



Point Lepreau Nuclear Generating Station 2022 Licence Renewal

Commission Hearing (Part 2)

May 10, 2022

CMD 22-H2.C



CNSC Staff Presentation



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Presentation Outline

- Background
- Proposed Licence Period
- Evolution of Licence Period
- Periodic Safety Review -2 Integrated Implementation Plan Actions
- Environmental Protection
- Emergency Preparedness
- Waste Management
- Engagement
- Conclusions and Recommendations



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Background

- New Brunswick Power applied to renew the Point Lepreau Nuclear Generating Station operating licence on June 30, 2021
- The current Power Reactor Operating Licence expires on June 30, 2022
- Part 1 Public Hearing was held on January 26, 2022
 - CNSC staff recommended that the Commission renew the Power Reactor Operating Licence for 20-years
 - Part 1 information is available on CNSC's website (nuclearsafety.gc.ca)
- This presentation provides highlights of key themes that were presented in the interventions



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Proposed Licence Period

CNSC staff recommend a licence period of 20 years until 2042:

- NB Power processes meet regulatory requirements
- NB Power demonstrated stable compliance and safety performance
- Periodic Safety Review -2 was performed to support long term operation and the implementation of Integrated Implementation Plan (IIP) actions is in progress
- Refurbishment, completed in 2012, extended the plant life by up to 30 years or approximately until 2042
- Pressure tubes will remain fit for service during the recommended 20-year licence period
- Engagement continues to be a priority regardless of the licence period

NB Power must seek Commission approval for any change to the licensing basis



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Factors Influencing the Licence Period

Licence periods of nuclear facilities in Canada continue to evolve due to many factors. In particular, CNSC staff:

- Established a systematic Safety and Control Area (SCA) framework
- Defined the licensing basis and a power reactor operating licence (PROL) with standardized conditions
- Implemented licence conditions handbooks (LCH)
- Established a comprehensive set of regulatory documents that are updated periodically
- Implemented a comprehensive risk-informed approach to compliance verification
- Improved public and Indigenous engagement and participation in Commission Proceedings
- Established scheduled and unscheduled reporting requirements for licensees
- Implemented the requirement for periodic safety reviews (PSR) on a 10-year cycle
- Implemented the Environmental Protection Review report

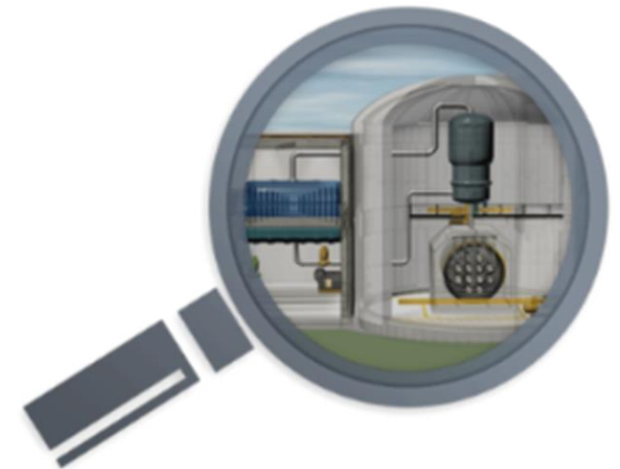


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Periodic Safety Review

In 2015, the Commission approved REGDOC-2.3.3, *Periodic Safety Reviews* to supersede RD-360: *Life Extension of Nuclear Power Plants*

- REGDOC-2.3.3 requires that:
 - NB Power and CNSC staff agree on a PSR basis document
 - NB Power completes and submits safety factor review reports, a global assessment report with all the findings and an IIP with actions to address the findings
 - CNSC staff review and accept the IIP
- Changes that impact safety in the non-conservative direction will be brought to the Commission for decision

