



## **Supplementary Information**

### **Presentation from the Coalition for Responsible Energy Development in New Brunswick (CRED-NB) and the Canadian Environmental Law Association (CELA)**

In the Matter of the

**New Brunswick Power Corporation,  
Point Lepreau Nuclear Generating Station**

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Application for the renewal of NB Power's licence for the Point Lepreau Nuclear Generating Station

**Commission Public Hearing  
Part 2**

**May 10 to 12, 2022**

## **Renseignements supplémentaires**

### **Présentation de la Coalition for Responsible Energy Development in New Brunswick (CRED-NB) et l'Association canadienne du droit de l'environnement (ACDE)**

À l'égard de la

**Société d'Énergie du Nouveau-Brunswick,  
centrale nucléaire de Point Lepreau**

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Demande de renouvellement du permis d'Énergie NB pour la centrale nucléaire de Point Lepreau

**Audience publique de la Commission  
Partie 2**

**10 au 12 mai 2022**

# Renewal of the Point Lepreau Nuclear Generating Station Power Reactor Operating Licence CNSC Licence Renewal (Ref. 2022-H-02)

**Canadian Environmental Law Association  
Coalition for Responsible Energy Development in New Brunswick**

May 10 - 12, 2022

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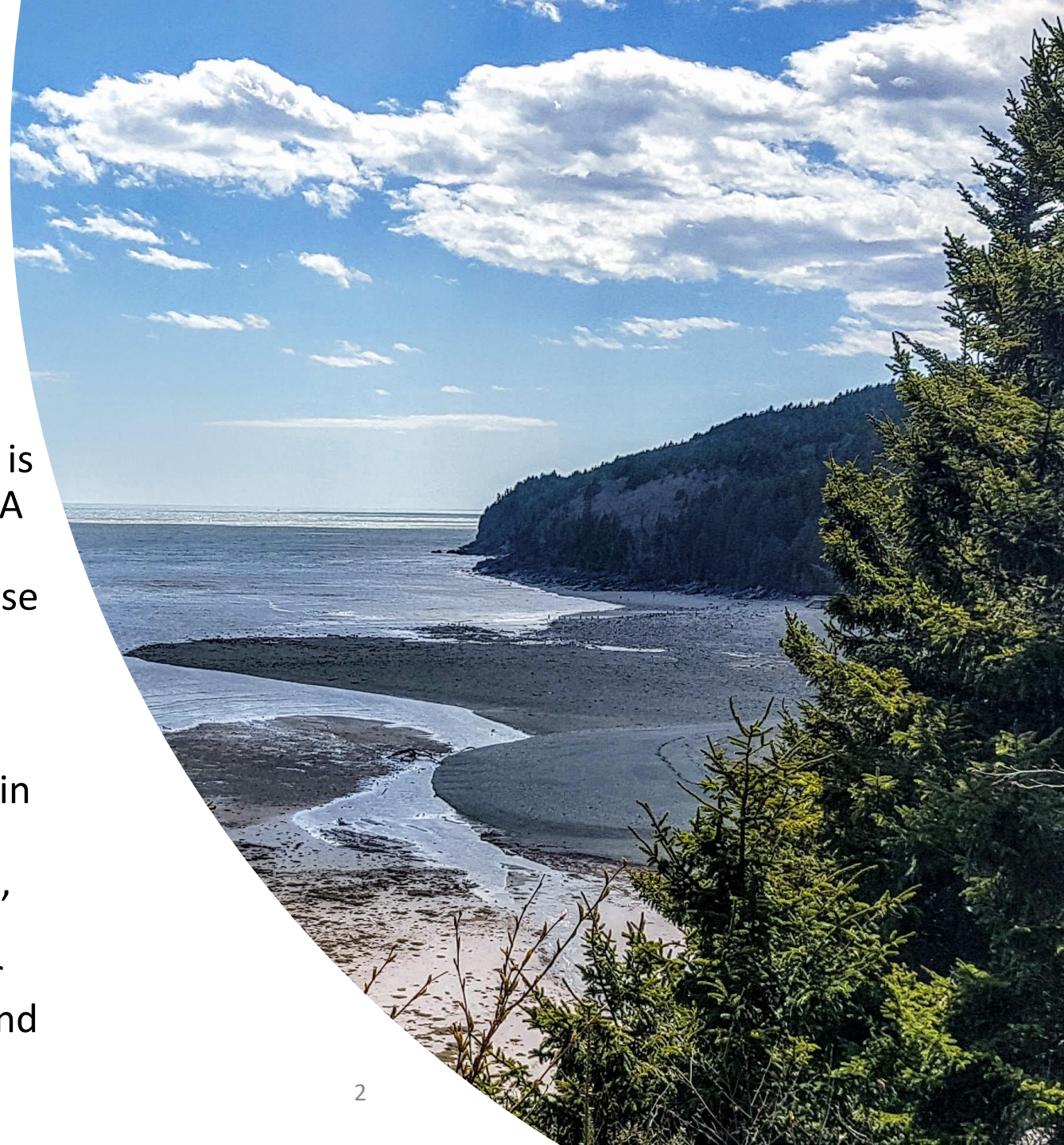
# I. An Introduction to CELA

