

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location

Virtual

Date & Time

April 19, 2024 at 1:00 PM

A regular meeting of the Durham Nuclear Health Committee was held on Friday, April 19, 2024 at 1:00 PM via Microsoft Teams. This meeting was also livestreamed on <https://www.eventstream.ca/events/durham-region>. Comments and questions from members of the public observing the meeting can be emailed to dnhc@durham.ca.

Attendance

Members

Dr. Robert Kyle, Durham Region Health Department (DRHD) (Chair)
Anthony DiPietro, DRHD
Caitlyn Paget, DRHD
Phil Dunn, Ministry of the Environment, Conservation and Parks (MECP)
Raphael McCalla, Ontario Power Generation (OPG)
Loc Nguyen, OPG
Dr. Kirk Atkinson, Ontario Tech University (OTU)
Susan Ebata, Public Member
Deborah Kryhul, Public Member
Dr. Lubna Nazneen, Public Member
Veena Lalman, Public Member
Jane Snyder, Public Member
Bill Rattan, Alternate Public Member
Adam de Grosbois, Alternate Public Member

Presenters & Staff

Dianne San Juan, DRHD (Secretary)
Helen Tanevski, DRHD
Caitlin Burley, Nuclear Waste Management Organization (NWMO)
Kapil Aggarwal, OPG
Craig Axler, OPG
Analiese St. Aubin, OPG
Roger Inacio, Region of Durham, IT- Service Delivery

Regrets

Hardev Bains, Public Member
Dr. Seewoosunkur Gopaul, Public Member
Alan Shaddick, Alternate Public Member

Madison Kidd, Youth Public Member
Madisen Wood, Youth Public Member

Dr. Robert Kyle opened the virtual meeting and welcomed everyone.

Land Acknowledgement by Dr. Kyle.

Dr. Kyle mentioned that observers who have questions concerning presentations should email or discuss their requests with Dianne San Juan, DNHC Secretary, at dnhc@durham.ca.

Dianne will follow-up with each of the presenters after the meeting with the observers' questions. Dianne will report back to Dr. Kyle the outcomes of the questions received.

1. Approval of Agenda

The Agenda was adopted.

2. Approval of Minutes

The Minutes of the February 2, 2024 meeting were adopted as written.

3. Correspondence

3.1 Update on the Darlington New Nuclear Project

Received February 27, 2024 from the Ontario Power Generation (OPG), to update on the Darlington New Nuclear Project (DNNP). This update was emailed to DNHC members and observers on February 27, 2024.

For the latest project updates, visit the OPG [Neighbours newsletter \(News article | Neighbours - Pickering/Darlington - Winter 2024 – OPG\)](#). Should you have any questions about the project, contact the project phone line (1-800-461-0034), [email darlingtonnuclear@opg.com](mailto:darlingtonnuclear@opg.com) or visit the public information centre (1855 Energy Drive, Courtice, open Monday-Friday 9 a.m. – 3:30 p.m.).

3.2 Nuclear Waste Management Organization (NWMO) 2023 Annual Report and 2024- 28 Implementation Plan

Received March 2024 from NWMO.

2023 Annual Report available at <https://annualreport.nwmo.ca/2023/>

2024-28 Implementation Plan available at [Implementing Adaptive Phased Management 2024-28 | Implementation Plan \(nwmo.ca\)](#)

Share your thoughts on the Implementation Plan by visiting <https://www.nwmo.ca/Canadas-plan/Implementing-Canadas-plan/Have-your-say>

4. Presentations

All meeting presentations will be made available on the Council and Committee Meetings Calendar. PDF files for each presentation can be accessed using the agenda HTML link and a video recording of the meeting can be viewed using the webstreaming link that will be provided approximately two weeks after this meeting date.

4.1 NWMO Project Update and Transportation Planning

Presented by Caitlin Burley, Director, Strategic Programs and Transportation, NWMO

Highlights of the presentation included:

- Long term management plan discussion
- Deep geologic repository site will be selected this year
- Acknowledgement of Indigenous lands in the work that NWMO undertakes
- Siting update – 2 remaining siting areas: Wabigoon Lake Ojibway Nation, Ignace and Saugeen Ojibway Nation, South Bruce
- Site selection criteria: safety, transportation, and partnership
- Introduction to transportation of used nuclear fuel and safety discussion
- Used nuclear fuel transportation: requires transportation license with standards set by the IAEA, enforced by the CNSC
- Multi-layered safety program discussed: elements include certified and registered packages, operational controls, security and emergency management, management system and compliance assurance
- Transportation package designs discussed; package testing includes free drop tests, puncture tests, thermal tests, and immersion tests
- Can people be exposed to radiation from transportation of used nuclear fuel? Yes
- Background radiation sources discussed; radiation from transportation and shipments of nuclear material discussed
- Framework for transportation planning discussed; identifies public priorities; safety as the top priority

Questions

Susan Ebata: Is this a facility? Who is responsible for long-term upkeep?

