



*Welcome to the CNSC's  
Webinar for:  
The Darlington New Nuclear  
Project – Licensing Review  
Update*

June 22, 2023 (EN)





# Objective of Today's Webinar

To discuss OPG's Licence to Construct application and give an update on the regulatory review and hearing process.

## **Presentation outline:**

- CNSC Overview
- DNNP Licence Application & Project overview
- DNNP Licensing & Hearing Process
- DNNP Public Hearings
- LTC Focus area – Waste Management
- Upcoming events

# CNSC Overview





# Canadian Nuclear Safety Commission

## OUR MANDATE



### REGULATE

the use of **nuclear energy** and **materials** to **protect health, safety, and security** and the **environment**



### IMPLEMENT

Canada's international commitments on the **peaceful use of nuclear energy**



### DISSEMINATE

**objective scientific, technical and regulatory** information to the public

75 years of regulatory experience

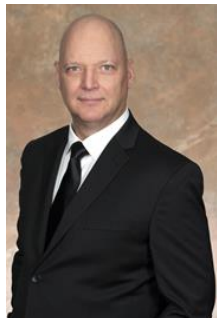


# Canadian Nuclear Safety Commission

## *The Commission Tribunal*



Ms. Rumina  
Velshi



Dr. Timothy  
Berube



Mr. Randall  
Kahgee



Dr. Marcel  
Lacroix



Dr. Victoria  
Remenda

## **TRANSPARENT, SCIENCE-BASED DECISION MAKING**

Quasi-judicial administrative tribunal  
Agent of the Crown (Duty to Consult)  
Reports to Parliament through Minister  
of Natural Resources

Members are independent and part-time  
Commission hearings are public and Webcast  
Staff presentations are public  
Decisions are reviewable by Federal Court



# CNSC Staff Responsibilities

1. Implementing Commission decisions
2. Developing regulatory requirements recommendations and guidance for the Commission
3. Verifying and enforcing licensee compliance
4. Engaging the public and Indigenous Nations and communities





# Regulator and Licensee Responsibilities

## *Regulator (CNSC)*

- Set safety requirements, inform licensees, verify compliance
- Assure Parliament and Canadians that licensee responsibilities are properly discharged
- Make **independent, objective** and **risk informed decisions**

## *Licensee*

- Responsible **for safety**
- Manage regulated activities in a manner that protects the **health, safety, security** and the **environment** while respecting Canada's **international obligations**

# DNNP Overview & Licence Application







# DNNP Overview

- Construction and operation of up to four new nuclear reactors at the existing Darlington site (up to 4,800 MWe)
- An Environmental Assessment was completed in 2009
- OPG has selected the GE-Hitachi BWRX-300 technology and **must demonstrate that the technology fits within the bounds of the 2009 Environmental Assessment**
- OPG submitted a Licence to Construct application to construct one Small Modular Reactor of up to 300 MWe





# DNNP Licence Application

Two technical reviews are being completed in parallel:

OPG submission	Status	CMD #
Updated documentation to demonstrate how the selected technology (BWRX-300) fits within the bounds of the 2009 Environmental Assessment: <ul style="list-style-type: none"><li>• <i>Use of Plant Parameters Envelope to Encompass the Reactor Designs being Considered for the Darlington Site</i></li><li>• <i>Darlington New Nuclear Project Environmental Impact Statement Review Report for Small Modular Reactor BWRX-300</i></li></ul>	Under CNSC staff technical assessment	1
Licence to Construct (LTC) application and supporting documentation	Under CNSC staff technical assessment	2

**CNSC staff will produce two separate Commission Member Documents (CMDs) with the results of its review and recommendation(s) to the Commission**

