



# Protocol Between Ontario Power Generation and Canadian Nuclear Safety Commission Staff for the Darlington New Nuclear Project: Pre-Construction and Construction Licence Application Activities

December 2021



### Summary of Changes

Revision No.	Date revised	Section	Description of change
0	2021-12-22	All	Revision 0 of the document.

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)<sup>1</sup> 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 designated officers, CNSC inspectors 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*<sup>2</sup>.

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).

---

<sup>1</sup> Canadian Nuclear Safety Commission, or CNSC, refers to the total organization. The tribunal component is referred to as the Commission and the staff component as CNSC staff.

<sup>2</sup> *Canadian Nuclear Safety Commission Rules of Procedure*, SOR/2000-211.

---

## Table of Contents

1.	Introduction.....	- 1 -
1.1.	Purpose.....	- 1 -
1.2.	Scope.....	- 1 -
1.3.	Document Security.....	- 1 -
1.4.	Exchange of information.....	- 2 -
1.4.1.	Formal Communication.....	- 2 -
1.4.2.	Informal Communication.....	- 2 -
1.5.	Fees for Regulatory Effort.....	- 2 -
2.	Roles and Responsibilities.....	- 2 -
3.	Pre-application Statement of Activities.....	- 3 -
3.1.	Pre-application Regulatory Meetings.....	- 3 -
3.2.	Long-Lead Items.....	- 3 -
4.	Application Work.....	- 4 -
4.1.	Project Schedule.....	- 4 -
4.2.	Application Review Time.....	- 4 -
4.3.	Application Review Approach.....	- 5 -
4.3.1.	Conformity Review.....	- 6 -
4.3.2.	Detailed Technical Review.....	- 6 -
4.4.	Results of the Technical Review.....	- 7 -
5.	Other.....	- 8 -
5.1.	CNSC Inspections and Independent Verification Activities.....	- 8 -
5.2.	Interfacing with other Jurisdictions.....	- 9 -
5.3.	Project Communications.....	- 9 -
5.4.	Licence to Construct Commitments.....	- 9 -
6.	Future Revisions of the Protocol.....	- 9 -
7.	Approval by signatories.....	- 10 -

---

## 1. INTRODUCTION

---

### 1.1. Purpose

Ontario Power Generation (OPG) is proposing 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) up to 400 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 intends to submit a Licence to Construct application in 2022. Recognizing the importance of project schedule and scope, and that many activities will have to be conducted as part of this process, the purpose of this document is to:

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

Target dates for deliverables and milestones will be maintained in a separate working level Licence to Construct Planning document and updated, as required and agreed to by OPG and CNSC, to reflect completions, changes to assumptions or any other meaningful variations.

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 whether to issue a Licence to Construct.

The CNSC's regulatory processes will continue when the protocol expires.

### 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 parties. 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 – not of the persons involved.
- OPG and CNSC subject matter experts may communicate directly with each other to request clarification or to share information, but these communications must be brought to the attention of the SPOCs.

There are two types of communication: formal and informal.

### 1.4.1. Formal Communication

The purpose of formal communication is to document, in an acceptable and agreed-upon written or electronic format, any official regulatory requests or positions from CNSC staff, and for OPG to provide an official response to such requests or positions. All formal communication must have a record number associated with it in the corresponding 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.

## 1.5. Fees for Regulatory Effort

The CNSC cost recovery for any regulatory effort regarding OPG's Licence to Construct application shall be cost recovered in accordance with the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*.

## 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 the application

from OPG for a licence to construct (LTC) and making recommendations 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 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. PRE-APPLICATION STATEMENT OF ACTIVITIES**

---

It is recognized that pre-application activities between OPG and CNSC staff on specific items will be of mutual benefit, through increased efficiency for resources and reduced schedule uncertainty. The following subsections provide an outline for pre-application activities.

#### **3.1. Pre-application Regulatory Meetings**

It is recognized that both OPG and CNSC staff may require regulatory clarifications/discussions at the pre-application stage for the project. Either participant may initiate the clarifications/discussions provided that the following ground rules are followed:

- The intent of these meetings is to respond to questions for clarification around topics related to the application for a Licence to Construct. The purpose of these meetings is not to provide any acceptance on topics that could circumvent the licensing process or fetter the powers, duties, or discretion of the Commission.
- An agenda, presentation materials and list of questions will be formally submitted by OPG one week (or more, as required if the subject is complex) in advance of a meeting.
- CNSC and OPG staff on an alternating basis will write minutes and forward them for review and agreement. Minutes will be provided as soon as practicable.

The ground rules will ensure that the clarifications/discussions will be efficient and concise.

