



Ontario Power Generation - Canadian Nuclear Safety Commission Staff Protocol for the Darlington New Nuclear Project Licence To Construct Application

February 2023



Summary of Changes

| Revision No. | Date revised | Section | Description of change |
|---------------------|---------------------|----------------|---|
| 0 | 2021-12-22 | All | Revision 0 of the document. |
| 1 | 2023-02-20 | All | Updated to reflect submission of licence to construct application |
| | | | |

This protocol is strictly administrative in nature. None of the statements in this protocol are to be construed or interpreted as constituting a contract, or as affecting the jurisdiction or discretionary powers of the Canadian Nuclear Safety Commission (CNSC) in its assessments of licence applications made in accordance with the *Nuclear Safety and Control Act* (NSCA).

Nothing in this Protocol fetters the powers, duties, or discretion of CNSC staff or the Commission respecting regulatory decisions or taking regulatory action. Also, this protocol does not change in any way any applicable laws or regulations, application requirements or hearing process as set by the *CNSC Rules of Procedure*¹.

The timelines outlined in this protocol provide a transparent and reasonable outline of what may be expected from a regulatory perspective, but do not, and cannot, bind CNSC staff or Ontario Power Generation – Darlington New Nuclear Project (hereto referred to as OPG) in any legally enforceable manner.

This protocol does not, in any way, affect or influence the Commission decision on OPG's application for a Licence to Construct (LTC).

¹ *Canadian Nuclear Safety Commission Rules of Procedure*, SOR/2000-211.

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1. INTRODUCTION

1.1. Purpose

Ontario Power Generation (OPG) has a project for the site preparation, construction, operation, decommissioning and abandonment of a new nuclear generating station at its existing Darlington Nuclear Generating Station site, located along the north shore of Lake Ontario, in the Municipality of Clarington. The current project scope for Darlington New Nuclear Project (DNNP) is to construct and operate a Small Modular Reactor (SMR) of approximately 300 Megawatt-electric (MWe) as early as 2028.

The environmental assessment (EA) for the DNNP was completed and OPG currently holds Nuclear Power Reactor Site Preparation Licence (PRSL) 18.00/2031. OPG submitted a Licence to Construct application in October 2022. A Commission decision regarding JRP recommendation # 1 is required, which states:

“The Panel understands that prior to construction, the Canadian Nuclear Safety Commission (CNSC) 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 PPE, the Panel recommends that a new environmental assessment be conducted.”

In addition, the Government of Canada provided a response to the recommendation, stating:

“The Government of Canada accepts the intent of this recommendation, but acknowledges that any RA under the CEAA will need to determine whether the future proposal by the proponent is fundamentally different from the specific reactor technologies assessed by the JRP and if a new EA is required under the CEAA.”

A Commission decision regarding the licence to construct application is also required.

Recognizing the importance of project schedule and scope, the purpose of this document is to:

- establish a communication process (formal and informal) between OPG and CNSC staff;
- provide a framework within which CNSC staff will perform a technical assessment of the application and supporting documentation to make a recommendation to the Commission on OPG’s application for a Licence to Construct.

Target dates for deliverables and milestones are described in OPG’s LTC Application Plan (NK054-PLAN-01210-00007) and Section 4.2 in this protocol.

This protocol should be followed to allow for open and transparent processes that do not fetter the discretion of the Commission.

1.2. Scope

This protocol will come into effect on the date of the last signature to this protocol. It will terminate on the date that the Commission announces its licensing decision on OPG's Licence to Construct application.

1.3. Document Security

The CNSC follows the *Policy on Government Security, Access to Information Act* and *Privacy Act* for information management. It is important for OPG to classify the submitted documents at the appropriate levels, to ensure that CNSC staff that need it, have access to the information to perform the review.

1.4. Exchange of information

The exchange of correspondence between OPG and CNSC staff should be effectively coordinated, managed, retained, and retrievable by both participants. The following principles will be applied:

- Communication between OPG and CNSC staff will be controlled using the single point of contact (SPOC) approach.
- The information exchanged will reflect the position of OPG or the CNSC staff – not of the persons involved.
- OPG and CNSC subject matter experts may communicate directly with each other to request clarification or to share information. SPOC's must be aware and involved as required.

There are two types of communication: formal and informal.

1.4.1. Formal Communication

The purpose of formal communication is to document any official regulatory requests or positions from CNSC staff, and for OPG to provide an official response. All formal communication must have a record number associated with it in the corresponding document management systems and captured in action tracking, where appropriate.

1.4.2. Informal Communication

It is a normal and accepted practice that OPG and CNSC staff interact on a regular and informal basis. The basis of this communication is normally to clarify technical points that may relate to administrative, licensing or compliance issues. Neither CNSC staff nor OPG will communicate regulatory positions or application commitments in this manner.

