



Oral Presentation

Exposé oral

**Submission from
Greenpeace**

**Mémoire de
Greenpeace**

In the Matter of

À l'égard de

**Ontario Power Generation Inc.,
Pickering Nuclear Generating Station**

**Ontario Power Generation Inc.,
centrale nucléaire de Pickering**

Request for a ten-year renewal of its Nuclear Power Reactor Operating Licence for the Pickering Nuclear Generating Station

Demande de renouvellement, pour une période de dix ans, de son permis d'exploitation d'un réacteur nucléaire de puissance à la centrale nucléaire de Pickering

Commission Public Hearing – Part 2

**Audience publique de la Commission –
Partie 2**

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GREENPEACE

Intolerable Risk: Time to Close Pickering

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- Given there is no justification for Pickering’s continued operation from OPG’s shareholder, the Commission should categorize OPG’s application as “an unreasonable risk” under section 9(i) of the *Nuclear Safety and Control Act*.
- In the event that the Commission approves the operation of Pickering until 2024, the Commission should also include a requirement for OPG and CNSC staff to develop and publish contingency plan for an earlier closure, including worker transition plans, before the end of 2018.
- The Commission should require OPG to publish plans on how it will mitigate the negative social and community impacts of Pickering’s closure as requested by Durham Region.
- In line with its mandate under section 9(i) of the *Nuclear Safety and Control Act*, the Commission should require OPG to develop proposals for more robust radioactive waste storage facilities to ensure adequate provision is made to protect Canadians and the environment before it applies for a decommissioning licence. Plans for more robust radioactive waste storage facilities should be available for public review during an environmental assessment before OPG applies for a decommissioning licence.
- The Commission should ensure a public assessment of alternatives to OPG’s preferred delayed decommissioning strategy—including contingency plans for long-term waste management at the site— takes place before OPG is allowed to apply for a decommissioning licence.
- The Commission should request the Minister of the Environment and Climate Change conduct a Strategic Impact Assessment of decommissioning strategies, including long-term waste management strategies, for the Pickering nuclear station under section 95 of the proposed *Impact Assessment Act*.
- The Commission should reject OPG’s request for an unprecedented 10-year licence and approve only a 5-year licence in order to better oversee Pickering’s end-of-operations.
- The Commission should instruct CNSC staff to strive for higher levels of transparency while carrying out future Periodic Safety Reviews, including proactive disclosure of all safety improvement opportunities and their associated cost-benefit analysis.

- Before approving OPG’s licence renewal, the Commission should request a list of all safety improvement opportunities considered during OPG’s Periodic Safety Review with a clear justification on why specific safety improvement opportunities were accepted or rejected.
- In response to the Ontario government’s policies, which promote population growth and intensification and thereby undermine public safety around the Pickering nuclear station, the Commission should reject OPG’s application to operate the Pickering nuclear station beyond 2020.
- In the event that the Commission approves the continued operation of Pickering beyond 2020, the Commission should include additional license conditions requiring OPG to work with its shareholder to establish limits on population growth within the newly established 20 km Contingency Planning Zone (CPZ).
- In light of the province’s consistent mishandling of nuclear emergency response planning, the Commission should reject OPG’s application to operate the Pickering nuclear station beyond 2020.

1. Preparing for Pickering’s End-of-Life

In 2010, the Ministry of Energy approved OPG’s plan to close the Pickering nuclear station¹ in 2010 due to the prohibitive cost of reactor life-extension and long term-safety concerns.²

Going online in 1971, but designed and built in the 1960s, Pickering was Ontario’s first multi-unit nuclear station. It will also be the first multi-unit nuclear station to be permanently closed and dismantled.

As Pickering quickly approaches its end of operations, the Commission must ensure OPG is prepared to ease the social impacts of the station’s closure and openly assess how the wastes produced over the past four decades are safely stored at the site, potentially forever.

1.1 No justification for Pickering’s continued operation

A foundational principle of radiation protection – and risk management more generally - is that any potential exposure to radiation should have a useful justification before being permitted.

¹ The Pickering nuclear station will henceforth be referred to as “Pickering”.

² The reasons for closing the Pickering station are detailed in a briefing note provided to the Energy Minister in 2010. Greenpeace acquired through Freedom of Information request. See: Briefing Note, prepared by Cedric Jobe, January 8, 2010.

In Greenpeace’s view, there is no justification for Pickering’s continued operation. On these grounds alone, the Commission should reject OPG’s request to expose millions of people within the Greater Toronto Area (GTA) to the possibility of a nuclear accident.

In 2010, OPG and the Ministry of Energy announced its proposal to operate Pickering beyond its design life. OPG justified the risk by claiming the station would be needed until new replacement reactors came online in 2020. However, the Ontario government announced it was abandoning plans to build new reactors due to declining electricity demand.³

In announcing the abandonment of new reactors, however, the government unfortunately did not instruct OPG to close the Pickering reactors. As a result, Pickering has been the principal cause of the province’s electricity surpluses over the past decade. Thus, Pickering has effectively been an unnecessarily – and thus unreasonable – risk to the GTA.

In 2016, the government announced it would allow OPG to explore the possibility of operating Pickering beyond 2020 by seeking out appropriate approvals from the Ontario Energy Board (OEB) and the CNSC. However, the government’s 2016 Long-Term Energy Plan (LTEP) is clear that OPG can only seek “final approval” from the government after it has received appropriate approvals from the CNSC and the OEB.⁴

The government’s final approval of the Pickering continued operation will also consider the need and cost-effectiveness of operating Pickering beyond 2020. As noted by Ontario’s Environmental Commissioner there “...has been no independent review of whether the Pickering extension still makes environmental and financial sense for Ontario.”⁵

In spite of OPG’s assertion that there is a strong case for the continued operation of Pickering, the claims they made in support of this assertion were disproven under cross-examination at the OEB.⁶

Although OPG provided information to the OEB to support its belief that the Pickering life-extension was desirable, the Board did not consider the need or desirability of Pickering’s continued operation. The analysis OPG provided to the OEB showed that

³ Keith Leslie, “Ontario kills plan for 2 new nuclear plants; will rebuild existing reactors,” *the Canadian Press*, October 10, 2013.

⁴ Ministry of Energy, *Ontario’s Long-Term Energy Plan 2017 – Delivering Fairness and Choice*, October 2017, pg. 51.

⁵ Environmental Commissioner of Ontario, *Making Connections: Straight Talk About Electricity in Ontario*, April 2017, pg. 222.

⁶ See: Submissions of Environmental Defence, EB-2016-0152, May 29th, 2017; Final Argument of the Green Energy Coalition, EB-2016-0152, May 29th, 2017.

the majority of Pickering's output is unneeded surplus power.⁷ OEB staff and public interveners, such as Greenpeace, noted that system modelling provided by OPG was out-dated and likely overestimated electricity demand and underestimated the surpluses created by Pickering's operation.