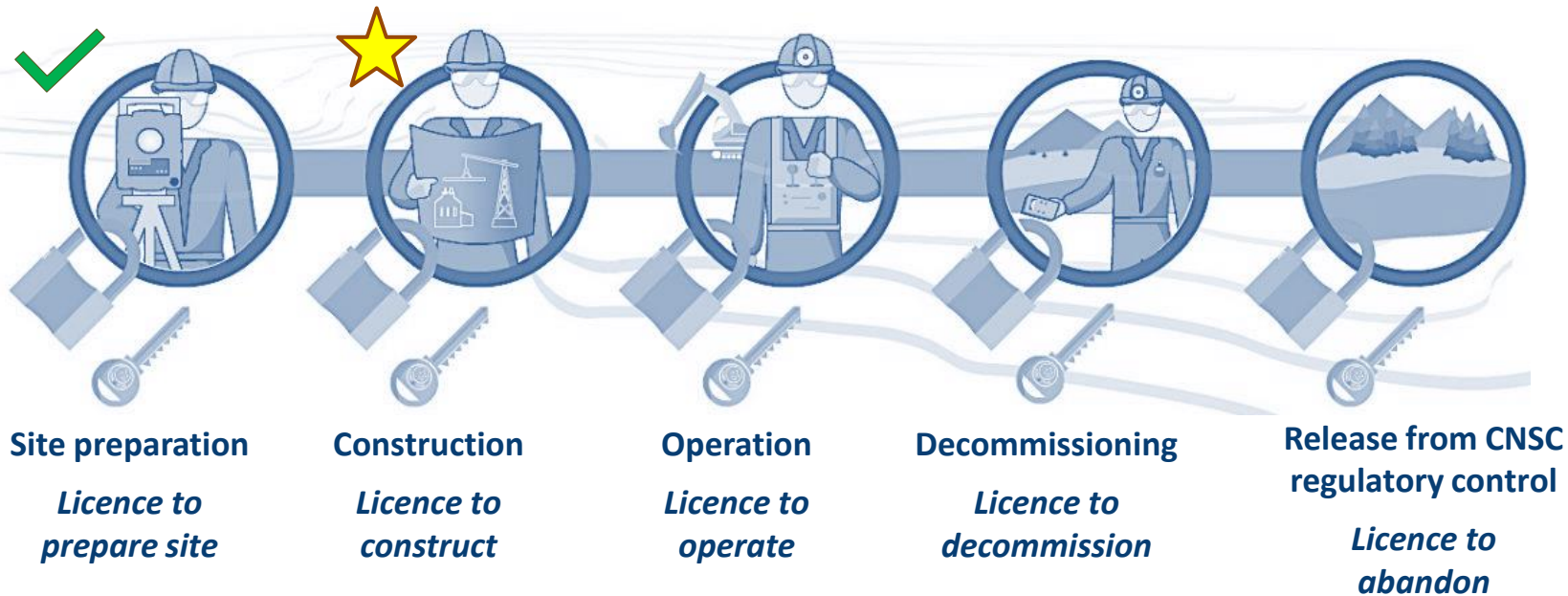
# DNNP Licensing & Hearing Process





# DNNP Licensing & Hearing Process

## Nuclear Facility Lifecycle Stages



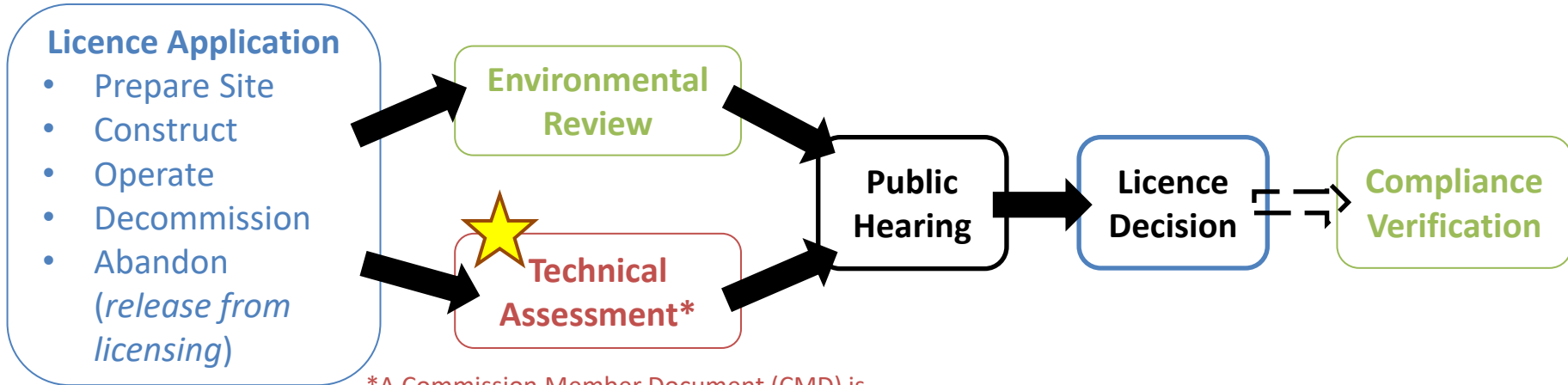
Issued and  
valid until  
2031

Application  
submitted to the  
CNSC in Oct 2022



# DNNP Licensing & Hearing Process

## Licensing Process Overview



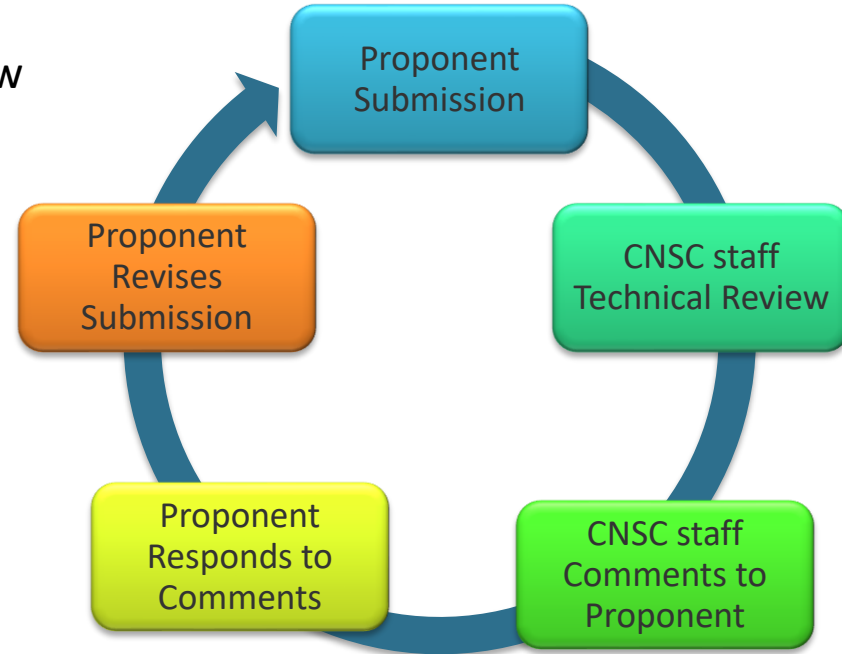
\*A Commission Member Document (CMD) is developed, with the results of the staff's review and recommendations to the Commission. Two CMDs will be developed for this project as two separate decisions are required.



# DNNP Licence Application

## *CNSC Technical Review Process*

- The submission is subject to a technical review
- Assessed against regulations, JRP recommendations, regulatory documents, international guidance, codes and standards, professional judgement
- Topics include safety analysis, radiation protection programs, detailed decommissioning plan, operator training programs, etc.



