# Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on June 3, 2025

Minutes of the hybrid Canadian Nuclear Safety Commission (CNSC) meeting held in person and virtually on Tuesday, June 3, 2025, beginning at 9:00 am EDT, at the Outaouais Room, 140 Promenade du Portage, Phase IV, Gatineau, Quebec. The meeting was webcast live via the CNSC website, and video archives are available on the CNSC website.

Present:

P. Tremblay, President
T. Berube
A. Hardie
J. Hopwood
M. Lacroix
V. Remenda

C. Salmon, Commission Registrar
C. Maheux, Commission Counsel
H. Forester, Recording Secretary

CNSC staff advisors: E. Lemoine, A. Mathai, A. Bulkan, K. Hazelton, M. Fabian Mendoza, R. D'Onofrio, P. Burton, B. Duhaime, S. Eaton, J. Thelen, T. Panichevska, M. Laflamme, K. Owen-Whitred, L. Shuparski-Miller, G. Boudrias, S. Dagenais, K. Dulhanty, M. Albert

Other contributors:

- New Brunswick Power: S. Bagshaw, N. Reicker Bruce Power: M. Burton, A. London, M. Rinker, K. Thomson, J. Scongack, L. Van Wieringen
- Ontario Power Generation Inc.: K. Carew, S. Irvine, Z. Khansaheb, D. Popovic
- Department of Fisheries and Oceans: W. Glass, S. Eddy
- Cameco Corporation: L. Mooney, G. Murdock
- Nuclear Waste Management Organization: L. Frizzell
- Ontario Ministry of Labour, Immigration, Training and Skills Development: B. Morgan

## Constitution

1. With the Notice of Meeting Commission Member Document (CMD) 25-M29 having been properly given and all Commission Members present, the meeting was properly constituted.

2. For the meeting, CMD 25-M11 and CMDs 25-M22 to 25-M28, were distributed to Commission Members. These documents are detailed in Appendix A.

## Adoption of the Agenda

3. The agenda CMD 25-M20, was adopted as presented.

## Chair and Registrar

4. President Tremblay chaired the meeting of the Commission, assisted by C. Salmon, Commission Registrar.

## Minutes of Previous Commission Meetings

5. The minutes of the Commission meetings held on January 29, 2025, and February 25–26, 2025, were approved secretarially in advance of this meeting on May 30, 2025.

## Participant Funding Program

There was no participant funding for this meeting.

## Status Report on Power Reactors

6. With reference to CMD 25-M23, which includes the status of the power reactor facilities as of May 8, 2025, CNSC staff provided the following additional updates:
   - Bruce Power's emergency derating of Bruce Nuclear Generating Station (NGS) Units 5, 6 and 8 due to a power line loss
   - Bruce Power's planned forced outage on Bruce NGS Unit 6 due to an instrument line leak in the primary heat transport (PHT) system
   - Bruce Power's loss of feedwater on Bruce NGS Unit 5 due to elevated bearing temperatures on both PHT system feed pumps

- Ontario Power Generation (OPG) completed the refurbishment moderator fill at Darlington NGS Unit 4, and started lower feeder installation

7. New Brunswick (NB) Power provided an update regarding the administrative monetary penalty[1] (AMP) it received in March 2025 respecting the Point Lepreau NGS. NB Power discussed the following:
   - NB Power reported that it had completed computer-based training, and that its scheduling software was updated and validated; however, this was not correct when verified by CNSC staff
   - NB Power paid the AMP penalty and took prompt and immediate action to complete all software training
   - NB Power continues to work to validate its software
   - NB Power emphasized the importance of operating safely

*Discussion*

8. The Commission asked questions to the licensees and CNSC staff regarding the following topics:
   - the frequency of feed water pump failures
   - reactor trip event at OPG
   - Bruce NGS's moderator spill issue
   - AMP issued to NB Power
   - licensees and CNSC staff's work on prevention strategies
   - Bruce NGS's Unit derating

