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Oral presentation

Written submission from Christine Drimmie

In the Matter of the

Ontario Power Generation Inc.

Application for a licence to construct one BWRX-300 reactor at the Darlington New Nuclear Project Site (DNNP)

Commission Public Hearing Part-2

January 8, 2024

Exposé oral

Mémoire de Christine Drimmie

À l'égard d'

Ontario Power Generation Inc.

Demande visant à construire 1 réacteur BWRX-300 sur le site du projet de nouvelle centrale nucléaire de Darlington (PNCND)

Audience publique de la Commission Partie-2

8 janvier 2024

October 25, 2024

Dear Senior Tribunal Officer,
Commission Registry,
Canadian Nuclear Safety Commission
Email: interventions@cnsccsn.gc.ca

I request to intervene in writing and orally with respect to the hearing to be held the week of January 8, 2025 to consider Ontario Power Generation (OPG)'s application for a licence to construct one BWRX-300 reactor for its Darlington New Nuclear Project (DNNP).

Like every other phase of the Canadian Nuclear Safety Commission (CNSC) licencing process, this one is narrowly focused on getting approval of the next step, a licence to construct. As mentioned in previous submissions, this piecemeal approach to licensing is frustrating because it means broader issues/questions that flow from the current decision are never addressed as they are considered "out of scope".

This fragmented process might be more acceptable if a proper public consultation about the need for, acceptability or alternatives to developing the Small Modular Reactors (SMRs) had been held with the current Durham Region community. However, the CNSC decided that an Environmental Assessment (EA) resulting from a process started about two decades ago and approved 12 years ago could still apply, so none of those big questions were asked of the current community. Almost half of the people now living in Durham would not have been residents at the time that the earlier EA consultation was conducted.

The step-by-step system of licensing hearings leaves no room for discussion of the long-term consequences of approving each licensing stage. Site preparation and construction are hugely expensive from both a financial (\$ billions) and environmental perspective (GHG and other air emissions; vegetation, soil and rock removal; dewatering and runoff effects). However, the decommissioning plan at this licencing step only deals with restoration to conditions suitable for another industrial use, not to bring back the habitat for bank swallows or bats or butterflies that were documented prior to site preparation.

Long-term effects of each decision are inevitably ruled out of scope by the CNSC. The lack of response or even acknowledgement of these questions as the process goes along does not build trust or community confidence. Approval of one step leads irrevocably and expensively to the next step. Gaining CNSC approval to build radioactive waste facilities is an entirely separate, apparently "just-in-time" licensing process. Even though operating the nuclear plant in the absence of such a facility is only possible for a few years. Holding hearings for construction, operation and waste licencing in isolation may be convenient for the regulator and proponents. However, it is

absurd to those in host communities and Indigenous territories who will live with the whole nuclear lifecycle for the next century.

The EA processes conducted to build the original Darlington NGS did not respect treaty obligations. It did not meet current obligations to obtain free, prior and informed consent from Indigenous rightsholders and communities. Fortunately, OPG is now undertaking a more detailed engagement with Indigenous communities, specifically the Williams Treaty First Nations and Metis residents. However, this engagement, outlined in OPG's supplementary submission (CMD-24-H3-1A), also seems constrained by the narrowly scoped licensing process. The timing of requested studies and delivery of information to the Indigenous rights holders appear to be out of synch with OPG's expected plans and schedule for the LTC stage.

A scan of CMD-24-H3-1A suggests OPG is struggling to compensate for the lack of early Indigenous consultation on this project by shoe-horning an Indigenous knowledge study into the process after key decisions have been made. Moreover, the fragmented licensing process seems completely contradictory to holistic Indigenous world views. How can this disjointed approach consider and honour reciprocal relationships and balance in nature (of which humans are one member) or consider seven generations of impacts? Are the Williams Treaty First Nations and Metis Nation of Ontario satisfied with the engagement?

Since no nuclear fuel is on site during the construction phase, the commission will not consider questions related to the eventual presence of nuclear fuel and wastes on site. Indigenous and non-Indigenous residents alike are concerned about the fate of these wastes.

Once again, I am amazed and appalled that the CNSC continues to accept without question, OPG's statements on slide 27 of CMD 42-H-3 that

- OPG plans to store low and intermediate level radioactive waste at the DNNP site during operation on an interim basis
- Used fuel to also remain on DNNP site until transfer to Nuclear Waste Management Organization (NWMO) licensed facility

These statements of intent don't address key questions for the host community. How much waste will be stored on site and for how long? This is especially relevant given that this will be a new kind of nuclear waste not previously planned for by the NWMO.