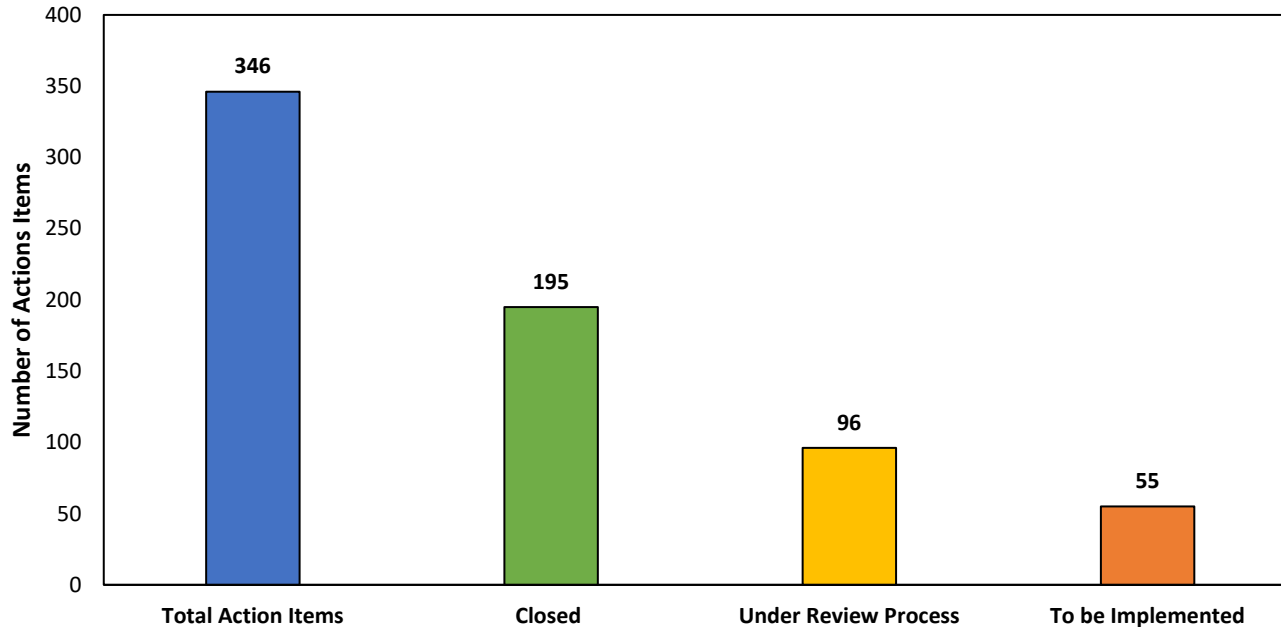


The PSR-2 IIP is part of the licensing basis

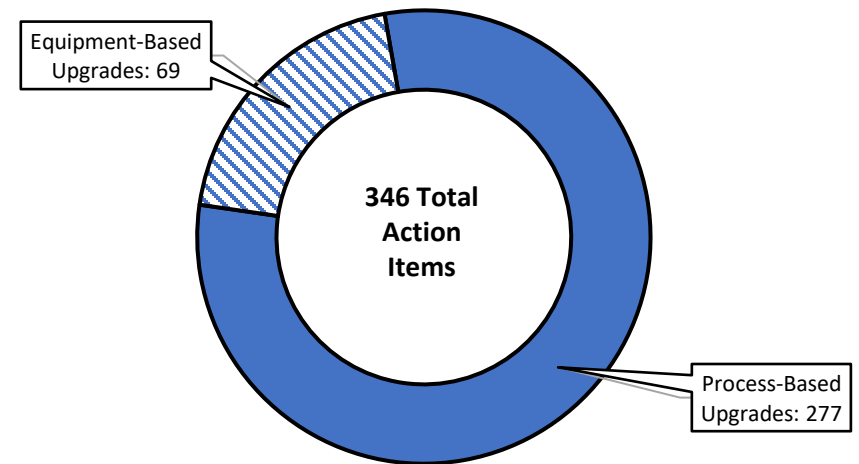
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Status of PSR-2 IIP Actions

Status of IIP Action Items



Type of Upgrade



CNSC staff will inform the Commission of any deviations from the accepted IIP



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Environmental Protection

CNSC confirmed that:

- The effluent and air emissions to the environment from the facility have remained well below CNSC regulatory limits and federal and provincial reporting thresholds, as applicable
- The aquatic environment remains protected from radiological and hazardous releases from the station, as well as from physical stressors
- The terrestrial environment remains protected from radiological and hazardous releases from the facility, as well as from physical stressors such as noise and wildlife interactions with traffic and structures
- All radiological releases from the site result in doses that are well below the annual regulatory public dose limit of 1 mSv per year, which is protective of human health
- NB Power's environmental monitoring program results demonstrate that the health and safety of persons and the environment are controlled and protected