## Interest and Expertise

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**Canadian Environmental Law Association (CELA)** is a non-profit, public interest law organization. CELA is funded by Legal Aid Ontario as a specialty legal clinic to provide equitable access to justice to those otherwise unable to afford representation for environmental injustices.

**Dr. M.V. Ramana** is a Professor and Simons Chair in Disarmament, Global and Human Security at the School of Public Policy and Global Affairs (SPPGA), University of British Columbia. M. V. Ramana has extensive knowledge and expertise in the nuclear non-proliferation safety risks of reactor designs and accompanying adverse environmental effects.



# I. An Introduction to CRED-NB

## Interest and Expertise

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**CRED-NB** advocates for responsible, renewable, nuclear-free energy development in New Brunswick. CRED-NB is comprised of more than 20 citizen groups and businesses and more than 100 individuals from across New Brunswick who are concerned about the health, safety and environmental impacts of nuclear power.



## II. Summary of Findings

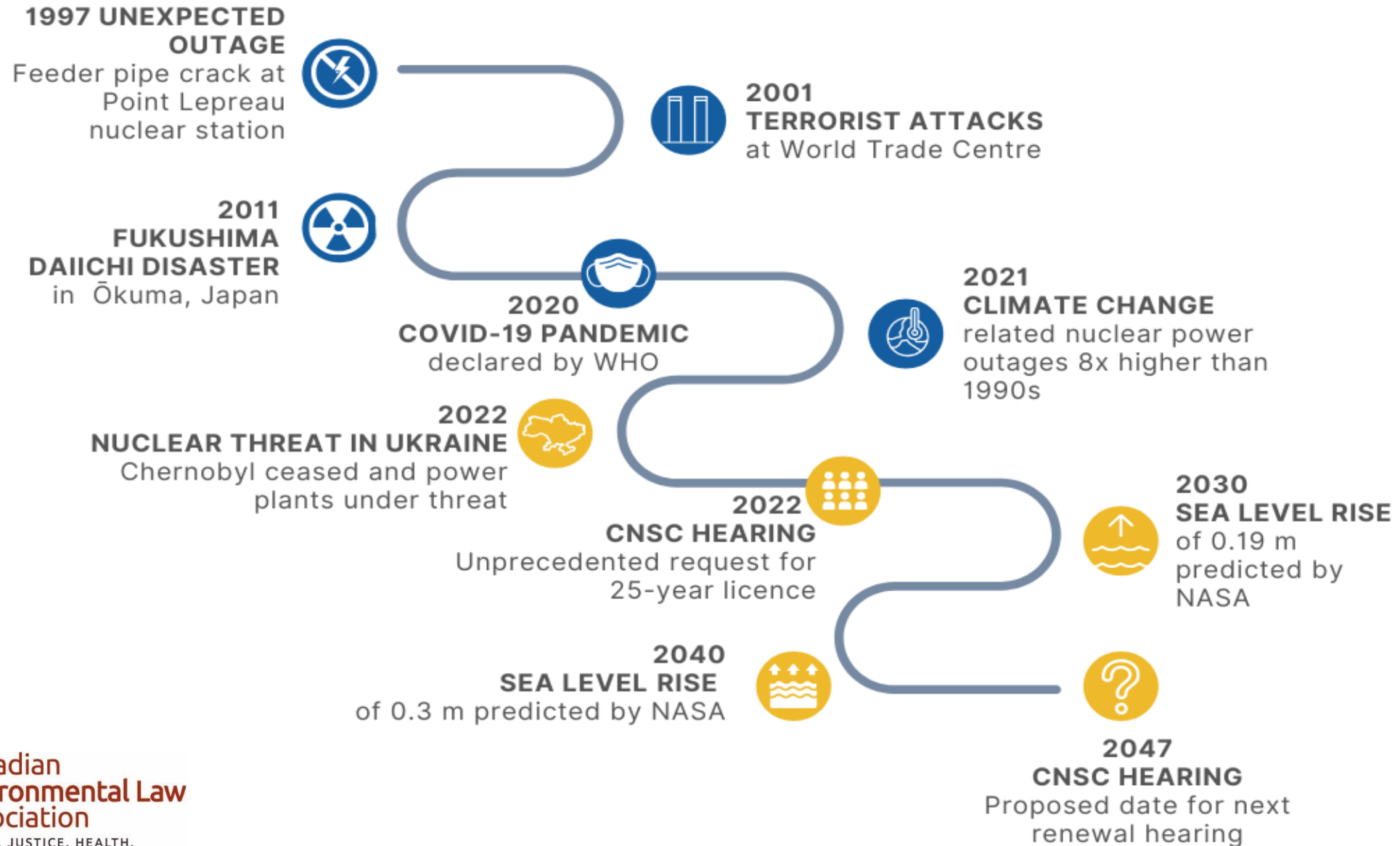
### **NB Power's request for a 25 –year licence is:**

