

Commission canadienne de sûreté nucléaire



Assessment of Ontario Power Generation's Application for a Licence to Construct a BWRX-300 Reactor at the DNNP Site



CNSC Staff Presentation

Commission Hearing – Part 1

October 2, 2024 CMD 24-H3.A

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Presentation Outline

- Purpose of Hearing
- Regulatory Approach
- Darlington New Nuclear Project (DNNP) Licence to Construct (LTC) Regulatory Review Process
- CNSC Staff Assessment of Licence Application
- Indigenous Consultation and Engagement
- Proposed Licence and Draft Licence Conditions Handbook
- Regulatory Oversight Phased Construction Verification and Regulatory Hold Points
- DNNP Outreach and Engagement
- CNSC Staff Conclusions and Recommendations



Purpose of Hearing

- Ontario Power Generation (OPG) applied to the Commission for:
 - A licence to authorize construction of a single BWRX-300 reactor facility
- CMD 24-H3 includes CNSC staff analysis and recommendations with respect to the following:
 - Update on consultation and agreement with Indigenous Nations and communities
 - OPG's application and its request for a licensing decision under the Nuclear and Safety Control Act (NSCA)
 - A decision on the acceptance of the OPG Financial Guarantee
 - Delegation of authority for administration of Regulatory Hold Points



Regulatory Approach

- The CNSC applies a risk-informed approach to regulation, focusing on the safety risks for each licensing phase
 - For the construction phase, CNSC staff focus is primarily on conventional safety risk and establishing the safety case
- Compliance Oversight
 - Phased Construction Verification
 - Use of Regulatory Hold Points
- International Collaboration and Leveraging of Information
 - Memoranda of Cooperation (MOC) with other national nuclear regulators

CNSC's performance-based regulatory framework is well-suited for the evaluation of novel reactor technologies



The Regulatory Review Process

Environmental Assessment (EA) applicability to the BWRX-300 technology:

 The April 2024 Commission <u>Record of Decision</u> determined the technology fits within the bounds of the approved DNNP EA

Licensing assessment under NSCA:

- Assess licence application against the CNSC regulatory framework for all aspects relevant to construction
- Following Canadian requirements and international best practices



A Brief History of the DNNP

JRP Decision and EA Report



2012

Concluded DNNP unlikely to cause significant adverse environmental effects.

2011

Issued 67 Recommendations. Commission issued a 10year LTPS, to allow site preparation work for potential construction.

2022

LTPS

Renewal

Decision

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Public Hearing held with submissions from Indigenous Nations and communities and environmental groups. Commission renewed the LTPS until 2031.



Applicability Decision

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2024

Public Hearing held to determine whether EA remains valid for four BWRX-300 reactors. Commission determined that a new EA is not required.



Results on the Environmental Assessment Applicability

CNSC staff assessed the parameters of the bounding scenario in the EA and concluded that OPG:

Mitigation measures are adequate to ensure there are no residual adverse environmental effects

The Commission determined that the existing EA for the DNNP is applicable to the BWRX-300 reactor.

- This Commission Decision did not authorize the construction of a BWRX-300 reactor
- Following this decision, CNSC staff proceeded with this Hearing on OPG's application to construct one BWRX-300 reactor

As a result of this decision, CNSC staff proceeded with this Hearing on the OPG application for a licence to construct one BWRX 300 reactor. LTC BWRX-300 Reactor - October 2, 2024, CMD 24-H3.A



DNNP LTC Regulatory Review Process Overview

NVIRONMENTAL MONITORING THROUGHOUT LIFECYCLE OF PROJECT



ONGOING INDIGENOUS AND PUBLIC INVOLVEMEN

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CNSC CCS

CNSC STAFF ASSESSMENT OF LICENCE APPLICATION



OPG Construction Application

OPG applied, in accordance with the NSCA and associated regulations, for a licence to construct to:

- Construct one BWRX-300 Powerblock, which includes the structures, systems and components (SSCs) associated with the Reactor Building, Turbine Building, Control Building, and the Radwaste Building
- **Construct supporting infrastructure** for up to four BWRX-300 reactors
- Inspect and test installed SSCs, and conduct fuel-out commissioning
- Complete remaining licensed activities under the existing site preparation licence

Licensed activities would not allow for nuclear fuel to be on site



CNSC Staff Assessment

CNSC staff reviewed the application using the NSCA and associated regulations, including *Class 1 Nuclear Facilities Regulations* and *General Nuclear Safety Regulations*. CNSC staff also leveraged modern codes, standards, and guidance, both domestic and international, to support the review.