The environment and human health continues to be protected



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Climate Change

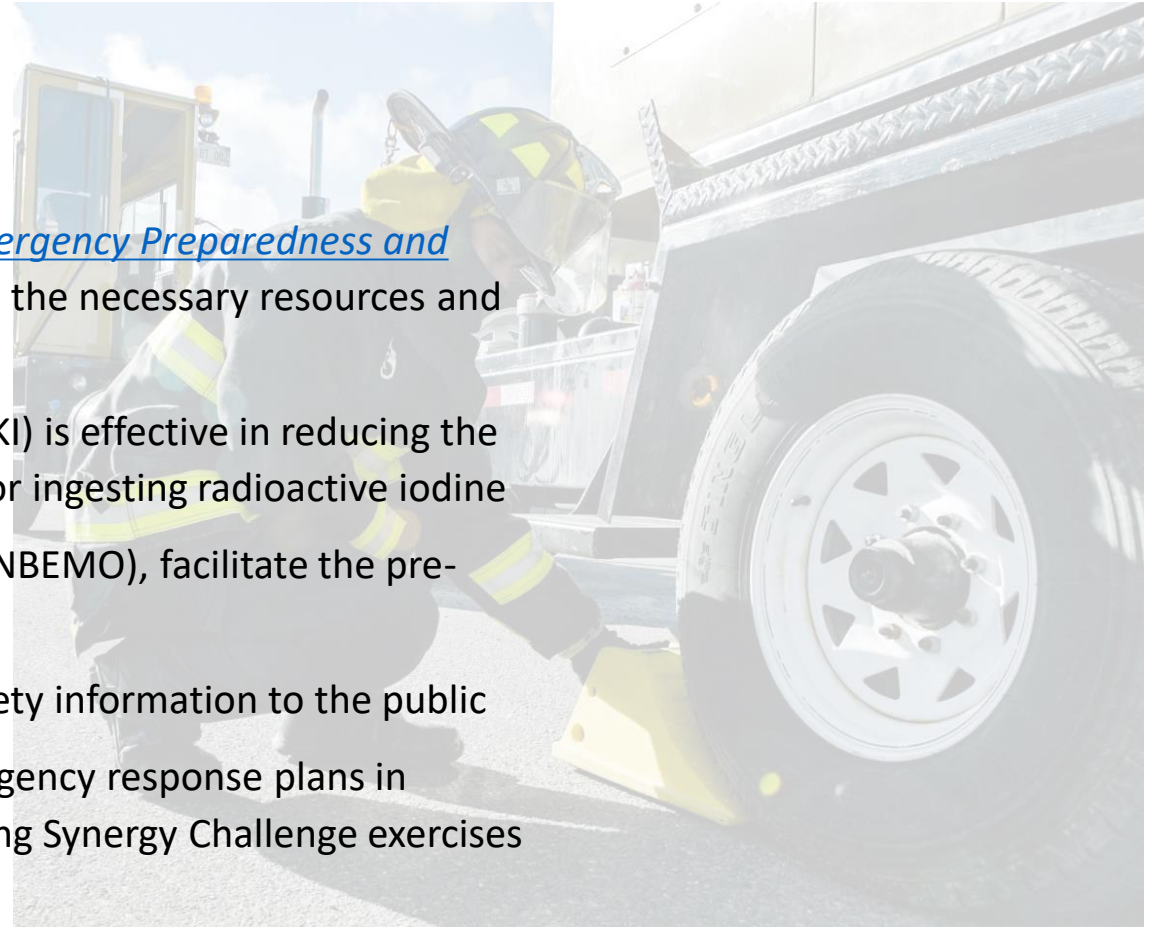
- Hazard analysis, including hazards affected by climate change, is included in the Probabilistic Safety Assessment and updated every 5 years which accounts for changing projections
- CNSC staff applied conservatism and bounding analysis to examine the licensee's climate resilience using the worst-case emission scenario climate mode
- NB Power has procedures in place to address severe weather events, including:
 - winter weather
 - rainfall
 - high wind, tornado and hurricane
- Point Lepreau NGS remains protected from potential external flood hazards and is resilient to the current and projected climate change conditions



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Emergency Preparedness

- CNSC regulatory document [REGDOC-2.10.1, Nuclear Emergency Preparedness and Response](#) includes requirements for licensees to provide the necessary resources and support pre-distribution of KI within a prescribed radius
- In the event of a nuclear emergency, potassium iodide (KI) is effective in reducing the risk of thyroid cancer to residents' potential of inhaling or ingesting radioactive iodine
- New Brunswick Emergency Management Organization (NBEMO), facilitate the pre-distribution of KI pills and maintains fresh inventory
- The NBEMO Warden Service assists in disseminating safety information to the public
- NB Power demonstrated the effectiveness of their emergency response plans in accordance with REGDOC-2.10.1, in 2018 and 2021 during Synergy Challenge exercises