- Contrary to the public interest (Recommendations 8 – 10)
- Contrary to recent international precedent taking into account climate change and environmental protection (Recommendation 11)

### **NB Power's licence application:**

- Fails to consider the impact of new developments, including proposed Small Modular Reactors and radioactive waste reprocessing facility (Recommendations 12 – 14)
- Relies on outdated and incomplete environmental data (Recommendations 15 – 19)
- Extends the plant's operating life and overlooks decommissioning (Recommendations 20 -22)
- Fails to expressly consider impacts of climate change on safety and siting (Recommendations 23 – 26)
- Does not demonstrate off-site emergency planning and preparedness at Point Lepreau is sufficient to protect the public nor compliant with international standards (Recommendations 27 -40)

# III. 25-year Licence Poses Unacceptable Risks



## IV. Procedural Fairness Concerns

- Pre-hearing procedures should be adopted
- Transparency and disclosure of documents must be a priority in all licensing hearings
  - Meaningful participation in decision-making is critical to advancing environmental justice
  - Failure to uphold commitments to release documents diminishes public trust in the CNSC and the actions of the licensee operating in our community
  - Public dissemination of information is a purpose of the CNSC
- The renewal of nuclear operating licences ought to be subject to impact assessment

# IV. Procedural Fairness Concerns

## Recommendations

**Recommendation No. 1:** The CNCS should provide a pre-hearing opportunity where CNCS Staff, licensees and intervenors alike can weigh in on the issues which should frame the licensing hearing and accompanying documents. Given the trend to longer licences, soliciting public comment on the scope of issues which they believe are critical, would provide a starting point for early public engagement.

**Recommendation No. 2:** Documents relied upon in NB Power's and CNCS Staff's CMDs ought to be publicly available by default and not available upon request only.

**Recommendation No. 3:** At a minimum, the CNCS should require all licensing documents be publicly disclosed to advance the public's right to know. This is critical, not only in advancing the right to know, but the public's trust in the regulator and the actions of the licensee.

**Recommendation No. 4:** The CNCS should immediately initiate a comprehensive review of action items made in previous licensing hearings, to ensure past commitments are upheld and tracked for compliance.