9. The Commission asked Bruce Power about the frequency of PHT system feed pump failures. Bruce Power representatives confirmed:
   - that PHT system feed pump failures are rare events, and procedures were in place to respond; a root cause investigation is ongoing to better understand the event
   - return to service checks were completed according to operational procedures; however, the effectiveness of written procedures will be improved
   - Bruce Power has completed an assessment of the PHT feed pumps on all its Units, and put in place enhanced monitoring steps while the root cause investigation is ongoing

[1] The AMP was issued to NB Power for failure to comply with Licence Condition 2.1 of its power reactor operating licence, which states, "The licensee shall implement and maintain a human performance program." The compliance verification criteria require NB Power to comply with the requirements of REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue*, which provides hours of work and recovery limits for workers in safety-sensitive positions.

10. The Commission asked OPG and CNSC staff to elaborate on the reactor trip event and optional checklists. OPG representatives and CNSC staff commented:
    - OPG completed return to service checks on Unit 1; however, the procedure did not require the valves be returned to an open state
    - OPG acknowledged the error in the procedure review process and agreed to not having an optional checklist
    - CNSC staff requested OPG implement additional actions to demonstrate the readiness of Unit 1
    - CNSC staff will conduct reactive inspections to verify whether corrective actions will prevent future events

11. The Commission asked Bruce Power representatives and CNSC staff to comment on the moderator spill issue:
    - the moderator spill on Unit 5 was a result of maintenance activities on the system which resulted in discrepancies between routine and maintenance procedures
    - Bruce Power acknowledged that the moderator spill was preventable and will complete a full system alignment check
    - during the moderator spill, due to local monitors, tritium exposure was reduced by alerting workers to evacuate and return with the appropriate personal protective equipment

12. The Commission asked NB Power and CNSC staff about the AMP issued to NB Power in March 2025 respecting the Point Lepreau NGS. NB Power representatives and CNSC staff commented:
    - NB Power confirmed that software is only a tool, and workers will be trained on flagging issues
    - NB Power developed the software in-house and has had challenges with validation, and until confidence has been regained, a weekly validation is in place to review the schedule for the past 2 weeks and the next 2 weeks
    - CNSC staff commented that the outputs of the software must meet the requirements set out in the REGDOC 2.2.4 Fitness for Duty: Managing Worker Fatigue
    - CNSC staff commented that it flagged the issue during a Type I inspection on fitness for duty and NB Power representatives were in full alignment on behaviours, accountability, trust and transparency
    - CNSC staff have observed increased corrective actions from NB Power and NB Power workers have completed all training; as well, CNSC staff will discuss the frequency of future verifications with NB Power

13. The Commission asked licensees and CNSC staff about prevention strategies:
    - Bruce Power representatives commented they use key drivers, root cause investigations and a robust training program as prevention strategies
    - Bruce Power representatives added that they are still in the corrective action phase for the bearing failure event, and the loss of PHT feedwater event may be related to human performance
    - OPG representatives commented they use key drivers, operating and industry experience and operations recovery plans to understand how events occur; as well, currently brainstorming any issues for the upcoming Unit 4 refurbishment restart
    - NB Power representatives commented they use root cause investigations, system performance monitoring and training as prevention strategies; as well, are reviewing equipment failures and trending the data to identify any issues
    - CNSC staff stated using the compliance oversight program (which collects information), Type I inspections[2] (if there are issues), routine inspections, increasing oversight and asking the bigger picture questions

14. The Commission asked Bruce Power about the frequency of derating Units:
    - Bruce Power representatives clarified their capability to divert steam in a planned manner
    - added that the derate in question was a result of a loss of power line from the Bruce B switchyard and that Bruce Power works closely with Hydro One to be aware of potential issues

**Event Initial Reports**

Bruce Power: Increased Fish Impingement at Bruce A (CMD 25-M24)

15. Since January 30, 2025, there's been an increase in fish (gizzard shad) observed impinging on the condenser cooling water (CCW)[3] intake screens. This led to reduced flow through the CCW system, which resulted in impacts on the CCW pumps. Operators intervened on Units 1 and 2.

