

**DNGS Community Advisory Council**  
**Darlington Nuclear Information Centre**  
**Tuesday, November 28, 2023**  
**Highlights**

**CAC Intervention at CNSC Hearing**

Dave talked about a CAC letter recently sent to the Canadian Nuclear Safety Commission regarding the applicability of a Darlington New Nuclear Project environmental assessment to the selected reactor technology (SMR).

**Darlington Site Update**

Richard Geoffroy presented a site update. He talked about the operating status of the units, the progress of refurbishment of two of the site's four units, and CNSC hearings coming up next year on the Darlington SMR project.

**Pickering Site Update**

Allan Grace talked about the operating status of the six active units at Pickering, the potential extension of service and potential refurbishment of four of those units.

**IESO Update**

Bonnie Chan presented an update on Ontario's Independent Electricity System Operator. She talked about the role of refurbishment of nuclear assets and of new resources in ensuring a reliable supply of electricity now and in the future. By mid-century, Ontario will have to meet double the current energy demand.

**Nuclear Energy: Powering Ontario's Growth**

Tracy Leung talked about OPG plans for carbon free energy in the province's future. She talked about OPG's contribution to powering Ontario's growth through advancing new nuclear, maximizing hydroelectric power and exploring energy storage. She talked about refurbishment at Darlington and, potentially, at Pickering as well as OPG's leadership in SMR development.

**Community/Public Affairs**

Lindsay Hamilton presented an update on recent OPG activities in the community. Among the items mentioned: visits of mayors from various municipalities to Darlington Nuclear; OPG pop-up shops at two local malls; the station's Take Our Kids to Work Day; and the best year yet in OPG's fundraising for the Durham Region Police Service's Toy and Food Drive.

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**CAC:**

Jim Boate  
Sami Elhajjeh  
Cara Gregory  
Sheila Hall  
Bethany Matovic  
Mary Novak (via Zoom)  
Jennifer O'Meara  
Pat Pingle  
Penny Smith  
Stacy Wanamaker  
Bonnie Wrightman

**Regrets:**

Heather Reid

**OPG:**

Richard Geofroy  
Allan Grace  
Lindsay Hamilton  
Tracy Leung

**IESO:**

Justin Bremner  
Bonnie Chan (main presenter)  
Sari Gerwitz

**Hardy Stevenson and Associates:**

Francis Gillis  
Dave Hardy

## **Topic #1: Health and Safety Moment**

Following a Land Acknowledgment, Lindsay Hamilton remarked that there might be snow within the next few days, which means icy conditions. Icy roads and walkways present risks, especially in the early morning hours when it's still dark outside. Drivers should give themselves more time.

Richard Geoffrey recommended winter safety kits and a shovel in the back of vehicles.

## **Topic #2: Review of Minutes**

The CAC minutes of September 26, 2023 were approved without changes.

## **Topic #3: Introductory Business**

CAC Facilitator Dave Hardy noted that Jim Cryderman has resigned from the Council. Lindsay said she would bring a farewell card for members to sign at the January meeting.

Dave noted that Robert Rock, Ward 3 Councillor, Township of Scugog, will be joining the CAC.

## **Topic #4: Comments from the Community**

A CAC member said that a friend of his saw dump trucks carrying dirt in the area near Darlington Nuclear and wondered if this was soil being carried away from the site being prepared for small modular reactor (SMR) construction. Richard confirmed that these trucks were not related to OPG activities and that all soil excavated on the Darlington site would remain there.

## **Topic #5: CAC Intervention at CNSC Hearing**

Dave talked about a CAC letter recently sent to the Canadian Nuclear Safety Commission regarding the applicability of a Darlington New Nuclear Project environmental assessment to the selected reactor technology (SMR). The letter also indicated the Council's intent to present the letter at a CNSC hearing in January. Council members reviewed and approved the text of the letter sent on their behalf.

