The dip is the gap that happens between when Pickering closes and when and if a Darlington facility would open.

And we had, actually, a very

interesting presentation from the IESO talking about what those options might be to fill that gap.

And I guess the council has a pretty strongly expressed feeling that there are ways to fill that gap, some more effective than others, but the important thing is to make sure that it's doable.

Let me pass on to Jim.

MR. DIKE: Jim Dike, for the record.

I look at the planning and the timing of the new build in Darlington and look at the timing of the closing of the Pickering plant, and the build time is 8 to 10 years. So you sort of look at the math on that and I'm sitting there saying, to me, looking at the chart that was presented to us, there is a significant shortfall if the electrical requirements of the province continues to be at the current level or even grow. And with electro-cars coming down the pipe in 10 years and requiring more electricity, somewhere somebody has to do something and, obviously, shutting down the coal plants was, from an environmental point of view, a very good idea and I strongly support that.

I just question how are we going to have sufficient electricity to meet the needs of the province and make the province competitive in terms of drawing new industry in if we don't have enough power.

And I have a major concern about that and every time I do the math, my math doesn't come out very favourable in terms of 2020, 2023 in terms of the timing of the new build, assuming the new build is built.

If it's not, the other methods that they would be talking about, the technology may come in the future but it's not there now and we as an organization sit here and say, how do we make the province competitive, how do we make sure this is happening and have the electricity to be a competitive place for people to invest.

Thank you.

MR. VINCETT: And if I may add, Mr. Chairman -- John Vincett, for the record -- we've now had three presentations on different kinds of alternative energy options. The council is keen to hear about that.

Last fall we had some discussion about what's going on to deal with plants like

Atikoken moving towards bio-fuel efforts, and we also heard about that at Nanticoke.

And I think the council has a pretty realistic understanding that the scale of that is currently small and has the possibility to increase, but again, there's a time constraint there.

The folks from Alternative Energy are coming back in the fall to tell us what is going on there too.

I wouldn't want to leave the impression that anyone around the council table doesn't agree with conservation; they are very much for it and, in fact, challenge OPG on how are they conserving at the site. And so it's certainly there. There's no-one at the council who doesn't think solar and wind are terrific ideas, but they are concerned about the timing.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Vincett.

The process we go through now is I go to OPG and ask them if they have any questions or comments?

MR. SWEETNAM: Albert Sweetnam, for the record.

No, no questions.

CHAIRPERSON GRAHAM: Thank you, Mr. Sweetnam.

I'll now go to CNSC. Do you have any questions or comments?

DR. THOMPSON: No, thank you, sir.

CHAIRPERSON GRAHAM: Any government participants in the room that would have questions or comments?

Any intervenors?

If there are no intervenors, I want to thank Mr. Vincett for your group coming here this morning and giving us your views and your intervention. Thank you very much and safe travels.

MR. VINCETT: Thank you, Mr. Chairman.

CHAIRPERSON GRAHAM: The Chair will now move to the next four presentations who are each registered to make oral statements. All panel members will be asked questions after each oral statement and I would remind that the questions must relate to the Pickering nuclear site -- pardon, the Darlington -- Pickering group here, Darlington site.

Thank you very much.

And I would start off with Mr. Angemeer, I believe it is.

Mr. Angemeer is the President and CEO of the Durham Strategic Energy Alliance. I believe that's the correct title. The floor is yours.

--- PRESENTATION BY MR. ANGEMEER:

MR. ANGEMEER: Thank you very much, Mr. Chairman. My name is Michael Angemeer and I am the President and CEO of re-incorporation but I am the past and founding Chair of the Durham Strategic Energy Alliance. Good morning.

With me also today, on my right is Jacquie Hoornweg from Ontario Power Generation. She is on the DSEA Board as well, the Durham Strategic Energy Alliance is knows as the DSEA.

Also in the audience, we have Mayor Dave Ryan, who is a director on the Board representing the City of Pickering.

And also in the audience we have regional councillor, Mary Novak, an alternate director representing the Municipality of Clarington on the DSEA Board.

I would like to welcome the panel

members to Durham Region, the energy capital of Ontario.

This morning, I am going to tell you a bit about the DSEA organization, what we have accomplished together through partnership for the region and the province and specifically our views on the value OPG and this project bring to Durham Region.

In 2004, 11 community leaders in industry, government and academia in the Durham area began a discussion to address Ontario's emerging energy challenges. The goal of the partners, including Ontario Power Generation, Veridian, Siemens, the Municipality of Clarington and the City of Pickering and the Region of Durham and the University of UOIT and others was to leverage and build upon the strengths of Durham's energy sector.

The intent was to develop energy solutions through innovation, to create economic and industry stimulus, and to further develop the natural strategic relationships between the academic community, the local government and private sector that exist in Durham Region to create a positive contribution within the energy

sector.

Durham's strength in the energy sector is built on the infrastructure, the human capital, training capability and expertise that naturally developed to support the nuclear plants that bookend Durham Region and Clarington and Pickering and the other energy sector partners.

In June 2005, DSEA was officially launched to develop clean energy and sustainable solutions for today and the future for Ontario, for Canada and for the world.

Today, our organization has grown to include about 70 energy and related industry organizations, including two universities and a college here in Durham Region, local government across the lakeshore of Durham Region, the Durham Regional Government as well as numerous private and public sector organizations in Durham and beyond.

In the past six years, DSEA has become a recognizable participant in the energy sector in Ontario taking a leadership role on commercialization and partnership development leading to new energy projects and partnerships. We have become a thought leader in the industry through our contribution to energy and

sustainability discussions and through an annual conference that attracts international participants.

Previous conferences have included sustainable transportation and sustainable communities.

Most recently, the Ontario Ministry of Research and Innovation granted about $1.2 million in funding for DSEA to lead development and operation of a regional innovation centre that will bring new resources and expertise to Durham entrepreneurs. The regional innovation centre will provide commercialization, incubation facilities and advice to both fledgeling and mature technology-driven companies in Durham Region and Northumberland County.

The services will be assessed through three of our partner facilities, one at the University of Ontario Institute of Technology, one at Durham College Skills Trade Centre in Whitby, and one at the office of the Northumberland Manufacturing Association.

The DSEA Innovation Durham Northumberland will not just provide these services to the energy sector but will assist organizations

in other emerging technologies, such as digital media, bioscience and clean tech. This is a demonstration of how the strength of Durham's energy sector partly borne out of the nuclear facilities here as led to further volistic development and a beneficial result to the region's residents and economy in a more global way.

The creation of Innovation Durham Northumberland fills the geographic gap in innovation and commercialization service ability in Ontario. It allows Durham to take a lead role in developing and promoting sustainable energy solutions. It will also allow us to use our strength and energy to progress other intersecting industry sectors such as transportation and development of new technologies such as the electric vehicle and Smart grid development.

To that point, another recent initiative facilitated by DSEA is a multi-partner pilot project on electric vehicle and electricity grid compatability.

This project will help advance knowledge and development of new technologies and will produce data that will contribute to the discussion on the path forward on this emerging

technology. It will also provide Durham and DSEA partners potential opportunities for economic development in the converging energy and automotive sectors. Perhaps more importantly, it could help in the development of clean effective ways to reduce local smog-forming pollution and greenhouse gas emissions in the transportion sector.

We are really proud of what we have accomplished over the last half a dozens years and we are pleased when other communities invite us to talk about our experience so they can look at a model for their own community.

So what does this all have to do with our support of the Darlington new nuclear project? A great deal.

First, the efforts of OPG as a corporate citizen have provided a significant contribution as an enabler to Durham region to develop the energy sector as an area of strength. OPG has been an active partner in ensuring the potential for opportunities coming out of their operations are explored and utilized.

This includes nurturing programming and research in post-secondary institutions and contributing leadership and active

participation in business development organizations like boards of trade and the DSEA.

These organizations in turn are genuine contributors in their own right to the benefit of our communities and smaller businesses.

Collectively, the energy industry and business community that has grown around OPG and other companies in Durham Region is a significant positive force for socioeconomic development.

Number two, as a community we have come to understand the value and opportunities of nuclear technology and jobs and quality of life for the host community. We see the direct and indirect spinoff opportunity within the nuclear and nuclear supply industry, and we have worked together to take the benefits beyond nuclear as well to fully explore and develop opportunities in other areas of the energy sector using the human capital that exists here in Durham.

In short, for our businesses and for our community, we have experienced the benefit of the current OPG operations and fully expect these benefits will be extended with new nuclear at Darlington.

These include: socioeconomic benefits including high-skill and knowledge-based jobs that bring a good quality of life to employees and to the communities where they reside; a significant contribution to Ontario with the generation of safe reliable electricity without the addition of local smog-forming pollution or greenhouse gas causing emissions; corporate citizenship that includes commitment, economic and social partnership within the community through initiatives like DSEA allowing us to further develop strengths in our business and our community that reach beyond the nuclear industry; the training, research and knowledge development of our local post-secondary institutions, which have been able to build upon areas of expertise and skilled trades as a result of the nuclear stations in Durham Region, the safety culture of OPG recognized amongst contractors and suppliers who work with OPG, as a benchmark to raise standards across the industry.

And we are not just business people. Many of our members are residents with families of their own who benefit from the knowledge and goodwill of thousands of employees

who call Durham home and volunteer their time in their community.

In conclusion, it is unlikely that I would be sitting here today talking to you about the benefits that DSEA is bringing into Durham region through partnership, research, development and commercialization for entrepreneurs and beyond, if it were not for OPG and the existing nuclear stations they operate here and in Durham region, as well as all of the other DSEA members.

We have seen the way OPG operates in our community. It is with integrity, honesty, and an earnest desire to be a positive force in our community and also in the world.

We welcome more of the same through OPG's Darlington new nuclear project, and we would certainly like to thank all of the participants from the energy sector, local government and academia, for their work in trying to make our communities, our province, our country and the world a better place in which to live.

Thank you very much.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Angemeer.

Madame Beaudet, do you have any

questions?

--- QUESTIONS BY THE PANEL:

MEMBER BEAUDET: You mentioned that there are certain areas where you can have input or advice.

I notice that you talk about this Smart grid development and I'd to hear a bit more about your contribution and the development of that, because we've got many briefs that are trying to push more a local or regional grid, than to have a massive grid all over Ontario.

MR. ANGEMEER: Thank you for your question, and that's a very good question.

Historically, the province has had very large power stations with very large transmission lines. And I think, over time, what will happen is there will be a move towards more localized generation and more localized control.

So I think what we'll have in the future is basically a hybrid-type of grid. We'll still have large power stations, and large transmission lines, but we'll also have a integrated distribution system that has more Smart technology to it.

The company that I work for,

Veridian Corporation, is a local distributor, and we have a Smart grid which is getting smarter. So things like Smart meters, and technologies to allow people to shift their demand, are going to be important; local generation is going to be important.

So I think it's very important to have a mix of the large plants, to keep the bulk power system very reliable, because it's very important to have almost 100 percent reliability for customers and businesses in Ontario, but the local grid will become more important in the future.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Mr. Pereira?

MEMBER PEREIRA: Thank you, Mr. Chairman.

In your presentation you speak about the positive influence of OPG, and stimulating the local economy and enabling a good quality of life.

When talk about the commitment to sustainable solutions, and many of the interventions we have received touch on the question of sustainability of nuclear power. In

some intervenors' minds nuclear power is not sustainable.

From the perspective of your alliance, what are -- are there any concerns about sustainability of nuclear power?

MR. ANGEMEER: Our alliance is made up of, as I said, about 70 members, many different companies from different types of technologies. We have OPG involved in nuclear, we have wind generation companies, we have Enbridge gas distribution. So I think -- as I've tried to say before, I don't think there's one answer to this problem, or this opportunity.

In order, again, to keep the lights on all the time and provide businesses and residents electricity, and to hopefully have a growing economy, it will be required to have all different types of generation to make sure that we can meet the needs of the province.

The difficulty with electricity is, you have to generate what you need at the time that you need it. So you need, I think, nuclear for baseload. You can have renewables that add to the mix and allow less generation of greenhouse gases. You can have gas-fired plants for peaking.

So it’s really a very complicated proposition to put all these things together into a power system and make it work.

So our alliance really feels that there’s a role for all these things, and especially on the conservation side as well, that we in Canada, or Ontario, probably use more electricity than we should be using, based on world-wide standards.

So it is really a role to make sure that we do everything possible to increase levels of conservation, have things like Smart meters to be able to shift demand, so that we ultimately have to use less of all these generation technologies, but you really still need them all to be present, to be able to operate a modern power system.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Pereira.

The only question that I would have is, can you maybe comment with regard to -- and I think maybe I even asked the question before this morning.

There seems to be either a confusion or misunderstanding of the policy for

energy generation in Ontario, in the general public view, and we see that in some of the intervenors that have come forward.

Are you facing that, that there is not -- in some people's minds it's not clear, and how could that be rectified?

MR. ANGEMEER: That's also a very good question.

As a local distribution company that serves Picking and Ajax and Clarington and Belleville and other municipalities, we have a call centre and we get a lots of calls from customers. With the media and the press and different stories about what's going on in the energy industry, it becomes a challenge to be able to try to explain what is happening, and what are the right things to do.

We're typically a very trusted resource to ours customers, and we try to provide unbiased information about what is going on.

Again, as I said before, it's a very complex matter, to run a power system, and to be able to generate electricity to the exact amount you need at any particular point in time, because we don't have large levels of energy storage at

this time.

It’s very complex to do that, and to explain to people how things are interconnected, and how you need baseload and how you need peaking power, and then if you actually can shift demand in your home by using Smart metering and more knowledge about your energy use, you can influence what’s going on across the province at a coal plant; you can actually reduce the amount of pollution that’s being caused.

People don’t naturally understand that, and it’s very difficult to explain that to people because it’s -- they’re seeing a lot of different things in the media about how all this works.

But I think what we have here in Durham, is we have a great collaboration of energy companies, and all the local municipalities, and the leaders of tomorrow in the universities and the colleges, are trying to come up with the best ways of doing these things.

We’re obviously not perfect. We can always have new technologies, and new research and development, and that’s certainly what the goal is of some of the things that I’ve talked about.

CHAIRPERSON GRAHAM: Thank you very much for those comments.

I think what we'll do is we'll take a 15-minute break.

I want to thank you for coming this morning and presenting to us, and certainly all the interventions are well-received by the panel, and we review them, and we really appreciate your presentation this morning. So thank you very much for coming.

MR. ANGEMEER: Thank you.

CHAIRPERSON GRAHAM: Again, as I said, I think we'll take a 15-minute break, and on deck afterwards when we come back will be the written submission, or the submission by the Whitby Chamber of Commerce.

So, with that, we will resume at 10:20, or 10:22, I guess it is.

MR. ANGEMEER: Thank you.

--- Upon recessing at 10:09 a.m.

L'audience est suspendue à 10h09

--- Upon resuming at 10:24 a.m.

--- Upon resuming at 10:22 a.m./

L'audience est reprise à 10h22

CHAIRPERSON GRAHAM: Could

everyone please take their seats. We'll start again.

Our next presentation will be the Whitby Chamber of Commerce as outlined in PMD-11 P1.87, and we have a presenter this morning, Mr. Auchincloss, I believe. I hope I've said that right, I'm not -- sometimes I apologize -- and I do apologize if my pronunciation was not correct. Sir, the floor is yours.

--- PRESENTATION BY MR. ANCHINCLOSS:

MR. AUCHINCLOSS: Good morning, I will be brief. My name is Graham Auchincloss, I am the president of the Whitby Chamber of Commerce.

I'm here today just to follow-up briefly on the letter of support that we've submitted to your -- to your group. We're here to support OPG's proposal for the new build at Darlington, and please be advised that the Chamber of Commerce Board of Directors unanimously supports the new build at Darlington site, and is confident it'll be built and operated in a responsible and safe manner as reinforced in our letter of support, which was written by Gordon Mackey (ph), our CEO, which is dated February 9th.

Energy, especially green energy,

is considered a key factor for Durham, given the strength of our programs through our colleges and just local education institutions, UOIT and Durham College. We think that the continuance of nuclear development and nuclear power in our area makes good sense for the growth of our community and the sustainment of what we currently have in the way of business opportunities.

We see, for the Chamber's perspective, the benefits to the community and our local businesses are well established. We know that approximately 94 percent of the current Durham positions occupied at the Darlington plant are run by -- or operated, excuse me, by Durham and Darlington residents. The growth of UOIT over the years as an education centre of excellence, we believe is built a lot on their nuclear technology programs, and now they're moving into renewable energies, which is evident most recently at their Durham campus in the -- near the eastern edge of Whitby where they're looking at a lot of green energies, and it seems to be a natural synergy to move from the nuclear into these other renewable energy areas.

I'm sure you've heard from many

business groups and DSEA spoke to this as well, the job creation and sustainment is important. For our Chamber of Commerce we're looking for our local members to have a stable group of consumers, and certainly OPG provides long-term sustainable employment with people of higher levels of skill and knowledge and training, whether it be technical, white collar, into the Ph.D.s and in the nuclear end of it. There's certainly people who earn decent livings who are committed normally to the development of a family in the community where they live, and as I've mentioned previously, the vast majority of such folks happen to live in our immediate area.

We certainly see OPG as a viable partner for the non-profits and charities in our area, and they've been a great support of our Chamber and I believe they -- I believe they are committed to assisting the communities in which they operate and being a responsible partner stepping forward to volunteer where they can. And so we think that supporting them makes good sense for our business. We are comfortable with the amount of safety and oversight.

I went through the CNSC's

presentation on the site, and I'm a layman by many stretches, but it talked about the environmental assessment, and reviewing that 32-page power point there were certainly some suggestions they had made to improve the safety of the new build, and it all made sense to us.

So thank you for your time. If you have any questions I'd be happy to answer them.

CHAIRPERSON GRAHAM: Thank you very much for your statement. Go to panel members and I'll go to Mr. Pereira first.

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman. In terms of the environment in Whitby, the vicinity of Pickering and -- and not too far down the road from the new reactors at Darlington, are there any concerns in your Chamber of Commerce on safety issues and environmental protection and issues about waste -- waste handling, transport of nuclear materials through your city from OPG's operations?

MR. AUCHINCLOSS: So now, for clarification, do I re-announce my name each time as previous groups did?

CHAIRPERSON GRAHAM: Yes. Yes.

MR. AUCHINCLOSS: Yes, okay. So once again, it's still Graham Auchincloss.

I can best answer that from my own experience. I was transferred to Ontario five years ago and happened to be transferred to work in Whitby coming from the prairies. And so there was the whole thing, where do you want to live? And, well, I guess it'll make sense to live in the community where I work. Well, did you know that there's nuclear plants 15 miles either direction? Well, no, I didn't. And so when we were out first speaking to people, we asked, what -- what do you think -- what do you think of living in this area?

And there was no concern from the residents when I chose to look in the Whitby/Oshawa area for a home, either with the Darlington site or with the Pickering site. There were so many -- the jokes about I'll glow green some day or, you know, if something happens it'll be too late, I won't know, but I have -- in the time that I've now lived there, which is just over five years, I have never heard a concern about safety in the true sense. You'll hear the occasional light-hearted joke, but nothing where they're concerned about the operation. And certainly from what I've been aware

of through the media and reading the occasional report, the safety records of OPG at the Darlington site, and I'm sorry, I can't speak effectively to the Pickering site, have seemed pretty robust the last decade at least.

In terms of the transportation of hazardous goods, I have never heard that come up as a conversation that I've been privy to. I would have to assume it would be via rail, which would mean the rail spurs would run through Whitby, but I have not heard a discussion on that at all, Mr. Pereira.

MEMBER PEREIRA: Have there been any concerns about possible impact on drinking water from releases in the lake; is that an issue that your Chamber would talk about?

MR. AUCHINCLOSS: That would more than likely be outside the scope of what a Chamber speaks about as far as furthering business concerns, but from conversations with the members, the only -- only things I've ever heard discussed about water quality were whether it was safe to swim in, quite frankly, and that seems a real joke. Where is a safe place to swim in Lake Ontario? You know, farther west, of course, is better -- or

east, pardon me, going to out Cobourg way, but I've never heard a concern that some -- some impact from a nuclear facility would create a problem in the Whitby area. It's just more so levels of algae or whatever has floated up from Hamilton of whatever the joke was of the day.

MEMBER PEREIRA: Thank you very much. Thank you, Mr. Chairman.

MR. AUCHINCLOSS: My pleasure.

CHAIRPERSON GRAHAM: Thank you, Mr. Pereira. Madame Beaudet?

MEMBER BEAUDET: Thank you, Mr. Chairman. In your submission PMD-11 P1.87, on the second page, you mention about the OPG being a strong economic driver in the community. And you give here the figure of the number of direct and indirect construction and engineering jobs. I'd like to hear what is the Chamber of Commerce doing in terms of encouraging local employment, because we did ask questions to OPG and there is no quota established as to have preference for the local community with, you know, whatever company is going to win the bids. You know, certain areas you -- you must employ, let's say, 40 percent has to come from the local community. So I'd like to hear

about what the Chamber of Commerce of Whitby would do regarding that, or has already started doing?

MR. AUCHINCLOSS: Graham Auchincloss. I have not -- I'm not aware of any conversation directly with -- between the Whitby Chamber of Commerce and OPG Darlington site to say, are you planning to hire out of your 500 people, 20 from Whitby on a quota basis. Nothing of that sort has come forth that I'm aware of.

The Chambers in the east end of Toronto do meet, so the Darlington and Whitby and Oshawa Chambers have met. I don't believe a particular discussion has been had around recruitment within the local area. It does stand to reason, however, that the UOIT and Durham College, who have the nuclear programs, would certainly be working with them and I'm not sure if you're having a submission from them, but they might be able to answer more succinctly, whether there is a job placement program, and perhaps OPG can speak to that as well, but I'm sorry, I don't have any information on that, Madam.