2. ROLES AND RESPONSIBILITIES

The signatories to this protocol have the following roles and responsibilities:

- The CNSC has regulatory and statutory responsibilities under the *Nuclear Safety and Control Act* and its regulations. CNSC staff are responsible for assessing OPG's licence to construct (LTC) application and making a recommendation to the Commission.
- OPG is the applicant and is responsible for submitting adequate and complete information to support the licence application as per regulatory requirements.

For the purposes of this protocol, the CNSC staff shall be represented by the following representatives:

- Director of the Advanced Reactor Licensing Division
- Single Point of Contact, Advanced Reactor Licensing Division

For the purposes of the Protocol, OPG shall be represented by the following representatives:

- Manager, Regulatory Affairs – DNNP Licensing, OPG
- Single Point of Contact, Regulatory Affairs – DNNP Licensing, OPG

CNSC staff and OPG will identify an alternate if a primary team member is unavailable.

3. LONG LEAD ITEMS

Long lead items may include technical or regulatory reviews of structures, systems, components, programs and/or processes. Upon request, CNSC staff will review OPG submissions for long lead items and provide a technical review, including identifying any potential barriers to licensing, or providing concurrence on OPG's methodology and/or approach. It is understood that CNSC staff positions on such items does not and cannot, in any way, bind Commission decisions, and that procurement of such items is entirely at the business risk of OPG. The authority to approve or accept long lead items lies with the Commission as part of its decision-making processes.

4. APPLICATION WORK

CNSC staff will review the application for an LTC in accordance with REGDOC-1.1.2, *Licence Application Guide: Guide to Construct a Reactor Facility, version 2*. Further review criteria are captured in CNSC regulatory and guidance documents and in industry codes and standards applicable to a construction licence.

4.1. Project Schedule

OPG will provide CNSC staff with a project schedule with an overview of the completion of the project, as well as more detailed schedules on components of the project or information that will be required to enable, or are tied to, the accomplishment of scheduled activities.

OPG will update the schedule regularly and will notify CNSC staff of any significant changes in the schedule that are related to the items identified by CNSC staff upon such changes being identified.

4.2. Application Review Time

CNSC staff's review process began when OPG submitted its initial application for a LTC in October 2022. OPG will endeavor to support an expedited licensing process, with an anticipated CNSC staff review time of 24 months, and an expeditious record of decision by the Commission. REGDOC-3.5.1, *Information Dissemination: Licensing Process for Class I Nuclear Facilities and Uranium Mines and Mills*, Version 2, identifies a 32-month timeline for Class 1A nuclear facilities. This timeline includes the application review, preparation of the Commission Member Document and the hearing process.

The 24-month review period is based on the assumption that the information submitted by OPG is sufficiently complete and detailed to allow the regulatory safety assessment and licensing process to proceed efficiently. CNSC staff will endeavor to review the application expeditiously without compromise to the level of effort required to ensure a thorough technical review. CNSC staff also will not compromise on timelines for engagement and consultation with the public and Indigenous groups.

The planned review time may be extended under various circumstances, including, but not limited to:

- any significant changes made to the design or safety analysis of the nuclear power plant;
- any delay in OPG's timelines for submitting packages;
- CNSC receiving complete submissions packages 5 and 6 later than six months after receipt of the initial LTC application;
- the insufficiency of the information provided by OPG. For an expeditious review, the submissions must be complete, comprehensive and of sufficient quality to ensure the review can be carried out in an efficient manner;
- resolution of information requests issued by CNSC staff
- any outstanding issues from compliance under Licence to Prepare Site that impact the assessment of the LTC application;
- any additional time to ensure adequate public and Indigenous engagement and consultation.

In circumstances where the review timelines may be delayed:

- OPG and CNSC staff will communicate review timelines delays to the other as soon as they are reasonably able to;
- CNSC staff will continue reviewing material in other submission packages where possible; and
- OPG and CNSC staff will provide updated estimated timelines for the completion of applicable work and resolutions.

OPG has committed to providing responses to information requests within 40 business days. CNSC staff has committed to providing a response on the sufficiency of OPG’s response within 20 business days. Any OPG delay in responding to information requests may result in delayed timelines.

OPG will notify CNSC staff as early as possible if slippages occur in the schedule of submissions. CNSC staff will attempt to accommodate slippages to the extent practicable.

CNSC staff’s assessment consists of a technical review on the LTC application packages (see Table 1 below).

