

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location

Virtual

Date & Time

November 29, 2024 at 1:00 PM

A regular meeting of the Durham Nuclear Health Committee was held on Friday, November 29, 2024 at 1:00 PM via Microsoft Teams. It was noted that livestream services were experiencing technical issues and a video recording of the meeting would be posted once available.

**The video recording was posted on December 2, 2024 on <https://www.durham.video/>.*

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
David Keene, Ministry of the Environment, Conservation and Parks (MECP)
Raphael McCalla, Ontario Power Generation (OPG)
Loc Nguyen, OPG
Dr. Kirk Atkinson, Ontario Tech University (OTU)
Deborah Kryhul, Public Member
Veena Lalman, Public Member
Dr. Lubna Nazneen, Public Member
Alan Shaddick, Alternate Public Member
Bill Rattan, Alternate Public Member
Madisen Wood, Youth Public Member
Madison Kidd, Youth Public Member

Presenters & Staff

Dianne San Juan, DRHD (Secretary)
Helen Tanevski, DRHD
Roger Inacio, Region of Durham, IT- Service Delivery
Paul MacDonald, Canadian Nuclear Safety Commission (CNSC)
Nicole Simon, CNSC
Andrew Oussoren, CNSC
Cory Krasnaj, CNSC
Rebekah van Hoof, CNSC

Sendi Struna, DRHD
Tara Zupancic, DRHD
Alex Swirski, DRHD
Lindsay Hamilton, OPG

Regrets

Jane Snyder, Public Member
Dr. Seewoosunkur Gopaul, Public Member
Hardev Bains, Public Member
Susan Ebata, 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 September 13, 2024 meeting were adopted as written.

3. Correspondence

3.1. Update on the Darlington New Nuclear Project (DNNP)

Received on October 15, 2024 from Ontario Power Generation (OPG). On October 2, the Canadian Nuclear Safety Commission (CNSC) held the first of a two-part public hearing to consider OPG's Licence to Construct (LTC) application. A LTC is the next phase of the regulatory process for a new nuclear power plant in Canada and would allow for construction activities on the first of four Small Modular Reactors (SMR) planned at The Darlington New Nuclear site to begin. For more information, contact 1-800-461-0034 email or visit the Public Information Centre (1855 Energy Drive, Courtice, open Monday-Friday 9 a.m. – 3:30 p.m.).

3.2. Darlington Nuclear Generating Station (DNGS) Community Advisory Council

Minutes from the June 25, 2024 meeting received on October 22, 2024.

3.3. Pickering Nuclear Generating Station (PNGS) Community Advisory Council

Minutes from June 11, 2024 meeting received on October 22, 2024.

3.4. Update from DNGS Community Advisory Council

Received on October 31, 2024 from Eileen Clark, Associate, Hardy Stevenson and Associates. The DNGS Community Advisory Council is seeking to participate in the CNSC public hearing on January 8, 2025, in support of the DNNP's Application for a Power Reactor Construction License. A list of Community Advisory Council members and Terms of Reference were also provided.

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 Darlington New Nuclear Project (DNNP): Update on the Canadian Nuclear Safety Commission (CNSC) Staff's Technical Assessment and the Public Hearing for the Licence to Construct

Presented by Nicole Simon, Senior Project Officer, Advanced Reactor Licensing Division, Directorate of Advanced Reactor Technologies, CNSC

Highlights of the presentation

- Introduction and overview of CNSC organization
- DNNP Overview
- OPG submitted a Licence to Construct application to construct a single BWRX-300 reactor facility;
- DNNP timeline discussed;
- Commission public hearings on the application for a Licence to Construct a BWRX-300 at the DNNP site: October 2024 and January 2025;
- Brief overview of the application review and hearing process;
- Explanation of Commission Member Documents (CMDs); 2 CMDs prepared for the DNNP
- CMD #1 – Commission determined existing Environmental Assessment is applicable to BWRX-300 reactor (January 2024);
 - Commission decision did not authorize construction of the reactor

