



Supplementary Information

Renseignements supplémentaires

Oral presentation

Exposé oral

Written submission from the New Brunswick Emergency Measures Organization

Mémoire de l' Organisation des mesures d'urgence du Nouveau-Brunswick

In the Matter of the

À l'égard de la

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

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

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

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

**Commission Public Hearing
Part 2**

**Audience publique de la Commission
Partie 2**

May 10 to 12, 2022

10 au 12 mai 2022

Nuclear Emergency Program

New Brunswick Emergency Measures Organization (NBEMO)

I Introduction

This submission to the Canadian Nuclear Safety Commission describes the current arrangements within the Province of New Brunswick to prevent and mitigate off-site impacts and to ensure an effective response to and recovery from a nuclear emergency at Point Lepreau Nuclear Generating Station.

New Brunswick has a well-established and mature Nuclear Emergency Program. This document will describe the program design, program governance and the provincial arrangements with the licensee. It will discuss provincial capabilities and the readiness to deal with a nuclear emergency, with specific references to training, exercises, and an ongoing program of public awareness.

NBEMO maintains a close, collaborative relationship with NB Power as a key Critical Infrastructure partner in all matters of emergency management. The provincial nuclear emergency program is jointly maintained, resourced, and conducted to ensure robust and synchronized on-site and off-site capabilities are assured.

II Outline

This document will describe the following elements of the New Brunswick Nuclear Emergency Program:

1. Program design.
2. Governance.
3. Infrastructure.
4. Training Program and Exercises.
5. Public Information, and
6. Concluding material.

III Program Design

Program Overview

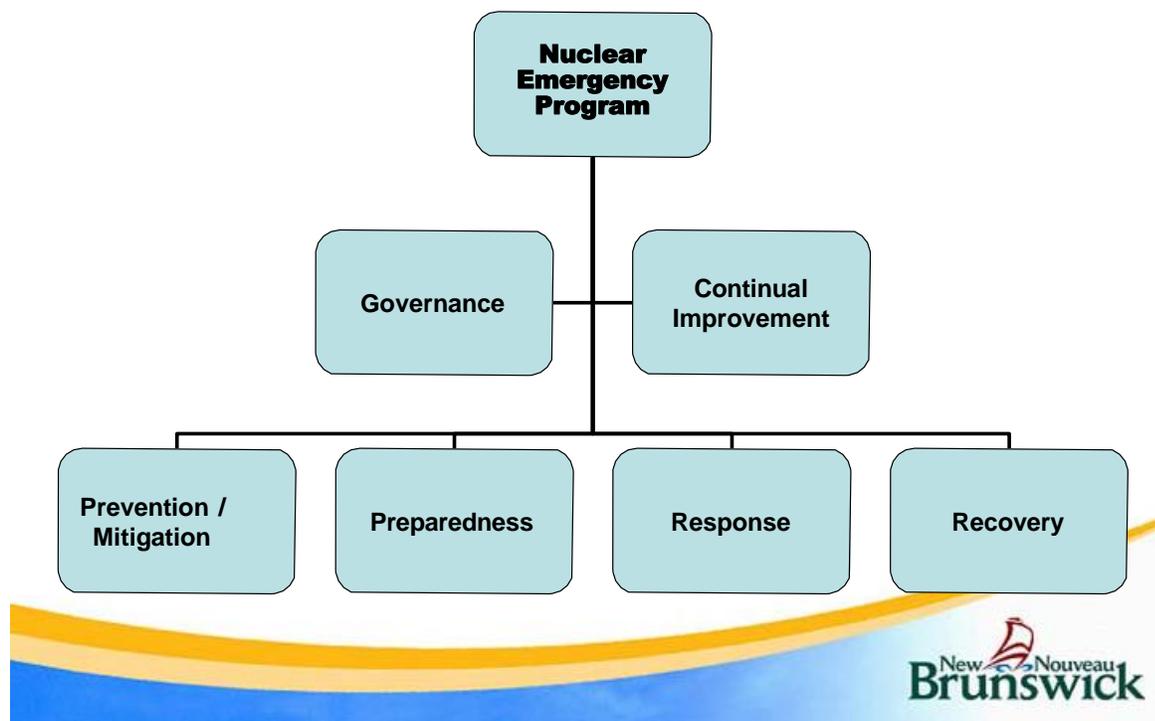
New Brunswick remains committed to constant rigour, complete integration, transparency, and continual improvement as key aspects of our emergency program.

