

DURHAM NUCLEAR HEALTH COMMITTEE (DNHC) MINUTES

Location Durham Regional Headquarters
 605 Rossland Road East, Whitby
 Meeting Room LL-C

Date January 19, 2018

Time 1:00 PM

Host Durham Region Health Department (DRHD)

Members

Dr. Robert Kyle, DRHD (Chair)
Ms. Mary-Anne Pietrusiak, DRHD
Mr. Ken Gorman, DRHD
Dr. Tony Waker, University of Ontario Institute of Technology
Mr. Raphael McCalla, Ontario Power Generation (OPG)
Mr. Phil Dunn, Ontario Ministry of the Environment and Climate Change
Dr. David Gorman, Public Member
Dr. Lubna Nazneen, Public Member
Mr. Marc Landry, Public Member
Mr. Hardev Bains, Public Member
Dr. Barry Neil, Public Member

Presenters/Observers

Mr. Brian Devitt (Secretary)
Ms. Carrie-Anne Atkins, OPG (Presenter)
Mr. Ian Azevedo, OPG (Presenter)
Mr. Adrian Nalasco, Ontario Ministry of Energy (Presenter)
Mr. Warren Leonard, Durham Emergency Management Office (DEMO)
(Presenter)
Ms. Amy Burke, Municipality of Clarington
Ms. Janet McNeill, Durham Nuclear Awareness (DNA)
Ms. Lynn Jacklin, DNA
Ms. Lydia Skirko, Whitby Resident
Ms. Linda Gasser, Whitby Resident
Ms. Libby Racansky, Clarington Resident
Ms. Sharon Gawtreay, Parkcrest Tenants, Toronto Resident
Mr. Robert Dixon, Ajax Resident
Mr. A.J. Kehoe, Durham Region Resident

Regrets

Ms. Janice Dusek, Public Member
Ms. Veena Lalman, Public Member

Dr. John Hicks, Public Member

Robert Kyle opened the meeting and welcomed everyone.

1. Approval of Agenda

The Revised Agenda was adopted.

2. Approval of Minutes

The Minutes of November 17, 2017 were adopted as written.

3. Correspondence

- 3.1.** Robert Kyle's office received Minutes of the Pickering Nuclear Generating Station (NGS) Community Advisory Council meeting held on October 17, 2017.
- 3.2.** Robert Kyle's office received an information release by the Ontario Government concerning the release of its *2017 Long-Term Energy Plan* dated October 26, 2017.
- 3.3.** Robert Kyle's office received a media release by OPG concerning its launch of the *Exercise United Control*, a multi-jurisdictional nuclear emergency preparedness exercise, scheduled for December 6 and 7, 2017 at the Pickering NGS dated November 14, 2017.
- 3.4.** Robert Kyle's office received a letter of resignation from Chris Weigel, Public Member for Whitby, due to his recent career change that required him to move from his home in Durham Region dated November 17, 2017.
- 3.5.** Robert Kyle's office received a media release by the Financial Accountability Office of Ontario announcing its report *An Assessment of the Financial Risks of Nuclear Refurbishment* dated November 21, 2017.
- 3.6.** Robert Kyle's office received a media release from the Canadian Nuclear Safety Commission (CNSC) concerning their decision to amend the nuclear power reactor operating licences for the Darlington and Pickering NGSs to include the import and export of nuclear substances in contaminated laundry, packaging, shielding and equipment dated November 21, 2017.

- 3.7. Robert Kyle's office received a newsletter from OPG concerning the progress of the Darlington Refurbishment Project dated November 28, 2017.
- 3.8. Robert Kyle's office received a media release by CNSC concerning their participation in the full scale, multi-jurisdictional nuclear exercise, *Exercise Unified Control*, to be led by OPG and the exercise will be conducted in a lead-up to the relicensing of the Pickering NGS in 2018 dated December 5, 2017.
- 3.9. Robert Kyle's office received a media release by the Ministry of Community Safety and Correctional Services, Office of the Fire Marshal and Emergency Management (OFMEM), concerning the release of their updated Provincial Nuclear Emergency Response Plan dated December 21, 2017.