#### **3.2. Long-Lead Items**

The authority to approve or accept long lead items (LLI) lies with the Commission as part of its decision making process under Licence to Construct and Licence to Operate. Long lead items may include systems, components, programs and/or processes. Upon request, CNSC will review OPG submissions for long lead items prior or during the licence application review and provide a technical review, 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.

Refer to Section 5 for information on CNSC inspections of supply chain in relation to LLI.

## **4. APPLICATION WORK**

---

CNSC staff will review the application for a LTC, by using REGDOC-1.1.2, *Licence Application Guide: Guide to Construct a Reactor Facility, draft version 2*. Further review criteria are captured in CNSC regulatory and guidance documents and in industry codes and standards, which will be described in OPG's LTC Application Plan.

### **4.1. Project Schedule**

OPG will provide CNSC staff with a project schedule that provides 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**

OPG will endeavor to support an expedited licensing process with a review time of 24 months by CNSC staff for the OPG LTC application 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 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 as expeditiously as possible, but will not compromise on the level of effort required to ensure a thorough technical review. CNSC staff also will not compromise on review timelines for the public and Indigenous groups. OPG will support this process from LTC application submittal to the Commission decision.

The schedule provided in the Licence to Construct Application Plan (NK054-PLAN-01210-00007) is generic in nature. The detailed schedule for deliverables and milestones will be maintained in a separate working level Licence to Construct Application Planning document and updated, as required and agreed to by OPG and CNSC to reflect completions, changes to assumptions or any other meaningful variations.



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;
- if the design is insufficiently advanced to meet the requirements of REGDOC-1.1.2, *Licence Application Guide: Guide to Construct a Reactor Facility, draft version 2*. This item is subject to further clarification in the Licence to Construct Application Plan (NK054-PLAN-01210-00007);
- any delay in OPG's timelines for submitting packages;
- CNSC receiving complete submissions packages 4, 5 and 6 later than six months after receipt of the initial application;
- the sufficiency 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.

In circumstance's where review timelines may be delayed;

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

### **4.3. Application Review Approach**

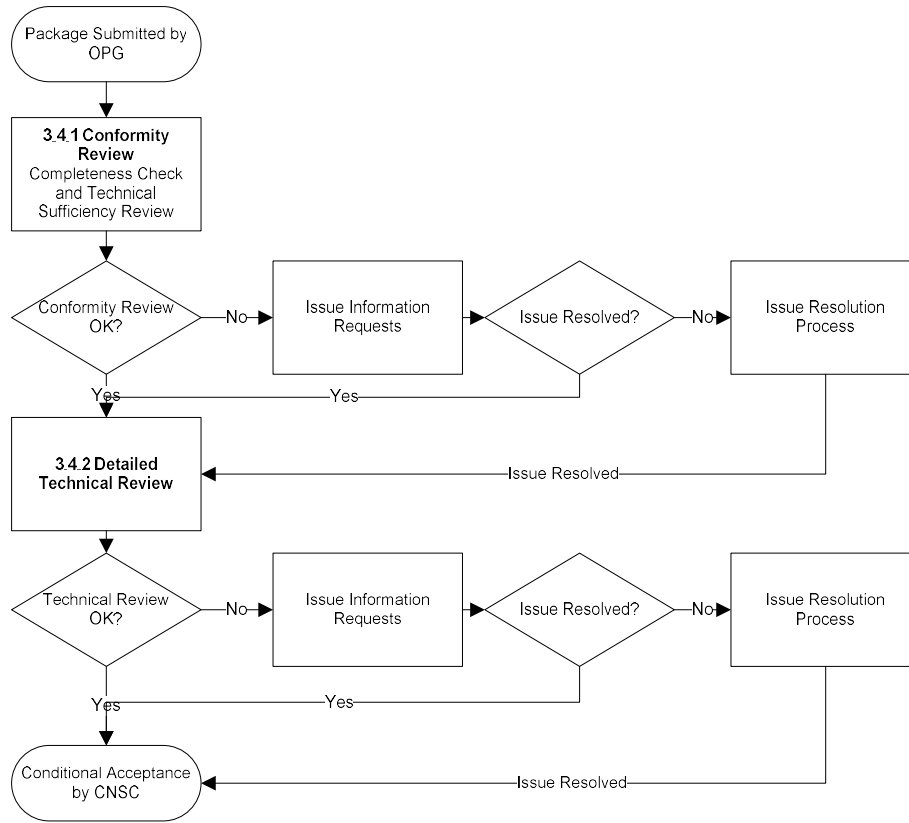
Once OPG submits an initial application for a LTC, the review process will begin.

OPG will submit the entire scope of submissions as a logical sequence of submissions as required, so that CNSC staff can perform an appropriate and efficient review. The OPG LTC Application Plan (NK054-PLAN-01210-00007) includes the overall CNSC assessment logic used to review an application for a LTC; the review is divided into different packages.