- OPG Construction Application
 - Activities included in licence application discussed, including construction of a single BWRX-300 Powerblock;
 - licence does not allow for nuclear fuel on site;
- CNSC staff assessment incorporating associated regulations, codes, standards and guidance discussed;
- CMD #2 – OPG’s Licence to Construct application
 - items assessed and confirmed by CNSC discussed;
 - CNSC staff concluded that: 1) The application to construct one BWRX-300 Powerblock at the DNNP site meets applicable regulatory requirements AND 2) OPG has the necessary programs to safely conduct licensed activities, taking into account the implementation of all identified regulatory commitments and BWRX-300 licensing regulatory actions
- Proposed Power Reactor Construction Licence (PRCL)
 - Describes licensed activities, duration, and licence conditions
- Draft Licence Conditions Handbook (LCH)
 - provides compliance verification criteria and guidance to OPG for each licence condition; also provides guidance on removing Regulatory Hold Points (RHPs)
- RHPs
 - Set of 3 activities requiring approval of the CNSC prior to being allowed to proceed;
 - process for removing RHPs and proposed RHPs for DNNP discussed;
- CMD #2 Staff recommendations:
 - Conclude that OPG is qualified to carry on the activities authorised by the proposed licence;
 - Authorise OPG to construct a single BWRX-300 reactor, subject to the conditions outlined in the proposed licence and Regulatory Hold Points
- More information and reports are available at <https://www.cnscccsn.gc.ca/eng/the-commission/hearings/cmd/#hearing-202401>

Questions

- Dr. Kyle: Regarding the Draft LCH: is it finalized at the staff level with input and response from OPG? Is it finalized after the Commission renders a decision with respect to the Licence to Construct?
- Nicole Simon: The Commission is the sole authority to issue the Licence and the Commission has authority over the Licence and its conditions. The LCH is a staff level document and does not require approval from the Commission. It does not replace the Licence, it explains the conditions. It is not finalized yet. It is subject to continuous revisions from input received from CNSC specialists and comments from OPG. Should the Commission issue the Licence, it will be finalized shortly after.
- Dr. Kyle: What is the date and venue for second set of hearings for the Licence to Construct?

- Nicole Simon: The venue is the Ajax Convention Centre in Ajax, from January 8-10 and 13-15 in 2025

4.2 CNSC Regulatory Oversight Report for Darlington and Pickering Nuclear Generating Sites: 2023

Presented by:

Andrew Oussoren, Senior Power Reactor Site Inspector, Darlington Site Office, Darlington Regulatory Program Division, Directorate of Power Reactor Regulation, CNSC

Cory Krasnaj, Power Reactor Site Office Supervisor, Pickering Site Office, Pickering Regulatory Program Division, Directorate of Power Reactor Regulation, CNSC

Rebekah van Hoof, Project Officer, Wastes and Decommissioning Division, Directorate of Nuclear Cycle and Facilities Regulation, CNSC

Highlights of the presentation

- CNSC produces an annual Regulatory Oversight Report (ROR) for Canadian Nuclear Generating Stations (NGS); 2023 ROR posted on CNSC website in October 2024;
- Public Commission Meeting re: NGS ROR - to be held February 25, 2025;
- General safety performance and observations discussed;
- Nuclear power plants (NPPs) and waste management facilities (WMFs) on their respective sites operated safely and complied with the applicable requirements for all safety and control areas in 2023;
- Radiation doses to the public and workers were below regulatory limits;
- Releases to the environment were within safe limits;
- Compliance verification activities discussed – number of findings, reportable events, and reports discussed;

Pickering Nuclear Generating Station (PNGS)

- Pickering NGS – Units 1 and 4 to shut down in 2024; Units 5-8 are operating to end of Dec 2026;
- June 2024 Public Commission Hearing held in the community to discuss OPG application to operate Units 5-8 to Dec 2026;
- On October 11, 2024, Commission authorized OPG to operate PNGS Units 5-8 to December 31, 2026;
- OPG has notified CNSC of intent to apply for authorization to refurbish Units 5-8;

- PNGS power plant and waste licenses will expire; OPG will request a consolidated license for Pickering Waste Management Facility Operating Licence (WFOL) into PNGS Power Reactor Operating Licence (PROL);
- There will be a public hearing for the licence amendment;
- OPG Safety Reports update were reviewed by CNSC staff and found to meet regulatory requirements;
- CNSC staff reviewed OPG's Environmental Risk Assessment (ERA) and Predictive Effects Assessment (PEA);
- ERA and PEA results indicate that meaningful human health or ecological risks attributable to PNGS operations are unlikely;

Darlington Nuclear Generating Station (DNGS)

- DNGS refurbishment activities discussed;
- DNGS PROL is expiring November 2025; relicensing hearings to be held in 2025
- Part 1 of hearings will be held on March 26, 2025 in Ottawa; Part 2 will be held in the community on June 24-26, 2025; members of the public can provide interventions during Part 2 of the hearings; location is to be determined;
- Periodic Safety Review 2025-2035 completed by OPG (comparison of existing plant against modern codes and standards); CNSC will be monitoring implementation
- DNGS radioactive isotopes discussion: The Commission amended OPG's license in spring 2024 to allow for Co-60 production in all 4 reactors;
- OPG has applied to amend the PROL to produce additional medical isotopes using the Target Delivery System (TDS) – hearing in writing expected to take place in early 2025
- The dose to the public from DNGS remained below the regulatory limit of 1 millisievert per year;
- Releases of radiological substances remained below the derived release limits;