16. The Commission questioned Bruce Power, CNSC staff and Fisheries and Oceans Canada (DFO) on the following topics:
    - fish population and ecological effects in the Great Lakes

[2] Type I inspections are in-depth examinations of a licensee's processes and operations, typically through direct observation, reviewing records and interviewing licensee staff.
[3] Condenser cooling water is one of the main cooling systems used in CANDU reactors and is used to cool the steam from the steam generator and convert it back to water (to be converted back to steam again).

- mitigation systems and effects on pumps
- climate change and environmental concerns on the Great Lakes
- Indigenous Community discussions

*Discussion*

17. A representative from DFO provided the following responses to the Commission:
    - DFO are looking at Bruce Power's Fisheries Act Authorization[4] to determine if it has been breached and to identify next steps
    - DFO was assessing whether the event needs additional investigation and is not aware of any modelling available on gizzard shad

18. A Bruce Power representative provided the following responses to the Commission:
    - Bruce Power is taking the event seriously, has installed new nets and physical barriers in specific areas, and is looking at using technology to prevent future issues
    - gizzard shad survey data is limited in the Great Lakes due to the fish not being tracked well
    - conditions in the Great Lakes have changed, and further investigation is needed to better understand the effects of climate change on fish populations
    - Bruce Power has focused on hazard elimination and prevention, and set a goal for winter of 2026 to limit fish intake streams
    - Bruce Power is looking at additional reactor cooling strategies; however, engineered barriers and impingement prevention measures are currently sufficient to mitigate the potential risks to reactor cooling
    - Bruce Power's staff train for multi-Unit events
    - only Unit 2 was impacted by the gizzard shad, and the internal condenser was cleaned
    - Bruce Power has consistently engaged with Indigenous Nations and communities regarding this issue, noting that their knowledge of the fish species was helpful

19. CNSC staff provided the following responses to the Commission:
    - CNSC staff's response, including moving to "enhanced monitoring" was informed by assuming the worst-case scenario, and because gizzard shad were still impinging in the station at the time
    - CNSC staff met with Indigenous Nations and communities, and invited them to review Bruce Power's response to the event;

[4] Bruce Power has a Fisheries Act Authorization from the DFO permitting the loss of up to 6,600 kg of fish per year (using a Habitat Productivity Index).

CNSC staff were coordinating a collaborative approach to the issue

Cameco Corporation's Workplace Injury at the McArthur River Operation (CMD 25-M26)

20. On January 19, 2025, a worker at Cameco's McArthur River Operation sustained a serious hand injury while attempting to remove a stuck back-fill plug assembly.

21. The Commission questioned Cameco representatives and CNSC staff on the following topics:
- the frequency of stuck back-fill plugs and alternate methods available to workers to remove stuck plugs
- Cameco's immediate actions and corrective actions following the event as well as the experience of the crew working at the time of the event
- Cameco's response to the larger picture, safety culture and process for reviewing procedures
- the condition of the worker who sustained the injury

22. A Cameco representative provided the following responses to the Commission:
- in response to the event, Cameco increased supervisory presence on site and brought in a counselor to support its workers
- a stuck back-fill plug is not a common event but occurs 1 or 2 times a year; out of forty-eight raises since 2022, this was the only stuck plug
- Cameco's corrective actions included updating training profiles, reviewing training requirements, taking a holistic view of mining operations and focusing on job hazard analysis (JHA)
- Cameco reinforced that non-routine work should trigger a work stoppage and initiate the JHA process
- this was the first time this crew had experienced a stuck back-fill plug, and the crew should have stopped and initiated the JHA
- raised bore mining is common in the mining industry; however, McArthur River is the only uranium mine currently operating using this method
- the worker sustained a lost-time injury but is planning to return to work

23. CNSC staff provided the following responses to the Commission:
- CNSC staff confirmed that lessons learned from this event included that procedures did not provide enough detail
- the event occurred at night and CNSC staff is evaluating its approach to verifying compliance for overnight work

- CNSC staff interviewed Cameco workers who confirmed they were comfortable reporting unsafe work conditions to supervisors
- CNSC staff confirmed communication was consistent with Cameco, and Cameco voluntarily shared reports with labour relations

Workplace Injury at Ontario Power Generation's Darlington New Nuclear Project Site (CMD 25-M28)

24. On April 9, 2025, a contracted worker sustained a serious injury at the Darlington New Nuclear Project (DNNP) construction site. The worker was releasing the safety latches on a large waste bin that was lowered into the waste enclosure.[5] It was during this step of the operation that the bin shifted and pinned the worker against the concrete block wall.

