Organizational Interfaces in Offsite Nuclear Responses

IAEA International Experts' Meeting on Severe Accident Management

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Ontario

Bruce Nuclear Power Station

Pembroke

Ottawa

Peterborough

Toronto

Windsor

Chalk River Laboratory

Bruce Nuclear Power Station

Kincardine

Peterborough

Ottawa

Toronto

Windsor

Chalk River Laboratory

Bruce Nuclear Power Station

Enrico Fermi 2 Nuclear Power Plant

Pembroke

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Chalk River Laboratory

Bruce Nuclear Power Station

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Darlington Nuclear Power Station

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Pembroke
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Bruce Nuclear Power Station

Pickering Nuclear Power Station

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• **Peterborough**

• **Toronto**

Enrico Fermi 2 Nuclear Power Plant

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Darlington Nuclear Power Station

• **Windsor**

Post Fukushima Considerations

- Clarify the aim of offsite planning
  Occurs when there is an actual or potential hazard to public health, property, or the environment from ionizing radiation…Such a hazard will usually be caused by an accident, malfunction, or loss of control involving radioactive material or a nuclear facility

- Context of a natural disaster

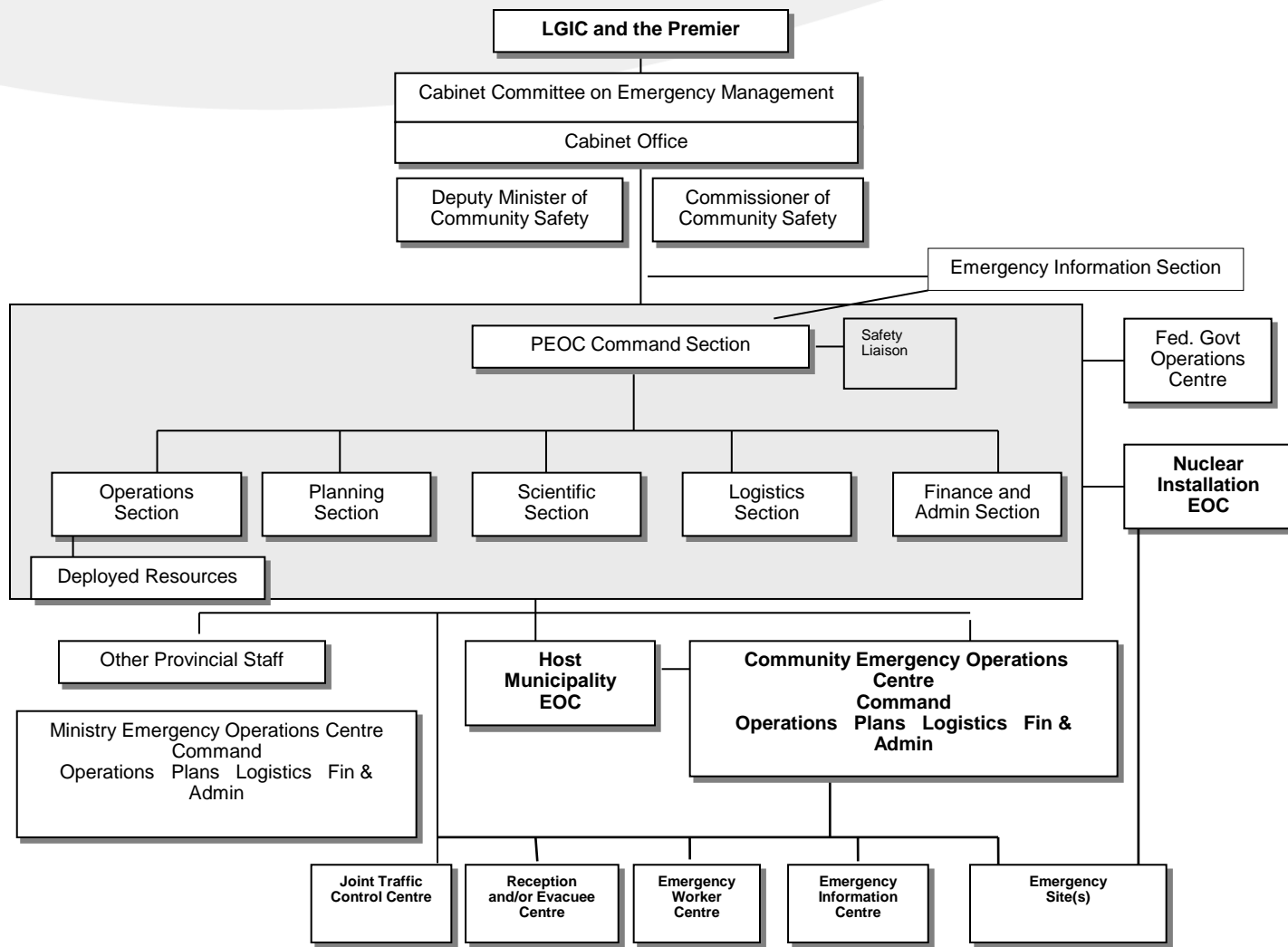All those tired of Winter, please raise your hands!