Based on the available evidence, the Environmental Commissioner of Ontario has raised "...doubt that extended operation of Pickering is in the best interests of Ontarians."⁸ The ECO has recommended that "If Pickering's operating license is extended by the Canadian Nuclear Safety Commission, Ontario should report to the public whether the Pickering extension still makes sense, and if so, why."⁹

Considering risk and uncertainties associated with Pickering's age and the station's location within the GTA, the Commission should give significant weight to the lack of justification for OPG's application. The Commission is mandated to prevent "unreasonable risk" and it is unreasonable to allow an unneeded nuclear station to operate in the GTA.

Request: Given there is no justification for Pickering's continued operation from OPG's shareholder, the Commission should categorize OPG's application as "an unreasonable risk" under section 9(i) of the *Nuclear Safety and Control Act*.

1.1.1 The Need for contingency planning and a closure plan

In the event that the Commission approves OPG's application to operate Pickering until 2024, the Commission should impose additional licence conditions requiring OPG and CNSC staff develop and publish contingency plans for the station's safe closure in 2020.

Greenpeace provided a submission to Commission prior to the first day of hearings considering OPG's application request asking the Commission ensure OPG provide additional information on worker transition planning in the event that Pickering closes in 2020, which is currently approved, or in 2024, as currently proposed¹⁰. The Commission refused to accept Greenpeace's information request.¹¹

In Greenpeace's view, OPG has not sufficiently planned for safely closing station despite having announced Pickering's eventual closure in 2010. However, the eventual closure

⁷ Independent Electricity System Operator, Assessment of Pickering Life Extension Options – Prepared for discussion with Ministry of Energy, March 9, 2015. Filed with the OEB on May 5, 2016. EB-2016-01-0152, Exhibit F2-2-4, Attachment 1, pg. 53.

⁸ Environmental Commissioner of Ontario, Making Connections: Straight Talk About Electricity in Ontario, April 2017, pg. 223.

⁹ Ibid, 224.

¹⁰ S-P Stensil (Greenpeace) to the CNSC, "Transition planning for Pickering's workforce," *letter*, April 3, 2018.

¹¹ Marc Leblanc (Commission Secretary) to S-P Stensil, "RE: CONFIRMATION: Submission for Pickering Hearing tomorrow," *email*, April 5, 2018.

of the Pickering reactors will not be insignificant. Approximately 3000 people work at Pickering and is the largest employer in Durham Region.¹²

According to OPG's preliminary decommissioning plan staffing will drop to approximately 1200 when it shifts from operations to preparations to safe storage.¹³ How this transition is managed over the next eighteen months (for closure in 2020) or over the next five years (for closure in 2024) should be given appropriate scrutiny by the Commission.

Notably, Durham Region, which is the host community for the Pickering nuclear station, is concerned by the lack of planning for Pickering's closure. In April 2018 it unanimously supported the following resolution:

That Durham Region requests OPG prepare and publish plans on how it will mitigate negative impacts of the station's retirement, including transition plans for affected workers, in advance of the stations' closure.¹⁴

Greenpeace encourages the Commission to direct OPG and CNSC staff to implement Durham Region's request for transparent transition planning. Unlike past licence applications, OPG needs to not only demonstrate that it can maintain safe staffing levels while the reactors are in operation, but show that the proper planning is in place to mitigate any negative social impacts caused by the station's closure.

1.1.2 Learning from Gentilly-2's closure

Statements made during the Day 1 hearings unfortunately show CNSC staff have yet to accept and learn lessons from the closure of Quebec's Gentilly-2 nuclear station in 2012.

In Greenpeace's view, CNSC staff misleadingly portrayed Quebec's closure of the Gentilly-2 nuclear station in 2012 as a "sudden" or unexpected political decision.¹⁵ By 2012, the cost of rebuilding the Gentilly-2 had increased dramatically since it was initially approved in 2008. As well, the 2011 Fukushima disaster had renewed concerns related to the desirability of rebuilding Quebec's only nuclear reactor when there were cheaper and less risky alternatives.

What staff have failed to acknowledge is that the closure of Gentilly-2 was reasonably foreseeable and CNSC should have required contingency plans when the station was relicenced in 2011. In response to staff's lack of situational awareness, Greenpeace

¹² Ontario Ministry of Energy, "Ontario Moving Forward with Nuclear Refurbishment at Darlington and Pursuing Continued Operations at Pickering to 2024", *Press Release*, January 11, 2016.

¹³ Ontario Power Generation, *PRELIMINARY DECOMMISSIONING PLAN - PICKERING GENERATING STATIONS A & B*, P-PLAN-00960-00001, December 2016, Table C-1, pg. 137.

¹⁴ Durham Regional Council – Minutes, April 11, 2018, pg. 13.

¹⁵ CNSC, *Public Hearing*, April 4, 2018, Ottawa, pg. 151.

alerted the Commission to the likely closure Gentilly-2 during the re-licensing process. Greenpeace requested that the Commission require Hydro-Quebec to develop an end-of-life plan, including how to address jobs lost by the station's closure.¹⁶ Unfortunately, the Commission dismissed Greenpeace's request.

A year later the newly elected Quebec government announced it would close the Gentilly-2 nuclear station. This triggered a wave of public protests by plant workers and unions who were rightly concerned by lack of worker transition planning. Without clear transition planning the plant closure was an unnecessary and unfair shock to the community. Such planning was exactly what Greenpeace had requested during relicensing hearings the previous year.¹⁷

In short, it would have been reasonable for the CNSC to anticipate and put in place contingency plans when Gentilly-2 was re-licenced in 2011. However, CNSC staff had a blindspot.

Neither OPG nor CNSC staff were prepared to oversee the safe closure of a nuclear station and its transition to decommissioning. This is not surprising. It has been Greenpeace's experience that the CNSC's regulatory guidance and requirements often lag the challenges faced by licencees.¹⁸ In line with this, staff acknowledged they only recently articulated regulatory expectations for Pickering's closure through a "formal letter"¹⁹ instead of a more formally developed regulatory guide.

In Greenpeace's view, CNSC staff's failure to propose contingency planning for the foreseeable closure of Gentilly-2 exacerbated the impacts of the plants closure. Greenpeace urges the Commission to learn from this past mistake. OPG does not have a final approval from its shareholder to operate the station beyond 2020. There has been no formal assessment of whether Pickering's extended operation is in the public interest. Greenpeace urges the Commission learn lessons from the closure of Gentilly-2 and instruct staff and OPG to prepare contingency plans for the earlier closure of Pickering.

Request: In the event that the Commission approves the operation of Pickering until 2024, the Commission should also include a requirement for OPG and CNSC staff to develop and publish contingency plan for an earlier closure, including worker transition plans, before the end of 2018.