Copies of the letter have been sent to Durham Region mayors, MPs and MPPs.

Dave noted that, if their schedules permit, CAC members Sheila Hall, Heather Reid and Robert Rock have expressed interest in attending the hearing and presenting sections of the letter. If other members would like to participate, Dave would like to hear from them ([davehardy@hardystevenson.com](mailto:davehardy@hardystevenson.com)). Lindsay noted that people will also be able to attend the hearing virtually.

Dave said that CAC members will have 10 minutes to present the letter. CNSC commissioners may have questions for the members. Dave said he would answer any technical questions that commissioners might have.

The hearing will take place the week of Jan. 22, 2024. Dave will hold a rehearsal with those Council members participating in the hearing.

## **Topic #6: Darlington Site Update**

Site Vice President Richard Geoffroy presented a site update:

- Units 2 and 3 are operating at full power. These units have been fully refurbished.
- Units 1 and 4 are now in refurbishment. The reassembly of Unit 1 is now underway. Its refurbishment is expected to be completed in the latter part of next year. Unit 4 is now being dismantled and has now been disconnected from the rest of the station. The disconnection minimizes the risk of its refurbishment having an impact on other units.
- The refurbishment of Unit 2, now on line, took 44 months. Unit 3 refurbishment, also on line, took 35 months. As Units 1 and 4 are refurbished, the time gained through efficiencies will moderate (decreasing returns to scale).
- The CNSC hearing in January will be the first of two. That first hearing will address the question: does the design of the proposed SMR meet the original requirements of the DNNP environmental assessment? Once the CNSC is satisfied that the SMR meets original EA requirements, a second hearing (probably in the fall of 2024) will determine whether OPG gets a licence to construct. Meanwhile, the Darlington communications team will be seeking community feedback.
- Drones have been taking pictures of site preparation progress.

## Topic #7: Pickering Site Update

Allan Grace, Deputy Site President at Darlington, presented a Pickering site update:

- Five of the six units at Pickering are now operating at full power. One unit is in a planned outage.
- Regarding Units 5, 6, 7, and 8 (Pickering B), OPG has reported to the Government of Ontario that it is safe to extend operations to the end of 2026. As well, in response of an Ontario government request, OPG has assessed the feasibility of refurbishing Pickering B, which would mean another 30 years of operation of these four units. OPG has recommended refurbishment. OPG is now awaiting two government decisions on Pickering B: extension of service to the end of 2026 and refurbishment.

Richard, and Tracy Leung, responded to Council questions:

- *I see where investors are pulling out of SMR projects in the United States and the United Kingdom. Does this suggest the possibility of financial difficulty for the Darlington SMR?*  
Richard: OPG is not relying on the market and investors.
- *What assurances do we have that cost overruns are not going to happen with the Darlington SMR project?*  
Tracy: OPG has gone through extensive evaluation of SMR designs and their financial aspects. We have used a robust estimating process. Based on that process, the Darlington SMR project remains economically feasible.
- *Are there supply chain issues?*  
Tracy: We are well aware of supply chain risks.  
Richard: We are working with industry to mitigate energy supply risks, in particular with Bruce Power. There is also a transparency element to the SMR project, a mechanism to keep us honest.
- *Saskatchewan is talking about getting into SMR development. Is this connected with OPG in any way?*  
Tracy: An OPG subsidiary is going to be helping Saskatchewan around SMRs. The nuclear industry succeeds by cooperating.  
Richard: Willingness to answer tough questions only strengthens our relationship with the public.

Allan remarked that, unlike a couple of years ago, the nuclear industry in Canada is looking to expand.

## Topic #8: IESO Update

Bonnie Chan, Manager Planning Assessments, who attended the meeting virtually, presented an update from the Independent Electricity System Operator (IESO) (Appendix 1).

Bonnie noted that the IESO works with generators, transmitters, local distribution companies and energy consumers to ensure a reliable, affordable and sustainable electricity system in Ontario, now and in the future.

