Session 2: Member States’ Experiences on IAEA Services

The Canadian EPREV Experience

Brian Ahier, Health Canada

TM on Peer Reviews and Advisory Services in the Areas of Nuclear Safety and Security
Virtual Meeting, 29-30 June 2020
EMERGENCY PREPAREDNESS IN CANADA

• **Shared responsibility:** Relies on ongoing cooperation between levels of government – Federal (F), Provincial (P) and Territorial (T) and their partners
  – bottom-up, all-hazards approach:
  – Local authorities and P/T governments provide the first response to most emergencies
  – If an emergency threatens to overwhelm P/T resources, Federal Government may intervene on request of the P/T

• **National Emergency Response System:**
  Harmonizes joint FPT response to emergencies

• **In a nuclear emergency, provinces assume control from the beginning, and are the primary authority for the response.**
## Key Players in a Nuclear Emergency – An Integrated Approach (1/2)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Local &amp; Provincial Government</th>
<th>Regulator</th>
<th>Federal Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prevent</td>
<td>• Protection of residents</td>
<td>• Regulatory oversight of operator</td>
<td>• Support to province</td>
</tr>
<tr>
<td>• Regain control</td>
<td>– Alerting</td>
<td>• Disseminate information</td>
<td>• National coordination</td>
</tr>
<tr>
<td>• Mitigate</td>
<td>– KI pills</td>
<td>• Support to Federal and International</td>
<td>• Cross border</td>
</tr>
<tr>
<td>• Provide info to offsite authorities &amp; the regulator</td>
<td>– Sheltering</td>
<td></td>
<td>• International matters</td>
</tr>
<tr>
<td></td>
<td>– Evacuation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Health Canada**
KEY PLAYERS IN A NUCLEAR EMERGENCY – AN INTEGRATED APPROACH (2/2)

INTERNATIONAL

FEDERAL AUTHORITIES

BORDERING PROVINCES AND STATES

LOCAL AND PROVINCE

INTERNATIONAL
• Other countries
• IAEA
• World Health Organization

FEDERAL AUTHORITIES
• Federal Emergency Response Plan (FERP) Departments
• Federal Nuclear Emergency Plan (FNEP) Partners
• Includes:
  • CNSC
  • Health Canada
  • Public Safety (Coordinates federal response)
  • Other government departments

LICENSEE
CANADIAN EPREV OBJECTIVES / EXPECTED BENEFITS

- Demonstrate that Canada meets the IAEA’s standards to respond to a nuclear emergency
- Identify best practices and areas of improvement as identified by peers and experts in the field
- Ensure a high level of preparedness to protect public health and safety at all levels
- Solidify Canada’s contribution towards global harmonisation of emergency preparedness and response approaches and arrangements
**CANADIAN EPREV SCOPE**

- Included arrangements related to nuclear generating stations (EPC I), and involved all levels of government and operating organizations
- Enhanced focus on:
  - Point Lepreau Nuclear Generating Station (NB): small population base within New Brunswick
  - Darlington Nuclear Generating Station (ON): proximity to a large population base within Ontario
- As EPREV reviewed the national arrangements, the self-assessment included Pickering and Bruce Power Nuclear Generating Stations
- Comment: Beneficial that EPREV has the flexibility to focus on specific emergency preparedness categories
NATIONAL EPREV GOVERNANCE

• Challenge: IAEA GSR Part 7, and EPREV, implicate a broad range of stakeholders

• National Governance established to:
  – Provide coordinated oversight
  – Develop self-assessment
  – Prepare action plan to address areas for improvement prior to mission
  – Plan mission logistics
  – Coordinate communications
  – Review findings / outcomes during mission
  – Approve followup action plan

• Benefit: Strengthened connections and collaborations between organizations
INITIAL PHASE - TIMELINE

Commitment at Convention on Nuclear Safety, 6th Review Meeting

Briefings, negotiations, approvals and commitments from stakeholders

Invitation sent to IAEA to organise an EPREV in Canada

Ongoing Preparations
- Project charter
- Self-assessment

National self-assessment submitted to IAEA

IAEA accepts Canada’s invitation to organise an EPREV

April 2014

Feb 2017

July 2017

GSR Part 7 Regional Workshop

Jan 2018

Feb 2018
INITIAL PHASE – OBSERVATIONS, BENEFITS AND CHALLENGES

• In Canada’s system, many organisations are involved: Requires extensive engagement, consultation, negotiation, and patience