4. Presentations

4.1. **Progress report by the Ontario Ministry of Energy concerning their 2017 Long-Term Energy Plan and expectations for the Darlington and Pickering NGSs**

Adrian Nalasco, Director, Nuclear Supply, Ontario Ministry of Energy, provided a detailed presentation concerning Ontario's Nuclear Sector of the 2017 Long-Term Energy Plan (LTEP).

Adrian provided an overview of Ontario's 2016 energy supply mix that included:

○ Nuclear	53.5%
○ Water	21.3%
○ Natural Gas	7.5%
○ Wind	6.2%
○ Solar	2.0%
○ Biomass	0.4%
○ Other	0.4%
○ Conservation	8.6%

Adrian provided an overview of the current and long-term commitment to nuclear energy in Ontario that included:

- There are 18 operational reactor units at Darlington, Pickering and Bruce NGSs with a capacity of approximately 13,000 MW.

- Ontario has committed to retain approximately 10,000 MW of nuclear capacity over the long-term considering Pickering NGS is targeted for shutdown by 2024.
- The provincial government has deferred its decision on building any new nuclear reactors due to Ontario's strong supply situation.
- The 2013 LTEP renewed the government's commitment to maintain nuclear as the single largest generation source providing approximately 50% of Ontario's electricity generation long-term.
- The 2017 LTEP re-affirmed that nuclear refurbishment is the most cost-effective option for baseload generation and Ontario is moving forward with the refurbishment of 10 reactor units at Darlington and Bruce NGSs as laid out in the 2013 LTEP.
- Ontario will continue to have a flexible electricity system and to accommodate and benefit from emerging technologies at the lowest cost to ratepayers.
- Nuclear refurbishments will help achieve emissions projections as established in the 2017 LTEP.
- Key government policy challenges for nuclear refurbishment projects are risks of cost overruns and schedule delays as well as locking-in a significant long-term capacity commitment.
- To address the policy risks of refurbishment projects, the 2013 LTEP established several principles to:
 - Minimize commercial risks on the part of the government and ratepayers;
 - Mitigate reliability risks by developing contingency plans that include alternative supply options;
 - Entrench appropriate off-ramps and scoping;
 - Hold private sector operators accountable to the nuclear refurbishment schedule and price;
 - Require OPG to hold its contractors accountable to the nuclear refurbishment schedule and price;
 - Ensure site project management, regulatory requirements and supply chain considerations, and cost and risk containment, are the primary factors in developing the refurbishment implementation plan; and
 - Take smaller initial steps to ensure there is opportunity to incorporate lessons learned from other refurbishments including collaboration with operators.

Adrian provided a summary of the Darlington and Bruce nuclear refurbishment projects that included:

- In January 2016, the government announced approval for OPG to proceed with unit 2 at Darlington NGS and refurbishment began on October 15, 2016 while the 2017 LTEP re-affirmed the government's commitment to refurbish all 4 units at Darlington.
- The Ministry of Energy and an Independent Oversight Advisor are ensuring continued government oversight as the refurbishment of Darlington has shifted from the planning phase to the execution phase.
- OPG provides the government with regular updates on the progress of the project and monthly progress reports to update the public on its performance and major milestones achieved.
- In December 2015, the Independent Electricity System Operator (IESO) and Bruce Power signed an agreement to refurbish 6 reactors at the Bruce NGS beginning in 2020 and the 2017 LTEP re-affirmed the government's commitment to refurbish 6 units at Bruce.
- The IESO will ensure strict oversight of the Bruce refurbishment project and provide timely reporting to the government on the progress of the project.
- On November 21, 2017, the Financial Accountability Officer of Ontario (FAO) released its report on the financial risks of Ontario's nuclear refurbishment plan.
- The FAO re-affirmed the long-term benefits of Ontario's nuclear refurbishment projects and noted the robust oversight and projections have been put in place to mitigate risks of refurbishment.
- The Ministry of Energy has facilitated an agreement between OPG and Bruce Power to collaborate and share lessons learned on refurbishment.

Adrian provided a summary of the proposed Continued Operation of the Pickering NGS until 2024 that included:

- In January 2016, the government announced approval for OPG's plan to complete confirmatory work and to seek regulatory approvals from the Ontario Energy Board (OEB) and CNSC for ongoing operations of the Pickering NGS to 2024.
- In December 2017, the OEB approved OPG's planned expenditure to enable ongoing operation of the Pickering NGS to 2024.
- In August 2018, the CNSC is expected to decide whether Pickering will be safe to operate to 2024 as part of its licence renewal application that is underway.