**Process continues until staff are satisfied all requirements are met**

# DNNP Public Hearings





# DNNP Public Hearings

For OPG's licence application, the Commission is required to make multiple decisions. Therefore, multiple hearings will be held:

Decision	Hearing #	Schedule
Whether the BWRX-300 reactor technology chosen by OPG is within the bounds of the 2009 DNNP Environmental Assessment	1	January 2024
Licence to Construct decision as per subsection 24(4) of the <i>Nuclear Safety and Control Act</i> *	2	<i>Tentative: October 2024</i>

\* Public Hearing #2 will only occur if the Commission decides favourably for Public Hearing #1





# Public Hearing #1

- In 2011, the Joint Review Panel conducted Hearings over a 17 day period and recommended issuance of a Licence to Prepare Site
  - Conditional on OPG implementing mitigation measures for residual adverse effects identified in the EIS
  - Selection of a reactor technology required OPG **demonstrate that its chosen technology fits within the bounds of the approved EA** and to assess potential effects on any parameters that are outside the bounding scenario.
- 67 Recommendations were issued to the Government of Canada, including Recommendation #1:

*“The Panel understands that prior to construction, the Canadian Nuclear Safety Commission will determine whether this environmental assessment is applicable to the reactor technology selected by the Government of Ontario for the Project. Nevertheless, if the selected reactor technology is fundamentally different from the specific reactor technologies bounded by the plant parameter envelope, the Panel recommends that a new environmental assessment be conducted.”*



# Public Hearing #1

## *Scope*

- [Notice of Public Hearing](#) for Public Hearing #1 issued on April 3, 2023
- Purpose: *For the Commission to consider and decide on the applicability of the DNNP EA with respect to OPG's selected BWRX-300 small modular reactor technology, as per the Government of Canada response to recommendation #1 of the joint review panel's 2012 report*
- The scope of Public Hearing #1 **will not include a decision on whether OPG can construct the BWRX-300**
- OPG's hearing submission and CNSC staff's CMD #1 will be available after **September 18, 2023**



# Public Hearing #1

## *Key Dates*

- CNSC Staff are currently preparing its review of OPG's EIS Review report, to be presented in CMD #1 with the following key milestone dates:

Stage	Scheduled Date
CNSC Staff CMD available for public review and comment	September 18, 2023
Interventions due to CNSC Registry	November 20, 2023
Public Hearing in the community	Week of January 22, 2024



# Public Hearing #2

## *Scope*

- Purpose: *For the Commission to consider and decide on the capability of the licensee to construct a **single** BWRX-300 reactor on the Darlington New Nuclear Project lands at the Darlington Nuclear Generating Station*
- The scope of Public Hearing #2 **includes a contemplation of a licensing decision** under the *Nuclear Safety and Control Act*
- Tentatively scheduled for October 2024, if a favourable decision is rendered by the Commission after Hearing #1
- OPG's hearing submission and CNSC staff's CMD #2 will be available after **June 18, 2024**



# Public Hearing #2

## *Key Dates*

- CNSC Staff will present its review of OPG's LTC application in CMD #2 with the following key milestone dates:

Stage	Scheduled Date
Participant Funding Program (Stage 3) Applications due	TBD
CNSC Staff CMD available for public review and comment	June 18, 2024
Interventions due to CNSC Registry	August 20, 2024
Public Hearing in the community	Week of October 02, 2024

# LTC Focus area – Waste Management





# What are the regulatory requirements for LTC for waste management?

REGDOC-1.1.2 serves as the basis for regulatory requirements for an LTC

- Physical Design
  - Waste treatment and control
- Waste Management
  - Hazardous substances and waste
  - Waste Minimization
  - Decommissioning practices

REGDOC-2.11.1, *Waste Management, Volume I: Management of Radioactive Waste* is the basis for the SRWMS

- Waste classification requirements
- Management of radioactive waste requirements



# What is OPG proposing?

## Key messages regarding waste management

- An LTC does not allow for the generation of radioactive waste
- OPG has submitted its Solid Radioactive Waste Management Strategy
- DNNP waste processing system is designed for all forms of waste streams (excluding spent fuel)
- DNNP design will minimize waste produced the greatest extent practicable
  - Collected effluents will be processed and reintroduced
  - Waste minimization techniques will be used for everything else