25. The Commission asked for more information from OPG, the Ontario Ministry of Labour, Immigration, Training and Skills Development and CNSC staff on the following topics:
    - steps taken by the contractor, Aecon Group Inc. (Aecon), including steps for accident prevention
    - how OPG is evaluating contractor training
    - clarification of events and prevention actions
    - the workers' experience level

26. OPG representatives provided the following responses to the Commission:
    - the original design of the waste bin system in question was an approved system, and Aecon has since redesigned the system to eliminate the hazard
    - OPG is responsible to review Aecon's procedures and health and safety program
    - the investigation is underway and the cause for the bin to shift is still unknown
    - supervisors, operators and crew working at the DNNP site are well experienced

27. CNSC staff provided the following responses to the Commission:
    - OPG is required to maintain oversight on the DNNP site and CNSC staff ensures that OPG has the necessary programs in place to ensure the safety of people
    - that Aecon has acquired and implemented new remotely operated bins which eliminate the need to have a worker in the area

[5] Waste bins are moved from the loading site to the waste enclosure using a crane. The waste enclosure is comprised of concrete blocks and is the area where excavated material is transferred to a dump truck.

28. A representative from the Ontario Ministry of Labour, Immigration, Training and Skills Development responded that it could not provide information as the investigation was ongoing, and that its inspectors were following up.

**Update on Items from Previous Commission Meetings**

Technical update on elevated hydrogen equivalent concentration research and development activities (CMD 25-M27)

29. The Commission reviewed the update and had no further questions.

Update on the results of the Nuclear Waste Management Organization public attitude research (CMD 25-M25)

30. The Commission requested during the April 27, 2021, Commission meeting that, after site selection, the results of the Nuclear Waste Management Organization's (NWMO) public attitude research be included at the next update to the Commission.[6] On November 28, 2024, the NWMO announced it had selected Wabigoon Lake Ojibway Nation and the Township of Ignace as the host communities for the future site of Canada's deep geological repository for spent nuclear fuel. CNSC staff document, CMD 25-M25, provides an update on the Commission's request.

31. The Commission asked NWMO representatives and CNSC staff for updates on Indigenous engagement and the continuation of public attitude research.

32. An NWMO representative provided the following responses to the Commission:
    - the communities have conducted their own research for their decision making
    - the NWMO was looking at continuing engagement with key audiences and seeking feedback on a 5-year implementation plan, and inviting any interested parties to provide feedback
    - based on feedback, NWMO will be updating the transportation framework every 3 years

33. CNSC staff noted that it continues to communicate with Indigenous Nations and communities with respect to the NWMO's proposed project.

[6] Page 9 paragraph 34 of the Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on April 27, 2021.

**Update on Items from Previous Commission Meetings**

Designated Officer Program: 2024 (CMD 25-M22, CMD 25-M22.A)

34. CNSC staff document, CMD 25-M22, provides a status update on the Designated Officer (DO) Program for 2024 including DO authorities exercised in 2024 and includes a focus on Accelerators and Class II Facilities Division DOs.

35. The Commission asked CNSC staff for high-level updates on the DO Program, including questions about lifecycle licensing for medical sector licensees:

    - CNSC staff responded that a lifecycle licence for an accelerator reduces administrative burden in the instance of accelerator replacements where the safety case and energy remains the same; however, not all accelerators qualify for lifecycle licence issuing.