CNSC staff assessment considered OPG's:

- Licence application and supporting technical documentation
- Existing programs, processes and procedures, as they would apply to the proposed BWRX-300 construction
- Implementation plans for new programs, processes and procedures
- Public information, community outreach, and Indigenous engagement activities
- Performance history

CNSC staff leveraged regulatory experience and technical information from other national nuclear regulators.

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Safety and Controls Area Framework

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Assessment of Management System (1)

OPG proposes using an Integrated Project Delivery (IPD) contract model for the construction phase.

- Each contractor has a defined scope of work and are required to follow their quality assurance program and management system
- Contractor organizations are integrated into a single
 Contract Partner Team, reporting to an integrated
 leadership team

OPG maintains overall ownership and accountability, and CNSC staff will conduct verification activities to ensure OPG remains an informed customer.



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Assessment of Management System (2)

For this SCA, OPG submitted documentation covering various Management System aspects, including Construction and Commissioning program elements.

CNSC staff assessed and confirmed that OPG and its contract partners have:

- Established agreements and arrangements to manage safe conduct of licensed activities at the DNNP
- Plans to develop, implement, and maintain procedures and conduct licensed activities in accordance with the OPG management system and project governance
- Committed to submit detailed management system documentation to support each phase of construction and commissioning

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>GNSCR</u>, sections 27, 28, paragraph 3(1)(k)
- The <u>C1NFR</u>, paragraph 3(d), 5(c), 5(g)

Regulatory Expectations:

- **REGDOC-1.1.2** Licence Application Guide: Licence to Construct a Reactor Facility
- CSA N286 Management System Requirements for Nuclear Facilities

CNSC staff will verify OPG management system implementation at each phase of construction and commissioning



Assessment of Operating Performance (1)

For this SCA, OPG submitted documentation covering several key operational elements, including the Construction and Commissioning program.

CNSC staff assessment of the OPG construction and commissioning programs is informed by:

 Regulatory experience gained from oversight applied to CANDU refurbishment projects, including the use of regulatory hold points to verify compliance

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>GNSCR</u>, sections 29-32, paragraphs 3(1)(b), 3(1)(c), 12(1)(e)
- The <u>C1NFR</u>, paragraph 5(c)

Regulatory Expectations:

- **REGDOC-1.1.2** Licence Application Guide: Licence to Construct a Reactor Facility
- REGDOC-2.3.1 Conduct of Licensed Activities: Construction and Commissioning Programs



Assessment of Operating Performance (2)

CNSC staff assessed and confirmed that OPG has:

- Described the scope of its construction program, proposed construction activities, and committed to provide a more detailed construction schedule
- Provisions in place to continue to meet the reporting requirements as per REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants* throughout construction

OPG will be required to provide regular updates on the conduct of licensed activities



Assessment of Safety Analysis (1)

- Safety Analysis is an iterative process that continues throughout the lifecycle of a nuclear facility
- Typically involves three (3) development stages in line with international best practices:
 - Preliminary safety analysis report (PSAR), which includes the basis for authorization of construction
 - Pre-operational safety analysis report (POSAR), which is an update to the PSAR and is used as the basis for authorization of operation
 - Final safety analysis report (FSAR), which is an update to the POSAR to reflect design modifications from commissioning and testing



Assessment of Safety Analysis (2)

For this SCA, OPG submitted documentation covering various Design and Safety Analysis aspects, including required safety analysis reports and assessments.

OPG submitted the Preliminary Safety Analysis Report (PSAR) which follows a safety strategy framework that includes deterministic safety analysis, probabilistic safety assessment, and hazards analysis.