¹⁶ Canadian Nuclear Safety Commission, Public Hearing Transcript, Bécancour, Quebec, April 14th, 2011, pgs. 74 – 81.

¹⁷ Brigitte Trahan, "Consultation et Gentilly-2: Greenpeace avait prévu le coup," *Le Nouvelliste*, 2 octobre 2012.

¹⁸ An obvious example is the Commission's late attempts to develop a regulatory framework for overseeing the life-extension of reactors.

¹⁹ CNSC, *Public Hearing*, April 4, 2018, Ottawa, pg. 149.

Request: The Commission should require OPG to publish plans on how it will mitigate the negative social and community impacts of Pickering's closure as requested by Durham Region.

1.2 Need for a Strategic Environmental Assessment on closure options

Greenpeace encourages the Commission to correct a historic failure of foresight and direct OPG to undertake a strategic environmental assessment of options for dismantling the Pickering nuclear station and securing the radioactive waste it has created.

Unfortunately, the Pickering nuclear station was approved without an environmental assessment. It was allowed to operate based on the promise that the radioactive wastes produced by the station would be sent to other waste management facilities. This was the antithesis of a precautionary approach. What's more, the station's community acceptance – what we now call “social licence” - has been based on this promise. This promise may have misled the community.

Over the past four decades, Pickering has produced over 18,000 tonnes of high-level nuclear fuel waste as well as other long-lived radioactive wastes. The dismantling of the station will also produce more long-lived radioactive wastes. The station's operation has also caused land contamination, although there is limited information in the public domain on the magnitude of this pollution and to what extent it could be remediated.

With Pickering now approaching its end of life, it is incumbent on government authorities to compensate for past ineffective oversight of OPG's operations. Specifically, Greenpeace encourages the Commission to support a Strategic Impact Assessment (SIA) once the government's proposed *Impact Assessment Act* (Bill C-69) gains Royal Assent.

A SIA is needed to address two significant policy issues overlooked due to the historic failure to review nuclear power projects in a precautionary manner. Specifically, SIA is needed to review alternatives to OPG's current decommissioning policy and to assess contingency plans for safely storing radioactive waste at the Pickering site.

1.2.1 Contingency Planning for Long-term waste storage

Considering OPG's failure to develop a dependable off-site plan for managing Pickering's radioactive wastes, it is reasonable and prudent to prepare long-term on-site management options for the radioactive wastes produced by Pickering since 1971. However, there are no such options discussed in OPG's decommissioning strategy.

In a 2017 submission to the Expert Panel reviewing Canada's environmental assessment process, Durham Region lamented the fact that environmental reviews of reactor life-

extension projects, including OPG's abandoned proposal to rebuild the Pickering B reactors, have not required reactor operators to provide reliable proposals for the long-term storage of radioactive waste. Durham Region recommended that "Approval of a nuclear project should require a proponent to have a nuclear waste disposal solution available **before** the new/refurbished nuclear reactors are permitted to operate."²⁰

Although Durham Region's request is reasonable and in line with the precautionary principle, the CNSC has never asked OPG, Bruce Power, Hydro-Quebec or New Brunswick Power to provide reliable long-term waste management solutions during environmental reviews of reactor life-extension proposals. In Greenpeace's view, the CNSC has perpetuated the failure of previous government authorities to require credible long-term nuclear waste management facilities as a condition of licensing. Greenpeace urges the Commission to constructively remedy this failure of foresight now that Pickering is reaching its end-of-life.

Notably, the Joint Review Panel (JRP) that assessed OPG's proposal to build new reactors at the Darlington nuclear station found that it was reasonable to plan for the possibility that an off-site waste storage facility is not established. The JRP recommended:

...that prior to construction, the Canadian Nuclear Safety Commission require OPG to make provisions for on-site storage of all used fuel for the duration of the Project, in the event that a suitable off-site solution for the long-term management for used fuel waste is not found.²¹

The JRP also recommended that OPG make equivalent provisions for the long-term on-site storage for intermediate-level radioactive wastes.²² The government of Canada accepted the intent of these recommendations, observing that Canada's 1996 *Radioactive Waste Policy Framework* states radioactive waste owners are responsible for developing and implementing waste management strategies.²³

The JRP's recommendations have turned out to be prescient. After only a decade of planning the Nuclear Waste Management Organization (NWMO) timelines for the opening of a fuel-waste DGR have been delayed by a decade. In 2005, the NWMO

²⁰ Garry Cubitt (Chief Administrative Officer, Durham Region) to Kevin Blair (Major Projects Management Office, Natural Resources Canada), "Environmental and Regulatory Reviews Discussion Paper," August 28, 2017.

²¹ Joint Review Panel, Environmental Assessment Report: Darlington New Nuclear Power Plant Project, August 2011, pg. 118.

²² Ibid.

²³ *Government of Canada's Response to the Joint Review Panel Report for the Proposed Darlington New Nuclear Power Plant Project in Clarington Ontario*, Canadian Environmental Assessment Registry: 07-05-29525, May 2, 2014.

claimed a DGR would be open in 2035.²⁴ In 2018, the NWMO acknowledge that its fuel waste DGR would not open until approximately 2045.²⁵ It is reasonable to expect additional delays.

However, the reasoning behind the JRP's recommendations for the wastes produced by new reactors is also applicable to Pickering's wastes. The "offsite solutions" OPG claims will be available for Pickering's wastes are the same offsite solutions OPG claimed would accept waste from new reactors. However, neither OPG nor the CNSC has acknowledged the reasonably foreseeable potential for the fuel waste DGR (or the DGR currently proposed to store decommissioning waste) to be either significantly delayed or never completed.

In short, without pro-active attention the interim Pickering Waste Storage Facility (PWSF) could, de-facto, become a long-term storage facility.

This is problematic because Pickering's current temporary waste storage structures are not reinforced or designed to withstand a terrorist attack or erratic and extreme weather events. Otherwise put, the likely delay or abandonment of planned DGRs will mean radioactive waste poses a long-term threat to the Great Lakes and surrounding community that requires alternatives assessment to be done today.

It is thus reasonably foreseeable that the radioactive wastes that have accumulated at Pickering will remain at the site in the long-term. This raises legitimate questions whether OPG has made adequate provisions to prevent unreasonable risk to Canadian society under section 9(i)(a) of the NSCA.