CNSC Regulatory Framework (CMD 25-M11)

36. CNSC staff document, CMD 25-M11, provides an update on CNSC's Regulatory Framework, highlighting recent accomplishments and providing an overview of prescriptive and performance-based regulation.

37. The Commission asked for additional information on the following topics:
    - clarity on the Government of Canada's Cabinet Directive on Regulatory and Permitting Efficiency for Clean Growth Projects[7]
    - distinction between performance-based and prescriptive requirements
    - how the public views and communicates with CNSC
    - CNSC's regulatory burden
    - reason for CNSC staff shifting from individual reviews of REGDOCs to thematic reviews when making updates

38. CNSC staff provided the following comments to the Commission:
    - identified safety gaps get priority and urgency
    - there is no formal process for determining when to use performance-based or prescriptive requirements; however, when possible, performance-based is preferrable – CNSC staff noted that in benchmarking with other countries' nuclear regulators, the United States is more prescriptive and the United Kingdom is more performance-based

[7] On July 5, 2024, the Government of Canada announced a Cabinet Directive for Clean Growth Projects which aims to ensure clean growth projects get built faster using whole-of-government direction.

- a cost benefit analysis is done as part of the review process when the CNSC is making regulations
- the CNSC engages broadly with the public, for example through activities such as Meet the Nuclear Regulator
- CNSC staff incorporated feedback from Indigenous nations and communities on communication tools
- the CNSC's Regulatory Framework Steering Committee meets monthly to keep reviews on track and avoid scope creep
- the CNSC's Regulatory Framework has grown over time and the CNSC will focus on filling gaps where more information is beneficial, such as for small modular reactors and mining operations

Closure of the Public Meeting

39. The public meeting closed at 12:48 p.m. EDT on June 3, 2025. These minutes reflect both the public meeting itself and the Commission's considerations following the meeting.

**Closed Session**

The Commission held a closed session to consider whether to repeal and replace the *Nuclear Security Regulations* (NSR). The Commission Registry will post publicly available minutes of that Commission Meeting when available.

Forester, Henry
Digitally signed by Forester, Henry
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Forester, Henry"
Reason: I have reviewed this document
Location:
Date: 2025.07.30 09:45:22-04'00'
Foxit PDF Editor Version: 13.1.4

Recording Secretary — July 30, 2025
Date

Salmon, Candace
Digitally signed by Salmon, Candace
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Salmon, Candace"
Reason: I am the author of this document
Location:
Date: 2025.07.30 11:47:03-04'00'
Foxit PDF Editor Version: 13.1.5

Commission Registrar — Date

APPENDIX A – Commission Member Documents

| CMD | Date | e-Docs No. |
|---|---|---|
| 25-M11 | 2025-06-03 | |
| The CNSC's Regulatory Framework<br><br>CNSC Staff presentation to the Commission | | |
| 25-M20 | 2024-05-23 | |
| Agenda of the June 3, 2025, Commission Meeting | | |
| 25-M22 | 2025-06-03 | |
| Designated Officer Program Update to the Commission: 2024 | | |
| 25-M22.A | 2025-06-03 | |
| Supplementary Information – CNSC Staff Presentation – Designated Officer Program Update: 2024 | | |
| 25-M23 | 2025-05-14 | |
| Status Report on Power Reactors | | |
| 25-M24 | 2025-06-03 | |
| CNSC Staff Submission – Event Initial Report – Increased Fish Impingement at Bruce A NGS | | |
| 25-M25 | 2025-06-03 | |
| CNSC Staff Submission – Update on the Nuclear Waste Management Organization Public Attitude Research (Action Item #23712) | | |
| 25-M26 | 2025-06-03 | |
| CNSC Staff Submission – Event Initial Report – Workplace Injury at Cameco's McArthur River Operation | | |
| 25-M27 | 2025-05-06 | |
| Update from CNSC Staff on Hydrogen Equivalent Concentration Research and Development Activities | | |
| 25-M28 | 2025-06-03 | |
| Workplace injury at Ontario Power Generation's Darlington New Nuclear Project Site | | |