- The 2017 LTEP re-affirmed the government's support for Pickering to continue operations to 2024.
- OPG will seek final government approval to proceed when the regulatory reviews are completed.

Adrian mentioned Ontario's nuclear sector is a source of considerable research and innovation that includes:

- Medical isotopes are produced by nuclear reactors and provide 70% of the global supply of the Cobalt-60 isotope.
- Deep space exploration needs Plutonium-238 and Darlington NGS may help supply the global demand for this material.
- Ontario is interested in collaborating with the federal government, universities and industry partners and will continue its support of the nuclear industry for both its energy and non-energy research applications such as:
 - Small Modular Reactor Technology for smaller footprints and economies of scale compared to conventional nuclear reactors;
 - Nuclear Fuel Research could lead to reprocessing or recycling used nuclear fuel; and
 - Hydrogen Production on a large scale that could be used to replace gasoline for transportation and natural gas for heating buildings.

Adrian Nalasco or his associates will continue to update the DNHC on any significant updates to the 2017 LTEP as it may affect the Darlington and Pickering NGSSs. For more information on the LTEP, contact Adrian at adrian.nalasco@ontario.ca or access the Ministry of Energy website at <http://www.energy.gov.on.ca>.

4.2. Progress Report by OPG concerning the Unified Control Emergency Exercise held on December 6 and 7, 2017 and Plans for 2018

Ian Azevedo, Senior Manager, Emergency Preparedness Security and Emergency Services, OPG, provided a presentation on nuclear preparedness at Pickering and Darlington NGSSs.

Ian provided an overview of the responsibilities of the Emergency Preparedness Department that included:

- Implement and maintain emergency response capabilities within OPG Nuclear.
- Maintain OPG's Nuclear Emergency Response Organization facilities as well as equipment at off-site facilities.
- Conduct drills and exercises to confirm effectiveness of OPG's nuclear emergency plans at Pickering and Darlington NGSSs.

- Oversee the Emergency Response Organization's qualification program.
- Liaise with off-site authorities and key stakeholders such as CNSC, OFMEM, DEMO, City of Toronto etc.
- Conduct assessments to demonstrate the emergency response program is performing as designed and continuing to improve with self assessments and benchmarking including CNSC, World Association of Nuclear Operators (WANO), Operational Safety Review Team (OSART) etc.

Ian provided a list of completed activities from OPG's 2017 Work Program that included:

- Enhanced Assembly Areas related to the Darlington Refurbishment Project.
- Update to the Emergency Preparedness Program for RegDoc 2.10.1 and lessons learned from OSART.
- Prepared for the relicensing application of Pickering NGS.
- Conducted drills at Pickering and Darlington to confirm effectiveness of emergency plans.
- Hosted the multi-jurisdictional Pickering Exercise United Control held in December.
- Tested the new data uplink to off-site authorities to be used during emergencies including the Province and CNSC.
- Upgraded to a new Dose Projection Software known as URI/Rascal.
- Applied industry benchmarking and Pickering WANO Peer Evaluation learnings to their plans.

Ian provided highlights of the Pickering Exercise United Control (ExUC) a large-scale, multi-jurisdictional nuclear exercise that included:

- The two-day nuclear emergency was conducted at Pickering NGS on December 6 and 7, 2017.
- The objective was to test key elements of OPG's emergency response plans.
- The Scenario was a severe accident at Pickering NGS leading to a significant radiation release.
- More than 30 local, municipal, provincial and federal agencies participated in the exercise.

Ian reported that ExUC successfully exercised key aspects of their nuclear emergency plans including:

- Accident mitigation and notification to authorities.
- Automated data transfer from OPG to off-site authorities.
- Use of updated dose projection software.
- Decision making related to public protective action.
- Deployment of Emergency Mitigation Equipment independent diesel pump.
- Tested P-25 radio system interoperability with Durham Region.
- Tested public communications and social media response.
- Tested the contaminated casualty process at Lakeridge Health in Ajax.