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>GNSCR</u>, paragraph 3(1)(i)
- The <u>C1NFR</u>, paragraph 5(f)

Regulatory Expectations:

- **REGDOC-2.4.1** Deterministic Safety Analysis
- **REGDOC-2.4.2** Probabilistic Safety Assessment (PSA) for Nuclear Power Plants
- **REGDOC-2.4.3** Nuclear Criticality Safety
- **REGDOC-2.5.2** Design of Reactor Facilities

Preliminary Safety Analysis Report is commensurate with the level of design details



Assessment of Safety Analysis (3)

CNSC staff determined the level of information provided in the PSAR, with commitments outlined in CMD 24-H3 Appendix D.2, is sufficient to recommend a licence to construct.

Based on the information provided in the PSAR, CNSC staff assessed and confirmed that OPG:

- Has acceptable safety analysis methodologies
- Will meet the core damage and large release frequency safety goals specified in REGDOC-2.5.2
- Committed to submit additional details to demonstrate meeting the regulatory expectations as the BWRX-300 safety analysis progresses

As the safety analysis progresses, CNSC staff will continue to verify adequacy of the safety case



Assessment of Physical Design (1)

For this SCA, OPG submitted documentation covering various aspects of the design of the facility.

CNSC staff determined that the level of information provided for reactor design, with commitments outlined in CMD 24-H3 Appendix D.2, is sufficient to recommend a licence to construct.

Focused regulatory review teams established on the following key design aspects:

- Safety Strategy and Safety Classification
- Break Exclusion Zone Methodology
- Steel-Plate Composite Containment Vessel and Reactor Building Structural Design
- Code Variance to CSA N285.0 Pressure-Retaining Systems and Components
- Alternative Approach to Containment Isolation
- Means of Shutdown

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>GNSCR</u>, paragraphs 3(1)(d), 3(1)(i)
- The <u>C1NFR</u>, paragraphs 3(a), 3(b), 5(a), 5(b), 5(d), 5(e), 5(g)
- The <u>NSR</u>, section 16, paragraph 3(b)

Regulatory Expectations:

- **REGDOC-1.1.2** Licence Application Guide: Licence to Construct a Reactor Facility
- **REGDOC-2.5.2** Design of Reactor Facilities



Assessment of Physical Design (2)

- The OPG approach to the safety classification of Structures, Systems, and Components follows the implementation of the defence in depth principles
 - CNSC staff concur with the highest Safety Class 1 approach
 - OPG will be required to provide additional information on Safety Class 2 and 3 approaches
- OPG proposes to apply the Break Exclusion Zone (BEZ) concept for the BWRX-300
 - Application on a larger scale than previously implemented in operating reactors
 - OPG will be required to provide technical information supporting the use of this concept at the extent of the proposed BEZ implementation
- Use of Diaphragm-Plate Steel Composite (DP-SC) for structures
 - No Canadian design codes are directly applicable to the proposed DP-SC; however, OPG will implement applicable sections of Canadian standards



Assessment of Physical Design (3)

- Use of USNRC rules as an alternative to CSA N285.0 code classification rules
 - OPG will be required to demonstrate that the implementation of alternative rules will result in an equivalent level of safety in its subsequent submissions

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- Alternative approach to Containment Isolation
 - Each system line that penetrates containment has dual redundant in-line containment isolation valves that automatically closes during accident scenarios with 5 system exceptions
 - OPG will be required to provide additional information as the design progresses
- Alternative approach to Means of Shutdown
 - Reliance on Control Rods to shutdown reactor (hydraulic driven as the primary mean and electric motor driven as the backup)
 - OPG will be required to demonstrate adequate functional independence of these separate means of actuation



Assessment of Physical Design (4)

Based on the information provided, CNSC staff assessed and confirmed that OPG has:

- Ensured site suitability for continued nuclear development
- Provisions in place to ensure ALARA principles are incorporated in the design of the reactor facility
- Adequate documentation to control, manage, assess, and evaluate changes to the design of the reactor facility
- Committed to provide additional technical information to demonstrate meeting the regulatory expectations as the design progresses