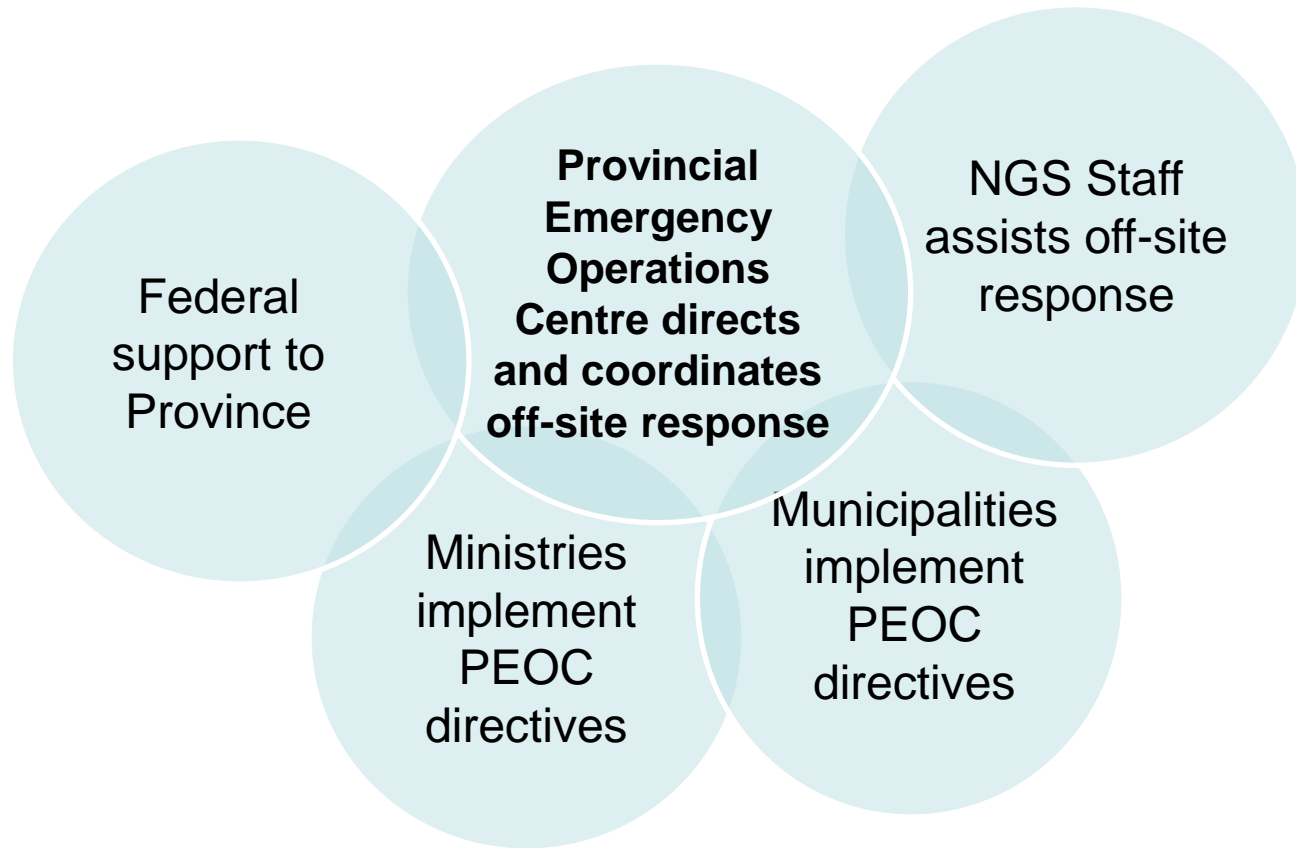FEB/ 5/2014

February 2014 – Bruce PZ

December 2014 – Pickering PZ

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Nuclear Response Integration

Federal support to Province

Provincial Emergency Operations Centre directs and coordinates off-site response

NGS Staff assists off-site response

Ministries implement PEOC directives

Municipalities implement PEOC directives

Interfaces – A Closer Look

- Formal Notifications
- Information products
- Situational awareness