• Keys to success included:
  – National EPREV governance
  – Regular inter-jurisdictional planning meetings
  – Open and honest discussion and self-assessment

• Operator’s engagement was paramount

• EPREV Communications Group was essential for managing strategic and risks communications

• Benefit: EPRIMS was a useful tool for consolidating self-assessment information from all stakeholders, and coordinating discussions across all jurisdictions on strengths, areas for improvement and next steps
**PREPARATORY & CONDUCT PHASE - TIMELINE**

- **Preparatory Mission**
  - Agreement on scope, content, schedule
  - Develop Terms of Reference
  - Discuss EPREV team composition
  - **May 2018**

- **Ongoing Preparations**
  - Action plan to address self-assessment
  - Updated self-assessment
  - Logistics

- **Advance Reference Material & Updated Self-Assessment submitted to IAEA**
  - **Mar 2019**

- **Preparatory call with IAEA and Team leads**
  - **May 2019**

- **EPREV MISSION**
  - 2-13 June 2019
PREPARATORY & CONDUCT PHASE - OUTCOMES

- 12 Person review team performed the peer review mission
  - Experts from Australia, Finland, France, Germany, Romania, South Africa, South Korea, Sweden, the USA, and 1 observer from Japan

- The mission resulted in 5 Good Practices, 6 Recommendations and 6 Suggestions

- “The clear, focused and effective preparation and support for, and the coordination of, the EPREV mission were exemplary and constitute a positive model for Member States who may consider hosting an EPREV or other IAEA peer review service.”
PREPARATORY & CONDUCT PHASE – OBSERVATIONS, BENEFITS AND CHALLENGES

• The EPREV Team was well prepared, took into consideration the information provided and asked appropriate questions
  – Well documented self-assessment and Advanced Reference Materials cross-referenced against GSR Part 7 requirements increased the mission’s efficiency
  – In order to save time, the EPREV team should understand the host’s overall governance prior to the mission
  – It would be helpful to identify areas of focus prior to the mission to allow organizations to compile all of the additional documentation and information requested ahead of time

• Canadian team was committed to open, unscripted interviews and discussions with the EPREV Team

• Full support of the host’s executives from all jurisdictions during the final negotiation phase, and the openness of the EPREV team, allowed for smoother discussion
• Canada’s full report was made publicly available on the IAEA website in February 2020
• Canada views this as a benefit for other countries

Area for improvement: One objective of EPREV is to share best practices and identify areas of improvement; this cannot be done without better sharing of outcomes
• Suggestion to improve the website and increase the number of full EPREV reports available
Canada also conducted:

- An IRRS in Sept 2019: Module 10 – Emergency preparedness and response was covered by the June 2019 EPREV to Canada
- An IHR JEE in June 2018, which includes a module on radiation emergencies
  - Different criteria, different experts
  - Not able to use the EPREV to cover this module
- Improve interface between EPREV and IHR-JEE for radiological emergencies
  - Challenge to support two missions organised through two different international organisations, with different lead national focal points, and overlapping timelines
  - Would benefit from closer coordination between the services for radiation emergencies
  - Ensure consistency of assessment and communication to the public
- EPREV excludes Requirement 3: Responsibilities of International Organizations in a Nuclear Emergency
  - Because IOs interface with national focal points in Member States, consider including Req 3 with a focus on interaction and coordination with and within the Member State
FINAL OBSERVATIONS

• In June 2019, Canada became the first G7 country to conduct an EPREV mission

• Resulted in 5 Good Practices, 6 Recommendations and 6 Suggestions: Canada commits to addressing all findings

• The EPREV Report and Canada’s response available to the public, in both of Canada’s official languages

• The mission was a success because of the collaboration and contributions of the federal, provincial, and municipal partners and the operators; and the effectiveness of the IAEA and EPREV review team

• The strengthening of internal linkages, and the follow up action plan will help Canada to continue to strengthen our nuclear emergency preparedness arrangements
Thank You!

https://www.canada.ca/en/health-canada.html

https://twitter.com/GovCanHealth?lang=en

Brian Ahier
brian.ahier@Canada.ca