Assessment of Environmental Protection

- For this SCA, OPG submitted documentation covering the revision of the Environmental Monitoring and Environmental Assessment Follow-Up program
- During construction, the DNNP will not produce any radiological releases

CNSC staff assessed and confirmed that OPG has:

- Demonstrated a continued commitment to meet regulatory expectations and will continue to make adequate provisions to protect the public and the environment
- Committed to provide a Predictive Environmental Risk Assessment reflective of construction activities and an updated Environmental Management and Protection Plan to include construction activities

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>CEAA (1992)</u>
- The <u>CEPA</u>
- The <u>GNSCR</u>, paragraphs 12(1)(c), 12(1)(f), 17(b), 17(c)(i), 17(c)(v), 17(e)
- The <u>C1NFR</u>, paragraphs 3(e), 3(g), 3(h), 5(b), 5(i), 5(j), 5(k)

Regulatory Expectations:

• **REGDOC-2.9.1** – Environmental Principles, Assessments and Protection Measures

CNSC staff continue to verify OPG's implementation of mitigation measures identified in the EA follow-up monitoring program throughout construction



Assessment of Waste Management

For this SCA, OPG submitted documentation covering waste management strategy and preliminary decommissioning plans.

CNSC staff assessed and confirmed that OPG has:

- Adequately described the proposed activities for decommissioning the facility and provided an accurate cost estimate for activities listed in the PDP
- Committed to provide detailed information on the characterization and management of hazardous wastes during construction

No nuclear fuel will be authorized to be on site, and no nuclear waste will be generated during the construction phase.

Regulatory Requirements:

- The <u>NSCA</u>, subsection 24(4)
- The <u>GNSCR</u>, paragraphs 3(1)(j), 12(1)(c), 12(1)(f)
- The <u>C1NFR</u>, paragraphs 3(e), 5(j), 5(k)

Regulatory Expectations:

- REGDOC-2.11.1 Waste Management Volume I: Management of Radioactive Waste
- **REGDOC-2.11.2** Decommissioning

Prior to fuel-in commissioning, OPG will be required to apply to construct an interim radioactive waste storage facility, which would require a Commission decision



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INDIGENOUS CONSULTATION AND ENGAGEMENT



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- Background and Context for consultation and engagement related to the DNNP
- Consultation activities specific to the DNNP LTC application
- CNSC staff's commitments to Indigenous Nations and communities
- Next steps



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BACKGROUND AND CONTEXT





Approach to consultation with Indigenous Nations and communities (1)

CNSC staff approach to consultation with Indigenous Nations and communities is guided by:

- The CNSC commitment to Reconciliation
- The Duty to Consult, and where appropriate, Accommodate
- United Nations Declaration on the Rights of Indigenous Peoples Act
- REGDOC-3.2.2, Indigenous Engagement

Public and Indigenous Engagement Indigenous Engagement

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Canada

REGDOC-3.2.2, Version 1.2

February 2022



Approach to consultation with Indigenous Nations and communities (2)

The CNSC's approach to consultation is mindful of the principles articulated in the **United Nations Declaration on the Rights of Indigenous Peoples Act** (UNDA), including Free, Prior and Informed Consent (FPIC).

The CNSC is currently using the following sources of guidance on FPIC:

- Principles Respecting the Government of Canada's Relationship with Indigenous Peoples
- Backgrounder: United Nations Declaration on the Rights of Indigenous Peoples Act



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Asserted or Established Indigenous and/or Treaty Rights

The DNNP site is located within the the Johnson-Butler Purchase, also referred to as the "Gunshot Treaty" (1787-88), the Williams Treaties (1923), and the lands that are subject to the Williams Treaties First Nations Settlement Agreement (2018).