# IV. Procedural Fairness Concerns

## Recommendations

**Recommendation No. 5:** References contained in CNSC Staff’s and the licensee’s CMDs ought to be publicly available so that subject matter experts can provide peer review of the documents. This is necessary for the CNSC is to uphold its obligations to disseminate “objective” information.

**Recommendation No. 6:** The right to cross-examination must be adopted as part of the hearing process so that members of the public have the ability to pose questions regarding, for instance, a study’s methods, scope and findings.

**Recommendation No. 7:** The renewal of nuclear operating licences should be fully subject to the federal *Impact Assessment Act* so that considerations of the need and purpose of the project, as well as alternatives, could be fully assessed against a range of factors including accidents and malfunctions, cumulative effects, sustainability, identity factors and Indigenous knowledge and culture.

# V. Detailed Findings

# A. NB Power's request for a 25-year licence is contrary to the public interest

1. It shields licensee activities from the public oversight and participation mechanism provided in section 40(1) of the NSCA for a full generation
2. It would mean relying on more discretionary forms of public engagement like CNSC meetings which are not subject to the licensing framework of the NSCA
  - RORs are not an appropriate alternative to more regular, site-specific licensing hearings
  - SCA framework does not ensure comprehensive and consistent oversight of licensed activities
  - Other regulatory control measures do not justify the use of longer licencing terms
3. It would be contrary to international guidance and precedents

## A. NB Power's request for a 25-year licence is contrary to the public interest

### Recommendations

**Recommendation No. 8:** Licence renewals should be subject to shorter licensing terms as it provides the opportunity for public hearings under section 40(1) of the *NSCA*, and enhances the openness and transparency of the CNSC, and its oversight of nuclear uses and technologies. These opportunities are critical to building the public's trust in the regulator and would be lost if there is only one chance every generation for the public to participate in a hearing and engage in dialogue with the CNSC and the licensee about their concerns.

**Recommendation No. 9:** Regulatory Oversight Reports and meetings are not sufficient alternatives to licensing hearings given their limited scope and exclusion of oral intervention opportunities. They should not be relied upon to remedy outstanding issues resulting from licensing hearings, nor used as a stand-in for public hearings.

## A. NB Power's request for a 25-year licence is contrary to the public interest

### Recommendations

**Recommendation No. 10:** The CNSC should disregard CNSC staff's recommendation for a 20-year licencing term.

**Recommendation No. 11:** Without a more thorough review of legislation and licencing procedures in other jurisdictions, international precedence and benchmarking do not justify longer term licences in Canada.

## B. NB Power's licence application fails to consider the impact of new developments

1. Licensing documents only provide a partial picture of NB Power's plans for Point Lepreau site
2. Licensing documents fail to consider:
  - The potential for two Small Modular Reactors (SMR) and a reprocessing facility to be constructed at the site
  - NB Power envisions two SMR technologies starting commercial operations at the Point Lepreau site by approximately 2030
3. Moving ahead with licensing without recognizing NB Power's plans for SMRs and other developments removes the ability of citizens to comment on site suitability and implications for their communities

## B. NB Power's licence application fails to consider the impact of new developments

### Recommendations

**Recommendation No. 12:** The CNSC should direct CNSC Staff and NB Power to revise all licensing documents to avoid implying 'no change' will occur at the Point Lepreau site during the proposed licensing term.

**Recommendation No. 13:** As a condition of licensing, upon receipt of an application to construct or site an SMR at Point Lepreau, a public hearing for NB Power's operating licence shall occur pursuant to section 40(5)(b) of the *NSCA*, and both licences at the Point Lepreau site considered in tandem, so that a site-wide and comprehensive review of cumulative effects, emergency planning, and impacts from accidents and malfunctions can be carried out.

**Recommendation No. 14:** In the event of a change in ownership or transference of the licence during the licensing term, a public hearing should be held pursuant to section 40(5)(b) of the *NSCA*.