In the United States, the development of a DGR for fuel waste has also undergone significant delays. In response, community and civil society organizations have been advocating for Hardened On-Site Storage (HOSS). Over 150 U.S.-based organizations have endorsed the principles of HOSS. These principles include:

- Irradiated fuel must be stored as safely as possible as close to the site of generation as possible. Waste moved from fuel pools must be safeguarded in hardened, on-site storage (HOSS) facilities.
- The overall objective of HOSS should be that the amount of releases projected in even severe attacks should be low enough that the storage system would be unattractive as a terrorist target.
- HOSS facilities must not be regarded as a permanent waste solution, and thus should not be constructed deep underground. The waste must be retrievable,

²⁴ NWMO, *Choosing a Way Forward - The Future Management of Canada's Used Nuclear Fuel Final Study*, 2005.

²⁵ NWMO, *Moving towards partnership – 2017 Annual Report*, pg. 10.

and real-time radiation and heat monitoring at the HOSS facility must be implemented for early detection of radiation releases and overheating.²⁶

The possible need to securely store radioactive wastes at the Pickering should be of particular concern due to the station's location on the shores of Lake Ontario and within the Greater Toronto Area (GTA).

With Pickering now approaching its end-of-life, it is incumbent on government authorities to compensate for past ineffective oversight of OPG's operations. This ineffective oversight has created radioactive waste without confirmed plans for managing long-lived radioactive wastes. This requires a precautionary assessment of OPG's decommissioning strategy.

We must consider the possibility that fuel waste and decommissioning wastes created by Pickering may end up at the site permanently - or at least for a very extended period. This is concerning because of Pickering's proximity to Toronto and the Great Lakes.

Request: In line with its mandate under section 9(i) of the *Nuclear Safety and Control Act*, the Commission should require OPG to develop proposals for more robust radioactive waste storage facilities to ensure adequate provision is made to protect Canadians and the environment before it applies for a decommissioning licence. Plans for more robust radioactive waste storage facilities should be available for public review during an environmental assessment before OPG applies for a decommissioning licence.

1.2.2 Consideration of alternatives to OPG's preferred closure strategy

The Commission should ensure that the environmental, economic and social impacts of alternatives to OPG's proposed plan are publicly evaluated before the company can apply for a decommissioning licence. A Strategic Impact Assessment would be an appropriate means to openly consider such alternatives.

OPG's proposed decommissioning strategy proposes to defer the dismantling and clean up the Pickering site defers for decades. It is evident that OPG's proposed decommissioning approach prioritizes the company's financial interests – deferring or avoiding costs - over the possible social impacts and environmental risks of delaying the clean up of the site.

OPG's current plan assumes the company will receive a "decommissioning licence" in 2028. Three activities would be permitted under this decommissioning licence *Safe Storage, Dismantling, and Site Restoration*. Under the plan, the plant will lay dormant in *Safe Storage* for twenty-two years until 2050 before dismantling the station begins. OPG's decommissioning plan assumes only forty staff will required on site during this

²⁶ Principles for Safeguarding Nuclear Waste at Reactors, available at: <https://bit.ly/2HufE1i>

period.²⁷ Such a dramatic transition could have negative social and economic impacts on the surrounding community.

There are no indications in OPG's licence application that it plans to carry out an environmental assessment to evaluate the potential environmental and social impacts of its decommissioning strategy compared to alternate scenarios. Thus, without instruction from the Commission, preferred decommissioning approach is accepted as a *fait accompli*. In Greenpeace's view, this is imprudent.

As discussed, a central assumption of OPG's decommissioning strategy is that radioactive wastes will be transferred to offsite storage facilities. However, this assumption is unwarranted and would impact both the timelines and the end-points presented in OPG's decommissioning strategy. This shows a need to assess alternative scenarios.

Moreover, OPG's assumption that delayed reactor dismantling is the best choice for the surrounding community and environmental protection should be questioned. Given the foreseeable social impacts and environmental risks, the public should be consulted on alternatives to OPG's financial preference to delay dismantling work, including the social and community impacts associated with OPG's preferred delayed decommissioning strategy.

There is also a need to gather and publicly review information on the accumulated contamination at the Pickering site. The extent and nature of such contamination may impact OPG's assumption that the site could be completely remediated. Again, this may require examining alternative decommissioning strategies.

In Greenpeace's view, the current plan to proceed with OPG's decommissioning strategy is imprudent and may lead to avoidable adverse social and environmental effects. A key aspect of an environmental assessment is information gathering. At present, there is insufficient information on the contamination at the Pickering site. There is also insufficient information on the impacts of deferred, prompt or staged²⁸ approaches to station dismantling.

A strategic environmental assessment of alternative decommissioning approaches is an appropriate mechanism for ensuring the public has access to the risks posed by the Pickering site and the possible social and economic impacts of OPG's activities. The

²⁷ Ontario Power Generation, *PRELIMINARY DECOMMISSIONING PLAN - PICKERING GENERATING STATIONS A & B*, P-PLAN-00960-00001, December 2016, pg. 137.

²⁸ Debate on decommissioning tends to focus on OPG's preference for delayed decommissioning versus proposals to immediately dismantle the station upon closure. A third "staged" approach could also be considered where the dismantling of the station occurs after the last of the fuel waste is transferred from fuel pools to dry storage. This could reduce the safe storage phase of OPG's current plan by at least a decade.

information gathering activities will also ensure that the Commission has the appropriate information to ensure that OPG will prevent unreasonable risk and protect both the environment and human health under a future decommissioning licence. In light of the uncertainties related to offsite waste management, Greenpeace does not believe the Commission has adequate information to properly assess a future application for a decommissioning licence, which will likely also approve a long-term waste management strategy for the site.

Request: The Commission should ensure a public assessment of alternatives to OPG’s preferred delayed decommissioning strategy—including contingency plans for long-term waste management at the site— takes place before OPG is allowed to apply for a decommissioning licence.

1.2.3 Strategic Impact Assessment under the new *Impact Assessment Act*

In light of the outstanding uncertainties related to the management of radioactive wastes and the need to develop a social acceptance for a decommissioning approach for the Pickering site, Greenpeace urges the Commission to ask the Minister of the Environment and Climate Change to conduct a Strategic Impact Assessment of decommissioning strategies for the Pickering nuclear station.

To be clear, Greenpeace does not consider the environmental assessments carried out under the *Nuclear Safety and Control Act* (NSCA) as equivalent or an adequate replacement for EAs that have been carried out under the former *Canadian Environmental Assessment Act* (CEAA). Due to their limited scope NSCA EAs are not well suited for evaluating the broader policy issues related to how Pickering should be decommissioned.

CNSC-led environmental reviews have focused on mere regulatory compliance, while overlooking whether a project advances or harms progress toward sustainable development. The reviews have also failed to consider the polluter-pays principle.

CNSC staff have validated Greenpeace’s concern, admitting that they lack the expertise and knowledge to assess a project’s sustainability.²⁹ Thus the need for an impartial and expert environmental review is clear.