New Brunswick's program design conforms to international norms for program management, including executive-level accountability.

In collaboration with NB Power, New Brunswick makes an ongoing significant investment to maintain competencies to manage any off-site emergency. Shared situational awareness and coordination is ensured across jurisdictional boundaries and all levels of government. This enables an integrated approach to emergency management.

Figure 1: Nuclear Emergency Program Architecture

Architecture



Program Components

Prevention/Mitigation: New Brunswick's emergency programs address prevention through active monitoring of threats, risks, and hazards. We maintain federally compliant arrangements for risk assessment and information sharing with Federal and other partners. Mitigation measures include pre-distribution of KI pills, mobile mass decontamination capabilities and improved sensors and decision support capabilities.

Preparedness: Arrangements include policy, plans, procedures, training and exercise programs and public information. NBEMO maintains a three-person Nuclear Preparedness Section with the mandate to conduct annual refresh of plans, to coordinate and execute a continual five-year exercise program, and to conduct continual equipment and individual skills maintenance.

Response: As a doctrinal basis for operational management, NBEMO employs the Incident Command System to manage complex events, including concurrent and conjoined threats of all types. In addition to nuclear emergency exercises, our management system has proven highly effective in flooding events, severe weather incidents, ice storms, and most recently in response to the impacts of the COVID-19 Pandemic. Applying this methodology has significantly facilitated NBEMO interoperability with First Responders and other agencies involved in response activities.

Recovery: Significant work has been conducted in NBEMO to formalize Recovery procedures, including several training sessions and exercises to validate a concept of operations for this phase of a nuclear emergency. The resultant plan addresses relocation/return of the population, environmental monitoring and remediation and the coordination of the Ingestion Pathway Monitoring Plan. NBEMO has a mature recovery framework which includes health and safety inspections, recovery services, disaster financial assistance and post-disaster mitigation. Recovery operations, as a phase of the emergency, was exercised during Exercise Synergy Challenge in 2018.

Federal Linkages

The New Brunswick program is integrated with federal agencies through the National Emergency Response System (NERS) and the federal Nuclear Emergency Plan (FNEP). We have long-standing relationships and well-defined operational linkages with Health Canada and Public Safety Canada which have proven effective in multiple exercises and actual events. The NERS provides a solid foundation for joint federal-provincial interventions in emergencies.

IV Governance

Governance of the NB Nuclear Emergency Program is comprised of the following elements:

Authority

Executive authority is derived from the NB Emergency Measures Act and Regulation 84-7 concerning Continuity of Government. The Minister of Justice and Public Safety has primary authority for the provincial emergency program, including management of emergencies. Alternate ministers are delegated formally.

Accountability

The Deputy Minister of Justice and Public Safety chairs the Deputy Ministers' Security and Emergency Committee which has overall responsibility for governance of the program. Accountability is accomplished through several individuals and committees who report to the Executive Council. These are described in more detail below.

Performance Management

Our emergency program is subject to a continual improvement policy which includes both internal and external evaluation and reporting. Deficiencies are identified along with recommendations for improvement, which are integrated into an improvement plan.

New Brunswick has undertaken a more robust governance framework for emergency management, one with a defined role for the executive level. The executive role was defined in provincial policy for the management of public security threats, but it proved very useful during major floods, catastrophic ice storms in 2013 and 2017 and most recently in response to the COVID-19 Pandemic. Governance arrangements have been formalized as follows:

Deputy Ministers' Security and Emergencies Committee

This committee was chartered following a significant flood in 2005. The committee deals with the entire spectrum of government's responsibilities for the continuity of government, public safety, and security. The committee has a policy focus but also has an operational role in providing strategic coordination of urgent matters and consolidating advice to government. This committee plays an important role in the strategic management of all provincial emergency response operations.