Emergency preparedness meets modern standards at Point Lepreau



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Waste Management

- CNSC requires NB Power to consider the waste hierarchy during management of radioactive wastes
- NB Power's programs ensure radioactive wastes stored in the solid radioactive waste management facility (SRWMF) is safe, secure and environmentally sound
- NB Power monitors the SRWMF for potential adverse environmental impacts
- CNSC staff perform inspections at the SRWMF and review quarterly reports
- In 2003, NB Power's proposal for the extension of the SRWMF underwent an environmental assessment. The Commission's EA decision for the proposed extension remains valid
- CNSC staff have determined that the Preliminary Decommissioning Plan (PDP) adequately captures the decommissioning and waste management strategy
- PDP and the associated cost estimates will continue to be reviewed by CNSC staff on a 5-year basis or when requested by CNSC



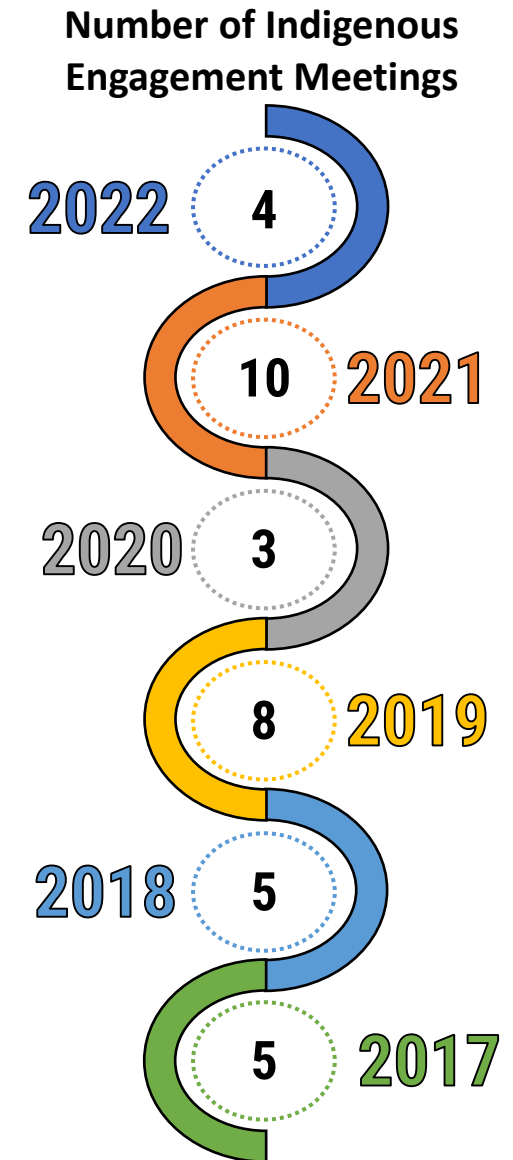


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Indigenous Engagement (1/2)

CNSC staff engagement with Indigenous Nations, communities, and representative organizations includes:

- Regular meetings to share information on topics including but not limited to:
 - the licence renewal application
 - identified areas of interest
 - updates on the DFO Fisheries Act Authorization process
 - IEMP sampling results
 - the environmental protection review report
 - CNSC processes and procedures
 - inspections, and event reviews
 - periodic safety reviews
- Introductory meeting with Kopit Lodge representatives was held in February 2022
- Notification letters were sent to communities and organizations regarding the licence renewal





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Indigenous Engagement (2/2)

- CNSC staff have also conducted a number of collaborative activities with Indigenous Nations and communities including:
 - collaboration on the development and execution of the CNSC 2020/2021 IEMP sampling campaign
 - tour of the CNSC Ottawa lab where the samples are analyzed
 - observation during an inspection of the Point Lepreau Environmental Monitoring program
 - tours and visits to cultural centers and communities



June 2019 CNSC Laboratory Tour

CNSC staff commit to continuing engagement with Indigenous Nations and communities