Environmental reviews under the NSCA are a relatively new phenomena. The scope of NSCA reviews is determined by *REGDOC-2.9.1: Environmental Protection: Environmental*

²⁹ During the environmental assessment hearings on OPG’s proposal to build a Deep Geological Repository (DGR) for non-fuel radioactive wastes, CNSC staff stated they only consider whether a project will meet existing regulatory requirements to protect the environment and rely on Environment Canada or provincial governments to carry out assessments of a project’s sustainability. See: Canadian Environmental Assessment Agency, *Deep Geological Repository for low and intermediate level radioactive waste project, Joint Review Panel*, Transcripts, Thursday, October 3, 2013, Volume 15, pgs. 182 - 185.

Principles, Assessments and Protection Measures. The EA produced for the current licence renewal is such an EA. Although the 2017 version of *REGDOC-2.9.1* lists the precautionary principle, the “polluter pays” principle, and the concept of sustainable development as guiding principles of CNSC EAs³⁰, the environmental review produced for the current license application did not incorporate sustainability concerns.³¹ In Greenpeace’s view, this is additional evidence the CNSC’s lack of expertise in sustainability assessment.

For these reasons, Greenpeace urges the Commission to ask the Minister of the Environment to conduct a strategic impact assessment of decommissioning options for the Pickering nuclear station under Section 95³² of the proposed *Impact Assessment Act*.

Strategic Impact Assessments are appropriate for investigating broader policy issues, including comparing alternative approaches to policy implementation. The Expert Panel that reviewed the federal governments environmental assessment approach in 2016 argued that a new SIA “...model should be put in place to provide guidance on how to implement existing federal policies.”

Considering the outstanding issues related to long-term waste management and decommissioning approach, using an SIA to review OPG’s decommissioning strategy would provide better guidance on how to implement a federal government policy. Although the federal government’s *Radioactive Waste Policy Framework* assumes that waste producers are responsible for the funding and managing of radioactive wastes, it assigns the federal government will ensure waste that radioactive waste management “is carried out in a safe, environmentally sound, comprehensive, cost-effective and integrated manner.”³³ The federal government has not clarified how it will ensure the safe management of radioactive waste in the event that off-site radioactive waste solutions do not come to fruition. Thus, a Strategic Environmental Assessment could be an appropriate means of developing guidance on how this federal policy should be implemented.

³⁰ CNSC, *REGDOC-2.9.1: Environmental Protection: Environmental Principles, Assessments and Protection Measures, Section 2.1, April 2017, pg. 6.*

³¹ Canadian Environmental Law Association (CELA), *Evaluating Emergency Preparedness and Environmental Protection for the Pickering Nuclear Generating Station Licence Renewal (Ref. 2018-H-03)*, Prepared by Kerrie Blaise, Rizwan Khan and Tanya Markvart, May 7, 2018, CELA Publication No: 978-1-77189-895-9.

³² Section 95 of the proposed *Impact Assessment Act* states “The Minister may establish a committee — or authorize the Agency — to conduct an assessment of (a) any Government of Canada policy, plan or program — proposed or existing — that is relevant to conducting impact assessments; or (b) any issue that is relevant to conducting impact assessments of designated projects or of a class of designated projects.”

³³ Ministry of Natural Resources, *Radioactive Waste Policy Framework*

The Expert Panel also noted that: “Under the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (“Cabinet Directive”), Canada now implements strategic environmental assessment to incorporate environmental considerations early in the development of a plan, policy or program, along with economic and social considerations.” This Cabinet Directive supports an upfront review of OPG’s decommissioning strategy to ensure local economic and social concerns inform the final decommission strategy.

Request: The Commission should request the Minister of the Environment and Climate Change conduct a Strategic Impact Assessment of decommissioning strategies, including long-term waste management strategies, for the Pickering nuclear station under section 95 of the proposed *Impact Assessment Act*.

2. Intolerable risk: time to close Pickering

The Pickering nuclear station’s location, out-dated design and aging components make it an unreasonable risk to Canadian society and the environment.

In its deliberations, Greenpeace encourages the Commission to consider OPG’s shareholder - the Ontario government – as the actual proponent of OPG’s licence application. The province will ultimately approve or reject whether OPG can continue operating the station. It appoints OPG’s board of directors and sets the scope of OPG’s business plans through a Memorandum of Understanding.

As will be discussed, the Ontario government determines the level of offsite safety through its responsibility for land use planning and emergency preparedness. The CNSC should judge the province’s performance in safeguarding public safety in the manner it considers OPG’s maintenance of onsite safety.

The province has promoted policies that have increased the risk imposed by Pickering on surrounding communities. It has also mismanaged its responsibility for offsite nuclear emergency response.

Considering the province’s track record, it is doubtful that the province – and by extension OPG – will make adequate provision to protect Canadians. These are grounds for rejecting OPG’s licence application or imposing additional licence conditions.

As discussed, the majority of Pickering’s output is surplus. Its output is bought by the Independent Electricity System Operator (IESO) and sold at loss to neighbouring U.S. states. The cost of these losses is paid for by ratepayers. While Ontario consumers pay for Pickering’s operations, the Ontario government benefits from a perverse incentive: it receives dividends from OPG even if Pickering’s power is unneeded.

In Greenpeace's view, the incestuous relationship between OPG and its government shareholder call for the Commission to be more sceptical of OPG's licence application. OPG is requesting an unprecedented 10-year licence as well as permission to continue operating the Pickering reactors until 2024. It has also requested a licence condition that would allow it to extend Pickering's operation again without the scrutiny of a licence renewal process.

OPG's request for a 10-year licence is effectively asking the Commission for less regulatory and public oversight as the risk from the station is increasing from both aging effects and increasing population densities around the station. In contrast, Greenpeace urges the Commission to consider the need for more oversight in light of Pickering's age and location.

Request: The Commission should reject OPG's request for an unprecedented 10-year licence and approve only a 5-year licence in order to better oversee Pickering's end-of-operations.

2.1 OPG's Periodic Safety Review – Insufficient transparency

The Periodic Safety Review (PSR) OPG has provided as part of its licence application lacks sufficient transparency and intelligibility to support the continued operation of the Pickering reactors.

A PSR assesses the existing nuclear station against modern standards to identify enhancements to reduce the gap between the current design and modern standards. Greenpeace is concerned OPG's approach to these safety enhancements has prioritized its financial interests over the higher levels that should be expected of a nuclear station operating in such a densely populated area.

In 2010, OPG abandoned proposal for extending Pickering's operations for another three decades due to the high cost and the limited capacity to improve the safety of Pickering's out-dated design. This is very different from the narrative OPG is using in the current proceedings.

In the briefing note provided to the Minister of Energy in 2010, which summarized why the Pickering life-extension should be abandoned, Ministry staff noted:

“Cost benefit analysis showed that little safety improvement would have been derived as a result of investing 100 M dollars would result in little safety improvement.”³⁴

³⁴ Cedric Jobe, Briefing Note, January 8, 2010. Acquired through Freedom of Information legislation.