MEMBER BEAUDET: There are different numbers being given, and sometimes I think there's some confusion between direct job and

onsite professional skill job and skill job. I don't know if it would be too much of OPG to draw -- I know it’s all in the technical document, but I think it would be interesting if you can do it this morning, maybe you can have a five-minute presentation of -- or a two-minute presentation of exactly what’s happening so that we can -- when we discuss with people we’re all on the same board.

MR. SWEETNAM: Albert Sweetnam, for the record.

We can certainly do that perhaps first thing this afternoon when we come back.

The other comment I would like to make is that in terms of restricting how many people come from a region, if we were to do that or if the Ontario government were to do that we would be off side on a whole series of agreements, including the free-trade agreement. It’s just not allowed.

MEMBER BEAUDET: I know that. I’m sorry if I made the wrong impression on saying restricting the number. I was trying to look at -- I think people have the impression that when you talk of 3,500 jobs it’s all local, and it’s not necessarily all local.

Thank you.

CHAIRPERSON GRAHAM: I just have one question. We heard earlier -- and perhaps you weren't here. The very first presenter this morning was the Pickering Advisory Council. And they have more or less a mechanism to represent a wide gamut of the population to bring issues forward. They talked about having over 100 -- talked about it any one time there's some outstanding one, and I think there were 11 outstanding as of today.

My question would be, Whitby is, from what I understand, is more east of Pickering. Does your -- not necessarily the Chamber -- but are you aware of a way of the residents of your community and so on being able to get answers to their concerns or having some sort of -- do the residents channel some of their questions through your Chamber?

Because I know your Chamber's role maybe is a little different than that, but is there a way of the general public being able to get an answer to their questions in your community from OPG?

MS. AUCHINCLOSS: Graeme

Auchincloss speaking.

Yes, I was here for the Pickering Council. That's was a very interesting presentation actually, an interesting kind of panel to have in place near a plant.

I believe that -- I certainly have heard that people have directed inquiries to the Town of Whitby who then reroutes them to OPG. And I know that in the past through the Chamber there have been discussions, not so much on safety issues with OPG but business opportunities which would then be routed to the applicable OPG authority.

I think your question deals more with concerns about safety or general information, and I would imagine, quite frankly, that if there would be a public relations member at OPG that I could call -- I haven't ever made use of it myself. If I wanted information I would go to a website and then if I needed more information I would probably look for a public relations number to contact.

That would be my answer.

CHAIRPERSON GRAHAM: I guess the reason I'm asking this is with the recent events today in Japan I would imagine that there's an elevation of whether it's anxiety or whether it's

just people wondering about evacuation, about buffer zones, about all these other things, around the nuclear facilities in this area of Lake Ontario.

What I'm wondering is, is you're saying Chamber doesn't have that facility in Whitby but you think it goes before the town or the town administration. Is that what you're saying?

If you had -- as an individual, if you have a concern where would you go?

MR. AUCHINCLOSS: Graeme Auchincloss.

To expand on that, because you've spurred my memory, I believe when my boys entered the elementary schools here there was information provided on issues with nuclear safety and evacuation. I seem to recall receiving a handout of some sort, which I'm afraid I probably looked at briefly and discarded. I couldn't tell you where it is now.

I am not aware of a formal escalation source or concern. I do know that people who have made inquiries has been channelled through authorities that they feel would be better suited to it, and I don't believe we have a

resource at the Chamber to deal specifically with that.

CHAIRPERSON GRAHAM: No, I know the Chamber doesn't have the resources, but I'm asking you as an individual.

MR. AUCHINCLOSS: Right.

CHAIRPERSON GRAHAM: We had a presentation a couple of days ago or yesterday from Emergency Preparedness and all of these things and questions from the panel regarding, you know, the weak link of seniors in their homes, notice -- street people, single parents that may be at home with no access to vehicles, and so on, for evacuation.

Those are just general concerns that we, as a panel, had and I'm wondering, you as an individual, living in a community not far from the two nuclear facilities that are here now plus the one that may be built, are you comfortable that there's enough information getting out?

MR. AUCHINCLOSS: If you term it that -- if you present it in those -- sorry, Graham Auchincloss.

If you present it in those terms I'm not uncomfortable with my level of knowledge or

the actions I would need to take, whether that's generally available to everybody, it might not be, but I may also -- respectfully, I may not be listening to those particular forms of information dissemination. There could be standard -- whether it's a local newspaper that has articles, which I don't read the local newspaper, though my sons deliver it. I might be missing on some of those avenues. I'm sorry; I don't believe I can answer that more effectively.

CHAIRPERSON GRAHAM: In fairness, I'm not going to pursue that any further. I just ask your view and that's what I was wondering about.

My colleagues, anything else?

MEMBER BEAUDET: I'd just like to add a precision on the request from OPG. It should be for two units and four units please.

Thank you.

CHAIRPERSON GRAHAM: So perhaps we give that an undertaking?

MR. SWEETNAM: We'll just do a presentation.

CHAIRPERSON GRAHAM: Just going to do a presentation. Okay. Thank you very much.

Well, that concludes Mr. Auchincloss' presentation, and we thank you for coming and thank you for the information you've provided from your Chamber and from your own perspective.

Thank you very much.

MR. AUCHINCLOSS: My pleasure.

Thank you for your time.

CHAIRPERSON GRAHAM: Next on our agenda is an oral statement by His Worship Mayor David Ryan of Pickering.

I understand Mr. Ryan will also be the spokesman for the following participants this morning, the Canadian Association of Nuclear Host Communities.

So, Mr. Ryan, welcome to the panel, welcome to this region, and the floor is yours, sir.

--- PRESENTATION BY MAYOR RYAN:

MAYOR RYAN: Thank you, and good morning, Mr. Chairman and Members of the panel.

For the record, my name is David Ryan, Mayor of the City of Pickering, and as stated I am also the Chair of CANHC, which is the Canadian Association of Nuclear Host Communities.

Firstly, I'd like to recognize and thank the Commission for holding these hearings here in Durham Region.

As you have acknowledged, our residents, businesses and community groups are arguably the primary stakeholders with respect to nuclear generation in our community.

Before I continue, I would be remiss not to acknowledge the recent and ongoing events in Japan. Our thoughts and prayers go out to the people of Japan as they struggle to cope with the aftermath of the catastrophic earthquake and tsunami. Our sincerest condolences go out to all those who lost loved ones as a result of these disastrous events.

In reflecting on these events of the last two weeks, I echo the comments of Minister Duguid. Let us learn from the lessons of Japan and apply them to Ontario and once we have acquired and advanced that knowledge the greater sin would be to do nothing with it.

While the unprecedented events of the past few weeks should not be ignored, we must refute the easy allure of reactionary policy making. That's simply not good governance.

Instead, let us steal our resolve and rise to the challenge before us. We must recommit ourselves to the penultimate goal of having the most advanced, productive and safest nuclear industry in the world.

Collectively, our goals have not changed. For Canada to remain at the forefront of nations we need to invest in clean, reliable, effective and safe energy production today.

What has changed is the heightened scrutiny by the public and the media. Now more than ever we will be justifiably held accountable to the decisions we make with respect to nuclear, which I feel is a god thing. Essentially, if we proceed to enhance our nuclear portfolio every action taken and decision made will be analyzed to the highest degree.

Consequently, under this intense scrutiny I am even more confident that the next generation of Canadian nuclear reactors and their inherent safety systems will be engineered to the highest standards in the world.

For this to occur we need to have the utmost confidence in the management and operations of the Ontario Power Generation.

Since I became Mayor of Pickering in 2003 I have worked closely with both the executive and staff at OPG. I wish to acknowledge that they have always been transparent and forthcoming with all of their communications. We regularly communicate about issues of mutual interest and importance. Currently, we regularly received informal and formal communications on station activities and industry issues through face-to-face discussions, emails, letters, presentations and newsletters. We also have representation on the Community Advisory Council that meets monthly. You heard from them earlier this morning.

Residents receive quarterly newsletters, ads are placed in local newspapers and on local radio and television stations. OPG manages an information centre and they’re an active and visible presence at many events across our city. Based on these close and frequent interactions, I am confident that OPG is committed to a higher level of excellence.

This is a testament in itself considering that it is already a world leader with respect to accountable and safe nuclear operations.

I truly believe that if given the mandate, OPG will have the expertise and ability to enhance its already robust leadership status.

Moving forward, the city of Pickering recognizes and accepts the important role nuclear power plays in Ontario's long-term energy and economic future. In this regard, we would like to assure the Commission that the city is prepared to do its part. We are pleased to continue being a supportive host community for nuclear power production on the understanding, of course, that the province, OPG and the CNSC continue to work with the city to help us manage and address the unique challenges that come with being a nuclear host community.

As I had mentioned earlier, I'm also the chair of CANHC, the Canadian Association of Nuclear Host Communities. We are a national, not-for-profit association that provides a forum through which communities who have nuclear-related operations within or in close proximity to their municipal boundaries can discuss issues and concerns of mutual interest We have ten member municipalities including the municipality of Clarington and the Region of Durham, the host

communities for the Darlington nuclear generating station and the new build project.

CANHC's mission is to ensure that the nuclear host communities have maintained the best interests of their communities in an ongoing pro-active relationship with the Canadian nuclear industries and its regulators. CANHC is composed at the board level, of the mayors or chairs of each of the member municipalities. Each has a great deal of knowledge and interaction with the nuclear industry and with the federal and provincial regulators. And to that end, board members participate in both national and international forums related to the nuclear industry and related issues such as new build projects, waste management, decommissioning and stakeholder confidence.

While we are not experts, we do endeavour to be extremely well-informed lay people. CANHC is pleased that OPG is proceeding with the environmental assessment for the new nuclear build in Darlington despite the temporary delay in the decision of the government of Ontario to move ahead with this project.

Our association has been

monitoring the EA process undertaken by OPG and is certainly impressed by its comprehensiveness as well as the extraordinary emphasis it places on openness and transparency. At our annual general meeting held this past February, our members unanimously approved a resolution supporting the new build project, citing the enormous benefits that it would bring to the local, regional and national economies.

In so doing, our association also considered any potential adverse impacts that the projects may have on the local community. On this latter point, our association works closely with the municipality of Clarington and fully concurs with its position that the project can be constructed and operated safely and in a socially and economically responsible manner.

Before I finish, I must reinforce the economic significance of this project to Durham Region. Should the Darlington project come to fruition, it will be one of Durham Region's key economic drivers over the next 50 to 60 years. Once underway, it may turn out to be the largest construction project in the country with a tremendous cascading effect. While the economic

impact will resonate throughout all of Durham's municipalities, I feel Pickering and its neighbours, Ajax and Whitby, are well-positioned to capitalize on much of the anticipated job creation as our geographic location remains one of our key competitive advantages.

As the gateway municipalities to both Toronto and Durham Region, we will capture a huge share of companies looking to do business in the energy sector, while remaining close to the financial centres on Bay Street.

In conclusion, both the city of Pickering and CAHNC are in full support of the Darlington new build project and urges the members of the Joint Review Panel to approve the EA and OPG's application for a licence to prepare this site. I thank you for this opportunity to address you today. I would be pleased to answer any questions you may have.

CHAIRPERSON GRAHAM: Thank you. Thank you very much. Your presentation this morning included the Canadian Association of Nuclear Host Communities?

MAYOR RYAN: Yes, it did.

CHAIRPERSON GRAHAM: And I failed

at the outset to say that that is covered under PMD 11-P-1.248, and I didn't say that at the introduction and I apologize. Questions, Mr. Pereira?

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman. I'll go first to -- to your words on the Darlington project and you -- you said that your association considered potential adverse effects of that the project may have in the local community and you accepted that, you know, the project can move ahead without any undue impacts. But what were the adverse effects that you considered in your discussions? Are -- are you able to speak a bit about that?

MAYOR RYAN: Largely around the -- the construction project itself and the -- the implication that has on -- on the community in terms of the traffic and some of the things we've heard earlier this morning. Also there's a -- there's a need, as the -- as the project expands, to ensure that we continue the communications in the broader community so that they -- the community in general is -- is comfortable with -- with what is happening.

MEMBER PEREIRA: Were there any concerns about environmental issues from adding new generation to the surrounding environment?

MAYOR RYAN: No, not -- not specifically at -- at the environmental level. We -- we have an understanding being host communities, of -- of what the -- a plant means in our community and also the consideration of the future waste management.

MEMBER PEREIRA: Going -- going to waste management, I note as well in your presentation you talk about your board members participating in -- in presentations on waste management, decommissioning -- and decommissioning, are there any concerns that your -- your host community association has on the future with waste management and decommissioning?

MAYOR RYAN: We're very involved with the Nuclear Waste Management Organization. We meet with them two to three times a year, more often as -- as information may become available and necessary. So we're very well-versed and connected in that process and feel very comfortable with it.

CHAIRPERSON GRAHAM: Is that -- pardon me, Mr. Pereira, when you speak, sir, would

you mind identifying yourself because --

MAYOR RYAN: Oh, I'm sorry.

CHAIRPERSON GRAHAM: -- when the -- when the transcripts are written, they don't recognize voices.

MAYOR RYAN: All right.

CHAIRPERSON GRAHAM: Introduce yourself each time, please. Thank you.

MAYOR RYAN: All right.

MEMBER PEREIRA: Thank you. Just to follow up on that one, obviously, looking to the future, at some point, and it may be in the fairly distant future, these -- these sites will be decommissioned. Is your community associations -- are -- are they looking -- sorry, host community -- yeah, host community, considering what needs to be done to assure future generations that the sites are -- will be safe?

MAYOR RYAN: For the record, Dave Ryan. Again, as -- in our relationship with the NWMO and they have asked us for advice on how best to communicate and -- and kept us well-informed of the direction they were going in, the -- the geologic repositories, the -- as the solution. We understand that -- that's very much a -- a long-

term project and we'll continue to work closely with them through them.

MEMBER PEREIRA: Just going to something more immediate. With your association of nuclear host communities, are there studies that your association sponsor to monitor the health -- impacts on health of your communities? And I know Durham has done something, but the broader association, has -- has anything been done in terms of monitoring of health impacts of the nuclear industry?

MAYOR RYAN: For the record, Dave Ryan. No, the association itself has not sponsored or -- or -- any of the studies, but we do look at the studies and we had presentations made. We've had a presentation from Durham Region as -- as an example to understand what the studies are -- are telling us.

MEMBER PEREIRA: Thank you. Mr. Chairman, could I redirect to -- to CNSC? CNSC staff, could you comment on what work has been done over -- over the last several decades perhaps to monitor health of communities in the vicinity of nuclear power reactors in Canada?

DR. THOMPSON: Patsy Thompson for

the record. I will provide some from memory and if possible perhaps with an undertaking, I -- I could provide the -- the complete list to make sure I don't provide information that I won't stand by.

Essentially, you mentioned the -- the study that was done by the Durham Regional Health -- Nuclear Health Committee. There were two studies done by -- by that committee over time. And the latest one covered the Ontario area including the City of Pickering.

There's also a number of studies that have been done -- I would say probably -- not probably, at the time of the OCB looking at various communities around the Bruce, AECL and other sites.

There's also studies that were done on nuclear power workers and -- nuclear power workers and effects on their children.

But I think at this point it would be better if I came back with a list of what the studies were and the key findings.

MEMBER PEREIRA: Thank you. And I just want to clarify a bit; the Durham study we were -- the ecological study but do you have any cohort studies or -- can you give some indication in your response on the relative merit of those

different types of studies, if possible?

DR. THOMPSON: Yes, certainly we could.

As well, we could provide the reference. There's a CNSC report that was posted on our website about a week and a half ago. It's essentially the study that -- or the report that was presented to the Commission in November and that outlines all the studies that were done with their relative strengths and weaknesses.

But we can certainly come back with a summary and reference this more detail report.

CHAIRPERSON GRAHAM: So if Mr. Pereira agrees, we will give that an undertaking, Undertaking Number 29.

And, Dr. Thompson, would you have any estimate of when you could report back on possibly when it would be available?

DR. THOMPSON: Could I suggest coming back Wednesday?

CHAIRPERSON GRAHAM: Next Wednesday?

DR. THOMPSON: I believe its March 30th.

CHAIRPERSON GRAHAM: I guess maybe I'm going to give it Undertaking 30 because there's some confusion that it may -- that 29 may have already been given. So we check our records, so will give this Undertaking Number 30.

And thank you very much for Wednesday next. So thank you very much.

You're finished Mr. Pereira?

OPG, you might have a comment on Mr. Pereira's question also.

MS. SWAMI: Laurie Swami, for the record.

The health studies that Dr. Thompson is referring to, we're aware of the studies that have been completed, some of those were completed through Ontario Hydro in the past, and the monitoring of workers and their children was completed and confirmed that there was no significant result. But I rely on the CNSC who will provide a much better summary of that.

The Durham Nuclear Health -- the Durham region health study that was completed was a peer review document that -- I think that you have a copy of now, so it does have -- and I'm sure Dr. Thompson will refer to that in her summary that

she'll be submitting as well.

CHAIRPERSON GRAHAM: Mr. Pereira, anything else? If not, then Madam Beaudet.

MEMBER BEAUDET: Thank you, Mr. Chairman.

I have a question first, to address to you as the mayor of Pickering and then as the representative of the host communities.

I'd like to understand a bit more about the complaint mechanisms that you have in your city.

We heard this morning, as you know, from the Pickering Nuclear Community Advisory Council, I'd like to know if you -- as a Mayor, in the town hall, if there's any other ways that ordinary citizens can -- or mechanism that they have, if they have any complaints and if you do, what would be the major issues?

MAYOR RYAN: For the record, Dave Ryan.

First of all, I'm pleased to say that we don't have many complaints. In fact, with the latest incidents in Japan I can tell you that my office did not receive a single phone call or email of concern.

We have a Customer Care Department in the municipality it's a one-stop shopping, one phone number that any resident can contact and get any information about the municipality. We did not have a single phone call to the Customer Care Department over the last week and a half, two weeks.

And I think that's a measure of the comfort that we have in our community, being a nuclear host community.

That having been said, that is the mechanism, either a direct call to the Mayor, the council representing your part of the municipality or into the Customer Care Department. So that would be the municipal contact point.

If I were to have a call and I couldn't answer the question myself then I would immediately call my contacts at OPG and obtain the information and take whatever actions are required as a result of that.

MEMBER BEUDET: Thank you.

Now, I have a question with respect to your written submission, as representing the Canadian Association of Nuclear Host Communities.

You say in paragraph 4 that the board level of the mayors or chairs each has a great deal of knowledge and interaction with the nuclear industry and with federal and provincial regulators. The federal would be CNSC, I presume.

MAYOR RYAN: Correct.

MEMBER BEAUDET: And with the provincial regulators, in what way do you intervene with them, is it in terms of issues you want to make sure that are addressed, is it also in terms of follow-up programs? I'd like to see where your involvement rests with them.

MAYOR RYAN: It's a communication role. We invite the various representatives to come and present, particularly their AGM and they've been very good to do so.

So we have that constant communication and flow of information that helps us with our understanding and in turn helps us to communicate to our communities.

MEMBER BEAUDET: With respect to that, what do you feel would be your biggest challenge?

MAYOR RYAN: I'm sorry, biggest challenge?

MEMBER BEAUDET: Well, let's say you -- for you you do invite people to come and present on different issues because you obviously want to have more information in order to take decisions at the council level.

MAYOR RYAN: Right.

MEMBER BEAUDET: And over the years, with your experience, what were the biggest challenge or the -- well, probably Japan would be one but were there any other big challenge that you had to face and organize the community?

MAYOR RYAN: For the record, Dave Ryan.

I think the biggest challenge that we all share is communicating in the way that our general public can understand exactly what's going on in the industry and what that means to individuals lives within the communities where they reside.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you, Madam Beaudet.

Just one question to the Mayor, Your Worship, if you could roll back the time, say 30 years, with regard to planning in the community

and urban planning and development and so on, is there any lessons learned that you could recommend to the Durham region or to this area with regard to how not to do certain things or how to do things better?

Do you have any -- have you any recommendations on lessons learned with regard to -- because your population density is very close to the plant, if I remember from my visits and so on over the years.

So I guess my concern is, is we have before us evacuation plans, we have -- there have been presentations from emergency preparedness, there's been -- on all of these other things but have you any recommendations, as either as Mayor or as a host community to the nuclear industry as how things could be done better?

MAYOR RYAN: I think the -- in terms of the urban planning, first of all, remember that the Pickering plant started construction 45 years ago was -- yeah, 45 years ago, was commissioned 40 years ago, the population of Pickering was 14,000, we're now a population of 96,000. And you're quite right, we have grown up around that facility.

The one thing, I think, we could have done a better job is we would have had a better grid system in the road network. Typically in -- you used the word “sprawl” which I take some umbrage but as suburban communities have developed they’ve gotten away from the grid pattern. And grid pattern is a more effective transportation pattern and that’s the one change I would make.

CHAIRPERSON GRAHAM: Thank you very much for coming this morning and making your presentation on both aspects, both as mayor and as the host community. Have you anything else to add, sir?

MAYOR RYAN: No, just again our appreciation that you’re holding these meetings here. We appreciate it.

CHAIRPERSON GRAHAM: Thank you very much and have a safe trip back.

MAYOR RYAN: Thank you.

CHAIRPERSON GRAHAM: This concludes, I believe, our complete agenda for this morning, which I -- I thank my panel colleagues for their questions and so on. And the public hearing now will resume at 1:30 this afternoon with the first presenter being Cottagers Against Uranium

Mining Exploration as the first presenter. Thank you very much and the chair will resume at 1:30.