Ian referred to several reports that are being prepared after the exercise and listing lessons learned that included:

- International Safety Research (ISR) is facilitating a Joint Exercise Planning Team report for OPG with key findings and recommendations to be released in approximately two months.
- Each organization/agency that participated in the exercise is reviewing their own plans and listing lessons learned.
- OPG will prepare an exercise summary report that will list opportunities for improvement and any corrective actions to be taken and it will be submitted to the CNSC for their review and comment.
- OPG has identified some preliminary lessons learned that included:
 - Common understanding is needed for technical communications;
 - Emergency organization briefings can be improved to be more efficient;
 - Social media capacity is a challenge with the volume of information needed;
 - Efficient use of emergency support personnel is required to make better use their technical skills;
 - Notification through updated technologies and systems is needed to improve efficiencies; and
 - Effective drill management is required to improve plans.
- INES ratings for real events are the jurisdiction of the CNSC. If this had been a real event, it would have been a high rating as it was a severe accident with offsite radiological release.

Ian reviewed the list of highlights planned for the 2018 Work Program that included:

- Update OPG emergency plans to comply with the revisions in the Provincial Nuclear Emergency Response Plan (PNERP).

- Follow-up on the lessons learned from the 2017 Pickering ExUC.
- Participate in the CNSC Public Hearings to be held in Ottawa and City of Pickering for the relicensing of Pickering NGS.
- Review and update as needed the Pickering and Darlington Evacuation Time Estimates Studies making use of the latest census data.
- Conduct drills and exercises at Pickering and Darlington to confirm effectiveness of emergency plans.
- June 2018, participate with DEMO in the planned Reception Centre exercise.
- Enhance the Hostile Action Based response plan for OPG staff.

Ian Azevedo or his associates will continue to update the DNHC on the progress of nuclear emergency preparedness at Darlington and Pickering NGSs. More information is available by contacting Ian at ian.azevedo@opg.com or accessing the OPG website at opg.com.

4.3. Progress Report by Durham Emergency Management Office concerning Nuclear Emergency Preparedness and Plans for 2018

Warren Leonard, Director, DEMO, Regional Municipality of Durham, provided a progress report concerning its nuclear emergency preparedness activities in 2017 and plans for 2018.

Warren provided some basic information about DEMO that included:

- DEMO is responsible for effective mitigation, preparedness, response and recovery of any emergency in Durham Region.
- Nuclear emergency planning is a part of its overall emergency preparedness responsibilities.
- DEMO's activities include developing plans, training staff, conducting exercises, testing public alerting systems and providing public education.
- Local municipalities in Durham Region have their own emergency response plans but are coordinated and conform to the Durham Nuclear Emergency Response Plan (DNERP).

Warren reviewed DEMO's 2017 Communications Plan that was developed in close partnership with the Corporate Communications Office and the activities included:

- 5,958 visits on website
- 11,869 pages viewed on website
- 9 targeted social media campaigns and 122 original posts

- 5 PSA's resulting in 11 media stories
- Media spots and media ads
- Community events
- Emergency Preparedness Week
- Brochure distribution

Warren provided a list of activities planned for 2018 that will include:

- Plans and Operations
 - Review the Durham Region Emergency Master Plan
 - Review the DNERP
 - Review hazard identification and risk assessment
 - Review critical infrastructure in collaboration with the Finance Department for business continuity and the asset management project
 - On-going development of a cross-department information management tool for situational awareness and common operating picture at the Regional Emergency Operations Centre
 - Annual review and audit of DEMO's program for compliance with the Emergency Management and Civil Protection Act
 - Implement changes required by the updated PNERP into the DNERP
- Nuclear Preparedness
 - July 2017, public consultation with the Province for the Planning Basis through the Environmental Bill of Rights Registry with Durham Region Council's approved recommendations forwarded to the Province for its consideration
 - December 2017, Cabinet approved the updated PNERP that will result in many nuclear emergency response plans being updated including the plans for Pickering and Darlington NGSs and the DNERP that will include updated 2016 census data
 - June 2018, the CNSC will be holding a public hearing in the City of Pickering concerning the relicensing of Pickering NGS.
 - Review the Ontario Ministry of Transportation evacuation planning project
- PNERP 2017 revisions are more standardized with international nuclear emergency response plans and are based on the following:
 - Canadian Standards Association N1600
 - International Atomic Energy Agency GSR-Part 7
 - Health Canada draft Guidelines for Protective Actions
 - Lessons learned during nuclear exercises
 - Post Fukushima analysis by United Nations and CNSC