Answer: Yes, it is a highly engineered facility with multiple barriers between the fuel and external environment. NWMO is responsible for the planning, construction, operation, decommissioning, etc.. NWMO is funded by the power

producers and reports on an annual basis to Natural Resources Canada (NRCan).

Lubna Nazneen: Is nuclear waste going far from where it is generated? Is it via trucks/trains? What are the quantities transported? Will trucks be identifiable?

Answer: Distance and mode of transportation will depend on site chosen. Used fuel can come from Durham, as well as other parts of Canada. There is no rail line that goes to the south site currently.

The conceptual plan estimates about 2 trucks per day, 6 days/week, for about 9 months per year, for 50 years time. If by rail, 1-2 shipments per week.

Transport Canada's Transportation of Dangerous Goods regulations will need to be complied with for labelling trucks/trains. For security purposes, the shipment of used fuel is considered prescribed information, so only a select group will be aware of shipments.

Dr. Kyle: Will used nuclear fuel waste from small modular reactors (SMRs) be covered under these plans?

Answer: SMR waste falls under NWMO's mandate. All of the same requirements for nuclear fuel waste would apply. Planning for SMR waste is already underway.

The federal government has also been providing funding, including to Ontario Tech University, to do research and development (R&D) in support of SMR vendors and NWMO on SMR used fuel.

4.2 Progress Report by OPG's Nuclear Sustainability Services Division Concerning its Handling and Management of Radioactive Materials and Waste

Presented by Kapil Aggarwal, VP Nuclear Sustainability Services, OPG

Highlights of the presentation included:

- All OPG waste falls under 3 categories of action: preventing waste before it is created, managing waste in their care, and harnessing waste and by-products to make nuclear power useful
- Strategic Plan: focus on waste minimization: reduce, reuse, recycle, recover

Examples include:

New facility: WCSR Sort and Seg Facility

Radioactive resin processing and carbon-14 isotope capture

Disposal: low level waste disposal and support of NWMO deep geologic repository siting

- Pickering Waste Management Facility: used fuel from Pickering Nuclear Generating Station removed from station and stored safely; loaded 70 dry storage containers in 2023; 10-year operating licence to 2028
- Darlington Waste Management Facility: 57 dry storage containers loaded in 2023; 10-year operating licence to 2033
- Safety: no significant safety events to workers or public in 2024
- Pickering refurbishment and decommissioning discussed
- Airborne emissions monitoring discussed

Questions

Dr. Kyle: Would decommissioning of Units 1 - 4 occur after refurbishment of Units 5-8? Would timing of decommissioning be dependent on timing of refurbishment?

Answer: Units 1 - 4 decommissioning and defueling activities will take place by end of year. Units 5-8 refurbishment definition phase and understanding the work required and timing of that work will also be taking place. Units 5 - 8 will continue to operate, assuming a successful approval of a life extension. Units 1 - 4 would proceed to safe storage state until decommissioning activities commence.

Dr. Kyle: Will your division have a role in planning for the nuclear waste stream from SMRs?

Answer: Waste has always been part of Durham New Nuclear Project (DNNP) site plans. A waste-led design ensures that waste requirements and needs are built into DNNP plans.

4.3 Progress Report by OPG's Nuclear Regulatory Affairs Concerning the Pickering Nuclear Station Units 5-8 Operations to 2026

Presented by Craig Axler, Director, Nuclear Regulatory Affairs, OPG

Highlights of the presentation included:

Background

- Pickering NGS is seeking an amendment to their licence to continue operating Units 5 to 8 to the end of December 2026
- Units 1-4 will retire at the end of 2024, as per the existing licence
- Units 5-8 will continue to run to 2026 if licence is granted
- 2027-2028 – all 8 units will be shut down
- 2028 – application for new licence; refurbishment of 5-8 will be addressed in new licence application in 2028
- This presentation will cover licence to extend operations to 2026 only

Why Extend Pickering?