--- Upon recessing at 11:05 a.m.

--- Upon resuming at 1:30 p.m.

CHAIRPERSON GRAHAM: Good afternoon, everyone. Please take your seats and the co-manager will read the opening procedures for this afternoon.

MS. MYLES: Thank you, Mr. Graham. Good afternoon, everyone. I'm Debra Myles; I'm the panel co-manager. Welcome back to today's second public hearing session of the Darling New Nuclear Power Plant Project Joint Review Panel.

Panel Secretariat staff are available at the back of the room. Actually, this is Julie right here. If you are scheduled to present and haven't identified yourself to Julie, please do so. If you'd like permission of the Chair to put a -- a question to one of the presenters this afternoon, please give your name to Julie. Opportunities for questions or to make a brief oral statement to the panel are subject to the availability of time.

As a courtesy to everyone in the room, please silence your electronic devices, cell

phones, et cetera. Thank you.

CHAIRPERSON GRAHAM: Thank you very much, Debra, and good afternoon everyone. Before we get into the -- the submission, interventions, I believe OPG has a short presentation to Madam Beaudet's questions this morning. OPG, the floor is yours?

MR. SWEETNAM: Albert Sweetnam for the record. So to clarify some of the key assumptions associated around employment, we anticipate a -- a construction workforce of up to 3,500 workers per year, and that would be for two units. Our anticipation is that the -- the build out of the remaining two units would not be done in -- in parallel, but in series. So you would have an additional 3,500 whenever you started the second set of units. And that's 3,500 workers per year. We plan a four to six year -- four to six years of construction for two units and eight to twelve years if you went to four units.

Through our economic modelling we also estimated that indirect employment -- employment as a result of the project, would be approximately 4,000 people per year of construction. So that would total 7,500 -- 7,500

total jobs associated with the project. Of that 7,500, 35 percent would be located in the Region of Durham.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you very much OPG. So our first presentation this afternoon is by the Cottagers Against Uranium Mining and Exploration. And -- and, Ms. Latham (phonetic), would you come forward, please. Okay. Just informed that they're not here yet. Can I alter the agenda and ask if the second presenters are here, which is Promotion Nuclear. Is anyone here -- someone here -- oh, just one moment. Maybe -- is this the Cottagers Against Uranium Mining and Exploration, are you here? No. Okay. Okay. If they're not then, and I've indication that Promotion Nuclear Limited is here for a presentation. I'll ask the question, are -- are you prepared to present now or -- or --

MR. ZIMNY: I'm prepared to present at any time today.

CHAIRPERSON GRAHAM: Okay. If that's the case then, my understanding is that Mark Zimny -- Zimny, I mean to say, is -- is here and he's referring to PMD 11-P1.168 and you are the

presenter so I'll ask you to take the -- the table, please, here.

(SHORT PAUSE/COURTE PAUSE)

CHAIRPERSON GRAHAM: Just as an indication, if you would -- when you speak, the mikes are there to turn off; when you finished turn them off, but also introduce yourself each time so the -- when they do the synoptic they -- they know who's speaking. So if you'd introduce yourself, sir.

--- PRESENTATION BY MR. ZIMNY:

MR. ZIMNY: Well, my name is Mark Zimny, I'm president of Promotion Nuclear. So I prepared a presentation and the whole point of presentation is to -- to have my power point right on the screen and thank you very much for putting this up. And -- and again, thank you for the opportunity for my comments and let's just get to the business.

Well, I'd like to -- the agenda of my presentation is I'd like to present -- introduce myself a little bit closer for -- introduce who I am and who is the company -- what is the company, Promotion Nuclear. I'd like to talk about the community values and sharing them, and I have some

comments on environment. And I'd like to say a little bit about energy and knowledge mix and the value of clean electricity.

Well, why I am here, because I'm involved in all aspects, not only running the business; I'm involved in my own community which is Mississauga and Oakville. I'm on a board of organization of CANDU industries, but as well, I'm on the board of Mississauga Chamber of Commerce. I work with high school communities, with Sheridan College and I work with universities. So that's the type of business Promotion is and that's me, and you can see the picture there to illustrate that.

The big gathering of the people in my company. There's always -- we have a cause besides the business.

Well, a little bit about the company, just to emphasize the knowledge part of this presentation, but basically we are engineers, technicians, machinists, skilled labour. We work together to produce state-of-the-art robotic tooling and solutions for the nuclear industry. We invent, design, manufacture, this is the type of company we are. And I'd like to add that we also

do a lot of business in automotive market as well.

You can see employees of Promotion Nuclear being engaged in robotics and tooling. Well, we know our nuclear business and these are our customers, just to illustrate that our team is involved in nuclear energy issues, especially on certain aspects of technology. We go as close as a reactor.

Well, a little bit word about information in the community. You can see that the company's involved in mentoring. We mentor young students as well as we mentor new coming international engineers, mentoring high school students, engaging in robotic competition. From like Promation Nuclear at certain point of its career I was able to mentor four high school teams in a robotic competition. So we are involved.

We're involved in sponsoring the University of Toronto Scientific Research Program and as well we engage in local hockey community and we are a major fundraising participant.

Well, we also work with other organizations, simply we share the knowledge. This is just to illustrate that we are out there working not with just one organization, which is the centre

organization of Candu Industry, we work with other manufacturing organizations related to our business.

Well, after the presentation of who we are, who is the intervenor and who are him and the people working with me, I'd like to be more credible in terms of this opinion of people I know from my business, it's around 75 employees, and more or less we share the same opinion and we think that -- we would say that all energy resources are evolutionary by nature, they evolve, and all energy resources they have their pros and cons. We understand that. Nothing is ideal in this world.

Yet, please notice the bullet statement that are the second bullet, I can claim that the biggest environmental advantage of nuclear power is the emission of less CO2 then cheaper fossil fuels. That sounds like a true statement to me.

And I know that we should understand that portion and we as Canadians we must work together to save our own environment. It seems like, again, a true statement.

Well, to illustrate that, look at the polar bear, he's hanging on on air. I'm not

sure if he's on iceberg anymore, and a penguin but a penguin is not from Canada, as my son noticed.

Well, some of the people involved in energy business or energy issues in the Province of Ontario they would know what Ontario energy mix means. It's a good balance of all energy available at Ontario with the thought of phasing out the coal generated energy.

So let me point it out too that Ontario energy mix I understand it really in terms of science and technology mix. Well, costly and intermittent solar and wind power in Ontario is only possible when mixing with affordable nuclear based load electricity. So we can co-exist in terms of different types of sources of electricity but we can't rely solely on one type.

Gas fired power plants are excellent backup when there is no wind and sun but they emit tonnes and tonnes of pollution. That's a true statement, as far as I am concerned.

Ontario needs to explore all energy options so it can contribute its part to evolution of the energy production. For the same reason Ontario needs to master its nuclear base knowledge to continually improve its nuclear power

generation and preserve the current energy mix.

Everything needs and can be improved and you have to have a chance to do so. Every technology can be and needs to be improved. This can happen only when there is a sustainable future for the scientists, engineers and highly skilled workforce. Construction of new reactors in Darlington is critical for mastering our own power generation nuclear technology, and behind the technology -- these additional comments -- are people.

Well, I'm coming -- I want to make another point. This is the point on value of clean electricity. Well, why do we need clean electricity and what electricity really means. I will take a little bit more time on this because I have two more very interesting illustrations. This is rather a vision then the current state of affairs.

The clean electricity could mean actually a much better future for all of us. What is the clean electricity? I think I know. But imagine that you in a few years you want a better life, you want a better economy, so how would you do it, it's got to be a breakthrough through us.

I have a little vision on a breakthrough that you need showing that any major movement in economy in coming years or decades will require a lot of energy. This is just one example of such a breakthrough, could be called an innovation.

So please listen to this story about the vision of a small highway, which is just an example, and I look at this illustration here. You have a highway made of aluminium, very light, single lane accepting only small cars. This highway is so light and so small it's easily suspended on columns above existing highways.

So this highway it's above existing highways so it overcomes really the traffic problems.

So now imagine that aluminium highway accept only electrical cars. This car has a small battery because it takes the power from the highway, from the grid. It's like a railroad. So if you are tired of driving on this highway you can actually come off and you'd own a very small battery to get back to home, 10 kilometres or so, or park it next to an office in Toronto.

All I'm saying here that this

technology is already available. We know how to build aluminium highways. There's nothing really innovative here. We don't need huge batteries because the electricity will come from rail. With smaller cars we can actually build our own cars in Canada. We don't need huge trucks.

So understand that robotic car, as you see a driver is reading a newspaper, can drive over distance 20 kilometres without driving. It could be automated easily.

I'm telling a little bit more story about it so you can understand the vision here.

Well, now, this is not just one or two, this is a simple illustration done by a young student of graduate of Sheridan College. When you see above the Gardiner, which is populated with traditional cars, you can see the small highway splitting going right to the office. It's so small and it's easy to place anywhere. So the highway above where they present some quite number of cars, which is again there's a new economy behind it, because someone has to make these cars and, of course, if you want to drive so many cars, you need a lot of electricity.

And this electricity better be clean because there's no point of burning CO_2; there's no point to burn oil, to run your cars again. There is no exchange of the values there.

Hopefully, this picture is pleasant for you. It's entertaining portion of my presentation, but, yet, it will tell you also -- helps you, in that when you are driving a big economy, you need a lot of, lot of electricity, and this electricity better be clean.

The Darlington community, with new nuclear reactors and its technology, is knowledge vital for building our future.

Just to illustrate, the Smart highway is so small that you can drive between trees into Muskokas. It's really low interference with them, with the nature.

Well, I hope that you enjoyed the presentation, including the vision of the Smart highway which needs a lot of clean electricity.

But I'd like to make a point now, that hopefully it's transparent; it's coming from my presentation to you today: You seek information on nuclear, just like one of many companies which is part of the chain supply, nuclear chain supply,

serving OPG and serving Bruce and other nuclear power plants. Hopefully you could see the Promation employs people of knowledge and high skill.

And one of the main points of this presentation is -- and please let me elaborate a little bit more on this third bullet -- the Promation to show the same values as Darlington in serving the local community.

I work with other industries, and that's my observation; I believe that nuclear industries is the best industry and does the most to work with the communities.

The communities actually benefit at lot with these industries on a day-to-day basis, on a current basis, and it is small and medium enterprise who always copy the best. We simply copy Darlington values to Oakville.

So it's not only Darlington benefitting and sharing the same values, is also Oakville community, because Promation is one of the companies in Oakville transferring the good values of the good business.

Another point is Darlington has to get new reactors, otherwise there will be no

progress in nuclear energy development.

How do we keep -- now we're coming here, addition to this bullet, is how do we keep refurbishing or repairing well-known technology and proven technology? Or do we have a chance to creating a window to develop something new, improving existing technology?

Is very important. You have to create the future for young engineers entering this industry; a lot of people are retiring.

And as a last bullet, I like to say that maybe it's -- lack of progress is always costly. That's -- I don't have to even say this, this is something which is basic for me, but we have to understand that if we don't make a progress -- and I think that Darlington, two new reactors, is progress for all of us -- other solutions could be much more costly.

At this moment, I'd like to complete my presentation, and I hope that it's well-received by the panel and by the public.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Zimny.

We'll now move to questions from panel members.

Mr. Pereira?

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman, and thank you for your interesting presentation.

You talk in your presentation about developing a sustainable future for scientists, but there are many intervenors who are going to be appearing before this panel who are concerned about the sustainability of nuclear power as a source of energy.

One of the major concerns that they have is about waste, dealing with the waste from the nuclear power generation. Have you any thoughts on the challenges that we face with waste management for the nucleaNr power?

MR. ZIMNY: Well, of course I had thoughts, and I'm not expert on the waste. My expertise is in the robotics, and tooling and automation. That's number one, but I'm close to the issues.

So I believe, in my humble opinion, the nuclear waste in Canada is very well engineered waste; it's very well under control. And waste containers are tracked, counted, and is

accountable; every container is accountable.

There are a number of other wastes during production of other electricity, but these nuclear wastes are quite comparable, or much better, to other industries.

MEMBER PEREIRA: I think the concern is about the long life of the waste and the fact that it's got to be isolated for a considerable period of time before it can be released into the environment, so that's the concern. I don't know if you have any more comments on that.

MR. ZIMNY: Yes. Long-term waste, I believe -- my understanding is that the nuclear waste is stored in containers and is calculated for 100 years. Okay, beyond that, I have no idea, and I'm not too sure if science has.

But 100 years is a long time, and I believe within a generation or two we'll know how to transfer this waste into either energy or any other goods. I simply believe in science.

MEMBER PEREIRA: Thank you. And you talk about the environmental advantage of -- one of the environmental advantages of nuclear power is emission of less carbon dioxide and

cheaper fossil fuels.

Do you have any concerns about any environmental impacts of generation with nuclear fuel?

MR. ZIMNY: Well, I compared to other sources of energy, that's one of my concerns, and I believe that nuclear energy stands very well on its own in terms of environmental concerns.

And for our community, which is Darlington, and in Province of Ontario, I believe that the measures are taken in design, and the regulatory measures are helping us to maintain the environment in a good condition, best we can.

MEMBER PEREIRA: Thank you very much. That's all, Mr. Zimny

CHAIRMAN GRAHAM: Madame Beaudet?

MEMBER BEAUDET: Thank you, Mr. Chairman.

You say you invented and designed and manufactured tooling and solutions for robotic application for the nuclear energy.

I'd like to know if you were also involved in robotic cars, and, if you are, you must -- in order to get involved in that field, you must have assessed how much more electricity we need in

terms of megawatts to be added to the Ontario grid.

MR. ZIMNY: Yes, involved, because my second market, it's automotive market.

I supply tooling to Honda, Toyota, and their suppliers, so I understand what it takes to manufacture a car.

Just like anybody from the public, I am tracking developments related to electrical car because I personally believe that North America requires innovation breakthrough to come up from bad economy. Economy is going to be a low progress for next ten years, unless something happens.

So electrical car, and clean car, it's very close to me. And, now, if I look at Ontario, what can we do in this province? What is ours, our technologies and specialty? Well, we produce cars, and also we produce electricity. So that, finally, I believe that someone would just put these two together and help us to create our own future.

MEMBER BEAUDET: But did you ---

MR. ZIMNY: Now, in terms of megawatts ---

MEMBER BEAUDET: Yes.

MR. ZIMNY: --- there are a lot of

-- tons of megawatts. It requires a lot of, lot of power.

I had a chance to just review quickly -- I said, no, I'm not going to produce any calculations because that's not the point.

The point of my presentation is to show the community work, and -- and I just want to show the other angle, but it's megawatts, huge amount of megawatts, of kilowatts required to supply so many cars.

It's a new economy, so much --

MEMBER BEAUDET: So your company did do some evaluation --

MR. ZIMMY: No. I'm not directly -- I'm designing the cars at all.

MEMBER BEAUDET: Okay. Because we had the deputy minister from the Ministry of Energy --

MR. ZIMMY: Mmhmm.

MEMBER BEAUDET: -- this week, and he did mention that there would be an increase that is needed in terms of electricity in the Ontario grid, and I just -- I was just wondering if you had the figures.

My other point is you mentioned

that you're mentoring new-coming international engineers, and I'd like to know if you -- if it is -- if it is within your own company or if you have a program also for other companies working in the nuclear energy.

MR. ZIMNY: Well, this is -- these are our programs. The mentoring of international engineers or mentoring high school students, this is part of the formation of a nuclear social co-operators possibility, okay?

These programs helping us to develop ourselves because I believe the company who does the work for the nuclear company has to be transparent, trustful, and we developing all the skills across the company. And this is a fantastic platform to make sure that all employees are really engaged with the community.

So when you supply, whether the equipment has to work for OPG or Bruce, it has to be -- and everybody out there has to trust you.

So that's the basis of that operation here.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Zimny.

The next -- we'll go to OPG. Do you have any questions?

MR. SWEETNAM: Albert Sweetnam for the record.

No questions.

CHAIRPERSON GRAHAM: Thank you, Mr. Sweetnam.

CNSC, do you have any questions?

DR. THOMPSON: No, Mr. Graham, no questions. Thank you.

CHAIRPERSON GRAHAM: Government departments that may have a question -- any questions from government departments?

If not, then intervenors. Do we have any intervenors?

I understand Mr. Kalevar has a question.

Mr. Kalevar?

--- QUESTIONS BY INTERVENORS:

MR. KALEVAR: Thank you.

You mentioned about some aluminum highways, yeah.

CHAIRPERSON GRAHAM: Can you say --

MR. KALEVAR: I'm Chaitanya

Kalevar from Just One World.

And in terms of aluminum highways, have you done any calculation as to the speed with which your cars will travel?

MR. ZIMNY: Well, no. This is just a vision, okay?

MR. KALEVAR: M'hm.

MR. ZIMNY: But technology is possible to do that. It's ---

MR. KALEVAR: But the ---

MR. ZIMNY: --- faster technology than cars racing in the deserts.

MR. KALEVAR: Yeah. Technology is one thing.

How about -- have you worked out how much aluminum you will need for that?

MR. ZIMNY: A lot of aluminum, a lot of electricity.

MR. KALEVAR: There are a lot of aluminum and electricity needed in other parts of the world where that's not even available for pots and pans.

MR. ZIMNY: Well, these are the technical visions. I help the engineers who would resolve it. That's why you have engineers.

MR. KALEVAR: I see.
MR. ZIMNY: And this is the vision. I'm just saying it's -- technology is sufficient enough to do it tomorrow.
MR. KALEVAR: Yeah, yeah. I agree as an engineer.
MR. ZIMNY: Thank you.
MR. KALEVAR: But your -- you haven't done any calculations, I understand?
MR. ZIMNY: No, because the calculation -- these calculations requires a fair bit of money and it's not my stream of the business. My business is in a different direction.
MR. KALEVAR: And you're sure about how nuclear waste will be handled from nuclear power stations?
MR. ZIMNY: As I said on the very beginning, I'm not expert in nuclear waste handling, but -- and I have only my opinion and a comment that -- that it's safely stored for 100 years. And during that time -- I'm repeating my answer -- you must find an answer. It's sufficient time, I believe.
MR. KALEVAR: So you -- you have --

CHAIRPERSON GRAHAM: Mr. Kalevar, you have -- you can have one more question.

MR. KALEVAR: Okay. Thank you very much.

You are counting on science to find the answer for you when it hasn't done so for the last 60 years or maybe more.

MR. ZIMNY: Well, that's right -- that's right.

But 60 years is nothing. You can see how long -- how long is the sun energy with us? My point is this; how long is the coal energy with us? How long is the sun energy with us?

And the -- and science progression is fast. It accelerates, so that's simply -- I'm trying to make a point that if you -- if you speak from the point of education, I'm a power plant engineer, actually. I studied energy. So you can -- you can believe more.

It's -- that's why I like to -- that's why I presented the -- my presentation, to emphasize that there are people with education. They should speak and that we should listen to them.

I can only say what I believe.

MR. KALEVAR: Yeah.

MR. ZIMNY: I'm not fully educated in the direction of waste.

MR. KALEVAR: I'm not here to challenge your beliefs.

CHAIRPERSON GRAHAM: Thank you, Mr. Kalevar.

I guess that is the end of the presentation from Mr. Zimny.

We thank you very much for coming today, sir, and your comments will be taken, as all others, by the panel.

Thank you very much.

MR. ZIMNY: Thank you.

CHAIRPERSON GRAHAM: Our next presenter is by Cottagers Against Uranium Mining and Exploration.

And just before we do that, I'm going to call for a 15-minute break. I'm -- this is a little bit ahead of time, and I'm going to call for that now, and then we'll get to you, if that's all right.

So we'll take a 15-minute break. Thank you.

--- Upon recessing at 2:04 p.m./

L'audience est suspendue à 14h04

--- Upon resuming at 2:20 p.m./

L'audience est reprise à 14h20

CHAIRPERSON GRAHAM: Good afternoon again and welcome back.

We're going to go back to our original agenda this afternoon now.

And we have an oral presentation by the Cottagers Against Uranium Mining and Exploration as indicated in PMD 11-P1.168.

We welcome you here today. We have read and considered your written submission, and we look forward to hearing your presentation.

Before you begin, I want to just mention that some of your questions and matters raised may be outside the control of this panel, and I know you appreciate that.

So with that, Madam Lauten, the floor is yours.

--- PRESENTATION BY MS. LAUTEN:

MS. LAUTEN: Thank you, Mr. Graham, and esteemed panel members.

Yes. My name is Suzanne Lauten, and I'm the founder of the group Cottagers Against Uranium Mining and Exploration.

And I'm here today to ask you -- and I don't know if you have the answer to this question, but I'd like it to be part of public record.

We all know that uranium is the fuel for nuclear power plants.

And my question to the panel is, where will we get the uranium that will fuel the new Darlington reactors?

Because the only source -- the richest source of uranium -- I realize we're getting our uranium from Saskatchewan now, and we have since 1996 when Elliot Lake was closed.

And Saskatchewan's uranium is actually the world's largest source of uranium. So we are, in Canada, supplying uranium, not only to our nuclear reactors, but to the reactors around the world.

For example, in Japan, they get 27 percent of their uranium from us.

So that leaves me with the question -- the uranium is a limited supply. The world demand is large. It's growing.

Where will the uranium come from that will supply Darlington's new build reactors?

What has been happening, what got me involved, the reason I'm here is this demand for uranium around the world has raised the price of uranium, and everywhere where there's a hint of uranium, prospectors are staking claims and digging up land. This is how I entered the picture three years ago.