The briefing also acknowledged that the Pickering reactors “...do not meet modern standards” and that “...there exists high potential for discovery of defects which would make refurbishment unfeasible.”³⁵

The briefing to the Minister also acknowledged that the CNSC’s new requirement to carry out a PSR once a decade “....results in the potential need for significant plant upgrades in the future.”³⁶ Curiously, the PSR that OPG is using to justify Pickering’s continued operation does not propose significant upgrades to the station despite the station’s out-of-date design and degrading components.

Greenpeace is concerned that OPG is using repeated requests for time-limited service extensions to avoid the more significant - and expensive – safety upgrades anticipated for longer-term extensions. Although there is a clear public expectation that Pickering should meet higher levels of safety, OPG has a financial interest in minimizing costly safety upgrades.

In 2013, OPG asked to continue operating the station for an additional six years. In comparison to the cost-benefit analysis carried out previously to evaluate the refurbishment and life-extension of the Pickering nuclear station, the cost benefit analysis carried out by OPG’s in 2013 would have ascribed less value to safety improvements because their benefits would be limited only six year period.

In the current application, OPG is asking to operate the station for an additional four years. To keep costs down, OPG appears to have again requested the CNSC accept a reduced valuation of safety improvements due to their limited duration.

In its 2015 *Technical and Economic Assessment of Pickering Extended Operations beyond 2020*, OPG acknowledged that the CNSC’s acceptance of evaluating safety improvements by the limited value they would provide over four years of additional operation. OPG acknowledged it needed to establish “...with certainty the regulatory requirements and how these interrelate to the timing of the end of extended operations...”³⁷ OPG also stated that it “...is confident that a list of reasonable and practicable safety enhancements can be reached with the CNSC staff in view of the 4 years of additional operation that is sought.”³⁸

Considering Pickering’s out-of-date design and its location, the Commission should prioritize the public’s expectation for safety before OPG’s financial interests. It should also remember that in 2013 OPG told the Commission and the public. it would only

³⁵ Ibid.

³⁶ Ibid.

³⁷ OPG, *Technical and Economic Assessment of Pickering Extended Operations beyond 2020*, October 2015, pg. 10.

³⁸ Ibid.

operate Pickering until 2020. Now OPG claiming it will only operate Pickering until 2024, but has a licence condition that would allow it to extend the life past 2024.

However, it is unclear what agreements CNSC staff have made related to the evaluation of safety upgrades. Without such information Greenpeace does not believe the Commission can reliably conclude that sufficient action has been taken to ensure the protection of the public under the *Nuclear Safety and Control Act*.

In 2016, Greenpeace filed a request under Access to Information legislation for all "...internal documents, meeting minutes, and correspondence discussing potential safety enhancements in light of OPG's desire to extend Pickering's operation for 4 additional years. This should include anything discussing how CNSC staff will determine what enhancements will be considered reasonably practical in light of the 4 additional years of operation."³⁹ The CNSC refused to provide any information in response to this request.

Given, OPG's economic incentive in minimizing safety upgrades, Greenpeace is concerned by staff's lack of openness related to what constitutes a cost effective safety upgrade. Without such transparency the public is deprived of the information it needs to meaningfully assess the conclusions of OPG and CNSC staff.

It should be noted that Greenpeace has observed a significant decline in Commission transparency since 2016. The Commission has refused a considerable number – if not the majority - of Access to Information related to OPG's PSR. In contrast, CNSC staff were much more open and encouraged proactive disclosure when Pickering underwent its first PSR⁴⁰ a decade ago. Information released a decade ago is now withheld by the Commission. It is unclear why.

In sum, the CNSC has lowered the bar on transparency in recent years and with it the credibility and trustworthiness of safety its safety claims. OPG has an obvious financial incentive to minimize safety improvements. To be credible, the criteria and analysis used to determine what safety improvements are cost-effective and what improvements are too costly should be open to public scrutiny.

Request: The Commission should instruct CNSC staff to strive for higher levels of transparency while carrying out future Periodic Safety Reviews, including proactive disclosure of all safety improvement opportunities and their associated cost-benefit analysis.

Request: Before approving OPG's licence renewal, the Commission should request a list of all safety improvement opportunities considered during OPG's Periodic Safety Review

³⁹ A-2016-00150

⁴⁰ At the time, the CNSC referred to PSRs as Integrated Safety Reviews (ISR).

with a clear justification on why specific safety improvement opportunities were accepted or rejected.

2.2 A risky location – the Pickering Site & declining safety margins

The Commission should reject OPG's application to operate the Pickering nuclear station beyond 2020 in response to the Ontario government's promotion of policies that increase the risk posed by the station.

As discussed, the Ontario government is OPG's sole shareholder and the effective proponent of OPG's application to continue operating Pickering. In Greenpeace's view, the Commission's assessment of OPG's application should consider whether its shareholder has made adequate provision for the protection of the environment and human health wherever its policies impact the safety of the Pickering nuclear station.

Under the CNSC's defence-in-depth safety approach, the Ontario government has significant responsibilities that should be considered during the relicensing of any OPG facility. Defence-in-depth is a series of defence levels that seek to prevent accidents from occurring, but ensure appropriate protection is provided to the public and the environment if prevention fails.⁴¹ As the authority responsible for offsite public safety and as OPG's shareholder, the province should be held accountable for the adequacy of the fifth level of defence-in-depth, which aims to mitigate the impacts of radioactive releases once they occur.

Two key areas of provincial oversight determine whether the fifth level of defence-in-depth is adequate under the *Nuclear Safety and Control Act*: land use planning and emergency preparedness.

Ontario's land use planning policies encourage population growth across the GTA generally, including the Pickering nuclear station. Such policies have increased the risk posed by the Pickering nuclear station by increasing the number of people who may be displaced or exposed to radiation in the event of an accident.

The province's growth plan identifies downtown Pickering as urban growth area.⁴² Downtown Pickering is less than 10 km from the Pickering nuclear station. By increasing population density around Pickering, the Ontario government is making the implementation of emergency measures more logistically challenging and less effective.

⁴¹ CNSC, *REGDOC-2.5.2 Physical Design of Reactor Facilities: Nuclear Power Plants*, May 2014, Section 4.3.1, pg. 7.

⁴² Ministry of Infrastructure, *Growth Plan for the Greater Golden Horseshoe, 2006*, Office Consolidation June 2013, pgs. 16-17, 65.