Table 1 - Detailed technical review LTC application packages

| Package | Topic |
|----------------|--|
| 1 | Management Aspects |
| 2(a)(b) | Design and Safety Analysis |
| 3 | Security |
| 4 | Environmental Monitoring and Environmental Assessment (EA) Follow-up |
| 5 | Core Control Processes and Operations Aspects |
| 6 | Construction and Commissioning Program |

The grouping of submissions will be as follows:

1. LTC Application was submitted with packages 1, 2(a), 2(b) and 3 on October 31, 2022.
2. Package 4 was submitted on November 17, 2022.
3. Packages 5 and 6 are anticipated no later than April 30, 2023.

4.3. Results of the Technical Review

During the technical review, CNSC staff will issue an information request (IR) if it is determined that there is insufficient information available to complete the review. Upon completion of the detailed technical reviews to satisfy each Safety and Control Area, CNSC staff will confirm the closure of any information requests. Once IRs are closed and finalized, the document title will be made available on the CNSC Open Governmental Portal.

4.4. Issue Resolution

CNSC staff will review the Licence to Construct application submitted by OPG to make licensing recommendations to the Commission. Disagreements between OPG and CNSC staff raised during

the review, including differences of opinion or interpretation and application of regulatory documents, will be addressed under issue resolution mechanism.

Nothing in this issue resolution mechanism seeks to bind, or has the effect of binding, the Commission.

Step 1: Identification of the Issue and Resolution at the Project Manager/Working Level

1. Periodic OPG and CNSC licensing or technical review meetings will be held to review progress on the key activities and highlight any potential major issues. Minimum attendance at these review meetings will be the Licensing SPOC for CNSC staff and OPG but may include technical SPOCs as well.
2. It is the intention of both participants to resolve issues at this level.
3. If an issue cannot be resolved at this level, it will be documented (typically, a brief factual summary of the issue and a paragraph representing the view of each organization) within one week of the indecision and forwarded to the Director/Manager Level (Step 2).

Step 2: Resolution at the Director/ Manager Level

1. A Step 1 issue, once documented, will be provided to the CNSC Director of the Advanced Reactor Licensing Division and OPG Manager, Regulatory Affairs – DNNP Licensing. A meeting will be called, normally within 7 business days, to resolve the issue, and the resolution documented.
2. Issues which cannot be resolved at this level will be referred to the Executive Level (Step 3) within 10 business days, supported by the original or revised documentation from Step 1 and any additional documentation from Step 2.

Step 3: Resolution at the Executive Level

1. A Step 2 issue with documentation will be sent to the CNSC Director General, Directorate of Advanced Reactor Technologies and OPG Director, Nuclear Regulatory Affairs. A meeting will be called, normally within 30 days, to resolve the issue and the resolution documented. In exceptional circumstances, CNSC Executive Vice President & Chief Regulatory Operations Officer and OPG Sr Vice President – Enterprise Engineering and Chief Nuclear Engineer will resolve issues that remain outstanding from Step 3. If the issue cannot be resolved at CNSC staff level, the issue will be presented to the Commission for decision as part of the licensing process.

4.5. Managing Change

When a proposed change has a potential impact on the review of OPG’s licence to construct application itself, the change will be submitted to the CNSC as a formal notification. Any changes to the LTC application and/or supporting documents that have a potential impact on the design and safety and control measures contained within the application, will be communicated as “notification requiring CNSC” concurrence as per the OPGs standard process, as these changes may impact the conclusions of CNSC technical review. Changes will be communicated on a quarterly basis.

4.6. Interfacing with other Jurisdictions

OPG and CNSC staff will identify areas of coordination with various jurisdictions in the federal, provincial, and municipal level. Where possible, CNSC staff will provide a single window approach to coordination of review efforts in its role as the regulator.

4.7. Project Communications

Monthly meetings will be held between OPG and CNSC staff at the project management team level to discuss the review progress and highlight any potential major issues.

On a quarterly basis or more frequently, manager level meetings will be held between OPG and CNSC staff to discuss the overall progress for the project and any issues as required.

4.8. Licence to Construct Commitments

There are a number of regulatory commitments related to the DNNP, as specified in the DNNP Commitments Report (NK054-REP-01210-00078). These activities, and deliverables associated with these regulatory commitments, must be completed as part of the Licence to Construct Application. OPG will make submissions for these regulatory commitments as per the DNNP Commitments Report.

5. REVISIONS OF THE PROTOCOL

Significant material revisions of this protocol shall be coordinated by the managers and approved by the signatories of this protocol. Managers can approve minor revisions (e.g., editorial corrections, clarification of text or updates to organizational structure) to this protocol.

6. APPROVAL BY SIGNATORIES

The participants hereto have signed the protocol, in counterpart, on the dates indicated below.

Mark Knutson
Sr Vice President – Enterprise Engineering and Chief
Nuclear Engineer Ontario Power Generation Inc.

Date

Ramzi Jammal
Executive Vice-President and
Chief Regulatory Operations Officer
Canadian Nuclear Safety Commission

Date