Cottager, recently retired up in Haliburton County, about 150 kilometres north of here and enjoying the beautiful wilderness, the lakes, the woods that we have. What a treasure we have, just 150 kilometres north of this GGA, thinking how wonderful it is to have this, how lucky we are that it will always be this way.

And then to my shock finding out that three years ago, in the spring of 2008, when the price of uranium hit record levels, mining companies came from all around the world, Germany, US, and staked claims on Crown land and also on privately-owned land. And we're talking forests, beaver ponds, marshes, things that you would never consider to be a mine, and privately-owned land as well, because those people, many people in the Haliburton area, did not know when they put their life savings into that property, that 100 acres,

they did not know that they did not own the mineral rights to that land. Perhaps the real estate agents did not know, it's a very well-kept secret. Even some of the lawyers up there are not familiar with *The Mining Act.*

So as an unwitting result of the renewed government interest in nuclear power around the world, it, of course, is pushing up the price of uranium. So what's happening is it's not just in Saskatchewan, it's not just in Elliot Lake. These are photos of Haliburton County, just 150 kilometres north of here. I'm talking about an area on the border, just of the southern border of Algonquin Park, and that should help you frame that. Algonquin Park.

So this is the devastation -- I'm sorry, I'm -- I'm not really very technical, so I'm just going to hold up these pictures, you get the idea. This is the devastation that an American mining company did. They staked a 3,000-acre claim, and then on 50 acres of mature forest, they bulldozed these trees, and every living thing, they bulldozed this to clear the land for drilling. And I'm going to point out to you an ironic fact. The mining company did not need an environmental

assessment to do this. If you want to build a sleeping cabin at your little weekend place that's bigger than ten by ten feet square, you need a health inspector to come and inspect your bathroom. Mining company did this on 50 acres of mature land without an environmental assessment. It's not required under Ontario mining law.

And then what they did when the price of uranium was still high, they drilled 50 test drills, each one -- each hole 400 feet deep. These are photos I took myself. You can see the drill holes where they've been capped. Four hundred feet deep.

Each drill hole pierced the aquifer. What that means is uranium is water soluble and many of the toxic elements in uranium are water soluble. So what this means is that there are now 40 deep cavities in this land that are going into the aquifer and into the uranium body beneath. So what it means is that this water now in the aquifer will be forever now flushing and diluting the toxic elements. And the people in this area can no longer drink their well water. It is many times above the safe level of uranium.

So what happened in September of

2008, the stock market crashed, the price of uranium was knocked back down again, the company disappeared and under Ontario *Mining Act* they didn't have to do any remediation. It's not like quarrying where the quarry people, they have to do some sort of filling. Under *The Mining Act* they just take off, they leave, and this is what has been left.

And as a result of this, just on an economic level, everybody in this area, and of course the people whose own land was staked, they've lost all the value in their land. They'll never be able to sell their land. Some of the -- some of the mining claims are still active. They're all for two-year terms, so they've lost everything.

So now the price of uranium is coming up again. It's only a matter of time. What they say in this area is we have sort of like the oil sands of uranium. It's a low-grade uranium.

You remember the time, it wasn't that long ago, when they said about the Alberta tar sands, which they used to call the tar sands. They used to say, We will never exploit the tar sands, it's too costly to do. Well, it only took for the

price of oil to get to a certain level, and the government to have the will to subsidize the tar sands, and now it's our largest oil source. And this is the situation that was happening here.

So what I'd like to point out to the panellists and the people in the room here is that nuclear power is not renewable because it still requires uranium, and that's a finite resource. We're running out of the rich uranium in northern Saskatchewan. They're having flooding problems and the supply is limited, the demand is great. So as an unwitting result, we are sending prospectors and mining companies from all around the world to the area that we love the most. We're talking about Algonquin Park.

That is -- I object to the expansion of nuclear power for many reasons, but this is the one that I can speak about from my unique perspective. So basically does anybody know, where are we going to get the uranium from? That's what I'm going to ask.

CHAIRPERSON GRAHAM: Thank you very much for your presentation, and we'll go through the procedure. Two points I want to make. First of all, I read the wrong document number,

it's PMD 123, not 168, 168 was the one -- the presentation just prior to your presentation, Ms. Lauten.

The other question I have, or the other point I'd like to make, do you care to file those pictures? Are you prepared to file those pictures with the Commission?

MS. LAUTEN: You mean leave them?

CHAIRPERSON GRAHAM: Yes.

MS. LAUTEN: Sure.

CHAIRPERSON GRAHAM: Okay. If that's the case, we'll get the secretary make arrangements for that.

My first question, Mr. Pereira.

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you. I'll -- I'll go to your written submission and focus on that comment that you include on uranium -- the waste from uranium mining, uranium tailings and the safety hazards that arise from that. And I'll ask for a comment from the CNSC on the hazards that are left at the end of the mining process and the safety of those -- those facilities.

MR. HOWDEN: Thank you. Barkley Howden for the record. Before I pass the floor to

Dr. Patsy Thompson, I'd like to point out from uranium mining perspective there's -- there's basically sort of three eras, and -- that Dr. Thompson can speak to. First one is the legacy era, where mining was done back in the '40s and '50s and the mine sites were left such that they weren't properly remediated and they are undergoing that.

The second one is the era of the Elliot Lake era where the -- the mining companies are still on site, even though there's no production. And then today the current era of the regulation and the risk posed by modern uranium mines.

DR. THOMPSON: Patsy Thompson for the record. There are a number of sites in Canada where radioactive uranium tailings were left on the ground or in shallow water with little to no long-term management plans. There was no management plans when the -- the mining took place. Many of these sites have been either dealt with or in the process of being dealt with through federal government and provincial territorial initiatives to bring these sites back to standards that will ensure long-term protection of the health and

safety.

In terms of the tailings in the case that is discussed in the PMD, 123, in terms of the Elliot Lake era the examples that are provided are indeed from the past and the Ontario Royal Commission are reports from the mid-seventies to the early eighties and at that time Elliot Lake Mines were -- the mining residues were what we call “acid mine drainage”.

So there was acids being leached from managing the tailings on surface and there are many rivers and streams who were severely impacted by management of acidic tailings, essentially.

This was essentially observed in the late -- early seventies and the tailings were managed to -- and effluent treated so that the effluent being released to these waterways was no longer acid and met modern standards.

And over the course of the eighties, up to the mid-nineties the Serpent River and other river-ways in that area and lakes, recovered from the period of acid -- the tailings -- acidic tailings period.

And what we know today is that those sites are under licence by the CNSC, they’re

being properly managed and the effluent being discharged to the receiving environment meet all regulatory requirements and there's no ongoing issues in terms of health or environmental issues with those sites.

In terms of current regulatory requirements for mine tailings the current requirements, for example, for existing Saskatchewan mines, the ones that are operating now, represent engineered structures to ensure that the tailings residues are managed properly for the long-term and there's no mix between the water in the residues and the mining tailings and the groundwater so that there's no spreading out of contaminants from those structures.

And those would represent, essentially, best management practices that the CNSC would require moving forward any new mines.

CHAIRPERSON GRAHAM: Mr. Pereira? Madam Beaudet?

MEMBER BEAUDET: I'd like to go a little bit further with Dr. Thompson, if I may, please.

When you say that CNSC regulates mining do you cover only the production phase or

the exploration phase as well?

DR. THOMPSON: Patsy Thompson, for the record.

The CNSC does not regulate exploration. The exploration is regulated by provincial governments. The CNSC gets involved when the exploration moves to a phase where, for example, underground activities are required and a certain volume of ore would be extracted and effluent would need to be treated.

That's the transition from the provincial regulation to the CNSC regulations, but the CNSC does not regulate exploration as the pictures show.

MEMBER BEAUDET: So what we have been presented would be responsibility in terms of mitigation measure from the province and -- I'm not sure which ministry would that be but is it possible to or -- have there been discussions about strategic environmental assessment for areas that can be -- where the exploration can happen and then do proper program of mitigation measures and follow-up because exploration has also environmental impacts?

DR. THOMPSON: Patsy Thompson, for

the record.

My understanding is that exploration activities would be, for example, under the jurisdiction of the equivalent of Natural Resources or mining ministry.

Provinces where there's been extensive exploration activities for uranium, for example, Saskatchewan have very detailed guidelines and that the exploration companies are expected to follow when they do uranium exploration.

And I know that in Quebec when uranium exploration became more prevalent, the last, probably three to five years, that the government -- the Quebec government essentially tried to adopt guidelines that were developed in Saskatchewan that represent good exploration practices. But I don't know what the situation is in Ontario.

MEMBER BEAUDET: Often sites would come under the CNSC regulation or the province?

DR. THOMPSON: My understanding is that there are thousands or hundreds or many, many, many exploration sites across Canada for uranium and most of those will never come to the CNSC with a licence application because they're just not

economically feasible.

The CNSC would get an application once exploration moves to what's called "advance exploration", as I explained that a certain volume of ore would need to be handled. It's at that time that CNSC would get involved, not before.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: I appreciate the explanation by CNSC on orphan sites and on the process it's gone through on licence sites and on existing mining and so on.

And I know there is a grey area here with regard to -- we're hearing today about Darlington and the new build at Darlington. But when a presenter brings things to attention and comes a long distance, I just want to pursue this a little further.

When -- it's been mentioned that it looks like the aquifer has been polluted or have been -- has now -- traces of uranium may have drained into the aquifer due to the number of drill holes that were going on and so on.

When does CNSC -- when does it kick in that CNSC then classifies this or goes to the exploration company and says you have to get a

licence or then takes over?

Where is the role of the province versus the role of CNSC as it relates to uranium at a higher -- or being disturbed so that it is affecting the aquifer of a few or a whole lot of people?

MR. HOWDEN: Thank you. Barclay Howden, for the record.

The time when the CNSC's regulatory regime kicks in is quite clear, it's when an organization might want to go underground to do further underground exploration or when they've determined that they want to actually develop a mine.

So the transition goes from the provincial to the federal at that point and so it's been under provincial for that.

I think -- I just want to make -- it's quite clear in our regulations when that point is and it's quite far along so there's much reliance on the provinces in their permitting process to ensure a level of protection of the environment.

And as Dr. Thompson said, in Saskatchewan, which has a lot of uranium mining,

it’s very clear.

What I’d like to add, and then Dr. Thompson is going to talk a little bit about uranium in aquifers is just within the process for the CNSC when the trigger comes in that someone wants to prepare a site and construct it would trigger an environmental assessment which would allow intervenors to be involved in the process. It’s a very public process as you know.

I think one of the important things within our process is, to a certain extent, the expected behaviour of the companies and I think the intervenor is getting at this, is that under the *Nuclear Safety and Control Act* there’s an expectation that the companies start public relations and proper consultation, communication with the local communities.

Because part of their application is they actually have to put in place a public information program to provide information to the public and the potential hazards and impacts from the facilities, so we expect that to be done. So the process is a very different process, it’s an open licensing process.

From the standpoint of the

potential drilling and the impacts on the aquifers, Dr. Thompson can provide a bit of technical information.

CHAIRPERSON GRAHAM: Dr. Thompson?

DR. THOMPSON: Patsy Thompson.

Essentially, a lot of work was done measuring uranium in drinking water across Canada in the early 2000s when the uranium drinking water standard was -- guideline was reviewed by Health Canada.

Many of these studies showed that across Canada, in Nova Scotia, areas of Quebec and Ontario had uranium naturally occurring; uranium in drinking water that were more elevated than the drinking water standards.

It’s not a situation that’s associated with uranium mining or uranium exploration, but these are because of the geology of the area. This is quite well documented in Health Canada’s extensive reports on this.

My understanding from -- because there’s been a lot of reports about the situation around because of exploration in the area where Ms. Lauten is talking about, that what we see in the groundwater in those areas is natural and is not

related uranium exploration and we also know that uranium in rock is not very soluble.

For example, when uranium ore is extracted from the ground, it needs to be crushed and treated with very strong acids to be able to remove the uranium and make it soluble.

And the fact of drilling through a rock that contains uranium does not put uranium in a soluble form in groundwater; that's quite well understood, but I know that because of these activities it has raised a level of public concern and people are more aware of uranium levels in their wells that -- not necessarily something that they were aware of in the past. It has led to a significant public concern.

CHAIRPERSON GRAHAM: Thank you.

We'll now go to OPG. Do you have some questions or comments?

MR. SWEETNAM: Albert Sweetnam, for the record.

We would just like to maybe add one comment with regards to what was said about the present situation in terms of the cottages, is that the Ontario Ministry of Northern Development and Mines introduced the *Mining Amendment Act* on April

30th, 2009 in part to address the conflicts.

The legislation is meant to modernize the mineral development process in Ontario and key features include: clarity and certainty for the mining industry; recognition of Aboriginal and treaty rights; a dispute resolution process; the new approach for mineral exploration; and private surface rights.

Just thought I might add that as a point of clarity.

MS. LAUTEN: May I say something?

I'm actually one of the reasons that law was changed.

I made a presentation to the Ontario Mining Act Review Board and I spoke to Michael Brown MPP from Eliot Lake. I'm one of the people who got that law changed.

But I'd also like to point out that that law, the new legislation, it's not engraved in stone. It's a ministerial protection. Should there be a change in provincial government, that ministerial protection may be gone.

As well, in this very area, this very town here, where the people have had their own land staked, the new legislation said that once

that two-year claim expired, it was to be void because it was on private land. And these people, they have had the money -- claim on their land extended for a four-year term, which is unheard of, the usual term is two years.

They've had it extended this January for a four-year term, so I am very suspicious of this legislation because it's not -- it's a blanket with a lot of holes in it.

CHAIRPERSON GRAHAM: OPG have any further questions?

CNSC do you have any questions?

DR. THOMPSON: Mr. Chair, no, we don't have any questions.

CHAIRPERSON GRAHAM: Government agencies -- I don't think the Department of Natural Resources Ontario are here today.

Any other government agencies here that might want to address this?

If not, go to government -- go to participants by intervenors -- questions, government participant questions?

And Mr. Kalevar from Just One World, you have -- ask your two things, sir.

Try not to have the preamble too

long, get to the question, and I'll allow you a couple of questions.

--- QUESTIONS BY THE INTERVENORS:

MR. KALEVAR: Thank you very much. My one question is to the gentleman from CNSC.

He mentioned that the mining company has to go to CNSC when they go underground.

Is that correct?

CHAIRPERSON GRAHAM: Mr. -- CNSC, go ahead. Sorry about that, Barclay.

MR. HOWDEN: Barclay Howden speaking.

That is one of the conditions if they want to do underground exploration.

Surface exploration is governed by the provincial agencies but if they want to go underground to do exploration, they're essentially building a mine, so at that point they are required to apply for a licence from the CNSC.

MR. KALEVAR: How about if they have to -- they do the mountaintop blow-up mining?

MR. HOWDEN: Could you repeat the question, please?

CHAIRPERSON GRAHAM: I think what he was referring to, if I can clarify, you said if

they go underground, what about a strip mine or something, if that's what you ---

MR. KALEVAR: I'll just -- if you have a mountain, you know, like the mountaintop blowing up the whole mountain, who will it be under, you or the mining ministry?

MR. HOWDEN: Barclay Howden speaking.

This is talking about open-pit where you -- even if you want to evaluate the ore body but you have to start to excavate to get down to that point, that is no longer exploration, that is now considered mining and that is covered under the *Nuclear Safety and Control Act* with the CNSC.

MR. KALEVAR: And my question to Suzanne Lauten.

In view of so many holes that have been drilled that we have a situation where all this pollution has been caused, do you see any solution for the problem they have created? Are you aware if the Ontario Government or any other provincial government has found a solution for that?

MS. LAUTEN: Suzanne Lauten speaking.

What they do in Nova Scotia, before a mining company can do exploratory drilling they pay for all the neighbouring residents in the area to have a water test of their well water and mineral test.

So then they have a baseline established, and then when there's mining exploration, afterwards the water of the citizens is tested again to see if there's a raised rate in uranium.

And then, if that's the case, then there's compensation and that's something that's very responsible in Nova Scotia.

MR. KALEVAR: How far is Ontario from coming -- how far is Ontario short of that target that you described?

MS. LAUTEN: I have spent the past three years speaking with politicians, mining ministry. They don't even recognize that it's a problem.

MR. KALEVAR: Thank you.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Kalevar.

We thank you very much for your presentation. Thank you for the information.

You have a hand up, but if you want to you have to register at the back, Mr. Zimny, and go through the procedure if you it -- that's the way we do it with -- just to finish my comments.

We thank you very much for your presentation. If you -- feel free to leave those pictures with our Secretariat at the back, and I thank you very much.

MS. LAUTEN: Thank you.

CHAIRPERSON GRAHAM: We will now proceed to the next intervenor which is the Society of Engineering Professionals under PMD P1.188 and 188A. And I believe Dr. Ivanco is the presenter, who is the Vice-President, and we will ask you to take your place and we welcome you.

Who is the presenter, I'm sorry? Mr. Rod Sheppard, The Society of Energy Professionals. I apologize; I didn't realize I said "engineers". It's Energy Professionals.

Proceed, sir.

--- PRESENTATION BY MR. SHEPPARD:

MR. SHEPPARD: Thank you, Mr. Chair, and thank you, panel, for allowing us to participate today.

As always in this industry, we like to see that the processes are transparent and we're very glad to be here today.

For the record, my name is Rod Sheppard. I do know Dr. Mike Ivanco, but I'm not him.

With me here today at the table, to my extreme left is Mr. Darek Kulczynski. He's a member of ours from Darlington. Mr. Joe Fierro, he is the local Vice-President for Ontario Power Generation. To my immediate right, Mr. Mike Belmore, who is the staff representative of the Society of Energy Professionals, and to my extreme right, Mr. David Romanowitz. He's a health and safety representative for us at OPG.

For a brief bit of history about the Society, we were born in the nuclear age, in 1944, and we have been in and around this industry, growing with it since the inception of nuclear generation in this province, and we represent, as you can see on the board there, more than 8,300 employees here in the Province of Ontario, such companies as Ontario Power Generation, Hydro One, Bruce Power, AMEC Nuclear Safety Solutions, just to list a few.

Our members are employed as first-line managers and supervisors, professional engineers, scientists, information system professionals, economists, auditors, as well as many other professional and administrative and associated occupations.

With regards to Ontario Power Generation, the Society represents more than 3,900 members at Ontario Power Generation. Approximately 2,600 of those are employed in the Nuclear Division.

Our members and the employees of OPG, as we are probably sitting here, have had something to do with the creation of the documents prepared by OPG, and we stand behind them with their professional integrity and commitment to excellence in all areas, particularly in workplace safety, public health and environmental sustainability.

At OPG, Society members provide technical expertise in all areas of conventional health and safety, radiation safety, emergency preparedness and environment.

Society-represented safety-sensitive occupations include ergonomists, safety

specialists, industrial hygienists, safety officers, health physicists, emergency managers, environmental sciences and environmental engineers. That would also include security supervisors in the safety network at these facilities.

Our members and our union are uniquely motivated and uniquely situated to act as an additional safeguard of the public trust. Our members work in OPG's nuclear facilities and they would be the first in harm's way if the highest standards of safe operation and occupational health and safety were not adhered to.

Our members and their families live in Clarington and Durham communities and their children drink the same water and breathe the same air as all the local residents.

Because of our occupational position, training and experience, and thanks to our independent role in the internal responsibility systems at OPG, we are in a position to enforce the most stringent of standards, and we take our position and our responsibility very seriously.

Before you on the screen is a diagram of basically our health and safety network. The laws in the Province of Ontario require that

employers with greater than 20 employees must have a Health and Safety Committee.

Well, this company has thousands of employees. We go a lot further than that, and working in a tripartite forum, not only do we have health and safety committees; we also have corporate safety rule working groups. We have corporate code advisory groups, joint radiation protection groups, Joint Working Committee and a Tripartite Advisory Committee.

So we're going to take a look at some of these a little more in depth. With regard to the joint health and safety committees themselves, they have multiple joint health and safety committees across the province. On these committees there are an equal number of workers and management representatives, and the goal is the improvement of health and safety conditions in the workplace.

The committees are tripartite in nature and are comprised of representatives from management, the Society and the Power Workers Union. And as most health and safety committees, they conduct regular meetings to address potential and existing safety issues. They obtain any

required information and make recommendations to continuously improve the health and safety concerns at OPG.

They also conduct regular inspections of the workplace and, when necessary, conduct accident investigations.

At OPG, all joint health and safety committee members are certified a standard over and above that requirement by legislation. Certified members have taken additional training and have special powers to halt unsafe work under the Act.

The Joint Working Committee is a tripartite corporate committee consisting of two management, two society and two PWU members, and Mr. Romanowitz here, to my right, is one of the members of our Joint Working Committee.

The Joint Working Committee operates at a higher level of analysis to identify broader issues and trends, evaluate evidence and solutions and to recommend and implement actions.

The Joint Working Committee meets on a monthly basis and consensus of the parties is mandatory for the approval of joint policies.

The Joint Working Committee

functions to provide support and guidance and reports to the Tripartite Advisory Committee. The members of the Tripartite Advisory Committee are the presidents of the three tripartite parties. I am one of the Co-Chairs, as the President of the Society of this policy-setting panel. We meet on a quarterly basis with the Joint Working Committee reporting to us all of their activities in a 90-day period. If there were to be a situation arising that required immediate attention, the Tripartite Advisory Committee would meet immediately to deal with anything arising from some serious safety issue within the corporation.

There is also a Joint Radiation Protection Committee which deals specifically with radiological health and safety issues. They meet quarterly and, if required, more often. It consists of representatives, again, from the Society, the PWU and OPG.

