



**Written submission from the  
Métis Nation of Ontario**

**Mémoire de la Nation  
métisse de l'Ontario**

In the Matter of the

À l'égard d'

**Ontario Power Generation Inc.**

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Applicability of the Darlington New Nuclear Project environmental assessment and plant parameter envelope to selected reactor technology

Applicabilité de l'évaluation environnementale et de l'enveloppe des paramètres de la centrale à la technologie de réacteur sélectionnée pour le projet de nouvelle centrale nucléaire de Darlington

**Commission Public Hearing**

**Audience publique de la Commission**

**January 2024**

**Janvier 2024**

**Delivered by Email**

**Email: [Interventions@cnsccsn.gc.ca](mailto:Interventions@cnsccsn.gc.ca)**

Nov 20, 2023

**RE: REVIEW OF THE APPLICABILITY OF THE DARLINGTON NEW NUCLEAR PROJECT ENVIRONMENTAL AND PLANT PARAMETER ENVELOPE TO SELECTED REACTOR TECHNOLOGY**

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The Métis Nation of Ontario received capacity to review and provide comments on documents from Ontario Power Generation (“OPG”) for a licence application to construct a single BWRX-300 reactor at the Darlington site known as the Darlington New Nuclear Project (“DNNP”). To facilitate meaningful participation in this process, the Métis Nation of Ontario retained MNP to conduct a review of the documentation related to the applicability of the Darlington New Nuclear Project Environmental Assessment and Plant Parameters Envelope to Selected Reactor Technology for sufficiency in outlining the requirements of the Métis Nation of Ontario (“MNO”) Region 8.

The MNP review considered the following:

- Commission Member Document (“CMD”) 24-H2 (written submission from CNSC staff),
- Commission Member Document 24-H2.1 (written submission from OPG), and
- Darlington New Nuclear Project Environmental Impact Statement Review Report for Small Modular Reactor BWRX-300 NK054-REP-07730-00055-R001 (dated June 28, 2023) (“Review Report”).

Informed by:

- Ontario Power Generation Presentation to Métis Nation of Ontario Region 7 & 8 (dated December 4, 2022),
- Ontario Power Generation Presentation to Métis Nation of Ontario Region 8 (dated September 12, 2023) and associated Meeting Notes,
- Preliminary Decommissioning Plan Darlington New Nuclear Project – End of Life NK054-PLAN-00960-00007-R000 (dated March 17, 2023) (“Preliminary Decommissioning Plan”),
- Darlington New Nuclear Project Application for a License to Construct a Reactor Facility (dated October 2022), and
- Darlington New Nuclear Project Licence to Construct Application Plan NK054-PLAN-01210-00007- R001 (dated May 27, 2022).

It is our understanding that the main objective of the public hearing process is to ensure that the conclusions of the original Environmental Impact Statement (“EIS”), which was accepted and approved in 2012, remain valid as the BWRX-300 parameters were not included as a reactor technology in the Plant Parameter Envelope (“PPE”). The PPE was developed based on four different types of reactors that were considered at that time, and it was identified that the PPE

may need to be modified when the specific reactor technology was selected, which is now the case.

The review process of the EIS conclusions was undertaken by the proponent in two ways:

1. An evaluation of the PPE parameters, and
2. A comprehensive review of the EIS to ensure the results remain valid and where this is not the case, provide corrective action.

**Ontario Power Generation Review Results**

Overall, the Review Report indicates that, with the BWRX-300 technology, the environmental effects are expected to be less than those originally assessed in the EIS. Where impacts are not lessened, they largely remain consistent as the BWRX-300 belongs to the same Light Water Reactor family as the Pressurized Water Reactor which was included in the original EIS.

As reported in CMD 24-H2 there were eight parameters (fire protection system and water supply requirements, depth of BWRX-300, airborne releases, solid radioactive waste volumetric activity and spent fuel cask weight, importance factor for wind loads) that differed from the bounding scenario of the PPE described in the environmental assessment. The findings of both Ontario Power Generation and the Canadian Nuclear Safety Commission were that these parameters do not impact the conclusion of the environmental assessment or will be appropriately mitigated.

Further, within CMD 24-H2 the Canadian Nuclear Safety Commission also reviewed the results of Ontario Power Generations comparison and noted that the effects on Valued Ecosystem Components within the EIS remains consistent with the implementation of BWRX-300.

Our review of the above noted documents focused on items of note which relate to MNO Region 8 involvement/engagement. Please see below for our key comments for your consideration:

**Outstanding Action Item**

As per the Meeting Summary for the September 12, 2023 meeting, Ontario Power Generation committed to providing supporting documentation regarding environmental impacts such as ponds, wetland, fish, etc. Ontario Power Generation committed to providing these documents directly or the external web links to these documents. The MNO Region 8 has confirmed this action item remains outstanding. These documents must be provided to allow for fulsome consideration of the Darlington New Nuclear Project by the MNO Region 8.