- Scientific data
- Operational information/response status
- Public directives/communications
- Assets and resources

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Interfaces – A Closer Look

- Web based
- Email
- Fax
- Telephone (cell, landline or SAT)
- Person to person
- Provision of services

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Interfaces with the Public

- The most critical of interfaces
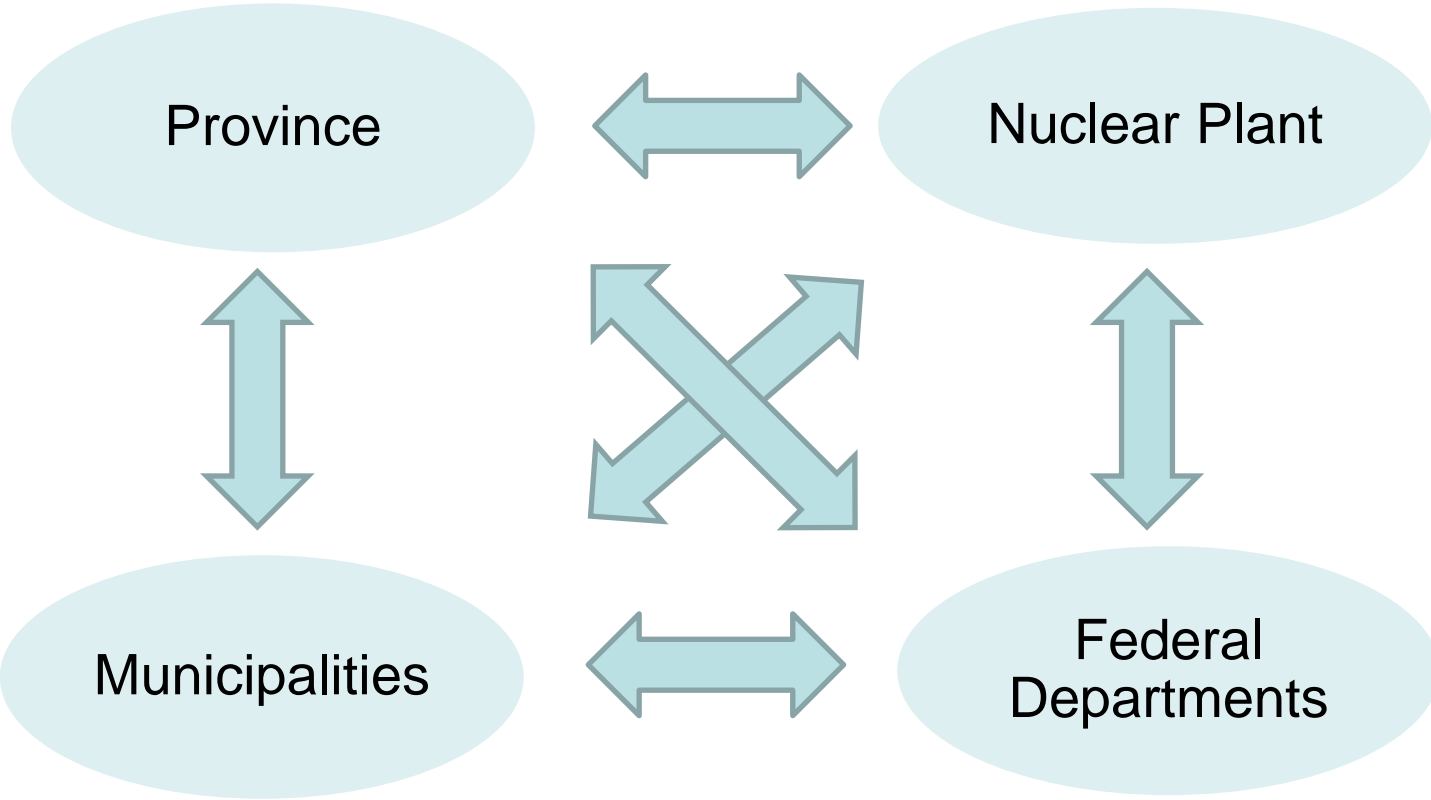- Social media is a "game changer"