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Identified Indigenous Nations and communities

CNSC staff identified the following Indigenous Nations and communities who have Indigenous and/or Treaty Rights in the area where the DNNP is proposed:

Williams Treaties First Nations

- Alderville First Nation
- Beausoleil First Nation
- Chippewas of Georgina Island First Nation
- Chippewas of Rama First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Mississaugas of Scugog Island First Nation

CNSC staff have identified the following Indigenous Nations and communities that have expressed an interest in the DNNP:

- Métis Nation of Ontario
- Mohawks of the Bay of Quinte
- Saugeen Ojibway Nation
- Six Nations of the Grand River

Indigenous Nations and communities are listed in alphabetical order



Timeline of Consultation and Engagement for the DNNP

| 2007 | 2011 and 2012 | 2020 and 2021 | May 2022 | Oct. 2022 – Jan. 2025 | Ongoing |
|---|--|---|---|---|---|
| Opportunities for consultation began on the DNNP Environmental Assessment (EA) and was ongoing up to and including the Joint Review Panel hearings Participant funding made available in 2008 and 2009 | Joint Review Panel hearings, with interventions from Indigenous Nations and communities Joint Review Panel Decision on the EA and Licence to Prepare Site (LTPS) | OPG submits application to renew the LTPS Opportunities for engagement conducted on the application and participant funding made available Commission hearing held, with interventions from Indigenous Nations and communities | Initial notification of the expected Licence to Construct (LTC) application Initial consultation and engagement offered, and initial meetings held with interested Indigenous Nations and communities | Consultation efforts for both EA applicability determination and LTC application January 2024 hearing January 2025 Part 2 hearing Three stages of Participant funding made available | Lifecycle consultation and engagement related to DNNP, should the project proceed |

Renewal of LTPS

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CONSULTATION ACTIVITIES





Consultation and engagement activities with ³⁵ identified Indigenous Nations and communities (1)

- Initial notification sent in May 2022 and formal notification of LTC application in November 2022
- Monitoring OPG's engagement activities in accordance with REGDOC-3.2.2
- Inviting Indigenous Nations and communities to webinars, open house and workshop
- Providing information and offering opportunities to review the CNSC staff technical assessment of OPG's Licence to Construct application and related programs, documents and reports



Consultation and engagement activities with ³⁶ identified Indigenous Nations and communities (2)

- Providing written correspondence, updates and having meetings in-person and virtually at key milestones
- Providing funding and capacity support through the Participant Funding Program (PFP) and the Indigenous and Stakeholder Capacity Fund (ISCF)
- Encouraging participation at the Part 2 Commission Hearing
- Efforts to collaborate on sections of the CNSC Consultation Report with several of the identified Nations and communities
- Efforts to collaborate on specific issues and concerns tracking tables for each Nation and community who has raised concerns and formally responding to issues raised and identified



Curve Lake First Nation (CLFN)

Key consultation activities:

- Regular monthly meetings under signed Terms of Reference for long-term engagement
- DNNP specific tri-party meeting between CLFN, CNSC staff and OPG
- Assessing potential impacts on CLFN rights
- Presentation to CLFN's Consultation Committee
- DNNP specific meeting with four Mississauga Nations and OPG
- Relationship building activities and cultural experiences
- Funding support provided

Key concerns and views related to LTC as expressed by Curve Lake First Nation

- Importance of long-term relationship building with CNSC and OPG.
- Importance of continued commitment to avoid, mitigate, compensate and accommodate potential impacts from the DNNP on Rights and interests.



Hiawatha First Nation (HFN)

Key consultation activities:

- Regular monthly meetings under signed Terms of Reference for long-term engagement
- Tri-party meeting with HFN, CNSC staff and OPG
- Working to understand and to assess potential impacts on rights
- Review and efforts to collaborate on key documents
- Meetings with community representatives and Chief and Council
- Funding support provided
- Relationship building activities and community visits

Key concerns and views related to LTC as expressed by Hiawatha First Nation

- Importance of gathering and applying
 Indigenous Knowledge in CNSC
 decisions being made in relation to the
 DNNP
- Cumulative effects on the environment and impact to rights
- Information and **knowledge gap** related to culture and rights practices
- Concern regarding the accelerated timelines of DNNP
- Need to identify appropriate mitigation and accommodation measures



The Mississaugas of Scugog Island First Nation (MSIFN)

Key consultation activities:

- Regular monthly meetings under signed Terms of Reference for long-term engagement
- DNNP specific meetings with CNSC experts
- DNNP specific tri-party meeting with MSIFN Leadership, OPG and CNSC staff
- Assessing potential impacts on MSIFN rights
- DNNP specific meeting with four Mississauga Nations and OPG
- Written responses to questions and concerns
- Funding support provided

Key concerns and views related to LTC as expressed by MSIFN

- Requirement for OPG to obtain consent from MSIFN for all licensing processes in the treaty area
- **Objection** to the CNSC's approach to assessing impacts to Rights from the LTC application, supported by legal opinion
- Requirement for binding commitments from OPG and the CNSC to address concerns
- Objection to using a 2009 EA and requirement for detailed information on potential impacts based on a collaborative approach using the more comprehensive Impact Assessment legislation and UNDA
- Concern about the absence of confirmed plans for managing used nuclear fuel generated by DNNP



Other Williams Treaties First Nations

- Included in all consultation opportunities, public webinars and correspondence
- Direct follow up through phone calls and emails multiple times through the process and at key milestones
- Introductory meetings, including discussions on DNNP

To date, there has been no interest expressed in further consultation on the DNNP LTC application and no specific issues or concerns raised to the CNSC Alderville First Nation Beausoleil First Nation Chippewas of Georgina Island First Nation Chippewas of Rama First Nation

CNSC staff are committed to continued outreach, engagement and consultation



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COMMITMENTS AND NEXT STEPS FOR INDIGENOUS CONSULTATION





CNSC Staff Commitments to Date for Consultation

 Supporting an Indigenous Knowledge study and Cumulative Effects assessment with the potentially impacted Williams Treaties First Nations (WTFN)

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- Incorporation of the outcomes of these studies into the CNSC's ongoing oversight and future regulatory phases of the DNNP with the goal of ensuring identified Rights and interests remain protected
- Ongoing engagement and consultation for the DNNP including discussions through the Terms of Reference for long-term engagement, as well as ongoing involvement in the CNSC's Independent Environmental Monitoring Program
- Ongoing oversight of OPG's commitments, through proposed Licence condition 15.4



Next Steps for Consultation

- Continue to consult and finalize assessment on potential impacts to rights
- Encourage all Indigenous Nations and communities to bring forward additional information or concerns through the Part 2 Commission Hearing Process
- Supplemental submission will be provided to the Commission in December 2024, which will include:
 - Update on CNSC consultation activities and assessment of OPG's engagement activities
 - Final list of CNSC staff's commitments
 - CNSC staff recommendations and conclusions related to the Duty to Consult and, where appropriate, accommodate, including assessment of potential impacts on rights from the DNNP LTC



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PROPOSED LICENCE AND DRAFT LICENCE CONDITIONS HANDBOOK





Proposed Licence and Draft Licence Conditions Handbook

- Proposed Power Reactor Construction Licence (PRCL):
 - Authorizes the licensed activities
 - Contains standard SCA-based licence conditions, as well as site-specific licence conditions
- Draft Licence Conditions Handbook (LCH):
 - Describes compliance verification criteria (CVC) for each licence condition
 - Identifies applicable regulatory documents and standards
 - Provides guidance
 - Provides the process for removing regulatory hold points

OPG must seek Commission approval for any change to licensed activities



Proposed Site-Specific Licence Conditions

- **15.1** The licensee shall implement the mitigation measures proposed, and commitments made during the Darlington Joint Review Panel process, including the applicable recommendations of the Darlington Joint Review Panel Report, in accordance with the Government of Canada response.
- **15.2** The licensee shall implement and maintain an environmental assessment follow-up program.
- **15.3** The licensee shall obtain the approval of the Commission, or consent of a person authorized by the Commission, prior to the removal of established regulatory hold points.
- **15.4** The licensee shall conduct Indigenous engagement activities, specific to the DNNP, throughout the period of this licence.



