



**POWER
WORKERS'
UNION**

EX16.46.6

June 27, 2016

Mayor Tory and Members of the Executive Committee
Office of the Mayor
City Hall, 2nd Floor, 100 Queen St. W.
Toronto, ON M5H 2N2

Re: EX16.46 Request for the Government of Ontario to Close Pickering Nuclear Station in 2018

The Pickering Nuclear Generating Station (PNGS) has been safely providing low cost, reliable, low-carbon electricity to serve a city of about one and a half million people for more than three decades.

Public safety guided the design and construction of this CANDU® technology based station. There are several ways to safely shut down the reactors, and in the unlikely event of a serious incident, multiple safety barriers are in place to prevent any harmful release of radiation.

Moreover, the Pickering Nuclear Station is licensed by, and its operations, including emergency preparedness, are overseen by the Canadian Nuclear Safety Commission (CNSC), an independent regulator. The CNSC has seventy years of experience and is highly regarded internationally.

Additionally, the Pickering Nuclear Generating Station, owned by Ontario Power Generation (OPG), a provincial Crown corporation, routinely provides information and consults with local communities about the plant's operations.

OPG's plan proposes to extend the operation of 6 PNGS units to 2022, at which time two units will be shut down and the remaining four will continue to operate until 2024. The plan was based on favourable Environmental Assessment, Integrated Safety, and station condition reports.

When the province approved OPG's plan to pursue the continued operation of Pickering beyond 2020 to 2024, it noted that final approval would be required from the CNSC. OPG has started work on a licence application seeking CNSC approval in 2018. The proposal will also be subject to an economic review by the Ontario Energy Board.

In the near-term, Ontario faces two significant challenges, an expected doubling of greenhouse gas emissions from the province's electricity generation sector and a system reserve capacity gap of 2,000 to 3,000 megawatts of electricity. According to Ontario's Independent Electricity System Operator, the capacity gap will occur with the scheduled closure of the 3,100 megawatt PNGS in 2020 and is expected to persist until 2032.

Ontario will need to fill this gap to comply with the requirements of the North American Electricity Reliability Corporation (NERC) and the Northeast Power Coordinating Council Inc. (NPCC) that govern the integrated operation of Ontario's grid within the North American system.

Given the inherent variability of electricity production from wind and solar generation, backup is required to maintain system reliability about seventy percent of the time. In

CANADIAN UNION
OF PUBLIC EMPLOYEES,
LOCAL 1000, C.I.C.

244 EGLINTON AVE. E.
TORONTO, ONTARIO
M4P 1K2

TEL.: (416) 481-4491
FAX: (416) 481-7115

PRESIDENT
Don MacKinnon

VICE PRESIDENTS
Bob Walker
Brad Carnduff
Mel Hyatt

Ontario, carbon-emitting natural gas generation plays this role. A 2014 Intergovernmental Panel on Climate Change analysis of life-cycle emissions (tons of carbon dioxide equivalent per gigawatt-hour) of energy technologies shows solar PV (photo voltaic) at 53 tons, hydroelectric at 26, nuclear at 13 and onshore wind at 12. Unfortunately natural gas generation, the backup for wind and solar comes in at 422 tons per gigawatt.

Building more wind and solar generation to fill the forecast system reserve capacity gap means using more natural gas generation resulting in higher GHG emissions. An independent analysis, prepared by Strategic Policy Economics (Strapolec) looked at the environmental and economic benefits of extending the PNGS operations as proposed by OPG thereby deferring additional investments in natural gas generation. A copy of the report has been attached for your information.

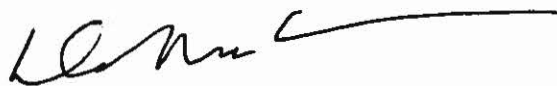
Strapolec's analyses indicated that extending PNGS operations could avoid over 18 million tonnes (Mt) of CO₂, equivalent to avoiding a 55 percent increase in electricity system GHG emissions and a 25 percent increase in overall provincial emissions from natural gas usage in all sectors of Ontario's economy.

Their analyses also identified substantial economic benefits. This included: lower electricity system costs—potentially reduced by over \$1.5 billion due to PNGS operating cost advantages and the avoidance of the risks of natural gas-fired generation dependence; and, positive jobs and gross domestic product generated from domestic spending—40,000 person year equivalent jobs and net new GDP of \$7 billion, enabled by the avoidance of \$4 billion worth of imported energy.

The proclaimed benefits of so-called cheap, low-carbon electricity from Quebec have been disproven by a number of highly credible analyses, including Ontario's Independent Electricity System Operator. Billions of dollars would need to be invested to build and improve the transmission interties and transmission lines in Ontario and Quebec. Ontario currently exports low-carbon nuclear power to help Quebec meet its winter peak and refill its reservoirs. Even if Quebec could supply large-scale baseload electricity imports, such a decision would result in tens of thousands of jobs and billions of dollars flowing out of Ontario.

The Power Workers' Union respectfully requests that for the benefit of Ontario's environment and economy the Executive Committee reject the proposed motion.

Sincerely,



Don MacKinnon
President

The Power Workers' Union represents the majority of employees in Ontario's electricity production and delivery sector.