The provincial demand growth driven by the industrial, mining, and agricultural sector, alongside the electrification of transportation and the demands of decarbonization poses major challenges for the electricity grid.

Bonnie talked about the role of refurbishment of nuclear assets and of new resources in ensuring a reliable supply of electricity. She noted that the IESO has to look out to 20 and 30 years or more into the future. By mid-century, Ontario will have to meet double the current energy demand.

Pickering's role in meeting future demand includes extension of operations of Units 5 to 8 to the end of 2026 and, potentially, the refurbishment of those units to provide power for another 30 years.

To meet future demand growth, the IESO has a Resource Adequacy Framework, a resource acquisition strategy to procure resources to meet the electricity system requirements. The system will need to double in size by 2050, which will require Ontario to:

- Increase non-emitting resources supply.
- Increase energy storage facilities.
- Natural gas facilities are needed in the near and mid-term to manage reliability requirements.
- Manage a number of risks and uncertainties.

Bonnie noted that nuclear and hydro generally provide baseload power in Ontario. Intermittent resources provide energy only when the wind blows or the sun shines.

Bonnie also talked about IESO's Pathways to Decarbonization report, issued in 2022 (link: <https://www.ieso.ca/en/Learn/The-Evolving-Grid/Pathways-to-Decarbonization>).

This report evaluated two different future scenarios to illustrate the cost, scale and pace of change required for Ontario's decarbonization efforts. The two futures looked at 1) a moratorium on the procurement of new natural gas, and 2) to develop an achievable pathway towards net zero.

The assessment identified a number of no regret actions to ensure a state of readiness to manage future decarbonization policy. This can include:

- Beginning the planning, siting and environmental assessment work needed for long lead time projects, to allow for faster implementation.
- Build partnerships across the sector with other provinces and with the United States, to share learnings and collaborate on potential solutions.
- Municipalities have a key role to play, particularly having a community host for new and expanded generation facilities. We may need transmission lines, to help relieve existing lines as demand grows. They also have a key role to play in energy efficiency initiatives, the most economical route to decarbonization.

Resources for community involvement in decarbonization are available on the IESO website (see link above).

Council members asked the following questions:

- *Regarding energy storage, are there any battery facilities in Ontario?*
- *Can the IESO override local municipal councils?*
- *And if you don't get municipal approval?*

The IESO could not further comment on the questions, as the competitive long term procurement process is underway, and the IESO must adhere to communication protocols to maintain integrity and fairness for the process.

Dave thanked Bonnie for her informative presentations at Pickering and at Darlington.

## **Topic #9: Nuclear Energy: Powering Ontario's Growth**

Tracy Leung, Director Projects, New Nuclear Growth, talked about OPG plans for carbon free energy in the province's future (Appendix 2).

She noted that demand for electricity is increasing and expected to double in 30 years. Peak demand occurs on hot summer days and cold winter nights.

Tracy presented a power chart showing that Ontario's grid is already a low emission one. Over 90 percent of the province's energy is from non-emitting sources. This "clean advantage" helps to attract investment into the province. To maintain that advantage, we need to phase out gas as a source of energy. This will require stepping up generation from nuclear and hydroelectric sources.

As noted in the IESO Pathways to Decarbonization Report (published in December 2022), the role of nuclear in the province's electrical system will need to increase. We need to add 18 gigawatts of new nuclear capacity by 2050.

Nuclear is needed for energy reliability. Because of the long lead times involved, planning for nuclear is now.

Tracy talked about OPG's contribution to powering Ontario's growth:

- Advancing new nuclear
- Maximizing hydroelectric power
- Exploring energy storage

The refurbishment of Darlington Units 2 and 3 demonstrated that OPG can deliver such projects on time and on budget. The lessons learned from refurbishment at Darlington have been shared with Bruce Power. In 2022, OPG was recognized as the best of the best in terms of refurbishment.