## C. NB Power's licence relies on outdated and incomplete environmental data

1. NB Power's Environmental Risk Assessment (ERA) predominantly relies on the period from 2015-2018 and excludes current baseline data
2. The framing of "environment" adopted in the ERA is too narrow
3. The ERA fails to predict or evaluate potential changes to the environment in the subsequent 25-year licensing period
4. The ERA is much too brief and cursory in its analysis of environmental impacts for the public to have a meaningful ability to understand the impacts of the 25-year licence and for the CNSC to receive feedback to understand local interests, concerns, and values
5. Recent international precedent underscores the need for up-to-date environmental data



## C. NB Power's licence relies on outdated and incomplete environmental data

### Recommendations

**Recommendation No. 15:** NB Power should be required to forecast environmental impacts for years 1 – 25 of the proposed licence period.

**Recommendation No. 16:** NB Power should be required to consider impacts to physical, biological, and human (including social, health and cultural) environments.

**Recommendation No. 17:** Given the unprecedented request for a 25-year licence, the ERA should be updated with data from 2019 and 2020, and, if possible, with data from 2021, before the Commission makes any decision regarding the requested licence renewal.

## C. NB Power's licence relies on outdated and incomplete environmental data Recommendations

**Recommendation No. 18:** NB Power should be required to predict or evaluate potential changes to the environment and likely effects in the subsequent 25-year licensing period.

**Recommendation No. 19:** The CNSC should make it a condition of licencing that all emissions monitoring data be publicly reported in real time.

## D. NB Power's request for a 25-year licence extends beyond the operating life of the facility

- A holistic reading of the licensing documents indicates a ten-year discrepancy in potential operating life
- It will be necessary to consider a change from operations to potential decommissioning in 2032
- End-of-life decisions must be discussed well in advance given their complex technical, procedural, and social dimensions
- Decommissioning considerations and accompanying risks to human health and the environment must be considered more thoroughly within the context of this licence renewal hearing

## D. NB Power's request for a 25-year licence extends beyond the operating life of the facility

### Recommendations

**Recommendation No. 20:** The gap caused by the historical oversight of decommissioning considerations and the infancy of the CNSC's consideration of decommissioning strategies more broadly in Canada, means this licensing hearing ought to be used as an early engagement opportunity to review decommissioning plans, methods, and their accompanying impacts to human health and the environment.

**Recommendation No. 21:** Review of NB Power's proposed decommissioning strategy ought to be among the issues considered in Part 2 of the licence renewal hearing. Supplemental submissions should be provided by the licensee so that both the Commission members and the public can engage in a review of preliminary plans and strategies.

**Recommendation No. 22:** The CNSC ought to review NB Power's proposed decommissioning strategy in light of plans for SMRs at the site. For instance, will decommissioning happen after the CANDU reactor is shut down or after all the reactors and reprocessing plant are shut down?

## E. NB Power's licence application fails to expressly consider climate change

- Potential climate impacts are directly within the purview of the CNSC
- Nuclear power plants and associated facilities are particularly vulnerable to climate change effects, including thermal disruptions (e.g., heatwaves and droughts) and extreme weather events
- Climate change poses unique dangers to Point Lepreau due to its location on the Bay of Fundy
  - High water in the Bay of Fundy is predicted to rise on the order of 0.5 m over the next 50 years, and on the order of 1 m by the end of the century

# E. NB Power's licence application fails to expressly consider climate change

## Recommendations

**Recommendation No. 23:** The CNSC should review the licence renewal application with express consideration given to climate impacts and climate resiliency, including in the context of site suitability and impacts on safety and the environment.

**Recommendation No. 24:** The criteria by which climate change impacts and natural external events have been assessed and evaluated against the 25-year licence application must be clearly set out.

**Recommendation No. 25:** Detailed climate analysis must be presented in a public forum as part of the CNSC's licensing process.

**Recommendation No. 26:** NB Power's environmental impact studies, evacuation time estimates, and land use change studies should be modelled at least 25 years out.

## F. NB Power's consideration of off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment

### Recommendations

**Recommendation No. 27:** To conform with international guidance, the Ingestion Pathway Zone must be expanded from 57 km to 300 km and include the additional requirement that all municipalities within this zone maintain nuclear emergency response plans.