The Joint Radiation Protection Committee provides group recommendations on improvements to the Radiation Safety Program with respect to employee and public health and safety. They review performance, evaluate against targets and external standards and recommend broad goals

and performance objectives. They evaluate performance, identifying problem areas and seek commitment for change as appropriate. They promote good radiation protection practices. They define the overall program direction and they also define appropriate changes to the Radiation Protection Programs when required.

The Joint Radiation Protection Committee ensures that OPG's radiation dose limits for workers and the public are not only within limits set by the CNSC but they are also as low as reasonably achievable.

For members of the public, OPG has a dose rate target of less than 1 percent or the regulated public dose limit.

Annual public doses from Darlington site have always been significantly lower than the regulatory limits and the annual average Canadian background radiation doses.

The annual radiation dose to nuclear energy workers is subject to an exposure control level of less than one-fifth of the regulatory dose limits. Darlington has never exceeded the CNSC regulatory dose limits or the OPG administrative dose limits. Most workers receive

less than ten percent of CNSC's annual dose limit.

Darlington nuclear generating station was awarded, in 2007, with the ALARA World Class Performance Award for exemplary performance in occupational dose. So as we look -- we look forward at environmental issues here and that's why we're here today, is to look at environmental issues. Certainly, climate change comes to the forefront when we talk about nuclear energy. And we see nuclear energy certainly as a part of the solution -- as part of the solution of dealing with climate change issues.

And we look at nuclear power plants as a central cornerstone of long-term environmental sustainability in Ontario's electricity system. Nuclear generation in this province is one-third of the generating capacity. It produces half of the actual electricity output in Ontario.

Lifecycle assessment studies of CO2 emissions place nuclear as roughly equivalent to wind, about half of solar generation. The carbon emissions in natural gas are several orders of magnitude higher than those of nuclear. Very little of the carbon footprint of nuclear

generation is actually associated with generation of electricity since it is -- it uses relatively little fuel. Most of the carbon footprint has to do with the construction phase of nuclear power plants. The long operational lifespan of nuclear assets and their low fuel use rate help dilute the impact of nuclear front and backend emissions.

We also see the potential here for a great social and economic benefit, not only to the immediate area, but certainly to this province. Darlington new build will serve as a major driver for Ontario's economic future. The recession of 2008 has certainly seen the loss of jobs in this area -- in this immediate area, particularly in the auto manufacturing. Good jobs create healthy markets and prosperous communities will come with this new build. Structural shift in the labour market, many of these new jobs were created -- that have -- that have been bragged about that have been created, have less stability, security and income than those that have been lost.

New build at Darlington will create a large number of high-quality jobs in the -- in the near future and for generations to come. OPG spoke of direct numbers and indirect numbers

here earlier of -- with regards to employment. We concur with those numbers. Direct employment of OPG employees and construction workers will be increased, increased employment at firms that will act as vendors and suppliers of goods and services to the project. And certainly spin-off employment created as a result of income spent in the local area and regional economies by those directly and indirectly employed.

During the site preparation and construction phase, as earlier reported, there'll be approximately 3,500 workers on the site for as many as eight years. Total number of direct and indirect and induced jobs created in this phase of the project is estimated to be approximately 7,500 jobs. During the operation and maintenance phase of the project, it will continue to support thousands of direct and indirect and induced jobs. The induced job creation effect of project-related household spending in Durham Region alone is expected to amount to as much as $375 million per year during site preparation and construction, and $143 million per year during the operation and maintenance phases.

With the construction of two

reactors at Darlington, the purchase -- the domestic purchase of iron and steel is estimated to be around $138 million. And iron and steel for pipes and tubes and fittings and pre-fabricated structures is also probable. The total GDP impact of the construction operations is approximately $2.66 billion. The net peak, it will create 3,500 construction jobs in management trades and labour. During the operations and maintenance phase, it will probably create up to 1,500 new and ongoing positions in management, nuclear operations, skilled -- skilled trades, administration as well as thousands of indirect and induced jobs.

The need for additional nuclear fuel for operations would provide job creation stimulus in the uranium mining and refining industries, both capable of providing 100 percent with the ongoing project needs from domestic sources. It will create such large numbers of good jobs at the same time provides much-needed renewal of the generation infrastructure.

While the upfront financial investment in nuclear is undeniable large, low operating costs and the long lifespan of facilities, being nuclear, is an economically

responsible choice in the long run.

Darlington new build would reassert Canada's long-held position as a major international player in the field of nuclear energy. It will be a catalyst required to propel both established and new players towards the next generation of breakthroughs in nuclear science and technology.

It will be a catalyst to improve post-secondary school institutions; involve an enrollment in the college and university programs and provide training relevant to the nuclear industry. And it will be part of the development of skilled journey persons to replace today's aging and dwindling construction force.

No better example, actually, lies right here in Durham Region with regards to the institutional infrastructure. With the birth ten years -- or just less than ten years ago of the University of Ontario Institute and Technology, it's a remarkable example of what can be done around this industry when it comes to innovation and -- and forethought. And so it's become quickly North America's largest and Canada's only accredited nuclear engineering program. They have

established a new Ph.D. program in nuclear engineering; UIT's control room simulators, the only one in Canada outside of the industry itself. And OPG has provided UIT with both operational and research funding and UIT will provide OPG and anyone else involved in the industry, world class facilities and research partnerships and industry-ready graduates.

The impact of Darlington new build, overwhelmingly is positive for the further development of this leading edge institution as well as other post-secondary institutions in the province and around the -- around the country.

We, ourselves, are hoping that efforts we've made in the last two years with UIT around a power engineering program, to revitalize that in this province will work out for us and hopefully we'll know very shortly whether we have established something here in the province to bring that skill back into the -- the job market.

So in conclusion, the construction and operation of Darlington new build can and will be safely accomplished. Society is uniquely situated and uniquely motivated to act as an additional safeguard of the public trust. Society

members are actively involved in continuous improvement of workplace and public safety and our track record is excellent. And I should also tell the panel that there's probably 20 of our members sitting here today that came to support this endeavour and I'd ask them to stand, but I think they'd all be too embarrassed to do that. So I won't centre them out that way.

Darlington new build will be key to reducing the carbon footprint on Ontario's electricity system in an economically, responsible way. And Darlington new build will create thousands of good jobs and an educational infrastructure for generations to come. And at the same time, as it revitalizes a key Canadian high-tech industry. We thank you for your time.

CHAIRPERSON GRAHAM: Thank you very much Mr. Sheppard.

We'll go right into panel questions first. That's the way we do it. And I'll ask Mr. Pereira if he has some questions.

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman.

My first question concerns the

multi-tier health and safety committees that the society is engaged in as a partner. Do you find, in your experience, that this is an effective mechanism or because of the multiple layers it tends to get bureaucratic and change is difficult to move forward in response to, say, an accident?

MR. SHEPPARD: I will pass that question on to Mr. Romanovitz.

MR. ROMANOVITZ: Dave Romanovitz here.

There are a number of different avenues and mechanisms to look at health and safety issues. One of the nice things about the process that we have it gives another set of independent eyes to look at the same issue and to determine resolution.

One of the things that we have learned with these various levels is that things can tend to be stagnated at times, and we continually go into those processes to fine tune them such that the issue can be moved on and could be addressed accordingly.

And this is one of the processes that we do use and we do use quite frequently, all the way from the line all the way up until the top

of the house, if that is required.

MEMBER PEREIRA: So do you find that there is reasonable progress in improvements and safety, say, radiation protection?

Are you able to see change being implemented in a reasonable period of time?

MR. ROMANOVITZ: Depending on the issue there's no question that some issues work much quicker then the others. Some tend to be extremely complex and it's not just a simple solution that can be given and implemented right away, whereas, in other cases they can be implemented quite quickly and quite effectively.

We do have ways of moving the issue up so it doesn't stagnant; that it can be corrected and it can be corrected in a timely fashion, and we haven't found that there's been any particular issues such that it has not been addressed and not been addressed in a timely way.

MEMBER PEREIRA: My next question concerns the challenge of renewing the workforce and knowledge management, preserving the value of the experience, which you obviously have, bringing new people in and making sure that that expertise is transferred on by jointly working together.

Does your society have a strategy of working with Ontario Power Generation and the educational institutions to promote knowledge management and training of new people coming into the industry?

MR. SHEPPARD: Rod Sheppard, for the record.

We have been -- this is something -- and I know that the Chair has heard the Society come to Ottawa time in and time out concerned about the workforce issues and that sort of thing.

Our strategy for us has been to try and encourage and we spend considerable dollars going to universities and trying to encourage the students to get into these programs. We try to educate as quickly as we can a number of them.

At the recent Canadian Nuclear Association Winter Conference we sponsored 200 students to go to the Wednesday education day and we spoke to them, as well as did OPG and other companies such as Bruce Power, speak to these students about the benefits of coming into this program, and trying to actually deal with an issue that came up certainly in the ’80s where we were being written off as a dying industry. And it has

become more and more encouraging to go to these facilities and see that the students are getting into it.

We're certainly happy with what's happening at UOIT and part of our endeavours, as well, is on this Power Engineering Program is to try and encourage students to go into these programs, but it's been a tough slug. I mean, what's happened in the '80s has hurt us and we don't want to see that again.

MEMBER PEREIRA: It's certainly a worthwhile effort -- sorry.

MR. FIERO: I would just like to add that as the local Vice-President of the Society local I've been working with OPG on this issue I guess now for six, seven, eight years and we've seen the hiring of somewhere between 400 to 500 new university graduates over that period of time and these people are coming into the workforce learning and will be fully trained and qualified when these new units are ready to be operated and be involved in these projects on the ground level.

We're learning from the existing units, and I think they do have a plan to continue to introduce new graduates into the workforce to

deal with the demographic issue of some of the retiring and more experienced people so that they have someone to actually transfer this knowledge to, and once this knowledge is transferred to them they'll be able to effectively move forward and carry out that skill set in maintaining those units.

MEMBER PEREIRA: Thank you.

You actually answered my next question -- that's excellent -- because I was going to ask about the strategy for having people in place when the new units come on stream, if they do proceed in a timely manner. So that's good.

Just looking at your presentation, you talk about the environmental impact of nuclear and new generation. As a society of professionals, what is your assessment of the environmental impact of nuclear generation, in particular, going forward to two more units? Is the environmental impact well understood and well managed to the extent that we have a reasonable handle on what is the actual impact on the environment in the vicinity of Darlington?

MR. SHEPPARD: I'll turn this to Mr. Fiero.

MR. FIERO: Thank you.

We've had a look at much of the data that OPG's prepared. We believe that there will be certain issues raised during the construction phase, but we believe they have adequate plans in place to deal with those.

We believe that the operational phase of -- construction phase of the project will also be adequately dealt with.

When you have a site with four units and you add two additional units the incremental impact is less then if you were to do it on a brand new site. The infrastructure's there, the roadways are there, there'll be some expansion required but the incremental impacts are much less then they would be if this was a new site that was going to be -- a Greenfield site that was going to be built into a new nuclear plant.

And that's why there's an advantage because the infrastructure is partially there already, or mostly there already, the workforce is there already and the expansion of that workforce to deal with two additional units will allow for a more sustainable project with less environmental impacts.

MEMBER PEREIRA: Thank you very much.

Thank you, Mr. Chairman.

CHAIRPERSON GRAHAM: Madam Beaudet?

MEMBER BEAUDET: Thank you, Mr. Chairman.

Well, you've just answered one of the questions I had about incremental impact. I wasn't too clear what you meant in your written submission on page 11 and 12.

My other question refers to the figure you have on page 10 and your appendix number one, presenting figures -- comparative figures of a lifecycle pollution of different form of power generation nuclear coal and natural gas.

And I was wondering, if you do include -- first I would like to check what is the lifecycle that you present here, is it just construction and operation or does it include also mining extraction or natural gas extraction and then at the end of the cycle dismantling or decommissioning?

MR. SHEPPARD: Thank you. I will pass that question on to Mr. Kulczynski.

MR. KULCZYNSKI: Darek Kulczynski, for the record.

The nuclear facility is designed, is born, is constructed, is operated and then it's decommissioned. The whole cycle is being taken into account when assessing environmental impact.

We can confidently say that nuclear industry, and that's in general, and the Candu system in particular, has certain advantages to the environment because the waste is concentrated in the very small area and there is a very good way of containing this waste and, for example, for an 80-year old general dweller of Ontario, if we took the waste that he or she will generate through their lifetime through nuclear power it will be of the size of the golf ball.

On the other hand, if we took the fossil waste, it would fill the 10-storey highrise and, in many case, it will be spread outside through the stack, including Uranium-235, because Uranium-235 is present in coal, for example, and is emitted in flue gases.

So I would submit that the nuclear industry, yes, it does have pretty toxic substances, but these substances are well-

contained, well-maintained, and in the whole cycle of the nuclear facility the care is taken that we plan for minimizing the releases.

We contain everything that we produce, and the figures that you've seen, I would say that they include the whole life cycle of the nuclear facility. And we do have -- like, not "we," but our employers do have the special nuclear fence that are especially prepared to secure adequate funds for safe decommissioning of nuclear sites when the time comes.

MR. BELMORE: Sorry, if I may add -- Mike Belmore, for the record.

MEMBER BEAUDET: Yes, I'm not sure I got an answer here. I'm just trying to understand the ---

MR. BELMORE: So when we talk about -- generally speaking, when we talk about life cycle assessment -- and there are a number of different ways of doing it -- we're talking the whole thing from cradle to grave, and that is from mining and extraction to decommissioning.

The particular -- there are a wide variety of studies out there, and they do use different goalposts, which is one of the things

that I think makes its difficult for folks to evaluate and compare studies and to find resolution for some conflicting numbers that exist up there.

I must say, off the top of my head, I cannot recall if the particular study that this table is extracted from -- I do believe that it is a full cradle-to-grave extraction to decommissioning, but certainly we would undertake to provide the panel with that.

MEMBER BEAUDET: Because the figures here and comparison are interesting, but we have to know exactly what is included here in the numbers.

CHAIRPERSON GRAHAM: Madame Beaudet, do you want ---

MEMBER BEAUDET: Yes, please.

CHAIRPERSON GRAHAM: --- as an undertaking?

MEMBER BEAUDET: Appendix 1, and -- well, Appendix 1, I think is sufficient because, if I understand well, the figure on page 10, the details are in the Appendix 1, right? So Appendix 1, what the definition of the life cycle is, if it’s from cradle to grave.

CHAIRPERSON GRAHAM: We’ll give

that a number. That number will be 31.

And I'm wondering -- generally, when we give the undertakings, we like to know roughly when you can have that back to the panel. So how long would you estimate?

MR. BELMORE: I would expect we would be able to return that information at some point on Monday.

CHAIRPERSON GRAHAM: That's perfect; that's fine. We'll put it for -- then we'll deal with it Tuesday morning. Thank you.

Madame Beaudet, you may continue.

MEMBER BEAUDET: Yes. I have another question which also I think is in your Appendix 1, and it's -- there's no page number, but it's in Section 7.

MR. BELMORE: You're referring to the addendum on the EC6?

MEMBER BEAUDET: Yes. Section 7 is EC6 fuel, and towards the end here you say -- it's two sentences before the end, that:

> "The fuel storage is conducted by personnel and in special facilities licensed by the CNSC, and therefore

presents no environmental or security hazard."

My question is, you have standards to meet and they are checked with CNSC, but how do you account here for human error?

MR. BELMORE: I will turn that question to Mr. Derek Kulczynski.

MR. KULCZYNSKI: Darek Kulczynski, for the record.

Nuclear fuel needs to be removed from the reactor after it is irradiated and safely stored.

There are different nuclear technologies. For example, the BWRs, such as at Fukushima, remove 15 tonnes of nuclear fuel at one time, and put it in their spent fuel pond. We don't do that in CANDU. We remove only .27 percent of the core inventory every day, and transfer it to a spent fuel base.

Our spent fuel bases are huge and are designed to hold fuel for at least 10 years. After 10 years of storage and cooling under the 10 metres of water -- 10-metre layer of water, this fuel is cool enough that it can be transferred to the safe storage in dry form, and we do have the

dry storage facility at site.

Regarding your question, how secure this is; every fuel bundle -- and this is like a 20-kilogram fuel bundle, as opposed to a huge rod, as in other designs. Every fuel bundle is inspected upon removal from the reactor, in the receiving bay.

It is also put in the known position, and there are baskets that are stored by trained and competent personnel, right in the storage bay.

Upon removal, they are -- after 10 years or more in the bay, they are equally meticulously accounted for, and they are transferred to the facility, to the dry storage fuel facility.

These storage modules are designed for 100 years, but there are plans to produce deep geological -- to build deep geological repository of nuclear fuel where, in the long term, it will be stored.

There is no security risk because our nuclear facilities are extremely secure. I don’t know if you’ve seen the fence that is built around the nuclear and GSA, but it’s like at

Guantanamo Bay. Like, it's a huge, huge, very secure fence, and there are no intruders, and they are patrolled by Durham Regional Police with live ammunition, 24/7. So there is no -- plus, our spent fuel from the CANDU cycle, yes, it does present a radiological hazard, but it doesn't -- it is not the best material to use to produce nuclear weapons, for example.

So they won't be targeted by the terrorist groups that, I submit, are pretty well repelled from our sites, so I would say our fuel is secure.

MR. BELMORE: If I may -- sorry, Mike Belmore, for the record. Just ---

MEMBER BEAUDET: My question was ---

MR. BELMORE: On human error.

MEMBER BEAUDET: --- on human error in handling.

MR. BELMORE: Yes.

MEMBER BEAUDET: I mean, we have regulations, we have standards, I understand that, in Canada, and I know ---

MR. BELMORE: I think one of the things is that there's a recognition that there is

room for human error in every process that humans participate in, because we're certainly not perfect.

I think that it's our fundamental belief that one of the ways to get around this issue of human error is through the kind of multi-tiered, multi-layer reviews of processes and procedures and technologies that we've alluded to earlier in our presentation.

The more eyes that you put on a problem, the less likely that the one set of eyes is going to miss it. The more levels from the ground level up to higher levels of analyses and abstraction that you view an issue or a problem from, the more likely you are to catch any sort of an omission or an error that might occur elsewhere. And so I think that fundamentally, again, the multi-layered from the ground right up to the boardroom, be it the unions or the operators of having multiplized on the same problems, that this fundamentally aids us in avoiding human error and detecting it where it occurs.

MEMBER BEAUDET: It's interesting for us to -- to speak to people that represent the workers' union because you are on site, you deal

with it every day and -- and you know what are the problems or what are the -- the requirements, maybe too long hours, et cetera, and you would be the first on the frontline to complain. So for us, we know that there's a procedure to make sure that everything is safe, but we'd like also to hear, you know, how it works, and is it realistic, would there have been incidents that, you know, you feel that could enlighten us or --

MR. BELMORE: Yeah, Joe Fiero would like to deal with your question.

MR. FIERO: There's a lot of work that goes on before an activity is taken on. Before any task is assigned, the people review the procedure together, they understand there's a pre-job briefing, they understand the tasks, the rules, how the things are going to work. The equipment is tested beforehand, before it's actually used in operation. It's not one person by themselves doing something, there's always people around in case something else happens. There's available support in case something doesn't work the way it's supposed to. People are trained.

These are highly-trained professionals who have, you know, constant amount

of training, re-training, simulation, you know, opecs, which your operational experience data. So they know if this happens this is what you do. There's -- there's enough experienced people when an activity is taking place, that if something unusual does happen they're prepared to deal with it. They are highly-trained professionals with a wealth of experience, and, you know, people have faith in them and they do an excellent job, as can be seen by the very small number of incidents that occur related to this type of work.

No one's perfect, but to my recollection there hasn't been a single serious incident in -- in fuel handling that I'm aware of in 30, 40 years as the plants have been operating.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you. Along the line of the questioning of both my colleagues, yesterday we had the Minister of Energy from the province of Ontario here who informed us through -- through discussions that it's on -- it's the Government of Ontario's decision to negotiate with the -- with ACL and for CANDU technology, but because of all of the uncertainties or the future of ACL and so on, if that fails, they will look at

another technology.

My concern or my question or my first question is to you, we keep talking CANDU, but if another technology is chosen, how can you assure that -- your society that the right professionals are trained to be able to address and work in a new technology alongside of a -- because you said you have another -- you have CANDU Technology next door in the original Darlington, but that may not be the case that you may be able to learn and work with that. It may be a whole new technology, it may be something that's -- boiling water, it may be something different than that.

So how can you -- I'd like you to address today how your membership is going to be able to adapt to this new knowledge, new technology and new skills?

MR. SHEPPARD: Well -- Rod Sheppard, for the -- the record, and I will pass it on to a couple others in a minute. But the -- I guess the first part of your question. The technology and the operation of it, I am fully confident that our membership would be able to operate whatever it is. This is a fission process, so the basic science is the same, the technology is

-- is different.

They are being trained constantly. There isn't anyone that works in this industry that isn't being constantly upgraded or -- or retrained to deal with even the simplest of system revisions. So I'm fully confident in our membership. The professional engineers in particular, would be very quick to pick up on the skills, and remember, we're talking about bringing new people into this industry as -- as quickly as we can. They would grow up -- as we did with the industry, they would grow up with it as well and -- and evolve and take it and move with the new technology.

I would like to turn to Mr. Romanovitz for some additional health and safety --

MR. ROMANOVITZ: Yeah, Dave Romanovitz, for the record. A couple of points. 1. We are slowly moving into mock setups where they approximate exactly what you're going to be working with, and using that type of took in another technology will provide us with -- with more experience before we actually do it in the real world and hands on.