Notably, the government of Ontario has knowingly eroded safety margins around the Pickering site. In the briefing note provided to the Minister of Energy in 2010, Ministry staff admitted Pickering's location made it risky to extend the life of the Pickering. The Minister's briefing stated:

"The ability to continue to operate for 30 years in a targeted population growth area (as defined by the Province of Ontario) also carries the potential for significant regulatory sanction in response to public intervention."⁴³

Otherwise put, the Ontario government is *aware* that its policy of encouraging growth around the Pickering nuclear station is objectionable. Thus, OPG's shareholder is intentionally reducing the safety of Pickering nuclear station. In Greenpeace's view, the Commission has a responsibility to penalize licencees if there is evidence that they have knowingly increased risk to the public. This can be done by either rejecting OPG's application or by adding additional licence conditions.

The province has also refused to modify its policies. In 2016, Greenpeace and the Canadian Environmental Law Association (CELA) filed a request for a policy review under Ontario's Environmental Bill of Rights. In our request we asked asking the Ministry of Municipal Affairs to revise its land use policies taking into account the need to encourage public safety instead of population growth near nuclear stations.⁴⁴ The province dismissed our request.

Thus, although provided an opportunity to revise its land use planning policies to encourage nuclear safety, the province has refused to modify its policies to take into account its responsibility as OPG's shareholder to ensure adequate protection and Canadians under the *Nuclear Safety and Control Act*.

It should also be noted that Commission staff have repeatedly decided against establishing clear criteria for judging the site suitability of a nuclear power plant. In 2018, the CNSC finally released an updated post-Fukushima site suitability guide, *REGDOC-1.1.1 Site Evaluation and Site Preparation*.

Greenpeace and CELA requested this new siting guide acknowledge the need to for provincial authorities to discourage population growth and inappropriate land use over the life of a nuclear facility. Unfortunately, Commission staff refused, stating that: "...land use is under provincial / territorial jurisdiction, and regions / municipalities and applicants must adhere to provincial/territorial legislation regarding land use."⁴⁵

⁴³ Cedric Jobe, Briefing Note, January 8, 2010. Obtained through Freedom of Information legislation.

⁴⁴ CELA, Durham Nuclear Awareness and Greenpeace, *Application for Review to the Ministry of Municipal Affairs*, September 26, 2016.

⁴⁵ *Detailed Comments Report Draft REGDOC-1.1.1, Licence to Prepare Site and Site Evaluation for New Reactor Facilities Public consultation: August 11, 2016 – November 14, 2016 and Feedback on comments: Dec. 7 to 29, 2016*, Edoc #5117698, pg. 70

In light of Ontario's ongoing actions to undermine offsite public safety, Greenpeace believes staff's deference to provincial policy is untenable under the *Nuclear Safety and Control Act*. In rendering its decision, the Commission should exercise its authority under the *Act* to reduce or eliminate the unreasonable risk posed by Pickering. The Commission should also be aware that staff's decision to not establish criteria for judging site suitability has been repeatedly criticized. For example, John Beare, who had been commissioned to review the CNSC's proposed licensing basis for new reactors, made the following observations:

19. There are two significant gaps in the Licensing Basis Document. ... The safety goals are independent of the site, the size of the exclusion area (if any) and the demographics of the area around the site. I was advised that site considerations do not affect the design requirements for the nuclear power plant but that explanation is difficult to accept.

*20. Before issuing this Licensing Basis Document the Canadian Nuclear Safety Commission should document and **publish its siting policy giving quantitative values for the tolerable risk** (not unreasonable to use the wording of the Nuclear Safety and Control Act) to individuals and the population around a nuclear power plant site. One weakness of the current siting policy in AECB-1059 is that only radiological risks are addressed. In AECB- 1059 the frequency and radiological consequences of process failures alone and in combination with safety system failures are addressed for individuals and the population, **but only the risk to individuals from more serious accidents. These weaknesses in the current siting policy should be remedied.***⁴⁶

Mr. Beare also made frank observation relevant to the current proceedings. He told CNSC staff: "Depending on one's perspective, from the safety point of view the approval of the Pickering site was an act of faith or hubris." Given the Pickering site was originally approved in the 1960s, either our faith or hubris has grown along with growth of nearby populations.

In addition, a report commissioned specifically to inform updated siting requirements in 2007 found "[i]mportant gaps not addressed in the CNSC documents or anywhere in its licensing framework ... [include] ... "criteria for the rejection of a proposed site if it is deemed unsuitable... [and]... that there are no insurmountable obstacles to the establishment of suitable emergency measures."⁴⁷ Unfortunately, CNSC has failed to acknowledge the criticism of these expert advisors.

⁴⁶ John W. Beare, P.Eng., *Review of ACR-LBD-001, Licensing Basis Document for New Nuclear Power Plants in Canada*, Draft dated 2004 December

⁴⁷ *Regulatory Site Requirements Needed for New Nuclear Power Plants in Canada, Final Report*, June 2007, RSP-0223, pg. 8.

In short, public safety is being undermined by failure of both the provincial government and CNSC staff refusal to limit population growth around the Pickering nuclear station. Greenpeace has attempted to alert both the CNSC and the province on the need to establish policies to reduce the risk of Pickering. Both have declined to act.

Greenpeace thus asks the Commission to use its power under the *Nuclear Safety and Control Act* to regulate the production of nuclear energy and prevent unreasonable risk to the public.

As discussed, OPG's shareholder has knowingly increased the risk posed to the public to unreasonable levels. Through its growth policies, the Ontario government has reduced Pickering's safety margins by diminishing the capacity of emergency measures to effectively respond to accidental radiation releases. It is reasonable to assume that the province will continue to promote population growth and undermine Pickering's safety without some sort of sanction by the CNSC.

There is precedent for the Commission to modify licence conditions based on the inadequate oversight of the Ontario government. In response to the public concern related to the province's oversight of nuclear emergency response, the CNSC imposed new license conditions on Ontario reactor operators requiring the direct delivery of potassium iodide (KI) pills within 10 km of Ontario nuclear stations.

Notably, the Ministry of Community Safety and Correctional Services, which inappropriately relies on OPG for policy support, opposed the Commission's new KI distribution requirements.⁴⁸ The province's opposition to CNSC's intervention in its jurisdiction has been stubborn. Even though the CNSC's new KI distribution requirements had been implemented by the end of 2015, the Ontario's government's 2017 Discussion Paper on updating emergency response recommended against including the CNSC's KI distribution in an updated Provincial Nuclear Emergency Response Plan.

Request: In response to the Ontario government's policies, which promote population growth and intensification and thereby undermine public safety around the Pickering nuclear station, the Commission should reject OPG's application to operate the Pickering nuclear station beyond 2020.

Request: In the event that the Commission approves the continued operation of Pickering beyond 2020, the Commission should include additional license conditions requiring OPG to work with its shareholder to establish limits on population growth within the newly established 20 km Contingency Planning Zone (CPZ).

⁴⁸ John Spears, "The real question about nuclear disaster: Federal or provincial issue?", *Toronto Star*, August. 23, 2014.