Pickering Waste Management Facility (PWMF) and Darlington Waste Management Facility (DWMF)

- OPG processes and stores dry storage containers (DSC) containing used nuclear fuel generated at PNGS and DNGS, as well as intermediate level waste generated from refurbishment activities at PNGS and DNGS;
- OPG met their target of transferring DSCs from PNGS to PWMF and from DNGS to DWMF;
- OPG operated PWMF and DWMF in accordance with the regulatory requirements;
- Releases to environment from the PWMF and DWMF were below regulatory limits and action levels;
- OPG is no longer required to monitor particulate emissions from the DSC processing building at the PWMF and DWMF; previous results from particulate emissions monitoring were less than 0.05% of limits in their licence.

PWMF

- OPG applied and CNSC authorized OPG to process and store a maximum of 100 DSCs containing a minimum of 6-year cooled fuel.
- OPG has loaded 2 DSCs to confirm that temperature and dose measurements meet modelling predictions; OPG to submit a commissioning report to CNSC for review;
- OPG is requesting authorization to construct and operate a new structure, Pickering Component Storage Structure (PCSS), to store low and intermediate level waste from future Pickering decommissioning activities and proposed refurbishment activities of Pickering units 5-8

DWMF

- CNSC staff approved OPG to carry out the site preparation and construction for used fuel dry storage structure #3; commissioning report will be submitted in January 2025

Additional information:

- The Regulatory Oversight Report for Canadian Nuclear Power Generating Sites for 2023 has been posted on CNSC's website;
- This document will be presented to the Commission as part of the February 25-26, 2026 Commission Meeting;
- To access this document, please go to the following link and select document titled 'CNSC Staff Submission - Regulatory Oversight Report for Canadian Nuclear Power Generating Sites for 2023':
<https://www.cnsccsn.gc.ca/eng/the-commission/meetings/cmd/#meeting-20250225-20250226>
- For more information about participation in a public meeting, please go to:
<https://www.cnsccsn.gc.ca/eng/the-commission/meetings/participate/>

Questions

- Dr. Kyle: For 2023, if the industry fails to meet satisfactory requirements, and CNSC keeps an eye on that indicator, is a rating in the 2024 Annual Report how we monitor improvements on this indicator?
- Cody Krasnaj: If a declining trend in performance is detected, regulatory oversight activities are increased in that area. For example, increasing the number of inspections performed on site, field interviews, and desktop reviews throughout the year. This provides better confidence that corrective actions are being taken by the licensee. For security specifically, CNSC conducted a bigger inspection in January of this calendar year and did see improvements that will be reflected in the 2024 ROR.
- Veena Lalman: There is no more requirements to monitor the air quality from the stack?

- Rebekah van Hoof: This is specific to the PWMF and DWMF processing buildings. The processing buildings at both these sites contain the DCFs, where the lids are welded to the containers. Last year, OPG requested to stop stack monitoring in these buildings. They demonstrated that releases were so low (<0.05% of release limits). CNSC has allowed OPG to stop monitoring stack emissions from these buildings, however stack emissions continue to be monitored by OPG.
- Raphael McCalla: Operating these buildings for over 20 years, it's been found that particulate emissions are below background. Environmental monitoring program is still taking place. Stacks from reactor buildings continue to be monitored.
- Alan Shaddick: The DNNP Jan 8th hearing is public?
- Raphael McCalla: Yes this hearing is open to the public, at the Ajax Convention Centre.
- Cody Krasnaj: This hearing will be livestreamed as well.

4.3 Climate Change and Health in Durham Region: Assessing the Impacts of Extreme Heat

Presented by Tara Zupancic, Climate Change and Health Specialist and Alex Swirski, Epidemiologist, Durham Region Health Department

Highlights of the presentation

- Background information provided on mandate and report series;
- Health impacts from climate change are on the rise; healthcare systems will be stressed by a wide range of climate-driven emergencies and some people face greater risks from climate hazards;
- A recent public health survey showed that although Durham Region is already experiencing the effects of climate change, most residents do not believe they will be harmed by it;
- Need to better understand and communicate risks, as well as actions we can all take to reduce them;
- Health risks and impacts depend on three main factors: exposure, sensitivity and adaptive capacity; people who experience all three factors of heat vulnerability are at greatest risk; for example, an older adult, who lives alone without air conditioning would experience all three factors of heat vulnerability and would be at high risk of harm during an extreme heat event;
- Extreme heat events in Durham Region are expected to more than double in the coming decades;
- Heat tolerant, nature-based solutions that can cool neighbourhoods and increase heat resilience are important for counteracting the increased land surface temperatures associated with the projected expansion of urban heat islands
- Local health impacts: 30°C + associated with increased emergency room visits; increased health risks from overnight heat; increased risk of illness and death at beginning of heat season;
- Health burden likely underreported among older adults;