The second point I'd like to make is that a number of our professionals, particularly

in the area of health and safety, radiation safety, are certified. Now, the difference between professional engineering where there is no really recertification requirement, no -- no professional upgrading that's required to continue your licence, many of these certifications that they have in areas of ergonomics and safety, industrial hygiene, radiation, there are certification requirements and these requirements require people to meet certain criteria in a given cycle. So they're maintaining these certifications by being up to speed and knowledgeable about their area, and therefore are reassessed on a -- on a systematic basis, and OPG provides support for these people to continue this retraining outside of the field, so that they are up to speed in addition to the training that they get inside.

So I would like to suggest that both of these two approaches, at least in the health and safety area, are being used and are being -- and can have a lot of benefit, so that if we do move into a new technology our ramp up could be quicker than -- than the technology that we presently have right now.

MR. FIERO: Joe Fiero, for the

record. Also with the purchase of any technology, there will be a different system. Even if we buy a CANDU system, it will not be the same CANDU system that we have now. And so as part of that contract, it will involve the purchase of a simulator, where our people will learn on that simulator. It will -- it will require training and certification on the new equipment. This is equipment that won't be actually up and running for eight years, so there's significant lead time to train our workers to be well prepared and ready to operate that new equipment. And I have no -- no doubt that with the professional expertise they have with the -- with the desire and dedication to their jobs, that that's more than enough time for them to be trained in the new technology and to successfully operate that for the next 30, 40 years, whatever's required.

CHAIRPERSON GRAHAM: Yeah, the reason for my question was a lot of the evidence provided today was with regard to the CANDU technology, and I wanted to put this other aspect, because yesterday it -- it became very clear that with the uncertainty of the future of ACL that if and when Darlington goes with the new -- with the

new build it may not be CANDU, and I don't know whether your society is prepared -- was prepared to answer this because -- I'll go a little further.

Over my experience with licensing and so on, over the years we have -- we have heard from -- I'm not singling out any special licence or any special utlitity, but in a class 1 nuclear licensing we've -- we've heard in the past, and I know it's improved a lot lately, but there was a reluctance by some people to adopt a new technology. This was a problem that some of the licensees had that in the plants, and -- and we've had that evidence before us from licensees in the past that some of the workers just, you know, they were getting near retirement and why -- why change? It's -- it's an attitude and it's -- it's something that -- it's a safety culture that has to be -- be preached and beat into everyone every day because it's -- it's the nuclear industry. And -- and this -- this was the reason for my question and I have a -- the question that I have is, how can you assure that -- or ensure that -- and assure me that your workers, the people you represent, will buy into and buy into change and buy into lessons learned because there literally have been hundreds of

lessons learned and with the recent events that have happened and unfolded in the whole nuclear industry in the last several weeks there will literally be reams of new lessons learned.

Please tell me how you will -- how your society will ensure that its membership are willing and ready to step up to the plate with that new technology and the new ideas and the lessons learned?

MR. SHEPPARD: Rod Sheppard, for the record.

I've been in this industry almost 33 years now and this is an exciting industry and we certainly were concerned in the eighties when it was written off -- my words, but that was what was happening to the industry.

People are excited with what's going on. I don't think it'll take much motivation to get people engaged in this and it doesn't matter the technology.

The mindset is there, the encouragement -- certainly encouragement from this organization. This is after virtually 20 years of waiting for something to happen here, I think we're on the edge of wanting to do something creative

again in this industry.

That's what people that I work with want to do. And when I hear your question I understand it. I'm more concerned about the issues around getting people into the industry as opposed to encouraged to work with the technology. In all honesty, there's been too much -- I'm going to call it damages, probably not the right word but there's been concern that this is a dying industry.

This is being revitalized and this is an exciting place to be right now and so we're -- I'm fully confident that our members will move there but I will turn it over -- Mr. Romanovitz has something to add.

MR. ROMANOVITZ: It's obviously going to be somewhat of a challenge because it's a new road. However, since being in the organization of OPG since 1981 the organization has changed radically from what it was and primarily the people have taken us there.

So I think that the people can adapt, they have adapted and that it's a fairly rigorous and strong safety culture that is throughout the organization, all the way from the line management where individuals can bring issues,

all the way up into the different types of infrastructures we have in place and our communication network.

It will be a challenge. But I think that this company, up to this particular point in time, has risen to the occasion for challenges and depending on what is selected, I believe that we will be in a position to be able to move towards that challenge.

And given the knowledge that we have and utilized up to this particular point in time, the only potential concern is that because a lot of the knowledge is going out the door in the next few years that somehow we have a process to be able to retain or pass on that knowledge, such that the younger people that are coming along can then not have to make the same mistakes that were in the past but then can be in a position to be able to move this technology forward or whatever other technology is chosen.

MR. FIERO: Joe Fiero, for the record.

Just my perspective. I am, I guess, the highest ranking society elected rep at OPG. I speak to society's members on a daily

basis, I interact with them.

These are people, many of which could retire today if they want to, but they choose not to. They're dedicated to their jobs, they enjoy their jobs. They don't come to work grudgingly, they really want to be there, they want to do the work they're doing.

These are motivated people, they're highly engaged in the work they do. You know, we have a significant portion of -- you know, as many as four to 500 new hires who are truly engaged, they really want to be here, they want to be doing this new work, this exciting work.

I have no doubt in my mind that whatever technology changes emerge or decisions occur they will adapt, they will pick up the new skill set and they'll continue to perform them excellently, as they do now, and they'll do in the future.

CHAIRPERSON GRAHAM: Thank you.

Just one further question and I know my others -- we have to get on with the agenda.

You keep coming back to people -- finding enough people to be interested, to be

motivated, new people to come into the industry. And from my experience, again, and I don't like to always be going back on that but from my experience another problem has been is the lack of having enough people and the overtime hours that are required and the concern that CNSC has had in the past with regard to too much overtime.

The possibility, as one gentleman said, all accidents are generally -- a lot of them are human error and fatigue and so on.

Regardless of what technology is chosen, are you confident that your society can find enough people to man a new operation or to personnel a new operation in such a way that it is safe and that you don't get into the problems of overtime and so on that could jeopardize safety?

MR. SHEPPARD: Rod Sheppard, for the record.

We're going to help find the people. We have our own activities to try and encourage people into the program.

From a safety culture perspective, we are going to be questioning the employer at every turn to make sure that that is done and I mean -- and I know, Mr. Chair, I've sat in front of

you maybe a decade ago concerned about some of the same things. And I'm concerned about -- and we still remain concerned with regards to this issue.

We don't want this business run as the dollar is the bottom line, we want it to be done in a fashion that protects the public and it ensures that the public can rest at night knowing that this place is being operated properly.

And certainly we are committed to make sure that that happens.

You know, we're not hesitant to come to the CNSC and say there's an issue and we never have been. We've been asked to leave the room maybe once or twice because we've been a little too verbose about that but that's what we're about. And we will continue to ensure that that is the hallmark of this.

And that goes with everybody we work with. Any of the licensees, be it Bruce Power or OPG, we are committed to make sure that they're a safe place and run with the factor of public safety being the highest order. That's our commitment to it.

CHAIRPERSON GRAHAM: Okay, thank you very ---

MR. BELMORE: Sorry. Mike Belmore, for the record.

I'd just like to say that it's not all a question of recruiting when it comes to staffing and when it comes to having enough people to avoid overtime and those sorts of things.

I think we need to be very vigilant about external pressures that are responding to different cues.

You know, for example we had a recent OEB rate hearing decision where OPG was seeking a 6 percent increase -- I believe it was 6.2 percent increase in the cost of the electricity generation portion of the bill and the OEB reduced what would be allowed to go into the electricity base rate to 1 percent.

That was the cause of much jubilation from the ratepayers' perspective and certain politicians but buried in that decision was a very pointed critique of OPG Nuclear and particularly on their staffing levels. And they singled out, for example, the example of radiation protection and critiqued OPG for not cutting its radiation protection staffing in terms of FTEs by 28 percent.

OPG did the right thing. They have a pressure from an administrative tribunal whose job is to hold costs down and they responded appropriately by not cutting radiation protection in the way that had been suggested.

But we really need to be aware that there are pressures coming from all over and, quite frankly, they're not just in terms of the inability to recruit people but they're also in terms of pressures to hold costs and to hold staffing costs down.

CHAIRPERSON GRAHAM: But I remind you that that is not -- external pressures, that is the decision of OPG, if they cannot operate that plant safely with enough radiation specialists, with enough of all of the other checks and balances that's needed in 2011 or 2020 or whatever date we pick to run a nuclear plant safely, then they close it down because they're not meeting the standards of CNSC; and it's just that simple, regardless of what some exterior force says your rate can only be so much and you have to cut.

If they can't find the cuts or if they find the cuts and it's at the expense of nuclear safety, then that's the role of CNSC to

shut them down.

So with that I'll go to OPG, that's my -- on my next questions, do you have any questions or comments, Mr. Sweetnam? ...

MR. SWEETNAM: Albert Sweetnam for the record.

I'd just like to make a brief comment.

OPG is committed to operating all of our facilities in a safe way that protects our workers and the public.

We agree with you, Mr. Chair, that external pressures are secondary to the safety of these plants. These plants will always be operated safely and efficiently as possible.

Thank you.

CHAIRPERSON GRAHAM: Thank you.

CNSC?

MR. HOWDEN: Barclay Howden.

No comments, except to concur with your last remarks, Mr. Chair.

CHAIRPERSON GRAHAM: The next on my -- from my list is government participants from any government departments.

If not, we will then go to

intervenors. And who do we have for intervenor questions? Mr. Kalevar?

--- QUESTIONS BY THE INTERVENORS:

MR. KALEVAR: Chaitanya Kalevar from Just One World.

Thank you, Mr. Chair.

There are five people who spoke. I don’t know how to deal with them, except with at least five questions.

My first question is to the person --

CHAIRPERSON GRAHAM: Well, we’ll see how time goes.

MR. KALEVAR: Sure.

CHAIRPERSON GRAHAM: We’ll allow you a couple to start with, okay?

MR. KALEVAR: You can be more generous.

My first question is to the person with my hairstyle. I don’t what his name is.

CHAIRPERSON GRAHAM: No. Your question is to the Chair, and I decide where it goes.

MR. KALEVAR: Yeah, to the chair, to the gentleman with my hairstyle.

CHAIRPERSON GRAHAM: I decide where it goes. You address it to the Chair.

MR. KALEVAR: Okay, to the Chair.

He spoke on those issues, so I'm addressing to that person to help you out.

Okay. You are Society of Energy Professionals.

At one time, I thought I was an energy professional myself.

So I would like to ask you if tomorrow Ontario Government decided to go the green route; that means, go the solar and wind route, rather than nuclear, you will have no problem retraining your professionals to install solar and -- panels and wind turbines, would you?

CHAIRPERSON GRAHAM: Mr. Sheppard, do you have a -- give your response to that question?

MR. SHEPPARD: Well, we consider nuclear green.

As far as retraining our people in -- in renewables, we are involved in one renewable only that I know of with OPG, and that's water.

The rest of it -- no one that we are engaged with is involved with renewable

construction or -- oh, well, yes -- I've been reminded kinectrics is from regards to servicing, but not with generation -- they're actually putting wind turbines up or putting solar panels up.

CHAIRPERSON GRAHAM: Mr. Kalevar, your next question, please.

MR. KALEVAR: Well, I'd just like to bring to your attention, Mr. Chair, that this society should be really called the society of nuclear energy professionals, rather than energy professionals.

CHAIRPERSON GRAHAM: Thank you. Your next question?

MR. KALEVAR: Yeah. My next question is to, again, the same gentleman.

You mentioned that there is a regulated dose limit. And perhaps you know that radiation bio-accumulates, and it has genetic implications.

Do you know how the regulation dose limit is established?

CHAIRPERSON GRAHAM: Question to Mr. Sheppard.

MR. SHEPPARD: Can I pass that question to Mr. Romanovitz, please?

MR. ROMANOVITZ: Well, there's the criteria that the -- a regulator has set, and then there's the internal procedures that OPG have set that's substantially lower, such that we don't approach anywhere near the limits that the regulator, the CNSC, has said as being our guide that we should follow.

CHAIRPERSON GRAHAM: Thank you.

Mr. Kalevar, your last question?

MR. KALEVAR: That's a little too soon for me, but I'll see.

I think one gentleman mentioned that, I think, nuclear waste that is stored cannot be used for nuclear bombs. I don't know, I think it was the gentleman with the --

CHAIRPERSON GRAHAM: Your question to the Chair, and I'll direct it.

MR. KALEVAR: Yeah, to the Chair, to one of them, I guess.

Is the gentleman talking of explosive nuclear bomb or, so-called, dirty nuclear bomb?

Because dirty nuclear bomb can be made out of any nuclear waste.

CHAIRPERSON GRAHAM: I think Mr.

Kalevar has asked for a clarification of what type of weapons you're referring to.

MR. SHEPPARD: Thank you.

I'll turn that question to Mr. Kulczynski.

MR. KULCZYNSKI: Darek Kulczynski for the record.

We do have procedures that prevent human error.

And the question that I did not answer, the procedure is in hand, and we check step by step, and we know exactly where our fuel goes.

The fuel that we use now has extremely -- has much lower fissile material content in it.

After it is removed from the reactor, then other types of nuclear fuel used.

It is virtually impossible to build an explosive device, and that's -- that's what I meant.

Of course, if you got a hold of spent nuclear fuel or any nuclear -- any radioactive material and contamination, you could -- you could make whatever.

But the thing is that our

procedures and the work of our members prevent this from happening.

As -- like, the fuel is so radioactive that there is no way of -- when it goes out of the reactor, it is handled by fuelling machines that are kind of robots that transfer this underwater to the safe storage place, and then it sits within the -- within the station boundary for at least ten years.

So to answer your question, yes, if you got -- if you got a hold of considerable amount of nuclear spent fuel or any radioactive contamination, you could pack it in the -- in the device and explode the device, yes, but there is no physical way of laying your hands, short of being killed instantaneously, or, you know -- or, like, the -- we have checks and balances and procedures and competent members to prevent anyone from taking possession of spent nuclear fuel.

CHAIRPERSON GRAHAM: Thank you.

Thank you, Mr. Kalevar.

MR. KALEVAR: Could I ask a last question, please?

CHAIRPERSON GRAHAM: To the Chair.

MR. KALEVAR: To the Chair, of

course, it couldn't go anywhere else.

Somebody mentioned that multi-layered eyes and oversight pretty well ensures that there can be no human error, I think something along those lines.

I suggest when there are more than one people -- there's a lot of literature on that. I don't have it here because I didn't expect that to -- somebody to say. But there's a lot of literature which would suggest that when there is more than one person or a lot of people involved in oversight, the oversight gets lax because everybody thinks the other guy is going to do it and things fall through the crack big time.

So I just wanted to bring to the Commission's attention that don't rely on multi-layer as beyond human error.

CHAIRPERSON GRAHAM: Thank you.

I don't take that as a question. I take it as a -- as a presentation to the Commission -- as a comment to the Commission.

I'd like to draw to your attention that we have one other intervenor that is registered -- one other person that is registered that is in -- not registered. I shouldn't say --

one other person that has indicated that they would like to ask a question. And that person is not a registered intervenor, and it is at the discretion of the Chair whether we accept those people that were not -- did not follow the rules.

However, because the person has indicated there's only one -- only one question -- and I'm going to bend the rules and allow this one.

We can't do this always because of time, but I will do this today. I did one the other day.

And I have Mr. Paulad Lahadee.

Mr. Lahadee, if you have a question, I'll entertain one question.

MR. HOWDEN: Mr. Graham, after this one, can I make a comment -- it's Barclay Howden speaking -- on the security and safeguards of nuclear material?

I'd like to provide some clarifications.

CHAIRPERSON GRAHAM: Certainly. I'll -- I should have really addressed that to you a minute ago and asked you, so -- but thank you. I'll get you just after Mr. Lahadee.

MR. LAHADEE: Thank you very much.

I want to thank the panel and the presenters. I will be very short.

I think there were some talks about the new generation that enters this industry and their readiness for the new technology.

I think me, as one of the few people here that represents that society, basically, I want to make a comment that I started my interest in nuclear through a program called Unini Debt, the utilities and AECL fund, and I thank them for that.

But, through my research in university and my training that I've received so far in the industry, I can assure you -- and I think that was the word that Mr. Chairman was looking for -- I can assure you that the training that I've received through university and through the industry was designed based on having different technologies in mind, and in terms of willingness to understand the new technology that the new build will bring.

I'm very confident that my generation and myself are very eager and very confident that we can go on with it and bring the legacy safety culture that this industry is

bringing with itself, and carry it into the future.

I want to thank everyone for listening.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Lahadee.

With that, Mr. Sheppard, thank you very much for your -- oh, I'm sorry, Mr. Howden has a clarification before you leave. Perhaps, in case there might be some other comments, just -- Mr. Howden?

MR. HOWDEN: Thank you. Barclay Howden, for the record.

I just want to point out a few points with regards to the safeguarding and nuclear material.

In Canada, we have our nuclear security regulations and also Canada is subject to IAEA safeguards with IAEA inspectors doing safeguard reviews of fissile or fissionable material.

As well, with other materials that people say could be used to make dirty bombs, just a few points.

There is a licensing process for all nuclear materials in Canada. There are

security measures in place for high-risk sources and they're categorized to determine the level of security needed.

Also, there is a sealed-source tracking system operated by the CNSC that tracks all nuclear substances in Canada, and there are other safeguards that I can't mention.

But, basically, there's a system of checks and balances to prevent diversion of nuclear material to nefarious means.

Thank you.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Howden.

With that, I thank Mr. Sheppard and his presenters today, The Society of Energy Professionals. Thank you very much for coming and presenting your views to the panel. Thank you very much.

Next on deck then is a presentation from Mr. David Faltenhine regarding PMD 11-P1.227.

Mr. Faltenhine, you have the podium, and welcome.

(SHORT PAUSE/COURTE PAUSE)

CHAIRPERSON GRAHAM: Okay.

Proceed then, sir.

--- PRESENTATION BY MR. FALTENHINE:

MR. FALTENHINE: Thank you, Mr. Chair, and to the panel.

My name is David Faltenhine, and I'd like to point out that I'm a layperson. I'm not affiliated with any particular group or organization, and I'm here to express my own personal opinions.

Years ago, I was totally in favour of nuclear power and, in fact, the only reason I felt opposed to this expansion was related to lifecycle cost.

However, in researching the background material for this submission, I've learned a lot more about nuclear power and much of it I find disturbing.

Nuclear power, we're often told that it's clean, cheap and safe. Nuclear power generation provides us with an abundant source of electricity. It helps all of us to power our homes, to do our work and to live comfortable lives.

Building, operating and refurbishing and dismantling nuclear power plants

provides good jobs and strengthens our economy.

Expanding capacity at Darlington, by adding new reactors, will pump much needed money into our economy. But at what cost?

“Sustainability” is commonly defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

With this in mind, when considering the costs and benefits of nuclear power, it’s essential to fully account for all aspects of proposed nuclear power plant development using the lifecycle cost approach.

The lifecycle cost is the sum of all costs and revenues over the lifespan from cradle to grave, as we previously heard.

It must include construction and commissioning costs, operating and fuel costs, as well as all revenues generated. It must also include maintenance, refurbishments, upgrades and decommissioning costs, as well as remaining value at the end of its useful life, or, in the case of a nuclear power plant, the present value of managing all the spent fuel and other radioactive waste, until such time as it is no longer dangerous.

Decommissioning of a nuclear power plant often takes 25 years or longer and can cost hundreds of millions of dollars or more.

Management of nuclear waste over the course of their entire lifetime is expensive. These costs should be fully paid by consumers at the time of consumption and not passed on to others at a later date.

When proponents of nuclear power speak of the cost of that power, they usually leave out the cost of decommissioning and the cost of storing and managing nuclear waste and spent fuel, which means we end up passing an unfair burden onto our children and their families.

We often hear that nuclear energy is clean, cheap and safe. Perhaps we should explore that a bit. Is nuclear energy really cheap? The nuclear industry has an abysmal record of cost overruns. There's a very long list of nuclear construction and refurbishment projects that went away over budget and finished away, away beyond the original completion date.

Consider the 1,600 megawatt nuclear power plant now being built in Finland. According to a recent New York Times article, and

other sources, the power plant was supposed to be safer as well as faster and cheaper to build.

However, after thousands of defects and deficiencies were discovered and corrected, the price is now roughly double the original construction cost estimate. The promise of cheaper and faster has not materialized. The project is lengthened by three years and costs have skyrocketed billions of dollars over budget.

Or perhaps consider a more local example, AECL's refurbishment of the nuclear reactor at Point Lepreau. According to a recent CBC story, it's now three years behind schedule and $1 billion over budget.

It's my understanding that in Ontario there has never, not once, been a nuclear construction project that has not gone over budget, ever.

A recent article on the Globe and Mail web site declared:

> "Nuclear is increasingly seen as uncompetitive with natural gas fired plants, as gas prices fall and global construction prices soar."

In 2009, MIT doubled its forecasted construction costs of nuclear plants.

A report by Ernst & Young in September 2010 informs us that a nuclear power reactor typically costs four times as much as a similar capacity power plant fired by natural gas.

Nuclear power, we're told that it's clean, it's safe, but it may not be so cheap.

Is nuclear power really clean? I recently attended a Town Hall meeting where my MPP, Glen Murray of Toronto-Centre, stated that nuclear power plants have zero emissions. It was pointed out to him that this is a common myth.

Last year, Advertising Standards Canada, who regulate Canada's advertising industry, stated that ads claiming nuclear power to be emission-free are inaccurate, unsupported and misleading.

Their decision, in part, states, and I quote:

> "Numerous different contaminants are emitted into the atmosphere at the four CANDU generating sites in Ontario."