**Engagement with MNO Region 8**

There is no description of, or commitment to, continued engagement with the MNO Region 8 within the Review Report. Ontario Power Generation has articulated their commitment to ongoing work with Indigenous Nations and communities as well as their dedication to reconciliation and renewing relationships with Indigenous peoples. It is recommended that in future documents or reports, reference to the ongoing relationship with MNO Region 8 be reported. For example, within the Preliminary Decommissioning Plan, it indicates that “There are no Métis settlements in or near the 3 Darlington Nuclear Site property; however, there are Métis persons residing within the regional area. The Oshawa and Durham Region Métis Council represents Métis people in Durham Region.” Also, within the CMD 24-H2 the Canadian Nuclear Safety Commission notes that “Indigenous

Nations and communities that have expressed an interest in the DNNP...” including the Métis Nation of Ontario. Similar reporting within other Project related documents should be undertaken.

**Project Timeline**

Within Section 3.5 (Page 18) a conceptual project timeline is presented. This conceptual timeline is identified as starting in 2022. However, this anticipated timeline has since passed and was already passed when the Review Report was submitted in 2023. The MNO Region 8 should have further discussions with Ontario Power Generation about when Reactor 1 Site Preparation is anticipated to begin to allow for accurate extrapolation of the 12-year timeline.

**Bank Swallow Nesting Habitat**

The Review Report indicates that the “...site layout for four BWRX-300 reactors will likely require some shoreline protection measures which may cause the bank to become unsuitable for Bank Swallows to inhabit.” Further, within CMD 24-H2, it is noted that Ontario Power Generation will be required to implement a monitoring plan for potential effects on aquatic habitats when conducting shoreline protection activities. The MNO Region 8 should require additional engagement from Ontario Power Generation on measures to offset the loss of Bank Swallow nesting habitat, including review of, and involvement in (pending sufficient internal capacity), the referenced monitoring plan.

**Terrestrial Habitats**

Within the Review Report (Section 3.6.2 Conceptual Plant Layout) it is noted that the “...smaller footprint for the BWRX-300 may provide an opportunity to retain some terrestrial habitats on the DNNP site.” Once it is confirmed with certainty whether terrestrial habitats can be retained, Ontario Power Generation should provide specific detail to the MNO Region 8 for consideration, including the measures applied to retain habitat, type of habitat, the wildlife it supports, and the amount retained.

**Socio-Economic Benefits**

Within Table 4 of the Review Report, both the “workforce, payroll, and purchasing” category as well as the “administration, purchasing, and payroll” categories indicate decreases in workforce (2,100 workers for “workforce, payroll and purchasing” versus estimated 3,800 in the EIS and 300 versus 2,800 in the EIS anticipated for “administration, purchasing, and payroll”). Further in Section 5.3.10 (Socio-Economic Environment) the Review Report notes that “...employment and payroll spending will generate beneficial economic effects, but less than anticipated in the EIS”; and within CMD 24-H2 it is noted that “...beneficial effects on employment and associated household income...” would be “...at a smaller magnitude than estimated in the EA.” As employment is typically weighted as a project benefit that positively impacts the socio-economic environment, additional engagement is required on how the anticipated lessening of the workforce will interact with the socio-economic conditions in the project area and potentially alter the conclusions within the EIS as this is not clearly articulated in the CMD documents or the Review Report.

**Physical and Cultural Heritage Resources**

Section 5.3.9 (Physical and Cultural Heritage Resources) of the Review Report indicates that “...should previously undocumented archaeological resources be discovered, procedure that complies with the Ontario Heritage Act would be followed and OPG would inform and consult with Indigenous Nations and communities.” This commitment is encouraging and the MNO Region 8 should be engaged and notified in the event of a discovery as the MNO Region 8 could add valuable insight, help connect dots, and engage in allyship with other Indigenous groups.

**Surface Water Environment**

Within the Review Report (Section 5.3.2, which describes the surface water environment) it is noted that the assessment confirmed that the "...BWRX-300 deployment will have no residual adverse effects on site drainage. The assessment identified minor changes in flows and the number of days per year that an area of land is wet that can be mitigated using best industry practices". Ontario Power Generation should conduct comprehensive ongoing monitoring of this conclusion, particularly in light of increased flooding and other extreme weather hazards due to climate change and ensure ongoing information related to this monitoring is reported to the MNO Region 8.

**Climate Change and Contingency Planning**

The Review Report indicates that "OPG will prepare a contingency plan for the construction, operation, and decommissioning Project phases, to account for uncertainties associated with flooding and other extreme weather hazards." As climate change and cumulative impacts of development are key issues to the MNO Region 8, this contingency plan must be provided to the MNO Region 8 for review and consideration, pending available internal capacity.

Overall, we hope these comments can facilitate the ongoing relationship between Ontario Power Generation and the MNO Region 8. We look forward to continued dialogue on this letter.