- Air conditioning is one of the most effective ways to reduce heat exposure and prevent illness and mortality during extreme heat events;
- Durham's seven priority health neighbourhoods: generally, have greater health inequities and higher rates of chronic health conditions, like asthma or heart disease, that can increase the risk of heat related illness and mortality;
- These neighbourhoods are located in urban heat islands (Pickering, Ajax, Whitby and Oshawa) and have the highest proportion of rented homes which are more likely to have building characteristics associated with higher indoor air temperatures, as well as a lack of access to air conditioning;
- Strengths and resources discussed;
- Durham Region's Heat Warning and Information System (HWIS): provides community partners with advance warning of extreme heat events so they can activate their heat response plans;
- Durham Greener Homes Program: includes an income-qualified incentive for airsource heat pumps that can provide cooling to low-income households;
- Knowledge gaps discussed;
- Key message: Health impacts are severe but often preventable;
- Reports and additional information are available at www.durham.ca/ClimateAndHealth

Questions

- Dr. Kyle: Can you provide more information on your Heat Hacks Infographic, and where to access reports, etc..?
- Tara: All reports are available on the website, www.durham.ca/ClimateAndHealth. You can also subscribe to receive updates to new information/reports to your email inbox. The heat hacks tool can be found at durham.ca/heat; it includes suggestions you can do to prepare for extreme heat when you do not have air conditioning.
- Dr. Kyle: There are other vulnerability assessments in the works and are expected to be released in 2025?
- Tara: The next reports in the series include solar UV radiation, vector-borne disease, extreme weather, food and water impacts and air quality impacts;
- Veena Lalman: I am just curious, do you consider the climate resilience of existing or future structures?
- Tara: There are key characteristics of existing housing that make them more vulnerable to extreme heat. Our sustainability group is also looking at this for future buildings to try to make them more energy efficient and heat resilient;
- Dr. Lubna Nazneen: What is Heat island that you mentioned in one of the earlier slides
- Tara: An urban heat island has built-up infrastructure, buildings, roadways, industry and vehicle exhaust, and a lack of green space. This contributes to local areas that heat up faster and are hotter than forecasted temperatures. Urban heat islands absorb heat during the day and release it at night therefore not much cooling in the evening, even

though the temperature goes down. It is harder to lower indoor temperatures in these areas.

- Alex: It can go up by 6 degrees difference, in the city compared to surrounding areas, so it is a significant increase.

5. Communications

5.1 Community Updates at Pickering Nuclear and Darlington Nuclear

Lindsay Hamilton, Senior Manager, Corporate Relations and Projects, Corporate Affairs, OPG, provided community updates for Pickering and Darlington NGS:

- Community engagement activities discussed; more than 4700 community members were reached during the various events;
- Electrifying Education program – visited schools across the Region of Durham and hosted students for Take your Kids to Work Day;
- Darlington Refurbishment Project; Unit 1 complete; Project tracking on time for 2026 completion;
- OPG submitted an application for renewal of the DNGS Power Reactor Operating Licence (expires Nov 2025); requesting a 30-year licence renewal 2025 – 2055; CNSC hearing in March and June 2025 to consider this application;
- Public Information Sessions: opg.com/durham
- Licence renewal process information: www.cnscccsn.gc.ca
- OPG to begin discussions on potential sites in Port Hope, Haldimand County, Lambton County to meet soaring demand for electricity (the province's demand for electricity is forecasted to increase by 75% by 2050);
- Province is on track to meet demand through 2035, but will need new generation to meet demand through 2050; discussions will include how communities will be supported

6. Other Business

1) Dates for 2025 DNHC meetings are as follows:

- February 7, 2025, 1:00 pm
- April 25, 2025, 1:00 pm
- June 20, 2025, 1:00 pm
- September 26, 2025, 1:00 pm
- November 28, 2025, 1:00 pm

Meetings will continue to be held virtually via the TEAMS platform and available for the general public to observe via livestream.

2) Dr. Kyle acknowledged the technical difficulties experienced at the beginning of this meeting. The recording of the meeting will be posted as soon as possible.

**The video recording was posted on December 2, 2024 on <https://www.durham.video/>*

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 presentation files for this meeting will be made available approximately two weeks after this meeting.

7. Next Meeting

Date & Time

February 7, 2025 at 1:00 PM

Virtual via Teams

8. Adjournment

2:51 PM