Nuclear Workshops

- Stress tests carried out through recent multi-jurisdictional exercises and workshops demonstrated that the quality and robustness of the interfaces between organizations is <u>integral</u> to an effective coordinated response.

Workshops

- Scenario based
- Explored all stages of a BDBA nuclear response with a natural disaster
- Three areas of exploration:
  - critical dependencies
  - decision making
  - communication

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Critical Dependencies

Province ⬌ Nuclear Plant

Municipalities ⬌ Federal Departments

Critical Dependencies - Questions

- Are data transmittals going to the right organizations at the right time?

- How are different units of measurement and format resolved?

- Is interoperability an issue at any level?

- If specific systems are non-operational, are there other sources of data and information that could be utilized?

- In the absence of information, how would you proceed?

- What is the capacity of human resources and required assets?

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Decision Making

- Public Alerting
- Protective Actions
  - KI, Evacuation, sheltering
  - Shutting down air, rail, marine traffic
- Food embargos
- Traffic control
- Worker safety
- Re-entry considerations

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Decision Making - Sample Questions

- Who has the authority to make, implement and enforce specific decisions?

- What is the legislative or regulatory basis for that authority?

- Who needs to be included in the decision making process?

- What happens if specific organizations are unreachable due to a technology failure or critical information is lacking?

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Communications

- Notifications
- Communication products
- Elected officials and senior management
- Social media
- Public messaging/guidance

Communications - Questions

- Are the right notifications going to the right people at the right time?

- Who is responsible for specific communication products?

- What redundancies exist for communication technologies and are they shared by all organizations?

- If a communication technology fails, what mechanisms exist to maintain required communication linkages?

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Managing Challenges

- Emergency management best practices
- Shared and understood response structure (IMS)
- Robust and redundant communication technologies
- Critical infrastructure resiliency
- Continuity of Operations planning
- Planning and exercising

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Results

- Organizations have excellent capabilities
- Good plans are in place (and being updated)
- Gaps were found in the INTERFACES!
  - Units of measurement
  - Communication products – needs and timing
  - Legislative authorities
  - Interoperability

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Next Steps

- Multi-stakeholder working groups are addressing gaps at the operational and functional level

- Protocols and procedures being updated

- Exercise Unified Response May 2014
  – 3 day, BDBA
  – Multi-jurisdictional
  – Feet on the ground

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