It is my understanding that CANDU reactors emit many different contaminants, such as various types of acids, ammonia, benzene, carbon dioxide, carbon monoxide, nitrogen oxides, morpholine, hydrazine, sulphur dioxide, suspended particulate matter, hydrocarbons, tritium and more.

Then there's nuclear waste. The industry tries not to admit it, but after more than 60 years of generating nuclear power the fact is we still don't really know what to do with our nuclear waste, other than to encase it and bury it somewhere; passing the problem, the cost and the risk onto future generations who didn't receive any benefit from it whatsoever.

Are we acting in a sustainable manner when we pass tonnes and tonnes of hazardous nuclear waste to future generations and let them deal with it?

We must also consider the hundreds or thousands of years that nuclear waste remains hazardous. In Japan, among other radioactive materials, caesium has been released into the atmosphere. It's apparently dangerous to humans for 300 to 600 years.

We hide our nuclear waste in a

hole somewhere and we'll let our kids and grandkids deal with it, let them bear the cost of cleaning up our mess.

My MPP seems to think this is perfectly okay because it creates jobs for them. Using that rationale, maybe we should make a bigger mess so that they can have more jobs.

Nuclear power, it's not clean, it's not so cheap, but maybe it's safe. Need I say more than six words, Chernobyl, Three Mile Island, Japan? But we're told over and over that that could never happen here, and it likely won't, but something different or something similar could happen. It's only a matter of time.

Then there's insurance. Canada's *Nuclear Liability Act* requires nuclear power plant operators to provide a maximum of $75 million liability insurance. They're responsible to pay damage in excess of $75 million for us with you and I, the taxpayer. Considering that I'm required to have $1 million liability insurance on my car, that seems absurd to me.

How much did it cost to clean up Chernobyl? Twenty-five (25) years after the disaster the mess is still being cleaned up and the

costs still pile up.

How much will it cost to clean up the mess from the nuclear power plants in Japan? A maximum liability of $75 million just seems utterly ridiculous.

I'd like to quote Linda Keen, the former head of the Canadian Nuclear Safety Commission, who said:

> "The industry is often inadequately prepared."

She went on to say:

> "In my experience, I found the nuclear engineers extremely optimistic. They're optimistic about everything; how fast they're going to do things, the cost, the idea of whether or not you're going to have an accident or not."

The nuclear industry has had so many cost overruns and missed completion dates, how can we possibly take seriously any commitments that they make?

This week it was announced that

Japan’s food and water supplies have been contaminated with radioactive materials, including Tokyo’s tap water.

Today, on the way here they announced that radioactive materials have been detected now in Newfoundland and it’s directly traceable back to Japan, and the seawater outside of the plants in Japan now has 1,200 times the legal limit of nuclear material in it.

Nuclear power; it’s not clean, it’s not safe, it’s not cheap.

In conclusion, if we don’t fully include decommissioning costs and the entire cost of managing spent fuel and radioactive wastes until they are no longer dangerous, if we don’t set aside money for these costs today, we’re unfairly burdening our children and their families. If we do not account for these dollars today we’re not acting in a sustainable manner.

When compared with safer alternatives, it seems abundantly clear that there are better choices we can make today to meet our energy needs.

I thank you for your attention.

CHAIRPERSON GRAHAM: Thank you

very much, Mr. Faltenhine.

I have on my notes here that -- and the lady wasn't there when you started, but supported by Liliana Manoliche ---

MS. MANOLACHE: Manolache.

CHAIRPERSON GRAHAM: Manolache.

MS. MANOLACHE: Yes.

CHAIRPERSON GRAHAM: And she will be presenting after but I didn't introduce you so I introduce you now.

So now we'll go to questions.

Madam Beaudet, do you have any questions for Mr. Faltenhine?

--- QUESTIONS BY THE PANEL:

MEMBER BEAUDET: Actually, I don't have a question for the presenter but I would have a question for OPG, if I may.

CHAIRPERSON GRAHAM: Go ahead.

MEMBER BEAUDET: The underlying of -- the spirit of your presentation is cost, and we've had many submissions that do talk about cost and especially overruns, possibly because -- I didn't know that, but on your electricity bill you get every month you do have a reminder there of the cost that you still have to pay, so that's possibly

why we -- I don't have the statistics but I don't think I'm very far by saying at least 100 submissions out of 300 do remind us about the overruns of cost.

And I'd like -- maybe OPG can enlighten us and explain why there is such a situation?

I worked in the industry for several years and I know that it's in recent 20 years maybe there is overrun in costs, and not just in nuclear but other projects, whether it's an underground construction or hospital.

I think part of the responsibility goes with the bidders, they always underbid, but there could be other reasons and I'd like you to comment on overruns in the nuclear industry, please?

MR. SWEETNAM: Albert Sweetnam, for the record.

Thank you for the question. It's a big load to be responding for the industry as a whole but I will try.

I'd also like to correct the inaccuracy in one of the statements that was made, which was that OPG has never delivered a nuclear

project on time or on budget.

We recently placed two units at Pickering into safe storage, on time and on budget. We returned Unit 1 to service on time and on budget, and we do our outages on time and on budget.

In terms of the industry as a whole, I can comment briefly on what's happening across the world.

The EPR construction problems were caused by a variety of delays and cost overruns, and the main reason for that is that they were dealing with first-of-a-kind builds, first-of-a-kind technology.

In addition to that, they had specific delays associated with the concrete foundation and difficulties with the main pressure vessel, and these were basically related back to the fact that they did not have a proper supply chain because no nuclear plants had been built recently and, as a result, the supply chain was not properly established.

These issues are now resolved.

In addition to that, there were a series of regulatory issues that caused delay in

the finish situation that because the finish regulator had required design changes after construction had begun. This created more delays in time and additional costs associated with redoing work.

This situation will not occur here in Canada because it's a clear requirement of the construction licence that the design be done and any portion of the work before that work is commenced.

I think the industry as a whole has learned from the past. The old adage that all nuclear projects are overrun relate back when there was a huge build-out in the '70s. At that point in time, we did not have the technology that we have now. We have very sophisticated project management tools at our disposal that we can access and utilize.

We have very sophisticated ways of tracking and controlling both cost and productivity.

The other comment that could be made by the anti-groups would be that, what about what's happening under refurbishment projects at both Bruce and refurb?

What we need to do is step back a little bit and think about what is a refurbishment project.

A refurbishment project is a refurbishment of reactors that have been operating almost continuously for 20-plus years in an environment that's highly radioactive. So as a result you do not have the ability to clearly understand the condition of all of the equipment that you have to refurbish.

So when you actually start a refurbishment project, unless you've done a detailed assessment of the condition of the plant you will encounter very many surprises.

In addition to that, it's the first time that CANDU reactors were being refurbished, so they had to develop the tooling. The tooling was new. There were some areas associated with that tooling and how they approached the job.

However, the industry has now learned from this situation and future refurbishments will be conducted quite differently and will have a different result.

The industry -- and I think this

has been said previously, the industry is in a continuous learning and we share our learnings across the whole nuclear industry, across the world, so everybody can benefit from it.

So OPG in its refurbishments will benefit from the lessons learned in Korea and Lepreau and Bruce.

And in terms of the new builds we are looking very closely at the lessons learned out of the situation in Finland and France.

MEMBER BEAUDET: Thank you.

Yesterday when I did ask CNSC about meeting the regulations because Westinghouse, for instance, they are aware that they have to meet but we don’t have the proof that they -- necessarily, that they would meet the 500 metre -- in the contract that you do because what I feel -- I’ll put it in very plain words is, in the nuclear industry because it has to be safe you need a car, that is automatic and air-condition and you can’t end up with the price that the government -- the choice of under the government will take of course always has to be at the lowest price but you can’t afford to end up with the car with a stick, and you have to roll down the windows.

And for me I'd like to understand if part of the overruns lay there, that because they have to meet certain regulations which they don't upfront, you know, you end up -- especially with a technology that is new, you would end up with overruns in such a case. Am I correct in thinking that?

MR. SWEETNAM: Albert Sweetnam, for the record.

It's not necessary that you will end up with overruns. A properly planned project that is designed before you actually start construction should not end up in a cost overrun.

However, in situations where, like we've experienced in 2008-2009, where the economy actually takes off one year and you have the price of steel increasing by 80 percent, the price of shipping increasing by more than 100 percent et cetera, et cetera, these things can actually drive up the cost of a project.

The other thing that drives up the cost of a project that spans over many, many years, when you have to mobilize a large workforce is delays. And this is what actually happened. One of the biggest cost overruns on the Darlington

plant was a result of the stop and start of the project due to political decisions that were made at that time.

When you delay a project of this sort you have a huge amount of additional interest that's attributable to the project, in addition to the cost of carrying those people and demobilizing and remobilizing.

So if you have a project that is fully committed to by the government that's in power at that point in time, and you have continuity from one government to the next, if the government changes, you should have very little chance of cost overrun.

MEMBER BEAUDET: Thank you very much.

CHAIRPERSON GRAHAM: Thank you very much, Madam Beaudet.

Mr. Pereira?

MEMBER PEREIRA: Thank you, Mr. Chairman.

I'd like to turn to the question about funding of decommissioning and funding for the management of nuclear waste.

This should be a concern with

questions of sustainability. I'd like to turn that question to the CNSC and ask as to how this is covered on the regulation that the CNSC administers.

MR. HOWDEN: Thank you. Barclay Howden speaking.

There's actually two pieces of legislation for the disposal of -- ultimate disposal of spent fuel. There's the *Nuclear Fuel Waste Act* which created the Nuclear Waste Management Organization.

But there is a funding requirement, that the funding be funded by the generation that's getting the benefit from it, i.e. the money has to be put aside now, whereas the fuel issues because that was one of the fundamental philosophies that you don't push it off to future generations who don't get the benefit, so that's for spent fuel.

For decommissioning of facilities the *Nuclear Safety and Control Act* allows the Commission to require financial guarantees for various things and the Commission has required financial guarantees for decommissioning of the facilities. And with those financial guarantees

its to ensure that if at a later date funding was not available from the company there's a pool of money that is available.

In the case of OPG they have a financial guarantee that is set aside in the form of cash and that is being managed.

OPG probably has more of the details. But it's intended to be able to fund the entire decommissioning of the fleet, again, being funded now as opposed to via future generation.

MEMBER PEREIRA: One of the concerns is that the projection now of what the cost will be may not be adequate down the road and how does the -- how is that risk managed?

MR. HOWDEN: In the case of OPG the funding is backed by the Province of Ontario.

They back that there's any difference between the projected costs and the actual amounts of the funding and that's revisited on a five-year basis.

The most recent was that the fund was either fully funded or very close to being fully funded by the OPG fund, meaning that the liability on the province was smaller, however, the -- it has to be revisited on a regular basis.

We do require that the preliminary decommissioning plans be updated on a five-year cycle or whenever there is a change being made at the facilities.

And the reason for that is such that the decommissioning fund, the costs can be revisited to ensure that the fund keeps up with the actual projected costs and the funds are -- there is contingencies built in and there's -- our decommissioning people will actually be here on Tuesday, on waste day, and they'll be able to describe the contingencies that are required within the financial guarantees.

MEMBER PEREIRA: Now, does the same apply to the fund put aside for management of industrial waste that is revisited and updated from time-to-time, the provision?

MR. HOWDEN: Barclay Howden.

Yes, it is. I don't have the periodic basis but it is done on a periodic basis.

MEMBER PEREIRA: And you say that on Tuesday we'll perhaps be provided with an update on that?

MR. HOWDEN: The staff who are intimately familiar with that will be here on

Tuesday.

MEMBER PEREIRA: I think with your permission, Mr. Chair, I'd like to turn to Ontario Power Generation for their comment on the issue.

MR. SWEETNAM: Albert Sweetnam.

Thank you for the question.

Just to add to what the CNSC just said, we have two funds; the decommission and segregated fund and the used fuel segregated fund.

These funds are managed not by OPG by managed in conjunction with -- between OPG and the Province of Ontario. It's a joint management of the funds.

These funds are addressed on a five-year basis. We're actually in the process of addressing those funds right now. We have to submit to the Ministry of Finance our new estimates.

These estimates of the decommissioning costs and the cost for the APM which is the vehicle that will be utilized for used fuel, are actually done by a third-party consultant, not by ourselves. It's done by a third-party consultant.

We confirm it with the third-party

consultant. Then, in turn, it's re-confirmed by the Ministry of Finance. When we are all agreed, it's submitted to the CNSC, as well, as part of the overall exercise.

So this is done every five years so that we have an updated estimate of what the decommissioning costs are and what the cost to store the used fuel is.

We make sure that -- and every time we update, if the price is increased there's a requirement for us to then adjust how much we take out of our earnings every year in order to fund these two funds, so that we are always current in terms of the liability associated with both decommissioning and taking care of used fuel.

MEMBER PEREIRA: I'd like clarification on one word that you used when you first started talking. You used the term "segregated funds". What does that mean?

MR. SWEETNAM: A segregated fund is one that's utilized only for a single purpose and it cannot be utilized for any other purpose other than the purpose it was established for.

So that the decommissioning fund can only be used for decommissioning activities and

the used fuel fund can only be used for used fuel activities.

MEMBER PEREIRA: That segregation then is to prevent Ontario Power Generation using it or does it also prevent the province from using it for any other purpose?

MR. SWEETNAM: Albert Sweetnam, for the record.

It prevents both Ontario Power Generation and the province from using it for anything else.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Pereira.

Now, our orders calls on OPG if you have any questions to Mr. Faltenhine?

MR. SWEETNAM: Albert Sweetnam, for the record.

No questions at this time.

CHAIRPERSON GRAHAM: CNSC, do you have any questions for Mr. Faltenhine?

MR. HOWDEN: No, sir.

CHAIRPERSON GRAHAM: Government departments? I see none and there were none earlier.

We have a few minutes to consider

questions from intervenors, and I understand I have one question from one intervenor.

Mr. Kalevar.

--- QUESTIONS BY THE INTERVENORS:

MR. KALEVAR: It seems like I am the only intervenor here today more or less, but anyway.

I think my question to you -- I didn't get your name, sir -- is ---

CHAIRPERSON GRAHAM: Mr. Chair.

MR. KALEVAR: Yes, to Mr. Chair, to him, is you mention about that we have get insurance for even our cars and pay for it ourselves while the nuclear industry sails through without insurance and with the blessings of the government.

If you have given it some thought and consideration, would $75 million be enough to cover the car insurance of all Ontarians?

CHAIRPERSON GRAHAM: That's an observation. The question is to you, sir, is $75 million enough to cover all the car insurance in Ontario.

Can you answer that?

MR. FALTENHINE: I have no idea.

CHAIRPERSON GRAHAM: The answer is he has no idea.

MR. KALEVAR: He can ---

CHAIRPERSON GRAHAM: Do you have another question, Mr. Kalevar?

MR. KALEVAR: He can take it as an undertaking to report later.

Thank you.

CHAIRPERSON GRAHAM: No, I'm not going to accept it as an undertaking because I think, in the fairness to the presenter I don't think he has the capacity to find out that and it would go to considerable cost.

So we accept his presentation as he presented like we accept ---

MR. KALEVAR: Okay. Thank you very much.

CHAIRPERSON GRAHAM: --- all interventions, and in fairness to the intervenor I don't think we should ask him to find out something like that.

So with that, we will ---

MR. FALTENHINE: Mr. Chair, actually I have a couple of questions if I may, to OPG?

CHAIRPERSON GRAHAM: Okay, go ahead.

MR. FALTENHINE: There was some clarification. Apparently some of the projects have been completed on time and on budget.

I'd like to ask, as a percentage, what percentage of the nuclear power projects in Ontario have been completed on time, on budget?

CHAIRPERSON GRAHAM: Mr. Sweetnam?

MR. SWEETNAM: Albert Sweetnam, for the record.

I cannot speak for all the projects in Ontario, so I don't have an answer for that, Mr. Chair.

CHAIRPERSON GRAHAM: Do you want an undertaking or will you accept that answer?

MR. FALTENHINE: I'll accept that answer.

CHAIRPERSON GRAHAM: Thank you.

MR. FALTENHINE: Just one other thing.

My understanding is that the average project ends up being about 2.5 times the original cost estimate.

If that's factual, then perhaps we

should double the current cost estimates or maybe even triple them to arrive at what will likely be the ultimate cost of this expansion?

CHAIRPERSON GRAHAM: Is that a suggestion or a question?

MR. FALTENHINE: That would be a suggestion.

CHAIRPERSON GRAHAM: Thank you very much.

Okay, with that, I want to thank you very much. You can remain there in support of the next intervenor because of the fact that she supported you.

I will refer now to PMD 11-P1.228 and Liliana Manolache.

MS. MANOLACHE: Manolache.

CHAIRPERSON GRAHAM: Manolache, pardon me, Manolache -- is the presenter and she is making what is known in our rules of procedure as an oral statement -- an oral presentation.

And with that, after that, we will only allow questions from Mr. Pereira and Madame Beaudet.

Madame Manolache, go ahead, please.

--- PRESENTATION BY MS. MANOLACHE:

MS. MANOLACHE: Okay.

Good afternoon, my name is Liliana Manolache. I was born in Romania in east Europe. I have been living in Canada since 1993.

I came here as a member of the public, not any professional organization, just because I have something personal to share with you.

I have not spoken to an audience under such amount of light in my life, so if I am nervous or screaming, please be understanding.

CHAIRPERSON GRAHAM: Just take your time, we have all day, and we accept exactly the way you present. We want this to be as an informal a process as possible, so take your time, please.

MS. MANOLACHE: Very well.

We have heard everything about clean air costs for little gains, arguments, debates, statistics. These are all important and started to be quite well-known as more and more of the public becomes aware and interested in all this, especially when it comes to cost increases. I believe my predecessor touched on this so I won't

go near.

I came here today to make a personal and private issue public, like I said. It's part of the dark and bigger story that started with the Chernobyl disaster.

And why? Well, first because someone was impressed by my tale and pushed me really hard to get me to do this.

Secondly, because it's really important that everyone hear it and makes an educated and obvious choice.

We find ourselves again confronted with a big decision and in light of the latest events I believe the answer is quite simple.

We cannot control and manipulate nature and we cannot gamble with it and hope for the best. It's a losing bet.

As someone who lived in a communist regime in the times of the worst nuclear disaster or incident after the drop of the two atomic bombs and who got away and alive to tell about it, I will try and carry you, my audience, through the nightmare that sent most of us to North America.

I might be off a bit, but I would

say that two out of three east European immigrants who moved here since the late ’80s ran away from fear and pain.

It was a massive cover-up and, of course, we knew, but what we didn’t know at the time, we watched unfolding in the following decade whether we wanted or not.

As my friend used to say, it’s easy to live in denial of something that cannot be seen until it’s too late.

Allow me to elaborate on that.

We did not pay much attention or we did not have enough school curriculum -- a lot about radioactivity and the way humans are affected by it. But soon as the radioactive cloud came upon us back then the bad news started to spread, don’t drink tap water, don’t consume fresh milk, don’t eat any root vegetable, don’t eat meat as the cow grazed on contaminated pastures.

The public health office in my hometown and the environmental health lab were assaulted by people bringing in food samples to be tested. They had to work 24/7 in 3 shifts, could not even go home. Somebody collapsed and was air-lifted to hospital with mouth and nose haemorrhage.

Poultry that fed last year's grains was good, but not to be found in the market. Rice was rationalized and sold out overnight as well as any pasta and can food from before the accident. Sorry.

I was four and a half months pregnant and right then in the last days of April -- the accident was on the 26th, started to feel sick and noxious. Luckily I was so sick all I could eat was potatoes and they were from the previous year, fall crops, not affected by the radioactive rain. Milk from the few farms that fed dry hay to the cows was almost impossible to find and made me throw up anyways. I thought I had some stomach issues and went on a very poor diet that might have saved my life and my unborn child's life as well. Sorry.

The most important part of the fetus' development is between three and five months, is when the brain is built as well as the vital systems. It's when the grounds for future happiness or misery and the chance for a normal or a sad life are laid. For the last four months I lived in fear of congenital malformation or God knows what other issues waiting for the most

appropriate time to reveal themselves.

My daughter made it. Partly she seemed like a perfectly normal child, but at two she started having seizures for absolutely no reason. I took her to the emergency. She was subjected to tests that are painful and invasive so much so that she had to put -- they -- she had to be put to sleep because she wouldn't let go of my hand, crying, no more, mommy. Please make it stop. I had to really think hard that the other kids may not have been so lucky to have treatment and professional care. And eventually we were discharged with no answers, but with a clean bill of health.

When we came here she was alienated and had every possible form of eating disorder and every now and then she attempted to kill herself. That lasted for about ten years. I heard about approximately 116,000 people had to leave their homes and lives behind and evacuate the area. At 20 she had her first and hopefully last surgery to remove cancerous cells found in her uterus. So far we have no signs of any relapse and thank God. I remember the Chernobyl kids, they never reached puberty.

When she was very young, she developed a weird cyst on her head that was removed here in Canada after having grown to a (unintelligible) size. No one could really explain how and why, but I knew it, at least I think. By comparison she's lucky so far.

One of my best friends lives in Vancouver now. Her sister moved to Tuscany, Italy, as soon as the Communist Party lost its lost crowns. The one in Tuscany had a farm and organized a summer camp for the so-called Chernobyl kids of Russian families immigrated to Italy, as form of giving back for she was lucky to get away. Every summer fewer kids returned until five years later not a single one was alive. She (unintelligible) and went on with her life.

The one in Vancouver who was close to high school graduation in April, '86, remembered how the fences closed where the political people in power had their children go to, distributing potassium, iodine pills to help the thyroid gland handle the excess radioactivity because the thyroid cancer was the first and by far strongest consequence of radioactive cloud.