ADM Security and Emergencies Committee

The ADM Security and Emergencies Committee is a working committee whose composition mirrors the DM committee. It implements DMs' direction. During operations, this committee meets regularly to provide the executive level coordination necessary to support the continuity of government, continuity of operations and essential services, public health operations and public information. This committee's primary task is to ensure that all activities associated with the nuclear off-site emergency program meets the executive's expectations.

Steering Committee

The off-site emergency program is a complex undertaking, requiring close coordination of multiple activities. The Steering Committee ensures that the associated activities are resourced appropriately and completed in accordance with the assigned priorities and timelines. The Steering Committee comprises Senior Officials from the Department of Justice and Public

Safety and NB Power, Project Managers and other managers and technical specialists as required.

Program Activities

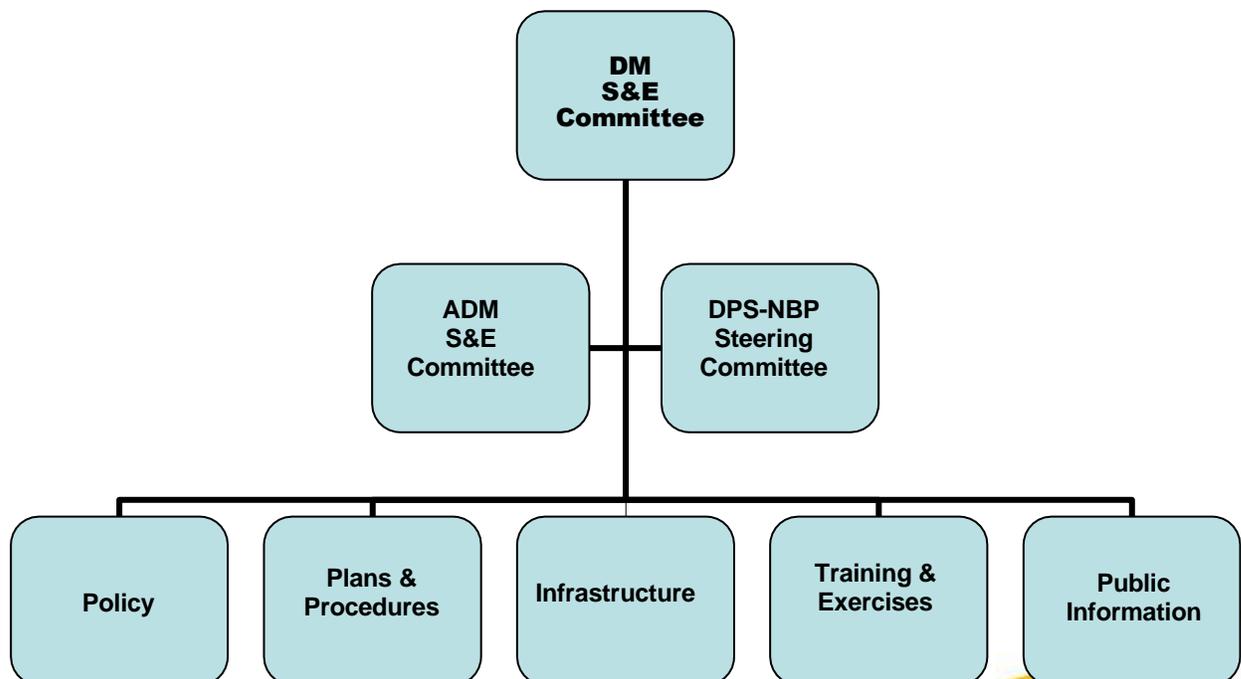
Program activities are assigned to various officials along functional lines. For example, public information activities are led by the Executive Council Office's Director for Emergency Public Information while policy concerning urgent protective actions is the responsibility of the Chief Medical Officer of Health. NBEMO leads most other activities.