2.3 Emergency preparedness – provincial malpractice

Since the 2011 Fukushima disaster, the Ontario government has consistently mishandled the oversight and upkeep of provincial nuclear emergency response plans.

It became apparent during the 2013 Pickering relicensing hearings that province's oversight of nuclear emergency preparedness was inadequate. Since the 2013 Pickering hearings, the Commission has laudably imposed KI distribution requirements in response to provincial inaction and required annual reports to the Commission on the province's oversight of nuclear emergency response.

However, the province's poor oversight of nuclear emergency management has continued and should be factored into the Commission's decision on whether to accept, reject or modify OPG's request to continue operating the Pickering nuclear station.

In December 2017, Ontario's Auditor General released an audit of the province's nuclear emergency planning, detailing a corporate culture at the Ministry of Community Safety and Correctional Services unable to deliver on its obligations.⁴⁹ For example, the Auditor noted that the Provincial Nuclear Emergency Response Plan (PNERP) had not been updated since 2009 even though it was supposed to be revised every four years. Elements of the PNERP, such as traffic control plans needed to facilitate evacuation, were incomplete.⁵⁰

It has become apparent that there is a clack of technical capacity at the Ministry of Community Safety and Correctional Services. In line with the incestuous relationship that exists between OPG and the provincial government there is also a lack of independence from OPG on emergency planning matters.

During CNSC hearings in November 2015, Deputy Fire Marshal Al Suleman acknowledged that there are only six staff with a responsibility for nuclear emergency response within the provincial government.⁵¹ A 2016 briefing note to CNSC president Michael Binder also raised concerns related to OFMEM's lack technical expertise. The briefing observed "...the challenge for OFMEM is the loss of expertise and corporate knowledge."⁵²

The Auditor General also observed that in 2015 the government had relied on staff borrowed from reactor operators. The Auditor rightly observed that this could compromise the government's objectivity.⁵³ This reliance on OPG staff has continued.

⁴⁹ See Chapter 3.03, Auditor General of Ontario, 2017 Annual Report, December 2017.

⁵⁰ Ibid, 239.

⁵¹ CNSC, Public Hearing Transcripts, Courtice, Ontario, November 4, 2015, pg. 45.

⁵² INFORMATION NOTE TO THE PRESIDENT, June 30, 2016E-Doc: 5027898, Acquired through Access to Information.

⁵³ Auditor General of Ontario, pg. 253.

In 2017, Jim Coles, OPG's Director of Emergency Management was "On loan from OPG to support development of the new Provincial Nuclear Emergency Plan."⁵⁴

Notably, internal documents obtained by Greenpeace through Freedom of Information legislation show that OPG was concerned that delays in the government's review of nuclear emergency response could undermine its request to renew Pickering's operating licence. In an internal document detailing risks to its licence application, OPG observed:

There is a tight schedule for the Province to have the updated PNERP approved by Cabinet by the end of 2017, before the Spring 2018 election and Part 1 Hearing. There is a risk that, if the PNERP is not updated and approved in time by the current Cabinet, it will be significantly delayed beyond the 2018 PNGS licence expiry date and will raise questions about the robustness of off-site emergency preparedness around Pickering. These issues could threaten Pickering relicensing and result in hold points and/or a shorter licence term <10 years.⁵⁵

To mitigate these risks, the document states that OPG was "...engaged at senior levels to provide appropriate support and consultation."⁵⁶ It is unclear whether these engagement activities included Mr. Coles' secondment to the Ministry of Community Safety and Correctional Services to assist with the PNERP consultation.

It is obvious that OPG has privileged access to government officials overseeing the review of provincial nuclear emergency response plans. According to documents obtained through Freedom of Information, OPG had received an invitation in early July 2017 to present to the PNERP advisory committee the third week of August.⁵⁷ In contrast, the government only informed Greenpeace one working day before we were expected to present. In Greenpeace's view, this is either evidence bias or incompetence.

After years of delay, it appears that OPG's application to continue operating the Pickering nuclear station expedited the provincial government's review of nuclear emergency response. OPG's operations appear to have a higher priority within the provincial than public safety.

Nevertheless, although Cabinet approved a revised PNERP on December 13th 2017, the government failed to release an updated Implementing Plan for the Pickering nuclear station in time for these proceedings. This is another example of the Ontario government's inability to competently oversee offsite nuclear emergency response.

⁵⁴ See Jim Coles LinkedIn Page. See: <https://www.linkedin.com/in/jim-coles-97a35442> Last accessed May 7, 2018.

⁵⁵ OPG, Risk Registry – Pickering Relicensing 2018, May 31, 2017, FOI # 17-048, pg. 393.

⁵⁶ Ibid.

⁵⁷ Scott Preston (OPG – Manager, Emergency Projects) "VP Relicensing Meeting", email, July 12, 2017. FOI # 17-048.

Upon review of the updated the updated Pickering Implementing Plan, Greenpeace will provide additional comments on the adequacy of offsite nuclear emergency response. That said, OPG's shareholder has a consistent track record of mishandling its responsibility for offsite nuclear emergency response. This should be reflected in the Commission's deliberations and decision.

Request: In light of the province's consistent mishandling of nuclear emergency response planning, the Commission should reject OPG's application to operate the Pickering nuclear station beyond 2020.

3. Disclaimer

This submission is not an endorsement of the CNSC's hearing process, credibility or independence. To the contrary, Greenpeace feels the recently elected federal government needs to re-establish the independence of the CNSC through a legislative review and by appointing a new CNSC president.

In Greenpeace's view, the former Harper government undermined the independence of the CNSC when it fired the CNSC president Linda Keen in 2008. Greenpeace has attempted to constructively participate in CNSC licensing hearings, but has found that CNSC hearings are often "staged" by CNSC management to keep inconvenient information off the record.

Notably, public participation in CNSC proceedings increased following the 2011 Fukushima disaster. This increased participation arguably lead to an increase in Commission decisions contrary to the recommendations of CNSC staff and licencees. Examples include, among others, strengthened potassium iodide (KI) distribution requirements, direction to licensees to develop a process for site-wide risk assessment and the issuance of the 2014 "severe accident study".

In spite of this evidence that increased public participation may lead to better regulatory decision-making, the CNSC has opted to reduce public participation and transparency by shifting to ten-year licences. In Greenpeace's view, this is evidence that the Commission's mindset – the unspoken assumptions that inform actions - still views public input and scrutiny as a nuisance instead of a valuable alternate perspective and check on their activities.

Until such a time that there have been changes in CNSC senior management and to the CNSC's rules of procedure to allow for cross-examination and testing of evidence, Greenpeace doesn't believe CNSC hearings can be relied upon to provide trustworthy assessments of nuclear risks in Canada.