The outcome of constructing a nuclear plant is usually the operation of that plant. One result of operation is the creation of nuclear waste. Canada's Policy for Radioactive Waste Management and Decommissioning states that waste generators and owners must.

- 3.9 demonstrate meaningful and respectful engagement, on an early and ongoing basis, with Indigenous peoples who may be affected in the siting,

construction, operation, and monitoring of radioactive waste management and decommissioning projects;

Has OPG begun the early, meaningful discussion with Indigenous people about the inevitable storage of waste products flowing from DNNP or eventual decommissioning of the project? Will this consultation be conducted in a timeframe and manner such that affected First Nations rightsholders can decide on free, *prior* and informed consent to both interim and long-term storage at the Darlington site?

Host municipalities have been told from the inception of the Pickering and Darlington plants that used fuel storage on this site is “interim”. So far “interim” is undefined and unlimited by CNSC regulation. If more waste is generated, OPG simply applies to the CNSC to build more onsite storage using previously approved storage methods. I sincerely doubt that anyone in the general public even knows when such an application is made.

If and when a Deep Geological Repository (DGR) finally is built and operational, “interim” could still be 100 years. What happens if Indigenous consent is not available for either interim storage or final disposition of high and intermediate level SMR waste? It would not make sense to construct the SMRs if there is no consent to waste storage. Logically, this consent needs to be sought upfront.

The recently updated federal radioactive waste policy (mentioned above) and the CNSC licencing process continue to allow advancement of OPG projects based on a *concept of plan* to deal with high and intermediate-level nuclear waste. While OPG may have demonstrated their ability to manage waste on an interim basis, there is no evidence that they (or NWMO) are capable or qualified to deal with it in perpetuity. Past history on finding sites for permanent disposal of nuclear waste suggests that NWMO (an organization of the generators) may fail in securing a willing host community for the long proposed DGR. A decision by the candidate host communities *may* occur in 2025. If they decline the “opportunity” to host the DGR, how will this affect the SMR licensing process, since OPG’s “plan” for waste disposal in a DGR will not then be achievable.

If communities currently hosting generation and “interim” storage are then asked to host the SMR and CANDU waste in perpetuity, will they have a comparable chance of giving willing and informed consent? How will they be compensated and consoled after being told for the past 50 years that a permanent waste solution would be found elsewhere? These communities might feel that they had been misled or hoodwinked.

Before approving a licence to construct that will launch a massive public expenditure, it behooves the CNSC to consider whether OPG will be “qualified to carry on” the potential for “in perpetuity” waste storage at the generating sites.

Given that the DNNP SMR development is being hailed as a model and prototype for SMR development across Canada, having a clear process for how waste from the SMRs is going to be managed in the short and long term will be a key consideration and

a significant trust issue for any potential host community. A clear agreement with the first host communities on the treatment of SMR waste will be vital to acceptance of these new reactors by others. **Why should communities that currently host CANDU operations be treated with less respect and consideration than others with regard to the new SMRs?** Further, how can an SMR proponent provide an adequate financial case and guarantee for an undefined long-term storage method and location?

With respect to the excavation for the reactor building: a key difference in the BWRX-300 from the previously proposed reactor types is the depth of excavation (38 metres compared to 13 m). Do previous seismic studies deal with operations at this depth? Where will the overburden and rock excavated be stored or used? Based on past practice in Canada, it seems likely that equipment housed at this depth could well end up being entombed rather than removed.

In terms of future decommissioning of the SMR, what steps are being taken during the design and construction phase to ensure that dismantling the reactor in 60 years is possible? While OPG may have experience writing vague preliminary decommissioning plans for CANDU reactors, they have no track record with actual decommissioning of a CANDU generating site. And they have absolutely no experience for the first of its kind BWRX-300 so how are they “qualified”?

Finally, OPG’s presentation (CMD-24-H3-1B) makes reference to creation of green construction standards. For transparency, more detail on what this standard includes is needed. In particular, how they will reduce the green house gas emissions from construction of the SMRs and related administrative and waste buildings? Have specific emission control targets been set compared to standard construction practices? Will they be aiming for net zero on the construction phase?

The opportunity to provide comments is appreciated. The Commission could offer a valuable service to the public if it can assist in seeking plain language answers to any of these questions for the public.

Christine Drimmie