Soon after the Fukushima incident,

the whole North American West Coast panicked at the threat of a radioactive cloud travelling towards it. According to some news, it reached the coast 36 hours later. The government quickly denied any potential reason for harm and panic, but my friend ran to every pharmacy in town in Vancouver looking for potassium iodine and was told that the government ordered that product be withdrawn and preserved for real needs, sending communicants to people that indeed there was a false alarm and there was no reason or need for concern just yet. The Eastern European immigrants won't buy that, so they're still looking.

My parents live in a northeast county back in Romania and it was the most affected area in my country, due to geographical factors, the mountains, directions of the wind, et cetera. I remember how many times I begged them to move away from the place. My dad was in favour, my mom refused. And as today she is not able to comprehend that what happened to her is the direct consequence of this decision. My dad is my hero. He comes from a long life of healthy extremely long life gifted people. All of a sudden he was found with a failing kidney that was removed. Twelve

surgeries later, tumours kept coming back to his bladder. But he is a survivor, a live-in mate and caregiver to my mom who is now totally unable to care for anyone, not even herself. She was the most active, upbeat, educated, curious, energetic person I've seen in her generation. It is extremely heartbreaking to see her like that and be unable to help.

She has some strange issues with her brain that is Alzheimer or anything known. She's lost her most -- she's lost most of her long-term memory, some of her short-term memory and the ability of reading, writing or even finishing a regular sentence. But at times she becomes aware of it and thinks it's God wrath for something. Useless to get any (unintelligible) since there's no much you can do now.

My dad was offered all sorts of gratuities and a hundred percent medical care and coverage, but I'm sure he'd give anything now to have a normal life. According to the few that documented the effects over the years, around the 14th anniversary of the accident, the total casualties reached 90,000 give or take. A doctor from my home town where my parents still live

estimated, based on the unofficial statistics available just to the medical community, that the number of people affected in 2010 reached seven million with the forecast for the following couple of years of about twelve million.

On April 26, 2006, the 20 years anniversary day of the Chernobyl accident, a petition was run in six major cities in Romania to stop the proposed build of two more nuclear reactors at Cernavodă where two CANDU reactors were built by a Romanian/Canadian team in the early 90s. All right, young people watching their parents get sick and die are becoming more and more aware the -- as -- of late and almost never-ending effects of the disaster.

When there are other options, there is no excuse for us to blissfully ignore the risks and not do everything we can to stay away from such a serious killer. Nuclear power fills some pockets quick and kills very slowly and painfully if unleashed. I just don’t trust this world to handle anything nuclear.

Thank you.

CHAIRPERSON GRAHAM: Thank you very much. Thank you for the -- giving us a very

good presentation which I -- I believe took a lot of courage and we thank you very much for the effort that you put into it. And we now will have, I believe, only questions from the panel. Mr. Pereira?

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: Thank you, Mr. Chairman. I'd like to thank you for your presentation and my hope is that the world has learned from the experience with the Chernobyl reactor and with other reactor accidents and if nuclear power continues to be a source of generation that the lessons learned will be applied, but certainly leads one to reflect on what are the appropriate choices for generation of nuclear -- of energy from -- from nuclear reactors. Thank you.

MS. MANOLACHE: Thank you for having me. And the purpose of my story was not to bring the booboo factor. I know it's -- it's said and done, the think is, it's not the story of the past, it still goes on, and will continue to go on. And since numbers are so important, so far there is the rough estimation of 235 billion, of which 8 percent have been paid. Belarus, which is the

Soviet -- former Soviet Republic where this happened, roughly pays a million dollar a day with external help for recovery.

What I meant is to show that there are actions and we cannot be so cocky as to say, we're safe for half century. And I'm aware that many people would not be alive at the end of said half century, so why would they care? The thing is, if we are given eternal youth or eternal life, would you want to be alive if something happens 50 years from now, and watch it? What if a few years from now all -- all the jobs that are left are, you know, just disposing of nuclear waste, how would that look? It's a really glum future.

And we have options. I mean, we haven't exhausted them, as far as I know. Thank you.

CHAIRPERSON GRAHAM: Madame Beaudet?

MEMBER BEAUDET: Thank you for your presentation. I would like to ask you, do you live in -- in the region, and were you aware when you moved here that it was the nuclear build? Do you live around here?

MS. MANOLACHE: I live in Toronto

now, yes. And, no, I was not aware about a nuclear -- active nuclear plant in existence or any danger around.

I also have been unaware of a lot of truth that was unravelled many years after the communist regiment fell because we -- insane amounts of data was just covered and inaccessible, and we all know what.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Well, thank you very much, both of you, for coming today. Thank you for your support, Mr. Faltenhine, for -- with the presenter, with Liliana, being there with her to support her in her presentation. I wish you both a safe trip home. And thank you very much for coming.

MS. MANOLACHE: Thank you.

MR. FALTENHINE: Thank you.

CHAIRPERSON GRAHAM: The next part of the agenda for today is that we have two oral statements that have been registered with -- with the Secretariat. And the procedure is -- I believe, the first one is Mr. Ho, and we understand that Mr. Ho is -- has a sore leg and would like to have an oral statement from sitting down, which

we've arranged, and we're asking that the webcast camera is ready to give Mr. -- accommodate Mr. Ho in his presentation, so that he can do this at his ease.

I remind, you, sir, you have ten minutes for your -- for your statement.

MR. HO: Thank you -- thank you, Chair, thank you, Secretary, thank you for giving me a couple minutes to -- to say -- to give my two cents worth. Probably that's all it's worth at this moment.

I had a handout somebody hand out over the last couple of days, also after I hear what some of the intervenor had to say, I -- I've given out a few of my own opinion on the issue of nuclear power, and also specifically on the way the information and data are being transmitted and discussed from OPG, for example.

The general -- the general is -- the general feeling I have is that CANDU power is quite different from, like, Chernobyl. I believe the lady was talking about Chernobyl accident, right? Was I right? Yeah. So we -- we all know that in North America that the -- the reactor have a containment, so I suppose the Chernobyl event

would not replay in North America, I suppose.

Number 2, the Japanese design is like boiling water reactor, and we can't lower the steam coming from the core will go directly to the steam turbine. And then there's more radioactivity there. I think in the CANDU and the Peterborough they have a steam generator to keep the radioactive water, within a confined circulation.

Now, that's my understanding, and my understanding is that I think the world will still need energy and power, whether it's green power or non-green, and I believe possibly be until the wind technology and the solar technology mature in North America, perhaps we need to have some new nuclear power plant coming up at some point in time. May not be next year, maybe a few year down the road, but however, from what I can see from the recent events around the world, like in Japan, even Germany is holding their plan and China's review -- reviewing their plan to build, like, 27 reactors, and I suppose the reason is that part of it has to do with the way the nuclear plant run their business -- I can point out a couple of specific examples offhand, not too many, but a couple.

See, I think there's insufficient

specifics disclosed. Now, what -- what I mean by that is insufficient specific data disclosed to the general public. What do -- still what I mean by that, I don't know if I make myself clear. Any question about my statement on that? No?

CHAIRPERSON GRAHAM: Proceed.

MR. HO: Okay. Thank you. So I understand that what my statement is that there's insufficient, not enough specific information of design data that the public can read about and digest through it, and part of it is possibly the culture in the corporation. I have the feeling that a big corporation who have a lot of talent and a lot of professional, feel entitled to hold on to their design data enough and ignore the public's common-man wisdom about things that might not happen every day, it might not happen every year, but once it happen it can cause a lot of serious consequences in a negative way. To the society for their residents, you know, as we all know that by now, right?

So I think, for example, I look at the -- one of the PDM from day 1, a couple of days ago, if you can refer to PDM-11 P1.1(b). I don't know -- I guess most of -- most of us don't have

that one by now, and page 17. I'm reading it from the handout there. "The project is defined by a flexible bounding framework." And then in bullets, "It incorporates a plan parameter envelope." PPN, right, PPE.

Now, offhand, I would think, why is the boundary of the design basis would be flexible?

Am I making myself clear at this point, or does it make sense at all?

Yeah, it makes sense, right?

So why is the boundary -- boundary -- boundary by boundary, we mean that the outermost limit the system, the power plant, can tolerate.

Why is the boundary flexible?

It doesn't give me a really good feeling. Why they -- are they just playing a work game right now to make everybody happy?

Okay. Can somebody explain that to me right now?

CHAIRPERSON GRAHAM: You have a couple of minutes left. If you'd finish your presentation, I will -- the way this works -- both my colleagues will speak, and then that will be it. That's how oral presentations -- oral statements

work, sir.

And you still have four minutes left.

MR. HO: Okay. Thank you, Chairman.

Yeah. I don't want to sound a little bit harsh on that. Maybe my understanding need a little bit more feedback to -- to digest through some of the wording here.

And then also, to make it quick, the other aspect is that some of the presenters mentioned something like safety goal-based analysis.

So to follow up on that for my own understanding and for possibly some of the stakeholder, who may have some interest in that kind of subject, what would be the overall achievable plant safety goal in terms of, like, ten to the minus something, okay, as a chance, a probability of a disaster happening?

So there are -- let my rephrase my oral statement.

Number one is that I think nuclear power is most likely needed in the near future, but the cultural -- the safety culture has to be

improved to disclose the specifics to the public, for them to brainstorm it.

For example, what is the design when -- can I have a list of that?

It shouldn’t be just confined to the elite who think they know everything, and the public is ignorant enough to -- not to bother to tell them because we are talking about something that has a public impact.

So I -- I appreciate if I can find a list of the design-basis event.

Number two is that what is the safety goal that you think is achievable for the overall plan in term of ten to the minus something?

One disaster for maybe 100,000 reactor year of operation, do we have a figure on that subject?

This is possibly a -- well, before I end it, I really appreciate the chance to listen to this open process.

I like the openness, but I don’t think there’s enough specific yet.

Thank you.

CHAIRPERSON GRAHAM: Thank you very much for your oral statement.

And adhering to the time, I will go to Mr. Pereira first.

And I just want to remind the presenter that we're only into the sixth day of a 20-day session and hopefully a lot more information will come out.

But, Mr. Pereira, would you like to start that?

MEMBER PEREIRA: Thank you, Mr. Chairman.

Some good questions from the intervenor.

I'll turn to Ontario Power Generation and request that they explain a couple of points.

One is, what does design-basis risk as an approach mean?

And, secondly, can you speak about safety goal based accident analysis?

And I can -- after you've responded, I can go to the CNSC if you wish me to -- wish them to elaborate.

MR. SWEETNAM: Albert Sweetnam for the record.

I'll request Don Williams to

respond to this.

MR. WILLIAMS: Don Williams for the record. I'm the senior manager of engineering and the design authority for the Darlington new build project.

The one question was around design-basis risk.

That specifically -- excuse me one moment.

So the design-basis risk, the -- within -- as the environmental impact statement and the assessment of this put together, there are a number of different technical support documents, TSDs, that pull that together.

They actually have malfunctions, TSD, which is put on the public record, that outlines a number of the design-basis risks.

And a number of the questions that have been asked, that particular document does provide that information. That would be available.

CHAIRPERSON GRAHAM: Mr. Pereira?

MEMBER PEREIRA: Thank you. Can you speak about the safety-goal-based analysis -- risk -- accident analysis?

MR. WILLIAMS: Don Williams again

for the record.

Again, that information is laid out in the regulatory document RD337.

And in that document, there are the small and large release frequency bases as well as the core damage frequency, and all of the requirements of RD337 are part of the -- the requirements that would need to be met for the -- for the new build plan.

They are part of the terms and conditions of the -- the vendor of the new nuclear plant would be required to meet.

MEMBER PEREIRA: Thank you.

Perhaps I'll go to the CNSC and --

MR. HO: Can I reflect on that a minute?

Just what this gentleman has to say, I have -- I look through the RD-337 last night and RD-310 also. I don't see an overall plan design safety goal.

It's just that you're talking about EB ten to the minus five to ten to the minus two and then beyond EB is ten to the minus five.

But that doesn't mean that's the overall plan -- safety goal, right, because --

CHAIRPERSON GRAHAM: Mr. Ho --

MR. HO: Yeah.

CHAIRPERSON GRAHAM: Maybe CNSC staff, in response to Mr. Pereira's question, could clarify that a little better for you, sir.

MEMBER PEREIRA: Can I just add to that?

Mr. Howden, in your response, could you also address the uncertainty about the plant perimeter envelop and why that approach is reasonable?

MR. HO: That's also one of my questions, yeah.

MEMBER PEREIRA: So plant perimeter envelop, safety goal-based accident analysis, and design-basis risk, and I think I've captured your questions.

MR. HO: That -- to make my clear -- I want to find out is there a point in time in your design process -- before you get the license to construct, you have a firm and non-practical boundary --

CHAIRPERSON GRAHAM: Mr. Ho, I don't want to get argumentative, but the way the procedure works is ten minutes for a statement.

You made your statement. We're trying to get some answers for you, but we can't have questions going back and forth because this could go on for hours.

And what we'll try and do is get your answers for you, and I think if you could have a little patience, we'll do it that because there is another oral statement -- another person wants to be involved, so I just ask you to wait and to see what CNSC has to respond to Mr. Pereira.

MR. HOWDEN: Thank you. Barclay Howden speaking.

In terms of the plant perimeter envelop, with no technology chosen by the Province of Ontario, OPG proposed the bounding approach, plant perimeter envelop, which has been accepted, because it's supposed to bounding for all of the reactors. So any reactor that would be chosen would be within that.

In terms of the safety goals and the safety goals -- safety-goal-base releases, I'll just give it an overview, but one thing that we had actually committed to the panel was a technical background that could be provided to the panel, which then could be made available on the CEA website for everybody to look at. That will be

ready on Monday morning.

But in terms of frequencies of events, Mr. Ho quoted the RD337 exactly correctly from a frequency standpoint.

In terms of the dose acceptance criteria for the anticipated operational occurrences, which are the ones that are equal to or greater than one in 100 years, the dose acceptance criteria is 0.5 milliSieverts to a member of the public.

For the design basis accident, which is equal to or greater than one in 100,000 years but less than one in 100 reactor years, is 20 milliSieverts for any design basis accident.

For the beyond design basis accidents, which includes severe accidents, it’s broken down into what we call three quantitative safety goals. One is the core damage frequency that Mr. Ho spoke of, which has to be less than one in 100,000 reactor years.

Then there’s the small release frequency, which is the sum of frequencies for all event sequences that could release to the environment of more than 10 to the 15 Becquerels of iodine131, should be less than one in 100,000

reactor years. A greater release -- this is important -- may require temporary evacuation of the local population.

The last one is the large release frequency, which is the sum of all the frequencies that could lead to releases to the environment of more than 10 to the 14 Becquerels of caesium137, should be less than one in one million reactor years, and a greater release may require long-term relocation of a portion of the population.

OPG, in their information that they submitted, that we reviewed and accepted, showed how these releases work in terms of how it might impact off site.

So what we have done, and it will be ready on Monday, is we are describing how accidents and malfunctions are considered; what is the criteria to judge the consequences of the accidents; how OPG satisfied the dose acceptance criteria; how did OPG satisfy the safety goals; why an emergency plan is needed; what is the safety goal base releases and why are they used and how are the safety goal base releases calculation performed, because I think that’s important, and then what is the next steps as you go towards

licence to construct.

Dr. Newland will be back on Monday and he is preparing this document and we'll be submitting it for the panel to be made public.

MEMBER PEREIRA: So that will respond to many of the aspects of the question in a documented form? That will be submitted to the panel so it will be on the CEAA website?

MR. HOWDEN: That is correct.

The reason we did this was a lot of the information people are seeking are in bits and pieces and if you read everything you can find those bits and pieces, but this was to put it all together to describe the story a little better and make it much more understandable. The document will only be four pages long so it should be pretty digestible.

CHAIRPERSON GRAHAM: Pardon me, Mr. Pereira.

My understanding is, is that a new undertaking or is that one that had been committed to earlier?

MR. HOWDEN: That was a -- Barclay Howden speaking.

That was something that we had

offered up before but hadn't been formally accepted as an undertaking, but we're very happy to give it as an official undertaking.

CHAIRPERSON GRAHAM: I would suggest we give it a number and an undertaking and then we'll go from there.

That will be undertaking 32.

CHAIRPERSON GRAHAM: Mr. Ho, you'll be able to have that information on Monday, later Tuesday.

Mr. Pereira?

MEMBER PEREIRA: Just on point of clarification, Mr. Howden.

One of the aspects of Mr. Ho's questioning was at what point will the reactor technology chosen by OPG be reviewed to confirm that it fits in with all of these criteria that are presented at present in the EIS?

MR. HOWDEN: The confirmation would occur at the time of the application for licence to construct because that is the time when the detailed design is being prepared and the preliminary safety analysis report is being put together, and at that time OPG will be required to demonstrate that their chosen technology fits

within the PPE.

MEMBER PEREIRA: Thank you.

And will that decision point be part of a public hearing process?

MR. HOWDEN: That is correct. The Commission normally has what is called a two-day public hearing process where there's an opportunity for the public to participate and give their views.

As I had said earlier in the week, the CNSC has recently launched a participant funding program which allows participants to seek funding to support any interventions they may wish to make to the Commission.

MEMBER PEREIRA: Thank you, Mr. Howden.

CHAIRPERSON GRAHAM: Thank you, Mr. Pereira and Mr. Howden.

Madam Beaudet?

MEMBER BEAUDET: Just a brief point that I'd like to ask OPG, if I may.

The gentleman was mentioning -- was passing a comment on transparency. And I think we can find a lot of the data in the TSD on communication, but what I would like to know is when there's an incident or an accident I know OPG

puts out a press release, but who's responsibility is it? You inform the municipality or ministry at the provincial level? What's the procedure exactly?

MS. SWAMI: Laurie Swami, for the record.

There's several different procedures or protocols that we would follow, depending on the type of event that it is, but generally what we do when there's an incident at the station we would notify the local municipality.

So, for instance, if there was a response -- an ambulance response to our site -- if that happened we would contact the municipality to let them know that that had taken place.

We do that so that we have an informed community. Should they get questions about our operations, they will be able to respond.

So those are fairly low-level incidents, if you will, from the perspective, they may respond but there may not be anybody that's actually in need of ambulance services or something of that nature. It's just really to keep them informed.

I think -- you know, on my way

home, I don’t know if it was last night or the night before, there was an announcement that we would be having steam releases at our Pickering facility over the weekend as we were starting up one of our units, and that’s the type of thing that we announce to the public so that they are very aware of what happens in our operations, so that we’re as open as we can be and there’s no need for people to think that something significant is happening.

So those are sort of low-level types of events that we would notify our community partners, and whether we issue a media release or not depends on what it is. We post all of those media releases on our website. We give them out to, obviously, media spokespeople should they get calls, those kinds of things.

In the event that something more significant happens that we would need to make notifications, we have a formal notification program that would go to the regulatory agencies that need to be informed so that they can take action. Then it becomes part of the process of who’s responsible for notifying the external bodies.

As we've had a lot of discussion on emergency response over the last number of days, OPG's responsibility is to make sure that the emergency response organizations are notified and they're responsible for ensuring that public communication of those events take place through their mechanisms.

So it's a wide variety of notifications and communications that our plant provides or our operations provides to the communities around us.

MEMBER BEAUDET: Thank you.

CHAIRPERSON GRAHAM: Thank you very much, Madam Beaudet.

The last statement or last bit on the agenda tonight is an oral statement and that will be given by Mr. Graham Cohen.

Mr. Cohen, would you take the mike please for your oral statement.

--- PRESENTATION BY MR. COHEN:

MR. COHEN: Hello.

I have no professional qualifications. I'm a lay man. I have had a long interest in getting nuclear power plants to produce something other than electricity. I believe they

could produce motor fuel and that this could be advantageous.

I favour the building of new nuclear power plants at Darlington. I believe that they benefit from inexhaustible fuel that currently is very cheap, have no pollution, no waste worries and no global warming in particular.

I believe I'm done.

CHAIRPERSON GRAHAM: Thank you very much. We appreciate lay people or ordinary people, that you say you classify yourself, to come forward and give us a presentation.

I'll open the floor now to Madam Beaudet.

MEMBER BEAUDET: I have no question, Mr. Chairman.

CHAIRPERSON GRAHAM: Mr. Pereira?

--- QUESTIONS BY THE PANEL:

MEMBER PEREIRA: I have no questions.

Thank you very much for your presentation.

CHAIRPERSON GRAHAM: Thank you very much, Mr. Cohan, for coming today and taking part in our process that we've been following the

last week.

This completes our agenda for today, my understanding is, and also for the first week of these public hearings. They've been six long days, but I think very productive.

I would like to personally and on behalf of the panel thank everyone that participated, everyone that put a lot of effort into providing information, getting information, getting undertakings and so on, and look forward to those undertakings.

The panel respects everyone's point of view and we certainly thank everyone for all their efforts and the logistics that made this work and all the staff that helped, from webcasts and everything else.

So with that, I will announce that we will resume Monday at 9:00 a.m. This segment or today's session is adjourned.

--- Upon adjourning at 5:19 p.m.

La séance est ajournée à 17h19

C E R T I F I C A T I O N

I, Alain H. Bureau a certified court reporter in the Province of Ontario, hereby certify the foregoing pages to be an accurate transcription of my notes/records to the best of my skill and ability, and I so swear.

Je, Alain H. Bureau, un sténographe officiel dans la province de l'Ontario, certifie que les pages ci-hautes sont une transcription conforme de mes notes/enregistrements au meilleur de mes capacités, et je le jure.

Alain H. Bureau