# What a Financial Guarantee is, and why is it needed?

## Financial guarantees Requirements

- Required as part of licence application and approved by the Commission
- Payable to the CNSC
- Separate from a licensee's assets and can be accessed by the CNSC, if required
- Required throughout the entire lifecycle of the facility
- To be updated and reviewed every five years, sooner if requested by the Commission (along with PDPs and cost estimates)
- Subject to annual reporting to demonstrate value and validity

Financial guarantees cover all decommissioning, dismantling, waste disposal, and long-term monitoring

# Upcoming Events





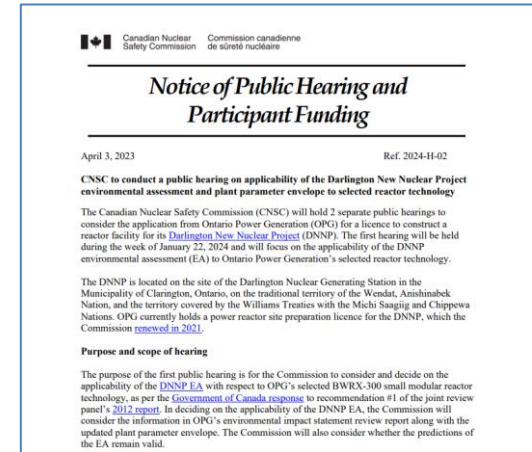
# DNNP Outreach and Engagement

## Multi-stage [Participant Funding Program](#) (PFP)

- **Stage 1** PFP for review of OPG EIS and PPE documents – **Complete**
- **Stage 2** PFP for involvement in the process for Hearing #1, CNSC staff review of the EIS and PPE – **In progress**
- **Stage 3** PFP for involvement in the process for Hearing #2, CNSC staff review of OPG's Licence to Construct application

## Commission Hearings will commence in 2024

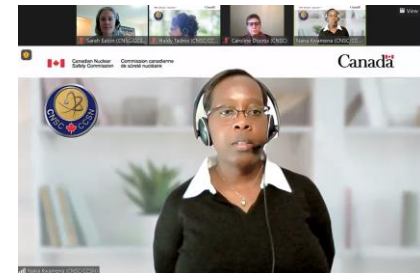
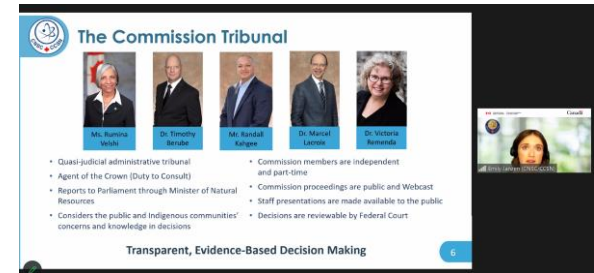
- **Hearing #1:** Environmental Impact Statement and Plant Parameter Envelope (January 2024) – [Notice of Public Hearing](#) issued on **April 3, 2023**
- **Hearing #2:** OPG's LTC Application (tentatively October 2024)





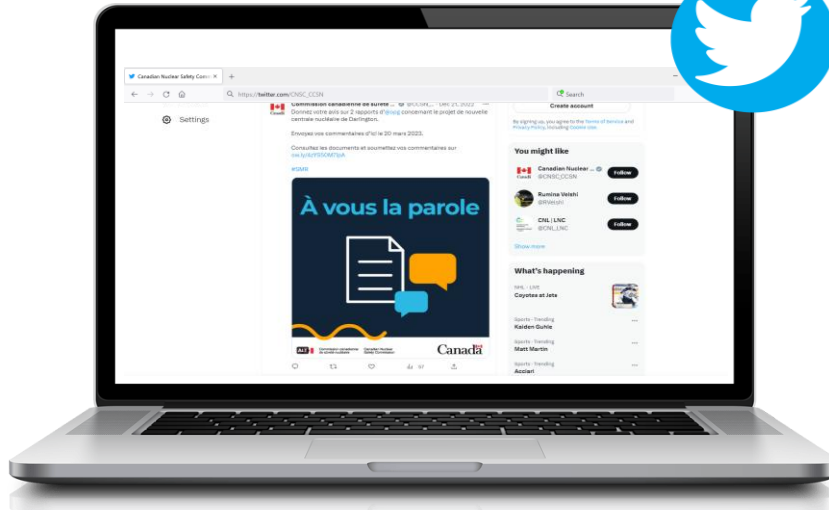
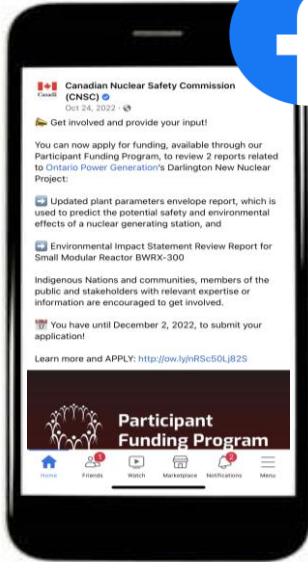
# DNNP Outreach and Engagement

