Licence Renewal

• NB Power seeking a 5-year licence
• Ottawa - January 26, 2017
  - Public hearing Part 1 - NB Power presents
• Saint John – May 10 & 11, 2017
  - Public hearing Part 2 – Public presents
• Point Lepreau Public Information Session
  – When: February 27, 2017 (6:00 pm to 8:00 pm)
  – Where: St. George, NB
Station Overview

- The Point Lepreau Nuclear Generating Station (PLNGS) is operating at 100 per cent reactor power, putting approximately 660 megawatts on the New Brunswick grid – approximately one third of the electricity needs in NB
  - Produces enough non-emitting electricity to power more than 333,000 homes per year and is a foundational piece of both our domestic energy supply and our export sales

- The Point Lepreau Generating Station is the foundation of our provincial power supply and the source of electricity for more than one third of New Brunswick’s in-province energy requirements
Point Lepreau is fundamental to achieving our goal of having 75 per cent of New Brunswick’s electricity coming from clean, renewable or non-emitting sources by 2020.

Safe and reliable operation of the newly refurbished reactor will pay dividends for the next 25 to 30 years.
Safe, Predictable and Reliable Electricity

- More than 800 highly skilled employees who recently achieved a milestone of operating over 5.5 million person-hours without a lost time accident
- Shared Safety Commitment with IBEW 37
- Exemplary record for public safety
  - 2016 - NB Power received both Canada’s Best Health and Safety Culture Award and Canada’s Best psychological safety award at Canada’s Safest Employer’s awards
SAFETY - #1 priority

- Built with redundancy – defense-in-depth – multiple barriers
- PLNGS’s safety analysis continues to demonstrate that the plant is very safe and robust to withstand very rare and large earthquakes
Radiation Safety

- Radiation dose well below regulatory limits

  - Natural background radiation: 2,000-5,000 μSv per year
  - Legal limit for dose from emissions: 1,000 μSv per year (CNSC)
  - Single chest X-ray: approximately 70 μSv
  - Total radiation dose due to emissions from Point Lepreau Generating Station since 1983: 25.78 μSv
Safe, Predictable and Reliable

Environmental Safety

- Radiation Dose well below regulatory limits
- Registered ISO 14001 Environmental Management
- Environmental studies
  - Fish impingement and entrainment studies validated previous predictions
- Bird observatory
- Monarch butterfly studies
Safe, Predictable and Reliable

- Refurbishment focused mostly on the reactor
- Focus
  - Reliability
  - Predictability – Industry initiative
  - Preventive maintenance
  - Long-term planning
  - Strategic upgrades
- Planned Maintenance Outage – Spring 2017 and Spring 2018

“NB Power is Committed to Improving Station Performance.”
People

Safe, Predictable and Reliable

- Solid work force with a good work ethic
- Highly trained and qualified
- Experiential learners
- Extensive continuous training program
  - Table top and hands-on drills and exercises
  - On-site full scale control room simulator
  - On-site full scale fuelling simulator
  - Mechanical and instrumentation labs
  - Dynamic learning Activities
Fire Protection

Safe, Predictable and Reliable

- Dedicated on-site Emergency Response Team
- Mutual Aid fire response
- Partnership with local firefighters
- Fire safety modifications

“Safe and Prepared.”
Safe, Predictable and Reliable

- Robust emergency preparedness plans practiced with communities, various levels of provincial and federal government agencies, including New Brunswick Emergency Measures Organization
- Successfully completed 2015 Intrepid emergency exercise
- Drills and exercises continue to demonstrate that the Station is prepared for an emergency event
Objectives:
- Validate preparedness to respond to beyond design basis accident
- Test inter-operability of response organizations
- Test emergency response plans - Video

NB Power met all objectives
Security

- Extensive and integrated security drills and training
- Partnerships with external emergency response agencies

“Prevent, Detect and Defend.”
Generating Nuclear Energy
Nuclear Fuel

- CANDU - 6 stands for CANada Deuterium Uranium
- It is a pressurized heavy water reactor that uses natural uranium as its fuel
Dry Fuel Canisters
Solid Radioactive Waste Management Facility
Safeguards and Used Fuel

- International Atomic Energy Agency - meet international non-proliferation treaty obligations
- Committed to safeguard obligations for nuclear fuel accounting
- All nuclear waste and used fuel are safely stored on-site

“We Adhere to Rigorous Canadian Standards.”
Partnership and Engagement

“Showing Respect and Regard for Aboriginal Peoples, Our Neighbours, our Communities, Media and the Public.”
• Good plant with good people
• We are qualified to continue operating the Point Lepreau Nuclear Generating Station
• We are personally accountable and responsible for Station operations
• The Station is safe and we meet regulatory requirements
• We are asking the CNSC to grant a 5-year operating license for our Station
• We are committed to providing New Brunswick with safe, reliable, and emission-free electricity for an additional 25 to 30 years.
Generate Safe, Predictable and Reliable Electricity

Value of PLNGS

Our investment in the Station has provided us our own source of reliable power and a solid foundation on which we can help build the local and provincial economies.