



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

CMD 22-M15  
File/Dossier # 6.02.04  
e-Doc 6758303

Status Report on Power Reactors

Rapport d'étape sur les centrales  
nucléaires

---

This document summarizes the status of  
the Power Reactor facilities as of  
March 11, 2022.

Ce rapport résume le rapport d'étape sur  
les centrales nucléaires en date du  
11 mars 2022.

Signed on / Signé le  
2022-03-17

---

Alexandre Viktorov, Ph.D.  
Director General, Directorate of Power Reactor Regulation  
Directeur général, Direction de la réglementation des centrales nucléaires

This page intentionally left blank

**1. Power Reactors Status as of March 11, 2022**

**1.1 Bruce A and B**

<b>Operational Status</b>
Unit 1 is at Full Power.
Unit 2 is at 87% of Full Power.
Unit 3 is at 0.1% of Full Power.
Unit 4 is at Full Power.
Unit 5 is in a planned maintenance outage.
Unit 6 is Shut Down for Major Component Replacement (MCR).
Unit 7 is at Full Power.
Unit 8 is at Full Power.
<b>Licensing</b>
Power Reactor Operating Licence expires on September 30, 2028.
<b>Comments</b>
<p>Unit 2 is derated due to vibrations in the turbine steam supply system. The reduction in power precludes the vibrations, such that there are no safety concerns. Bruce Power will only increase power when it is safe to do so.</p> <p>Unit 3 is returning to service following a shut down due to a turbine trip. The cause of the turbine trip was determined to be a computer card in the turbine control system.</p> <p>Unit 6 Major Component Replacement (MCR) started in January 2020.</p> <ul style="list-style-type: none"> <li>• Installation of feeders and calandria tubes in progress.</li> <li>• Steam Generator (SG) heavy lifts have been completed; installation of new SGs in progress.</li> <li>• Work on inspection and replacement of the primary heat transport system and electrical equipment has been completed.</li> <li>• Moderator and safety system work in progress.</li> </ul> <p>Unit 5 is in a planned maintenance outage that commenced February 4, 2021.</p> <p>Lutetium-177 Isotope Production System (IPS) has been installed in Unit 7. Cold commissioning test of the system is currently under way.</p>
<b>Event Notifications and Updates</b>
<p>Bruce Power and OPG responses to the GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes have been received and reviewed by CNSC staff. CNSC staff have requested additional supporting information.</p> <p>CNSC staff will report back to the Commission (Fall 2022) once the additional information has been provided and assessed.</p>

Actions from previous Commission meetings
None.

## 1.2 Darlington

Operational Status
Unit 1 is Shut Down for Refurbishment
Unit 2 is at Full Power.
Unit 3 is Shut Down for Refurbishment.
Unit 4 is at Full Power.
Licensing
Power Reactor Operating Licence expires on November 30, 2025.
Comments
<p>Unit 1 refurbishment started in February 2022.</p> <ul style="list-style-type: none"> <li>Defueling of the reactor is in progress.</li> </ul> <p>Unit 3 refurbishment started in September 2020.</p> <ul style="list-style-type: none"> <li>Installation of feeders and Calandria tubes in progress.</li> <li>Turbine generator static commissioning is in progress.</li> </ul>
Event Notifications and Updates
<p>Bruce Power and OPG responses to the GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes have been received and reviewed by CNSC staff. CNSC staff have requested additional supporting information.</p> <p>CNSC staff will report back to the Commission (Fall 2022) once the additional information has been provided and assessed.</p>
Actions from previous Commission meetings
None.

## 1.3 Pickering

Operational Status
Unit 1 is at Full Power.
Unit 2 is in a Safe Storage State.
Unit 3 is in a Safe Storage State.
Unit 4 is at Full Power.
Unit 5 is in a planned maintenance outage.
Unit 6 is at Full Power.
Unit 7 is at Full Power
Unit 8 is at Full Power.