- Project information on [Open Government](#)
- Public DNNP Webinars
  - Held in November 2022 ([link to recording](#))
  - Upcoming: June/November 2023 & Spring/Fall 2024
- DNNP Workshop held April 4, 2023
  - To discuss comments on OPG EIS and PPE documents
  - What We Heard report – **In progress**
- DNNP Project Bulletins
  - Providing regular updates on project status – **In progress**
- Open House – September 2023
  - In the Municipality of Clarington
  - Includes all nuclear projects in the area (e.g., CNL, OPG)





# Stay Connected



Canadian Nuclear Safety Commission – Commission canadienne de la sûreté nucléaire  
22,451 followers  
5mo • Edited •

Join us on November 15 for a webinar on the licensing review for Ontario Power Generation's (OPG) proposed Darlington New Nuclear Project.

OPG currently holds a site preparation licence for the project and intends to submit a licence to construct application in October 2022.

The purpose of the webinar is to:

- Familiarize the public with the project and its activities
- Discuss our licensing process and OPG's licence application
- Provide information on participant funding to review reports for the project
- Answer questions about the project and the regulatory process

Register now at <http://ow.ly/6L7150LeA6z>

Le 22 novembre, assistez au webinaire sur l'examen de la demande de permis d'Ontario Power Generation (OPG) pour son projet de nouvelle centrale nucléaire de Darlington.

OPG détient actuellement un permis de préparation de l'emplacement pour le projet et a l'intention de présenter une demande de permis de construction en octobre 2022.

Ce webinaire vise à:

- Renseigner le public sur le projet et les activités connexes
- Discuter de notre processus d'autorisation et de la demande de permis d'OPG
- Fournir des renseignements sur l'aide financière offerte aux participants pour les aider à examiner les rapports pour le projet
- Répondre aux questions au sujet du projet et du processus de réglementation

Inscrivez-vous dès maintenant sur <http://ow.ly/86IP50LeA6y>

See translation





# Acronyms

CMD	Commission Member Document
CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
DNNP	Darlington New Nuclear Project
EA	Environmental Assessment
EIS	Environmental Impact Statement
IAA	Impact Assessment Act
JRP	Joint Review Panel
LTC	Licence to Construct
Mwe	Megawatt Electric
OPG	Ontario Power Generation
PDP	Public Disclosure Program
PFP	Public Funding Program
PPE	Plant Parameter Envelope
REGDOC	Regulatory Document
SRWMS	Solid Radioactive Waste Management Strategy



# Connect With Us

Join the conversation



[nuclearsafety.gc.ca](https://nuclearsafety.gc.ca)



1-800-668-5284

General inquiries: [cnscccsn@nsc-ccsn.gc.ca](mailto:cnscccsn@nsc-ccsn.gc.ca)

Project specific inquiries: [dnp-npnd@nsc-ccsn.gc.ca](mailto:dnp-npnd@nsc-ccsn.gc.ca)