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REGULATORY OVERSIGHT – PHASED CONSTRUCTION VERIFICATION AND REGULATORY HOLD POINTS



Regulatory Hold Points

CNSC staff propose three (3) Regulatory Hold Points

- Pre-requisite commitments required to be met prior to removal of regulatory hold point
 - The draft Licence Conditions Handbook describes details of pre-requisites
- OPG commitments to provide additional information are detailed throughout CMD 24-H3
- CNSC has robust processes to ensure all verification activities have been conducted before recommending the removal of a regulatory hold point

Regulatory Hold Points

- Installation of the Reactor Building Foundation
- 2. Installation of the Reactor Pressure Vessel
- 3. Fuel-Out Commissioning



Regulatory Hold Point Process

Licensee submits request to remove the RHP, and submits documentation in support of completion of prerequisites described in LCH or in Protocol **CNSC staff review** the licensee request to verify work has been completed CNSC staff submit a report containing a recommendation describing the basis for the removal of the RHP Results of the review (including decision) communicated to licensee, Indigenous Nations and communities, the Public, and Commission

CNSC staff will review OPG submissions and conduct oversight to verify completion of pre-requisites prior to a potential removal of a regulatory hold point



Pre-Requisites for Removal of Regulatory Hold Point

CNSC staff will confirm whether the following pre-requisites have been met:

- Completion of commitments as summarized in Appendix D.2 in CMD 24-H3
- Workers are trained and qualified, as required
- SSCs meet quality and completion requirements of CSA N286
- Any non-conformances and open action items are addressed

If satisfied, CNSC staff will recommend that the Commission or delegated authority remove the hold point and provide notice to the licensee, Indigenous Nations and communities, and the public.

Regulatory Hold Points

- Installation of the Reactor Building Foundation
- Installation of the Reactor
 Pressure Vessel
- 3. Fuel-Out Commissioning



OPG Estimated Construction Timelines

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*Dependent on OPG satisfying CNSC RHP pre-requisites

RHP-1 January 2026*

Installation of Reactor Building Foundation

Examples of Activities:

- Installation of the Reactor Building foundation
- Construction of CCW
- Construction of the BWRX-300
 Powerblock structures

RHP-2 July 2027*

Installation of Reactor Pressure Vessel

Examples of Activities:

- Installation of Reactor Pressure Vessel (RPV)
- Connection of Main Steam and Feedwater system supply lines to Nuclear Island

3 RHP-2 August 2028* Fuel-Out Commissioning

Examples of Activities:

- Testing of installed pressure retaining systems and components
- Testing of structures, systems, and components



No nuclear activities will be conducted as part of the DNNP construction



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DNNP OUTREACH AND ENGAGEMENT



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DNNP Outreach and Engagement



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Participant Funding Program

OPG Licence to Construct (LTC) Application

For involvement in the process for LTC Hearing: \$191,863.98 awarded February 2024

- Mississaugas of Scugog Island First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Chippewas of Georgina Island First Nation
- Saugeen Ojibway Nation
- Métis Nation of Ontario
- Nuclear Transparency Project
- Canadian Coalition for Nuclear Responsibility
- Canadian Environmental Law Association
- Northwatch
- Mr. Paul Sedran



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CNSC STAFF CONCLUSIONS AND RECOMMENDATIONS





CNSC Staff Conclusions

Based on a licensing regulatory review and technical assessment, CNSC staff have determined that:

- The application to construct one BWRX-300 Powerblock at the DNNP site meets applicable regulatory requirements
- 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

OPG is required to continue to address Joint Review Panel (JRP) Recommendations under the proposed Licence Condition 15.1

CNSC Staff Recommendations

CNSC staff recommend that the Commission:

- **Determine** whether the CNSC has upheld the honour of the Crown and fulfilled its obligations to consult and, where appropriate, accommodate Indigenous peoples
- Conclude that OPG:
 - Is qualified to carry on the activities authorized by the licence
 - Will make adequate provision for the protection of the environment,
 the health and safety of persons and the maintenance of national security
 and measures required to implement international obligations to which Canada has agreed
- Authorize OPG to construct a single BWRX-300 reactor at the DNNP site, subject to the conditions outlined in the proposed licence and regulatory hold points
- Accept the OPG Financial Guarantee
- **Delegate** authority to CNSC staff for the administration of the regulatory hold points





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