Licensing
Power Reactor Operating Licence expires on August 31, 2028. OPG requires Commission approval to operate PNGS beyond December 31, 2024.
Comments
Unit 5 is in a planned maintenance outage that commenced January 4, 2022.
Event Notifications and Updates
<p>Bruce Power and OPG responses to the GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes have been received and reviewed by CNSC staff. CNSC staff have requested additional supporting information.</p> <p>CNSC staff will report back to the Commission (Fall 2022) once the additional information has been provided and assessed.</p>
Actions from previous Commission meetings
<p>Potassium Iodide (KI) Pill Working Group Update:</p> <ul style="list-style-type: none"> <li>• The Phase I Report was presented to the Commission in a Public Meeting on January 26, 2022.</li> <li>• Following the Commission Meeting, CNSC staff began discussing expedited timelines for Phase II objectives with the co-chairs of the Working Group from Ontario Power Generation, Ministry of Health, and Office of the Fire Marshal and Emergency Management.</li> <li>• The Phase II objectives discussed in relation to expedited timelines, include: <ul style="list-style-type: none"> <li>○ More detailed information on the feasibility and associated timelines for distributing KI to residents of the Ingestion Planning Zone, based on the Concept of Operations established in Phase I.</li> <li>○ Feasibility of pre-distribution to schools located in the IPZ, taking into consideration specific requests (e.g., Toronto District School Board) and the potential re-distribution of the centralized KI stockpile.</li> </ul> </li> <li>• The Phase II objectives concerning KI education, awareness, and emergency information are proposed to advance as planned, with completion in 2023.</li> <li>• The Working Group met in March 2022 to discuss expedited timelines for Phase II objectives. A plan with expedited timelines will be drafted and circulated to the Working Group for concurrence.</li> <li>• CNSC staff will present the plan to the Commission through the Status Report on NPPs once concurrence is reached.</li> </ul> <p>Background information on the Working Group can be found on the Working Group webpage: <a href="https://nuclearsafety.gc.ca/eng/resources/emergency-management-and-safety/potassium-iodide-pill-working-group.cfm">https://nuclearsafety.gc.ca/eng/resources/emergency-management-and-safety/potassium-iodide-pill-working-group.cfm</a></p>

**1.4 Point Lepreau**

<b>Operational Status</b>
The unit is at Full Power.
<b>Licensing</b>
Power Reactor Operating Licence expires on June 30, 2022. The licensee applied for renewal of their licence on June 30, 2021. Part 1 of the relicensing hearing was held on January 26, 2022 and Part 2 will be held on May 11-12, 2022.
<b>Comments</b>
None.
<b>Event Notifications and Updates</b>
None.
<b>Actions from previous Commission meetings</b>
None.

## 1.5 Other

### Power Reactor Regulatory Program (PRRP) COVID-19 Activities

CNSC staff continue their oversight of NPP operations, by carrying out inspections, having access to the licensees Virtual Private Network (VPN), attending meetings remotely and conducting regular surveillance activities. Inspections are being conducted on-site, as well with remote support from subject matter experts. To date CNSC staff have not identified any non-compliances caused by the pandemic and are satisfied with the measures taken by the licensees.

### Licensee COVID-19 Activities

#### Bruce Power

Bruce Power is reporting sixty-four (64) active COVID-19 cases. There has been no impact on minimum shift complement or the safe operation of the units from positive COVID-19 cases.

#### Ontario Power Generation

To date one thousand and nineteen (1,019) OPG Darlington workers (employee and contract) have tested positive for COVID-19. Seven hundred and one (701) of these cases are considered recovered with three hundred and eighteen (318) remaining active. There has been no impact on minimum shift complement or the safe operation of the units resulting from positive COVID-19 cases.

To date eight hundred and forty-one (841) OPG Pickering workers (employee and contract) have tested positive for COVID-19. Eight hundred and twenty-three (823) of these cases are considered recovered with eighteen (18) remaining active. There has been no impact on minimum shift complement or the safe operation of the units resulting from positive COVID-19 cases.

#### Point Lepreau

To date, there have been two hundred and sixty-eight (268) positive cases at Point Lepreau NGS. Two hundred and forty-seven (247) of these cases are considered recovered with twenty-one (21) remaining active. There was one (1) instance, previously reported on, which had an impact on minimum shift complement. There has been no impact on the safe operation of the units resulting from positive COVID-19 cases.