The refurbishment of Pickering Units 5 to 8, which is now awaiting approval from the Ontario Cabinet, will also incorporate lessons from the Darlington and Bruce Power experience.

OPG is a global Small Modular Reactor leader, with its plan to construct four SMRs at Darlington, which will produce a total of 1200 megawatts of electricity. Overall, this project will lower the cost of electricity per kilowatt hour in the province.

OPG is going to help SaskPower develop SMRs in the Province of Saskatchewan.

OPG is also involved in planning for off-grid, SMR applications for industry and remote communities.

Tracy and Richard responded to Council questions:

- *Can SMRs help smaller polluters?*  
Tracy: That is something we're looking at, specifically Micro-Modular Reactors of five to 10 megawatts.  
Richard: There is an economy-of-scale issue there as well. There is much to be worked out.
- *Do you have any concerns about sufficiency of uranium supply?*  
Tracy: We are confident in the supply of uranium, and untapped resources may become available with new technologies. As well, ways to reduce fuel waste are being explored.

## **Topic #10: Community/Public Affairs**

Lindsay Hamilton, Senior Manager Corporate Affairs, talked about recent and forthcoming OPG activities in the community:



- The Darlington stakeholder relations team has led 68 site, station and mock-up tours and visits to date in 2023. Recent highlights include:
  - Clarington Mayor Adrian Foster and Bergemeester Dijksterhuis, Zeeland, Netherlands on Sept. 21
  - 10 Polish journalists visited Darlington Nuclear on Oct. 2
  - SaskPower visited on Oct. 11
  - Three Anishinabek Chiefs received an OPG 101 presentation on Oct. 12 and 13
  - Darlington hosted the annual conference of the Canadian Nuclear Workers Council Oct 16 – 18
  - Mayor Foster hosted a delegation of Swedish politicians and government agencies on a DNGS visit on Oct. 30
- From Oct. 22 to Nov. 10, OPG hosted pop-up shops in the Oshawa Centre and Bowmanville malls to discuss the Darlington New Nuclear Project, but there were also many great conversations with members of the public on jobs, energy supply and other topics.
- OPG's nuclear stakeholder relations team has been "electrifying education" by visiting local elementary schools. During Science Literacy Week, OPG partnered with Scientists in School to offer an education electricity workshop. Spot the robot dog, provided by OPG's X-Lab team, was the star of the show. This fall, the team has engaged more than 400 students.
- On Sept. 26, OPG accepted the Sustainability Award from the Oshawa Chamber of Commerce at their Business Excellence Awards event.
- On Nov. 1, Grade 9 students participated in the station's Take Our Kids to Work Day. The students got a behind-the-scenes look at the work their parents do and the diverse career choices available at OPG.
- On Oct. 14, over 750 community members visited the OPG booth at Bowmanville's annual Applefest.
- On Oct. 27, Darlington Nuclear welcomed members of the Bowmanville Branch 178 Royal Canadian Legion to the site to collect poppy donations.
- On Nov. 16, OPG completed fleet-wide fundraising for the Durham Region Police Service's Toy and Food Drive. OPG raised over \$20,000, the best year yet.

Lindsay then presented a student-produced video, in which OPG staff members wished the Community Advisory Council happy holidays and thanked them for their advice to OPG.

## **Topic #11: Concluding Remarks**

Dave thanked the OPG stakeholder relations team for all the work they do in the community. He also thanked the CAC for their participation in Council activities and wished everyone a happy holiday.

Council member Jim Boate thanked Dave Hardy and Francis Gillis and the staff at OPG for their work in engaging the CAC.

Richard thanked Dave and Francis and expressed thanks and appreciation for the work of the CAC. He wished everyone a Merry Christmas.

## **Next Meeting**

Darlington Nuclear Information Centre  
Tuesday, Jan. 30, 2024  
4 pm – 7 pm