Specific details of the review and the process will be captured in the CNSC project-specific construction assessment plan as well as an OPG LTC Application Plan.

CNSC staff reviews will include two types of reviews: conformity review and detailed technical review. The following diagram illustrates the review process.

**Figure 1 - CNSC staff review process**



**4.3.1. Conformity Review**

The conformity review consists of a completeness check and a technical sufficiency check to ensure that the information submitted is sufficient to begin the review for each package. This review will be performed at the beginning of the submission of each package and is anticipated to take one month.

If it has been determined that sufficient information has been provided, CNSC staff will proceed with the detailed technical review. If any gaps are identified, CNSC staff will provide any required information requests for OPG to address.

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.

**4.3.2. Detailed Technical Review**

The detailed technical review consists of a technical review on the LTC application packages (see Table 1 below). For each of the packages, OPG and CNSC staff will identify the list of licensing and technical leads prior to the submissions.

**Table 1 - Detailed technical review LTC application packages**

Package	Topic
1	Management Aspects
2	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

These packages are aligned with REGDOC-1.1.2, *Licence Application Guide: Guide to Construct a Reactor Facility, draft version 2*. It should be noted that CNSC staff cannot review the construction program without, at a minimum, reviewing the design submissions in parallel. Similarly, CNSC staff cannot review the commissioning program without reviewing the design submissions and safety analysis results in parallel, as this is what the commissioning program measures.

The grouping of submissions will be as follows:

1. LTC Application will be submitted with packages 1, 2 and 3.
2. Packages 4 and 5 are expected in the next quarter following LTC Application
3. Package 6 no later than six months after initial application.

OPG will provide the schedule for submissions in their LTC Application Plan.

#### **4.4. Results of the Technical 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.

CNSC staff will issue an information request if it is determined that there is insufficient information available to complete the review. CNSC will notify OPG upon identification of an information gap. OPG will respond to the information requests at its earliest opportunity. Where potential issues are identified and cannot be resolved, OPG and CNSC staff will follow the issue resolution process.

##### **4.4.1.1 Issue Resolution**

CNSC staff and OPG will use their best efforts to resolve any differences of opinion in the interpretation or application of this protocol, and during the technical review of OPG's licence to construct application in an effective and timely manner. The CNSC remains the arbitrator regarding issues related to safety.

Nothing in this issue resolution process 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 SPOC for CNSC staff and OPG.
2. It is the intention of both parties 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 failure to resolve, 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 two business weeks, 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 Vice President, 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 (EVP&CROO) and OPG Chief Strategy Officer 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 licence application.

---

## **5. OTHER**

### **5.1. CNSC Inspections and Independent Verification Activities**

CNSC will carry out inspections of OPG as required for compliance purposes and in relation to long lead items.

CNSC staff may request to accompany OPG on OPG lead supplier audits and inspections or may notify OPG of CNSC planned independent verification activities of OPG suppliers. CNSC staff will follow the CNSC Inspection Process.

## **5.2. Interfacing with other Jurisdictions**

OPG and CNSC 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 regulatory authority by coordinating these reviews for licence to construct and any other issues related to EA follow-up, and Joint Review Panel recommendations and Government of Canada responses for a Licence to Construct.

## **5.3. 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.

## **5.4. Licence to Construct Commitments**

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

OPG will make submissions for these regulatory commitments as per the DNNP Commitments Report. OPG may choose to hold a pre-submission meeting with CNSC to ensure that a submission will meet CNSC expectations. Where such meetings include a formal presentation or formal discussion, meeting minutes will be recorded and issued by either OPG or CNSC, as agreed to. CNSC will review the submissions per the timeline specified in the DNNP Commitments Report or a mutually agreed upon timeline.

CNSC technical reviews may result in either an acceptance of the submission or an information request. Additional information during the course of an information request IR or resolution of issues will be formally submitted by OPG to CNSC and become part of the Licensing Basis.

## **6. FUTURE 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.

**7. APPROVAL BY SIGNATORIES**

---

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

  
\_\_\_\_\_  
Dominique Minière  
Executive Vice President  
New Nuclear Domestic & International Strategy  
Ontario Power Generation Inc.

\_\_\_\_\_  
January 6, 2022  
Date

**Jammal**  
**, Ramzi**  
\_\_\_\_\_  
Ramzi Jammal  
Executive Vice-President and  
Chief Regulatory Operations Officer  
Canadian Nuclear Safety Commission

Digitally signed by Jammal, Ramzi  
DN: C=CA, O=GC,  
OU=CNSC-CCSN, CN="Jammal,  
Ramzi"  
Reason: Approved  
Location: your signing location here  
Date: 2021-12-23 15:01:57  
Foxit PhantomPDF Version: 9.7.1

\_\_\_\_\_  
Date