- Power is needed; the Independent Electricity System Operator is projecting a capacity deficit on the Ontario system, beginning in 2023

Work Done in the Past Year

- Preparing for CNSC approval to extend Pickering 5 - 8
- Periodic safety review - concluded that the current plant design, operation, processes and management system will ensure continued safe operation of Pickering NGS Units 5 to 8 to the end of December 2026
- Environmental Risk Assessment
- Safe Storage Predictive Effects Assessment Addendum

Regulatory Process

- CNSC licence application review process discussed
- Intervention process discussed
- Timelines discussed: June 17, 2024 Public Commission Hearing in Pickering
- Resources provided in presentation

More information:

OPG's application is available at <https://www.opg.com/power-generation/our-power/nuclear/operating-licences/P>

CNSC website: <https://nuclearsafety.gc.ca/eng/>

CNSC Notice of Public hearing: https://nuclearsafety.gc.ca/eng/the-commission/hearings/documents_browse/results.cfm?dt=17-Jun-2024&yr=2024

Questions

Dr. Kyle: Is the decommissioning plan impacted by plans to extend Units 5 - 8? Would OPG do something different if Units 5-8 were actually going to close?

Answer: The timeline of things will be adjusted, as there are linkages between all 8 units. Adjusting the timeline to some units may have impacts on activities and how they are coordinated. Any changes and how change is managed will be included in the CNSC application. The application is comprehensive and the CNSC will evaluate how changes and their ripple effects can impact operations, to ensure that any changes will continue to be safe for the public and the environment.

Originally, decommissioning plan was set up for all 8 units to be shut down at the end of 2024. Because the timeline has changed, the decommissioning plan is impacted to some degree. Any changes to the plan will be presented to the CNSC in the current application.

4.4 Update from Ontario Tech University (OTU), Nuclear Engineering Program

Presented by Dr. Kirk Atkinson, Director, Centre for Small Modular Reactors, Associate Professor & Industrial Research Chair, Department of Energy & Nuclear Engineering, Faculty of Engineering & Applied Science, OTU

Highlights of the presentation included:

- Nuclear Engineering program
- New research capabilities and studies discussed
- Subcritical Assembly Project – under development; provide a useful research and teaching tool; will produce zero power and zero waste
- CNSC Class 1A licensing process and timelines discussed
- Engagement activities discussed

Questions

Dr. Kyle: Is OTU meeting targets for enrollment into graduate programs? Is the program receiving adequate funding and able to attract and retain faculty?

Answer: Graduate student programs are not growing as fast as bachelor programs in terms of student enrollment. There are so many job opportunities in the sector right now for bachelor's degree graduates that it is taking up potential graduate school applicants.

OTU is looking at expanding programs and bringing in professionals from other disciplines, such as physics or different branches of engineering to meet demand. Numbers are growing in bachelor's program; bringing more professionals in is critical. On the faculty side, OTU is looking to replace one professor, but able to sustain functions. There is a lot of opportunity and work to be done and graduate students are needed.

Dr. Kyle: When do you see a licence being granted by the CNSC in order to operate your lab (subcritical facility)?

Answer: OTU expects a timeframe after submission that is similar to a licence renewal for one of the existing university-based reactors, typically about 12-18 months. Early 2026 is where they would plan for.

5. Communications

5.1 Community Updates at Pickering Nuclear and Darlington Nuclear

Analiene St. Aubin, Manager, Corporate Relations, Pickering Nuclear provided community updates for Pickering and Darlington NGS:

- March break programming discussed
- Bring Back the Salmon educational program discussed
- Electrifying Education program discussed
- Community information sessions took place in February 2024 in Pickering; virtual and in-person sessions were included
- DNGS Unit 1 & 4 are in refurbishment
- DNNP: early site prep work complete; civil works, stormwater features, infrastructure, etc.

There were no questions received during the meeting.

6. Other Business

Dr. Kyle discussed the following Committee updates:

- 1) Dates for the rest of the 2024 DNHC meetings are as follows:
 - June 21, 2024
 - September 13, 2024
 - November 29, 2024

- 2) Reminders:

All meeting presentations will be made available on the Regional Council and Committee Meetings Calendar. This can be navigated to via the “DNHC meetings, agendas, presentations and minutes” tab on our webpage durham.ca/dnhc. A video recording of meetings can also be viewed using the webstreaming link in the Regional calendar. The video and presentation files for this meeting will be made available approximately two weeks after this meeting.

- 3) Lisa Fortuna, Director of Health Protection at the Durham Region Health Department has retired. Her last day was April 18th. Lisa has served the Durham Nuclear Health Committee as your alternate chair. We thank Lisa for her service to this committee and wish her well in her next chapter. Anthony DiPietro has assumed the role of Director, Health Protection and the Durham Region Health Department and will replace Lisa on this committee going forward.

- 4) Janice Dusek, DNHC member representing Ajax, has submitted her letter of resignation from the DNHC. We thank Janice for her contributions to this committee and wish her all the best in her future endeavours.

7. Next Meeting

Date & Time

June 21, 2024 at 1:00 PM

Virtual via Teams

8. Adjournment
3:06 PM