**Recommendation No. 28:** Models of potential exposure pathways must be a requirement of emergency response planning and a prerequisite to any determination on the sufficiency of off-site preparedness. If such modelling has already been conducted, then the assessments should be publicly disclosed prior to Part 2 of the hearing.

## F. NB Power’s consideration of off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment

### Recommendations

**Recommendation No. 29:** We encourage the CNSC to require NB Power to provide KI by way of pre-distribution within a 50 km radius, and pre-stock to 100 km. In accordance with international best practice, the CNSC should extend KI stockpiles to 100 km and ensure that places frequented by vulnerable groups, such as children and pregnant women, maintain sufficient stockpiles.

**Recommendation No. 30:** The CNSC should review the sufficiency of the Emergency Response Plan and actions which should be taken to further offsite emergency planning protections in the context of COVID-19.

**Recommendation No. 31:** Licence Conditions Handbook section 10.1 be updated to read the “licensee must provide emergency communications” and not “should”, as currently drafted.



## F. NB Power's consideration of off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment

### Recommendations

**Recommendation No. 32:** The CNSC should require ongoing public education for emergency preparedness and protective actions.

**Recommendation No. 33:** Require NB EMO to update the off-site Emergency Plan to include explicit calculation of numbers of people who would need to be evacuated, including households with no vehicles, residents unable to self-evacuate, and residents dependent on specialized transportation.

**Recommendation No. 34:** Require NB EMO to update its Emergency Plan to include information on how land use changes will be tracked and reported to the CNSC to ensure the sufficiency of emergency planning.

## F. NB Power’s consideration of off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment

### Recommendations

**Recommendation No. 35:** Require NB Power to update its Evacuation Time Study to include projections out to the year 2047.

**Recommendation No. 36:** It should be made a condition of licencing that NB Power “collaborate with the municipal or regional authorities to develop and maintain public evacuation time estimates based on current census data, and future population growth projections on a per-decade estimation until end of life of the facility”.

**Recommendation No. 37:** CRED-NB and CELA submit that this licence should not be granted until a marine-based offsite emergency plan is made public. The CNSC must ensure emergency response at sea allows for an effective response to accidents and demonstrates a high level of preparedness.

## F. NB Power's consideration of off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment

### Recommendations

**Recommendation No. 38:** The CNSC should seek clarification regarding: (1) when and how amendments to the Nuclear Security Program will apply at Point Lepreau, (2) when NB Power will be required to perform a gap analysis between their current CSA N290.7-14 cyber security program and the requirements in the new revision of CSA N290.7-21, and how this will be communicated to the public and the Commission, and (3) what interim measures are being taken by NB Power until CSA N290.7-21 is fully implemented.

**Recommendation No. 39:** CRED-NB and CELA submit that this licence should not be granted until NB Power's cyber security program is made public, and the public is given a chance to evaluate whether it is in line with international guidance and sufficient to ensure the protection of the health and safety of persons and the maintenance of national security.

**Recommendation No. 40:** Given the speed of evolving cyber security threats and uncertainty of risks, the CNSC should not grant NB Power the 25-year licence extension as applied for.

# VI. Order Requested

# Order Requested (1)

1. Deny NB Power's request for a 25-year licence as:
  - a) A 25-year licence would remove the right to a public hearing for a full generation, compromise meaningful public participation in nuclear matters and erode public confidence in both the Commission and the licensee;
  - b) A 25-year licence would be unjustified given NB Power's plans to deploy two Small Modular Reactors ("SMRs") at the Point Lepreau site during that timeframe;
  - c) Climate change, which will result in increasingly dire weather events, has not been expressly considered in the licence application nor impacts modelled; and
  - d) Off-site emergency planning and preparedness at Point Lepreau is insufficient to protect human health and the environment;

## Order Requested (2)

2. Deny CNSC Staff's recommendation for a 20-year licence;
3. Direct NB Power to revise its licence renewal application, considering all of the deficiencies and recommendations herein;
4. Make it a condition of licencing that a public hearing be held following NB Power's commencement of licensing for the proposed SMR projects to evaluate the effects of the SMR project on the nuclear power plant licence, including impacts to the public and environment from potential radiological effects and emergencies.

**Thank you.**