Work is generally aligned into the following categories:

- Policy.
- Plans and Procedures.
- Infrastructure.
- Training and Exercises; and
- Public Information.

Over the past several years we have made significant improvements in each of these areas.

Governance Framework



Program Standard

New Brunswick's emergency programs are consistent with *Canadian Standards Association Z1600-14, Emergency and Continuity Management Programs*.

This program standard includes robust accountability requirements and a commitment to continual improvement.

Continual Improvement

Our emergency program includes a continual improvement process which provides a basis for critical assessment and corrective actions. Accountability is to the Deputy Ministers' Security and Emergencies Committee. The process used to assess NB's emergency program is also used to extract lessons learned from exercises and disaster operations. For example, government requested independent audits of the 2017 Ice Storm and the historic flooding events of 2018 and 2019; the associated audit reports and approved action plans become public documents. This approach ensures that deficiencies are addressed and opportunities for improvements are undertaken as priority efforts.

Emergency Preparedness Review (EPREV)

Canada hosted an EPREV mission in June 2019. This was Canada's first EPREV mission, and the first EPREV mission conducted by a G7 country. The EPREV mission was based on GSR Part 7 Requirements (with the exception of Requirement 3, which only applies to International Organizations) and focused on reviewing Emergency Preparedness and Response (EPR) arrangements relating to Emergency Preparedness Category I, and in particular the Darlington and Point Lepreau Nuclear Generating Stations. These nuclear power plants (NPPs) were selected for enhanced focus during the 2019 EPREV mission to reflect the diverse geographic and local conditions of the various NPP sites in Canada. The EPREV mission examined arrangements at all levels of government (federal, provincial, and municipal), including emergency arrangements between the operating organizations and offsite emergency management authorities. The NPPs were not evaluated for their on-site emergency preparedness arrangements, as these are addressed through other IAEA safety standards and review missions.

Following the mission, the review team provided Canada with a report identifying recommendations and suggestions intended to enhance Canadian nuclear EPR capabilities and arrangements. The report also identified good practices that can be used by other Member States to enhance their own emergency preparedness and response arrangements. Canada developed a National Action Plan to address the EPREV findings and its implementation has been ongoing. Canada has requested, and the IAEA has accepted, a follow-up mission to assess the progress made in implementing the recommendations and suggestions for June 2023.

V Infrastructure

Infrastructure supporting our program includes facilities, information systems, decision support systems and telecommunications systems. We have a supporting business

continuity plan that includes redundant servers and paths, as well as alternate work locations.

Provincial Emergency Operations Centres

Tactical operations are centrally coordinated through the Off-site Emergency Operations Centre in the community of Saint George and Regional Emergency Operations Centres in St George and Saint John. Strategic coordination is accomplished through the Provincial Emergency Operations Centre in Fredericton.

Federal Coordination Centre

Public Safety Canada's Regional Office in Fredericton serves as the Federal Coordination Centre.

Near Site Operations

For many years, tactical level operations (radiological survey; evacuation) were conducted out of the Lepreau Emergency Operations Centre. This facility had limited space and was located within the 20 km zone. NB Power has now established a modern facility approximately 25km from the station in the town of Saint George. The new facility is fully equipped as an alternate control centre as well as the new Off-Site Emergency Operations Centre (OEOC). This facility also houses two rapidly deployable Mobile Decontamination suites of equipment.

Telecommunications Systems

The provincial government has a well-established Trunked Mobile Radio system for increased capacity and improved resiliency of communications. This system has significantly improved connectivity, coverage, and multiple channels to ensure interoperability with local and provincial responding organizations.

Commercial wireless infrastructure is also employed by responder organizations who use mobile devices and hosted applications to share information and to coordinate operational activities.

Information Management Systems

NBEMO uses Sentinel Systems' incident management application as a provincial standard. This application is used by all provincial operations centres and most municipalities. All municipalities in southern New Brunswick have adopted the same solution which enables information exchange across jurisdictional boundaries.

