



ONTARIO  
CLEAN AIR  
ALLIANCE

---

March 30, 2021

By email: [Rumina.Velshi@canada.ca](mailto:Rumina.Velshi@canada.ca)

Ms. Rumina Velshi  
President  
Canadian Nuclear Safety Commission  
Ottawa, Ontario

Dear Ms. Velshi:

**Re: Request for interim moratorium on operation of Pickering Nuclear Station**

We are writing on behalf of the Ontario Clean Air Alliance to request that the Canadian Nuclear Safety Commission (CNSC) impose an interim moratorium on the operation of the Pickering Nuclear Generating Station (PNGS) until Ontario Power Generation (OPG) has demonstrated, at a public hearing, that the risk to public safety from the continued operation of the PNGS is acceptable.

As you know, the PNGS's fuel is contained in pressure tubes which become "brittle" with age due to the combined effects of high pressures, high temperatures, neutron radiation and chemical corrosion.

According to Dr. Frank Greening, a former OPG research scientist, OPG has failed to demonstrate that the PNGS's pressure tubes are still fit for service.<sup>1</sup> In addition, Dr. Greening has pointed out that the failure of OPG to obtain reliable deuterium pickup data for Pickering Unit 6 means that OPG has failed to meet the requirements of CSA Standard N285.4 for this Unit which should therefore be immediately shutdown.

According to Dr. Sunil Nijhawan, a nuclear engineer and consultant who once worked for OPG and specializes in accident and safety assessments, in a worst-case scenario, a ruptured pressure tube could lead to a series of "cascading failures not unlike what happened at Fukushima".<sup>2</sup>

---

<sup>1</sup> Matthew McClearn, "Canada's nuclear regulator overlooked dubious data when reviewing Pickering plant's licence, documents show", *Globe and Mail*, (March 23, 2021).

<sup>2</sup> Ibid.

OPG's failure to demonstrate that the PNGS's pressure tubes are still fit for service is of special concern due to the following facts:

1. The fifty-year old PNGS is the 3<sup>rd</sup> oldest and 5<sup>th</sup> largest nuclear station in North America.
2. The PNGS is surrounded by at least twice as many people, within 30 km, as any other nuclear station on the continent.
3. The PNGS is the only nuclear station that the CNSC has allowed to operate well past its design life without the replacement of all of its aging pressure tubes.
4. According to a study prepared by Dr. Ian Fairlie, a Fukushima-level accident at the PNGS could:
  - a) cause approximately 26,000 cancers of which approximately half would be fatal;
  - b) require the evacuation of more than 150,000 homes and more than 650,000 people for 30 to 100 years or more, including the complete evacuation of the City of Pickering for at least 100 years;
  - c) cause a \$125 billion loss in the value of single-family homes in the GTA; and
  - d) require the re-routing of Highways 401, 404 and 407 and the CN/CP/GO rail lines to avoid highly contaminated areas.<sup>3</sup>

To determine if the PNGS's pressure tubes are still fit for service the PNGS must be temporarily shut down to permit OPG to scrape tiny samples from the pressure tubes to obtain accurate data for a scientific evidence-based safety analysis. The results should be made publicly available and subject to a full public hearing before the CNSC.

Fortunately, an interim moratorium on the operation of the PNGS need not lead to an increase in gas-fired generation. At the present, much of Pickering's nuclear generation is surplus to Ontario's needs and is exported to the U.S. For example, in 2020, Ontario's total electricity exports (20.4 billion kWh<sup>4</sup>) were virtually equal to Pickering's electricity generation (20.5 billion kWh).<sup>5</sup> As a consequence, Pickering's generation that is currently consumed in Ontario can be replaced by purchasing safer and lower-cost Quebec water power<sup>6</sup> and by eliminating our PNGS-caused need to spill water at the Sir Adam Beck Generating Station at Niagara Falls and curtail Ontario wind and solar generation.

Yours truly,



Jack Gibbons  
Chair



Angela Bischoff  
Director

---

<sup>3</sup> Ian Fairlie, *A Fukushima-Level Nuclear Accident at Pickering: An Assessment of Effects*, (March 2018); URL: <https://www.cleanairalliance.org/wp-content/uploads/2018/05/fukushima-March12.pdf>

<sup>4</sup> [www.ieso.ca/en/Corporate-IESO/Media/Year-End-Data](http://www.ieso.ca/en/Corporate-IESO/Media/Year-End-Data)

<sup>5</sup> <https://www.opg.com/reporting/regulatory-reporting/>

<sup>6</sup> <https://www.cleanairalliance.org/wp-content/uploads/2021/01/options-2021.pdf>