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**Oral presentation by  
Énergie NB Power**

**Exposé oral par  
Énergie NB Power**

**Event Initial Report**

**Rapport initial d'événement**

**Énergie NB Power**

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**Énergie NB Power**

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**Partial Loss of Class IV Power and  
Heavy Water Leak at the Point  
Lepreau Nuclear Generating Station**

**Perte partielle d'alimentation  
électrique de catégorie IV et fuite  
d'eau lourde à la centrale nucléaire  
de Point Lepreau**

Commission Meeting

Réunion de la Commission

January 25, 2023

Le 25 janvier 2023

# Point Lepreau Nuclear Generating Station

## Partial Loss of Class IV Power and Primary Heat Transport (PHT) System Leak

CNSC Commission Meeting  
January 25, 2023

# Presenters

## Jason Nouwens

Director, Regulatory and External Affairs  
Point Lepreau Nuclear Generating Station

## Nick Reicker

Manager, Regulatory Affairs and Emergency Preparedness  
Point Lepreau Nuclear Generating Station

## Kathleen Duguay

Manager, Community Affairs and Nuclear Regulatory Protocol  
Point Lepreau Nuclear Generating Station





# Event Details

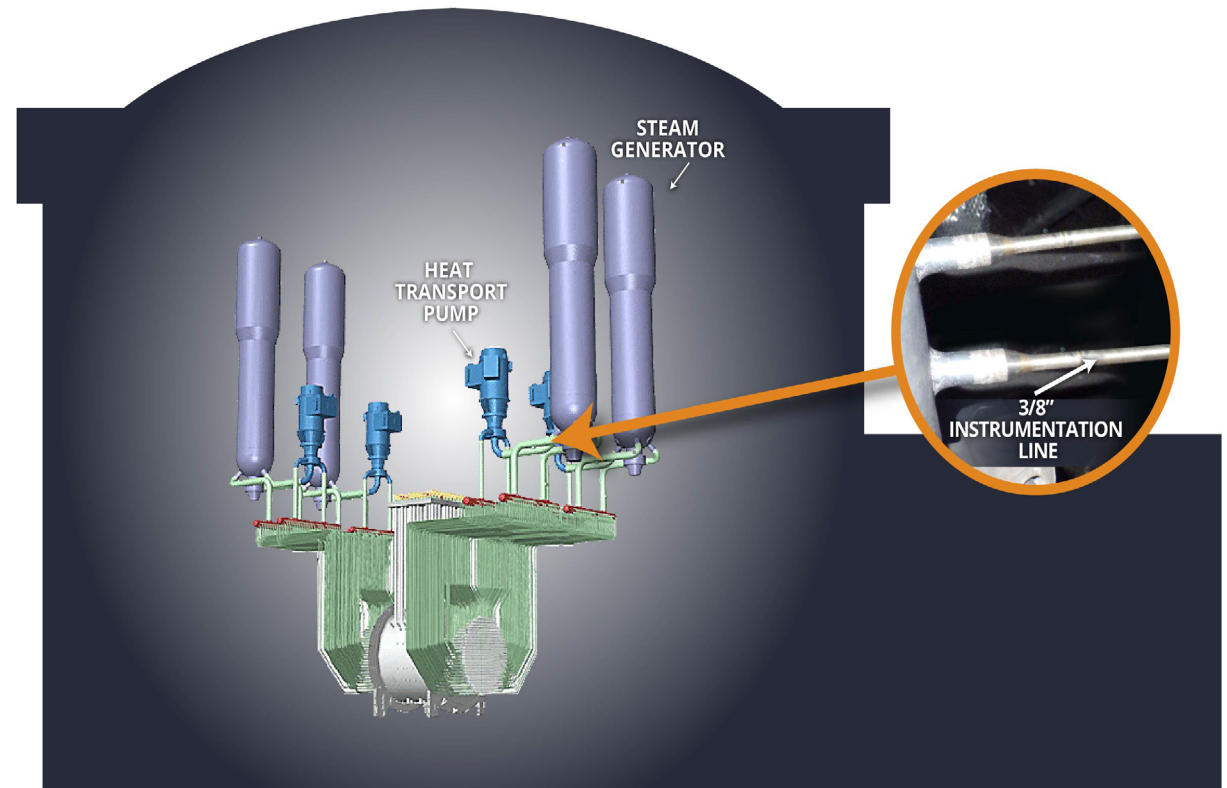
- On December 14, 2022, the Station was taken offline due to a partial loss of Class IV power:
  - An electrical fault on the Unit Service Transformer (UST) initiated the automatic shutdown of the transformer.
  - One of two parallel Class IV power trains was subsequently shut down .
  - Shutdown systems 1 and 2 operated (tripped) as per design and safely shutdown the reactor. Station systems operated as per design.
  - The fault was determined to be due to a separation of the cable connector shielding on cable PA-18.



# Event Details (cont'd)

- Shortly after, reactor building annunciations indicated the presence of a contained leak from the Primary Heat Transport system associated with a 3/8-inch instrument line.
- The instrument line was safely accessed and crimped to address the leakage.
- The analysis of the instrument line determined that it was a result of high cycle fatigue.

## Reactor Building





# Event Details (cont'd)

- The containment structure operated as designed to ensure the leakage was contained and managed within the reactor building.
- Heavy water inventory was collected and safely returned to the primary heat transport system, using equipment designed for this purpose, under existing procedures and processes.
- There was no risk to the public or the environment from this event.