- PNERP 2017 uses new names for zones that includes:
 - Automatic Action Zones (AAZ) 3km
 - Detailed Planning Zone (DPZ) 3-10km
 - Contingency Planning Zone (CPZ) 10-20km
 - Ingestion Planning Zone (IPZ) 20-50km
- Public Alerting
 - Rapid Notify is a Region-wide expansion that includes collaboration with 8 municipalities and the launch of self-registration for cell phone users in 2018
 - Spring and fall testing of the public alerting equipment
 - Tender a contract for a maintenance provider
 - May 2018, the province will launch its cell broadcast capability as part of its provincial alert system to coincide with the Emergency Preparedness Week and it will form the backbone of the national alert system
- Training Delivery for Regional staff will include:
 - Basic Emergency Management
 - Incident Management System
 - Emergency Operations Centre
 - Note taking during emergencies
 - Develop 'Radiation '101' from Health Canada material
 - September 2018, Public-Private Partnership Symposium
 - Regional Control Group training

Warren Leonard or his associates will provide the DNHC with DEMO's progress reports next year concerning Nuclear Emergency Preparedness in Durham Region. More information is available at the DEMO website at durham.ca/demo.

5. Communications

5.1. Community Issues at Pickering Nuclear

Carrie-Anne Atkins, Senior Communications Advisor, Corporate Relations and Communications, OPG, provided an update on Community Issues at Pickering Nuclear and the highlights were:

- Pickering Units 1, 4, 5, 7 and 8 are operating at or close to full power.
- Pickering Unit 6 is in a planned maintenance outage.

- In August 2017, OPG requested a 10-year licence renewal for the Pickering NGS and the CNSC has scheduled Hearings for April 4, 2018 in Ottawa and June 26 to 28, 2018 in the City of Pickering with the location to be announced by CNSC.
- DNHC participants and members of the public interested in commenting on OPG's licence renewal application and to request to intervene must file their request with the CNSC by May 7, 2018. For more information, visit the OPG website at OPG.com.

Analiese St. Aubin, Manager, Corporate Relations and Communications, Pickering Nuclear, OPG, can be reached at (905) 839-1151 extension 7919 or by e-mail at analiese.staubin@opg.com for more information.

5.2. Community Issues at Darlington Nuclear

Carrie-Anne Atkins, Senior Communications Advisor, Corporate Relations and Communications, OPG, provided an update on the Community Issues at Darlington Nuclear and the highlights were:

- Darlington Units 1, 3 and 4 are operating at close to full power.
- Darlington Unit 2 is undergoing refurbishment.

Jennifer Knox, Manager, Corporate Relations and Communications, Darlington Nuclear, OPG, can be reached at (905) 697-7443 or by e-mail at jennifer.knox@opg.com for more information.

5.3. Corporate Community Issues for OPG

Carrie-Anne Atkins, Corporate Relations and Communications, OPG, provided an update on corporate community issues and the highlights were:

- February 2018, OPG will be participating at the annual Canadian Nuclear Association conference to held in Ottawa.
- March 2018, the next edition of the *Neighbours Newsletter* will be distributed.
- Pickering and Darlington staff are currently planning and partnering with many community organizations in preparation for their annual March Break program which will include educational and environmental programs for families across the Region.

6. Other Business

6.1. Topics Inventory Update

Robert Kyle indicated the Topics Inventory will be revised to include the presentations made today.

6.2. Future Topics for the DNHC to Consider

Robert Kyle indicated the theme of the next DNHC meeting scheduled for April 20, 2018 will be *Revisions to the PNERP and the Management of Nuclear Waste* that may include:

- Progress report by the OFMEM concerning their recent updates to the PNERP.
- Progress report by the Nuclear Waste Management Organization concerning their Site Selection Process.
- Progress report by OPG concerning the safe management of nuclear waste at the Darlington and Pickering NGSs.
- Progress report by OPG on their After-Action Report of the Unified Control Exercise held at Pickering NGS December 6 and 7, 2017.

7. Next Meeting

Location Durham Region Headquarters

605 Rossland Road East, Whitby

Meeting Room LL-C

Date April 20, 2018

Time 12:00 PM Lunch served, 1:00 PM Meeting begins

Host DRHD

8. Adjournment 4:20 PM.