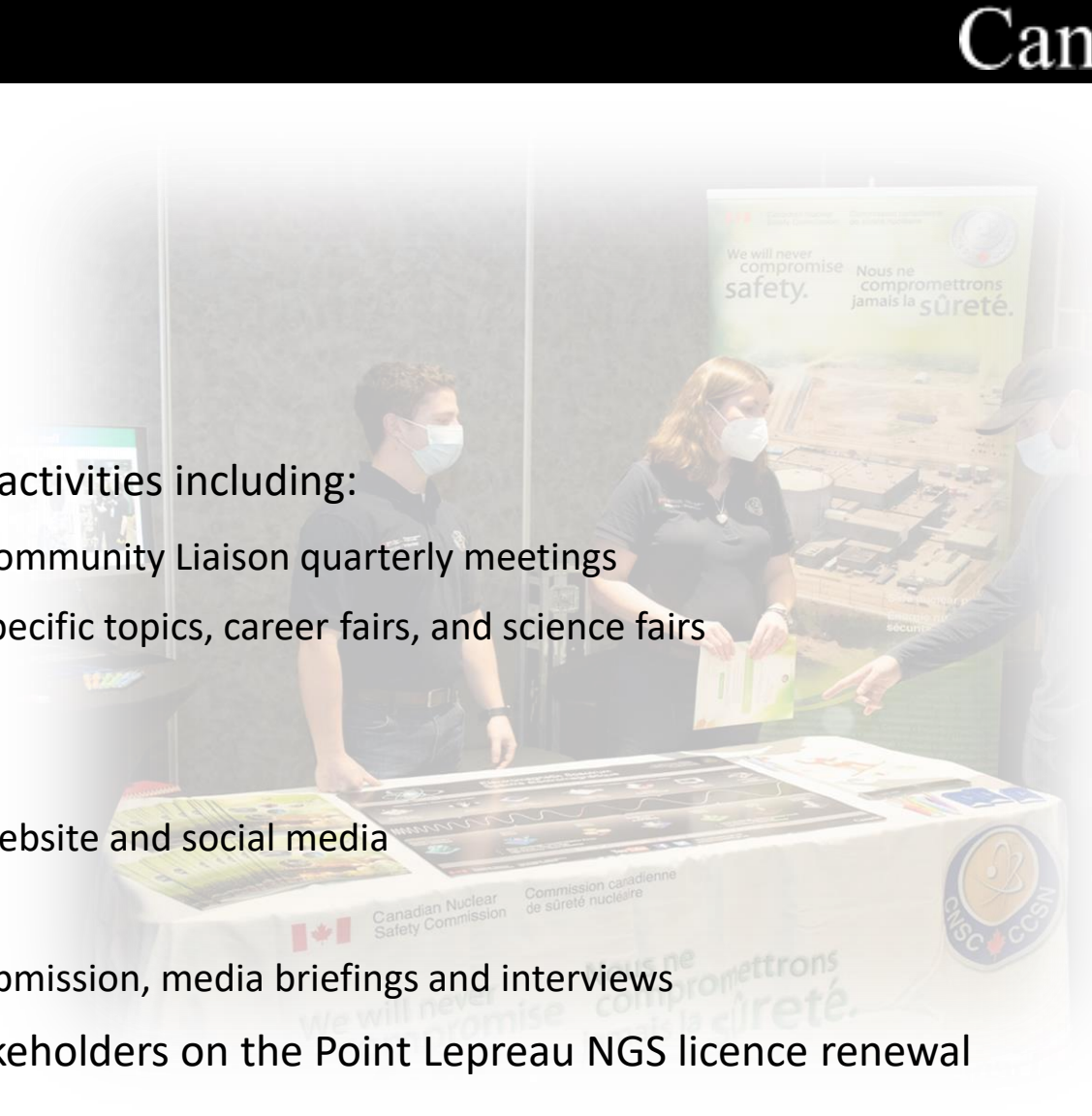
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Public Engagement

CNSC staff conduct numerous public engagement activities including:

- Updates on CNSC activities at the Point Lepreau Community Liaison quarterly meetings
- Outreach with schools such as presentations on specific topics, career fairs, and science fairs
- Participation in local open houses
- Webinars
- Dissemination of information through the CNSC website and social media
- Direct mailouts
- Engagement with the media including editorial submission, media briefings and interviews

CNSC staff provided updates to the public and stakeholders on the Point Lepreau NGS licence renewal



CNSC staff keep the public informed through our continuous public outreach



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Commission Engagement

Commission Proceedings	CNSC Staff	Licensees	Intervenors	
			Written	Oral
Annual Regulatory Oversight Report	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> *
Specific Commission Request	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	**	**
Status Report on Power Reactors	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Event Initial Reports	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deviations from the Licensing Basis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review of Orders and Appeals of Administrative Monetary Policies	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Indigenous intervenors can request to present orally

** At the discretion of the Commission

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CNSC Staff Conclusions

With respect to subsection 24(4) of the NSCA, CNSC staff find that:



NB Power is qualified to carry on the activity that the licence will authorize the licensee to carry on; and



NB Power will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed



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Recommendations

CNSC staff recommend that the Commission:

- Accept CNSC staff conclusions and recommendations presented in CMD 22-H2
- Exercise its authority under the NSCA to renew the licence to authorize NB Power to continue to operate the Point Lepreau NGS until June 30, 2042
- Accept NB Power's Financial Guarantee
- Delegate the authority to CNSC staff for a “person authorized by the Commission” as indicated in two proposed licence conditions:
 - Licence Condition 3.2 – Restart after a serious process failure
 - Licence Condition 15.2 – Commence the operation of the Solid Radioactive Waste Management Facility Phase II extension

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