Decision Support Systems

NBEMO employs several systems that collate information and intelligence from a variety of organizations and information sources. These systems assist managers to understand current and developing situations and make appropriate decisions.

Accident Reporting and Guidance Operational System (ARGOS): Health Canada's Radiation Protection Bureau provides NBEMO with direct access to their ARGOS

system which provides real-time decision support for urgent protective actions such as sheltering and evacuation.

Radiological Assessment (Survey): NB Power has radiological assessment (survey teams) which provides a first approximation of the scope and probable consequences of any radiation release at the station and to the environment.

VI Training & Exercises

Currently, training and exercises comprise our main effort. With improved facilities and systems, personnel with emergency roles are regularly trained and exercised in accordance with a continuous five-year training schedule closely coordinated with Point Lepreau Nuclear Generating Station training.

Deputy Ministers have agreed that these activities are essential and participation for those designated is mandatory. We have a comprehensive plan which identifies staff for all emergency roles, including personnel for tactical teams, reception centres, operations centres and the supporting technical and communications teams. Training is continuous and progressively conducted to ensure readiness for major validation exercises or real-life emergency events.

The scope of our exercises includes all components of the Incident Command System. Functional groups are exercised independently and then collectively in evaluated exercises. We maintain a thorough and accountable training and exercise program, through which we refresh and validate the competencies of all personnel with an emergency role on an ongoing basis.

We maintain mobile decontamination capabilities and have conducted evacuation exercises with decontamination drills and reception centre processing. The NBEMO Nuclear Emergency Preparedness section maintains lists of designated workers to ensure responsiveness of these teams.

Exercise SYNERGY CHALLENGE 2021 was the most recently conducted full-scale evaluated exercise. This exercise simulated a nuclear incident initiated by a cyber event affecting PLNGS, and subsequently a declared Site Area Radiation Emergency. Exercise SYNERGY CHALLENGE 2021 involved more than 40 organizations, with participants including the utility, Regional, Provincial, Federal, and International agencies.

A thorough Exercise After Action Report conducted by an independent audit concluded that: ***“Synergy Challenge 2021 successfully demonstrated and confirmed that New Brunswick Power, the Province of New Brunswick, and key organizations at the regional, and federal levels are prepared and ready to respond effectively together to an incident at Point Lepreau Nuclear Generating Station.”*** (quoted from Synergy Challenge 2021 After Action Report, Calian, April 2022).

It should be noted that exercise SYNERGY CHALLENGE 2021 was conducted while the Province was constrained by public health regulations resulting from the COVID-19 pandemic. While these necessary measures imposed additional complexity on exercise conduct, it presented an opportunity to manage an emergency in a hybrid environment by incorporating virtual and in-person participation. In effect, this exercise demonstrated how inter-agency collaboration and operational activity could be effectively achieved under difficult conditions.

VII Public Information

The New Brunswick Emergency Measures Organization (NBEMO) works closely with The Government of New Brunswick Executive Council Office (ECO), NBEMO Communications, and NB Power to ensure that residents have access to all the information they need concerning the station and our emergency program. We are confident that we have effective means to notify and instruct the public through all phases of an emergency. We also have a system for registering evacuees so that we can keep them informed throughout the recovery period.

Web Presence

The Province of New Brunswick has interlinked sites for NBEMO, NB Power, ECO and Public Alerts. All pages offer RSS and social media links as well as traditional web based information. <http://www.gnb.ca/alert>. Details of the nuclear off-site emergency program and emergency plan are available to the public on the NBEMO website.