# Incident Command

- The Station's Emergency Response Organization was activated (the Incident Command and Technical Planning Sections) and overall station response was subsequently transitioned to the Outage Control Center Organization.
- This response included the involvement of CNSC, New Brunswick Emergency Measures Organization, as well as other industry and government support partners





## Highly Trained & Qualified Team

- The safety of the staff, the public and the environment continue to be top priority for NB Power.
- Our very skilled, highly qualified, experienced staff that are well trained to deal with situations such as this, as we routinely conduct drills for a number of postulated events.





# Radiation Protection

- In all nuclear stations, workers can be required to do work where there is potential for radiation to be present.
- There are unique requirements for performing radiation work including personal protective equipment, safety protocols, established procedures, monitoring and dosimetry to provide workers with a high degree of protection.
- Reactor building clean up and restoration of PHT inventory were successfully completed using approved radiation and operational processes and procedures.





# First Nations & Community Engagement

- The staff of NB Power and PLNGS have been working hard to maintain and improve our relationships with the First Nations and surrounding communities.
- We communicate regularly through scheduled meetings and reach out whenever new situations arise at the Station regarding our operations and initiatives.
- PLNGS hosts annual events at the Station in which First Nations representatives and community members are invited to PLNGS to learn about our operations and robust safeguards that ensure the health and safety of staff and the general public.
- Staff at PLNGS prioritize training the Independent First Nations Monitors in plant procedures and are kept informed of ongoing activities so that they can share information with their respective communities.
- A result of this regular and ongoing interaction, information of this nature is able to be shared in a timely manner to ensure that the First Nations and Communities remain informed.



# Information



NB Power website



Updates to Stakeholders and Rightsholders



Social media



Media update



Detailed event report

**NEWS**

### Update on Point Lepreau Nuclear Generating Station Outage

2022-12-15

**Fredericton, N.B.** – The work at the Point Lepreau Nuclear Generating Station (PLNGS) continues in order to identify and address the fault causing the unplanned outage that started in the early hours of December 14. The plant was taken off line due to a partial loss of power to the Station. Station staff responded as per process and procedures and are safely executing response plans.

Yesterday, a leak was identified in a small instrument line that is part of the heat transport system. The leakage was contained and managed within the reactor building using approved processes and procedures.

Investigation and assessments are underway in order to determine the path forward. This ongoing work poses no risk to employees, the public or the environment.

**About the Point Lepreau Nuclear Generating Station**

The Point Lepreau Nuclear Generating Station is a 660 megawatt (net) nuclear generating station and a base load contributor to the New Brunswick electrical grid. It is a major component of NB Power's generating assets and contributes to NB Power sourcing approximately 80 per cent of the electricity used in New Brunswick from clean, renewable, or non-emitting sources. In 2021/22, it represented approximately 46 per cent of the total net generation from NB Power generating stations, with a net capacity factor of approximately 88 per cent.

**MEDIA CONTACT:** Dominique Couture, Communications, (506) 458-2345 or [DCouture@nbpower.com](mailto:DCouture@nbpower.com).

**TELEGRAPH JOURNAL**

Canada & World New Brunswick Moncton Saint John

**NEWS**

### NB Power continues process to restart Point Lepreau Station



The Point Lepreau Nuclear Generating Station had an unplanned outage on Dec. 14.  
Photo: Brunswick News Archive

**NB Power** @NB\_Power · Dec 15, 2022

The work at the Point Lepreau Nuclear Generating Station (PLNGS) continues in order to identify and address the fault causing the unplanned outage that started in the early hours of December 14. Click here for the media release: [bit.ly/3HEssEf](https://bit.ly/3HEssEf)

4 replies 7 likes

**NB Power** @NB\_Power · Dec 14, 2022

The Point Lepreau Nuclear Generating Station (PLNGS) was taken offline in response to a partial loss of power to the Station. Click here for the media release: [ow.ly/GLOm50M3qun](https://ow.ly/GLOm50M3qun)

5 replies 5 likes

**RADIO-CANADA** MENU

### ICI Nouveau-Brunswick

À la une En continu Arts Sports Crise en santé

ACCUEIL ENVIRONNEMENT ENERGIE

## La centrale nucléaire de Point Lepreau est fermée depuis une semaine au Nouveau-Brunswick

**Energie\_NB** @Energie\_NB · Dec 15, 2022

Les travaux à la centrale nucléaire de Point Lepreau (CNPL) se poursuivent afin d'identifier et de corriger le problème à l'origine de l'arrêt imprévu qui a débuté aux premières heures du 14 décembre.

1 reply

**Energie\_NB** @Energie\_NB · Dec 15, 2022

Cliquez sur le lien suivant pour le communiqué de presse : [bit.ly/3hzMNzH](https://bit.ly/3hzMNzH)

**Energie\_NB** @Energie\_NB · Dec 14, 2022

La centrale nucléaire de Point Lepreau (CNPL) a été déconnectée du réseau en raison d'une perte de puissance partielle à la centrale. Cliquez sur le lien suivant pour le communiqué de presse : [ow.ly/M9fS50M3qBG](https://ow.ly/M9fS50M3qBG)

New Brunswick

### Point Lepreau nuclear plant taken offline after power loss

No injuries, radiation contamination or spills reported, says federal safety commission

**Bobby Jean MacKinnon** - CBC News  
Posted: Dec 14, 2022 6:50 PM AST | Last Updated: December 14, 2022



N.B. Power crews are working to get Point Lepreau back online. (CBC)



## Summary of Repairs

- The transformer cable(s) have been repaired and tested.
- All other similar cables on the UST were inspected and tested as preventive maintenance.
- Class IV was fully restored.
- Weld repairs to cut and cap the affected instrument line were successfully completed.
- Three similar instrument lines were addressed as a preventive measure.
- The Station reconnected to the grid on January 18, 2023



# Point Lepreau Nuclear Generating Station

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CNSC Commission Meeting  
January 25, 2023