



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

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Status Report on Power Reactors

Rapport d'étape sur les centrales  
nucléaires

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This document summarizes the status of  
the Power Reactor facilities as of  
September 8, 2023.

Ce rapport résume le rapport d'étape sur  
les centrales nucléaires en date du  
8 septembre 2023.

Signed on / Signé le  
2023-09-14

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**1. Power Reactors Status as of September 8, 2023**

**1.1 Bruce A and B**

<b>Operational Status</b>
Unit 1 is Shut Down
Unit 2 is at Full Power
Unit 3 is Shut Down for Major Component Replacement (MCR).
Unit 4 is at Full Power
Unit 5 is at Full Power
Unit 6 is Shut Down at 30% Full Power
Unit 7 is at Full Power
Unit 8 is Shut Down
<b>Licensing</b>
Power Reactor Operating Licence expires on September 30, 2028.
<b>Comments</b>
<p>Unit 3 Major Component Replacement (MCR) started in March 2023.</p> <ul style="list-style-type: none"> <li>• MCR project is on schedule.</li> <li>• Bulkhead installation completed. Bruce Power is currently performing Vault Pressure Test (VPT). Bruce Power has identified some leaks as a result of the VPT; strategies are being developed to repair those leaks.</li> <li>• PHT drain and dry activities in progress.</li> </ul> <p>Unit 6 Major Component Replacement (MCR) started in January 2020.</p> <ul style="list-style-type: none"> <li>• MCR project is on schedule.</li> <li>• Regulatory Hold Point (RHP#2) – Guaranteed Shutdown State, removed by CNSC Executive Vice President and Chief Regulatory Operations Officer (EVP-CROO) on August 2, 2023 (e-Doc 7053045).</li> <li>• RHP#3 - Increasing reactor power above 1%, removed by CNSC EVP-CROO on September 1, 2023 (e-Doc 7105027).</li> <li>• Depending on the completion of outstanding work, the next RHP#4 (final RHP) for increasing reactor power above 35% is currently scheduled between September 8 – 10, 2023.</li> <li>• For each of the RHP, the Commission authorized the CNSC’s EVP-CROO to consent to the removal of the hold points. In support of hold point removal, CNSC staff verified and ensured that Bruce Power met pre-determined requirements. Verifications included CNSC staff inspections, witnessing tests to confirm that the project was being executed safely, and other compliance activities.</li> <li>• CNSC staff set regulatory expectations with the licensee early in the project to ensure that the CNSC’s regulatory activities were not an impediment to its progress.</li> </ul>
<b>Event Notifications and Updates</b>

<p>Unit 1 was shutdown on September 7, 2023 due to a turbine trip. The unit was shutdown safely. Bruce Power identified that the Automatic Voltage Regulatory malfunctioned and repairs are underway. The unit is expected to be back online on September 9, 2023.</p> <p>Unit 8 was shutdown on September 6, 2023 due to a feedwater transient. The unit was shutdown safely. Preliminary investigation indicates that a faulty limit switch caused a turbine trip. The turbine trip caused a partial stepback and unit transient. The unit is expected to be back online on September 9, 2023.</p>
<p><b>Actions from previous Commission meetings</b></p>
<p>None.</p>

**1.2 Darlington**

<p><b>Operational Status</b></p>
<p>Unit 1 is Shut Down for Refurbishment</p>
<p>Unit 2 is at Full Power</p>
<p>Unit 3 is at Full Power.</p>
<p>Unit 4 is Shut Down for Refurbishment.</p>
<p><b>Licensing</b></p>
<p>Power Reactor Operating Licence expires on November 30, 2025.</p>
<p><b>Comments</b></p>
<p>Unit 1 refurbishment started in February 2022.</p> <ul style="list-style-type: none"> <li>• Refurbishment project is on schedule.</li> <li>• Current critical path is Fuel Channel installation.</li> <li>• OPG is expected to submit the formal request to release the regulatory hold point to allow fuel load in April 2024.</li> </ul> <p>Unit 3 refurbishment started in September 2020 and ended July 2023.</p> <ul style="list-style-type: none"> <li>• Removal of RHPs were authorized by the CNSC’s EVP-CROO</li> <li>• In support of hold point removal, CNSC staff verified and ensured that OPG met pre-determined requirements.</li> </ul> <p>Unit 4 refurbishment started in July 2023.</p> <ul style="list-style-type: none"> <li>• Refurbishment project is on schedule.</li> <li>• Defueling is complete.</li> <li>• Preparations are underway for bulkhead installation</li> <li>• OPG is expected to submit the formal request to release the regulatory hold point to allow fuel load in July 2025.</li> </ul>
<p><b>Event Notifications and Updates</b></p>
<p>None.</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 at Full Power
Unit 6 is at Full Power
Unit 7 is at Full Power
Unit 8 is at 93% of Full Power
Licensing
Power Reactor Operating Licence expires on August 31, 2028. OPG requires Commission approval to operate PNGS beyond December 31, 2024.
Comments
None.
Event Notifications and Updates
Unit 8 is at 93% Full Power as it is entering a planned maintenance outage. Shutdown is planned for September 9, 2023.
Actions from previous Commission meetings
<p>Potassium Iodide (KI) Pill Working Group Update:</p> <ul style="list-style-type: none"> <li>The update to the CNSC KI Pill Working Group <a href="#">website</a> with the revised approach for Phase II, and posting the final Phase I Report went live on August 18, 2023.</li> <li>The next step for Phase II is for Emergency Management Ontario (EMO) to conduct their public review period of the updated Provincial Nuclear Emergency Response Plan (PNERP). The CNSC is awaiting further information on EMO's anticipated timelines for the public review of the updated PNERP; however, EMO is targeting completion of the PNERP in December 2024.</li> </ul>

**1.4 Point Lepreau**

Operational Status
The unit is at Full Power.
Licensing

Power Reactor Operating Licence expires on June 30, 2032.
<b>Comments</b>
None.
<b>Event Notifications and Updates</b>
None.
<b>Actions from previous Commission meetings</b>
<p>Note that CNSC staff are providing a briefing note for the Commission:</p> <ul style="list-style-type: none"> <li>• CMD 23-M41, Update on the Activities CNSC staff Conducted Following the Partial Loss of Class IV Power and Heavy Water Leak (NB Power will provide the Commission with a submission on this topic via CMD 23-M41.1).</li> </ul>

**1.5 Other**

None.