Public Alerting Systems

NBEMO has three distinct and mutually supporting methods of alerting the public:

Lepreau Public Warning System. New Brunswick has employed a variety of mass notification systems for Lepreau area communities since 1999. In 2009, NBEMO adopted the improved capacity and functionality of the Everbridge Warning system which can alert officials, responder organizations and all residents of the 20 km planning zone in a few minutes. Residents themselves determine their alerting methods and can select any combination of home phone, mobile phone, office phone, fax, e-mail, or text message. NB-EMO uses this system regularly for internal purposes and conducts annual live tests for Lepreau area residents. Notification tests are preceded by a variety of public awareness activities (news release, letter to residents, newspaper ads and radio interviews).

National Public Alerting System (NPAS). NPAS is a partnership between federal, provincial and territorial governments and Pelmorex Inc., the parent company for The Weather Network and MétéoMedia. NBEMO uses NPAS to disseminate urgent alerts to broadcasters, telecommunications service providers and Internet based services. The Alert Ready system now in place is a broadcast-interruptive system that enables urgent alerts to go direct to broadcast over AM and FM radio, television stations and all wireless compatible cellular phones.

Pt. Lepreau Warden System. The Warden Service comprises approximately 20 uniformed volunteers who are trained and equipped to assist police. They are drawn from the local community and their local knowledge are invaluable. The Wardens' tasks include assisting in notification, identifying people requiring help with evacuation, manning check points, providing radio communications, distributing Potassium Iodide (KI) pills to households, and serving as guides.

Public Awareness and Education

Communications activities for the nuclear emergency program are built on a longstanding

partnership among NBEMO and NB Power. NB Power speaks to matters inside the fence; NBEMO typically speaks to issues outside the fence. ECO plays a coordination role. ECO provides editorial services, web services, translation services, media monitoring services and media relations. ECO ensures that communications strategies, plans and activities are integrated, so that public messaging is timely, relevant, accurate and consistent.

NBEMO is responsible for developing and presenting public advice while ECO is responsible for production and dissemination. Strategies, plans, and product are developed jointly with input from other intervening organizations. ECO staff are embedded in the Provincial Emergency Operations Centre where they provide direct support to operations. This arrangement is well exercised during flood season, hurricane season and during several incidents every year. This arrangement was stringently exercised during Exercise SYNERGY CHALLENGE 2021, to excellent effect.

NBEMO has recently conducted a door-to-door campaign to update household information for our Demographic Database. Concurrently, we have refreshed the Potassium Iodide (KI) inventory and redistributed pills and instructions to all residences within 20 km of the station. Additional stockpiles of KI pills are maintained at the OEOC facility in Saint George if residents outside the 20 Km zone require access to them.

Our Warden Service provides a visible presence in the community and assists in disseminating safety information to the public.

NB Power actively engages the local population. NB Power distributes a newsletter titled "From the Point" which keeps residents informed about activities at and around the station. Station staff participate in community activities and work closely with local emergency responders and the RCMP.

For all exercises of the off-site plan we work closely with partners to keep residents informed about our activities, through letters, news releases and advertisements, our web presence and Social Media, and the Point Lepreau Warden Service.

VIII Concluding Material

The New Brunswick Nuclear Emergency Program leverages mature and proven doctrine and capabilities that can be mobilized quickly to deal with any contingency at the Point Lepreau Nuclear Generating Station.

There is a very well-established working relationship between the Province and the licensee, at various levels, with shared governance and executive level accountability for program outcomes.

NBEMO has considerable practical experience working with NB Power in other areas, including continuity of operations, transmission, and distribution restoration operations, dam operations, flow and water level forecasting and critical infrastructure protection.

Significant enhancements in our joint operational readiness have been successfully exercised to validate all aspects of our emergency program during the INTREPID and SYNERGY CHALLENGE series of exercises.

In summary, our program is built on the following foundation:

- a sound legal basis in legislation and regulation.
- a robust executive level governance and accountability framework integrated across the whole of government.
- an institutional commitment to program rigour, transparency and continual improvement.
- proven competence in managing complex emergencies.
- a comprehensive and continuous training and exercise program.
- a strong focus on public awareness and education; and
- a commitment to address program requirements identified in the EPREV 2019 Report as well as any other relevant advice the Commission may offer.

Respectfully submitted:

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