

**DNGS Community Advisory Council  
and  
PNGS Community Advisory Council  
Joint Virtual Meeting  
Tuesday, November 15, 2022  
Highlights**

**Site Updates**

Jon Franke talked about the operating status of the units at Pickering Nuclear and the vacuum building outage at the station, which was completed in just 30 days. He also talked about a proposed extension of operations at Pickering to 2026 and a feasibility study of refurbishing Units 5 to 8.

Richard Geofroy talked about the operating status of the units at Darlington and progress in the refurbishment of Units 3 and 1. A planned outage of Unit 2 is beginning this month to launch production of molybdenum-99, a critical isotope for nuclear medicine.

**OPG New Nuclear Update**

Dave Tyndall reviewed the history of the Darlington New Nuclear Project (DNNP) and presented an update on the small modular reactor (SMR) project at the site. He talked about site preparation activities, which began earlier this year. OPG anticipates that a licence to construct will be issued in 2024 and a licence to operate in 2027, with commercial operation by the end of the decade.

**Pickering Community Engagement Discussion**

Anaïs St. Aubin talked about OPG's optimized plan for the decommissioning of Pickering Nuclear and community engagement in that decommissioning. Even if it is decided that refurbishing Units 5 to 8 is feasible, Units 1 to 4 will need to be shut down and decommissioned. Council members discussed the factors that should be considered in decommissioning and how the community should be engaged.

**DNGS Community Advisory Council  
and  
PNGS Community Advisory Council  
Joint Virtual Meeting  
Tuesday, November 15, 2022**

**DNGS CAC:**

Jim Boate  
Penny Smith

Regrets:

Shirley Crago  
Jim Cryderman  
Sheila Hall  
Janice Jones  
Mary Novak

**PNGS CAC:**

John Earley  
Frank Dempsey  
Donna Fabbro  
Tim Kellar  
Pat Mattson  
Sean McCullough  
Cody Morrison  
Peter Ottensmeyer  
Dan Shire  
John Simpson

Regrets:

Jill Adams  
Mary Gawan  
Bill Houston  
Tracy MacCharles  
Tavis Nimmo  
Helen Shamsipour

**OPG:**

Carrie-Anne Atkins  
Amanda Briggs

Theresa Dekker  
Jon Franke  
Richard Geofroy  
Olivia Mar  
Margaret Mervin  
Karim Osman  
Analiese St. Aubin  
David Tyndall

**Hardy Stevenson and Associates:**

Francis Gillis  
Dave Hardy

**Topic #1: Land Acknowledgement; Health and Safety Moment**

Following a Land Acknowledgement presented by Carrie-Anne Atkins, Richard Geofroy noted that, with the arrival of cold weather, the focus at Darlington has shifted to preventing slips, trips and falls. Warning signage and communicating the importance of holding handrails and “walking like a penguin” (taking shorter, shuffle-like steps to maintain balance on walkways) are among the measures taken to raise awareness about winter risks.

Regarding COVID-19, Darlington continues to follow Health Canada practices. The station has moved away from mask mandates. OPG is not seeing Covid impact its business, and the situation continues to move in a positive direction. However, OPG is ready to respond if there is any change in direction.

Jon Franke said there is a low level of Covid infections at Pickering Nuclear at this stage. Seasonal flu is currently having an impact. But the station can respond if an unusual number of illnesses occur.

Like Darlington, Pickering Nuclear is taking steps to raise awareness about the risks of cold and icy weather.

**Topic #2: Forthcoming Meetings and Review of Minutes**

Council Facilitator Dave Hardy noted that the next meeting will take place on Tuesday, Dec 6. This will be an in-person joint meeting with a meal provided. CAC members at the Darlington Information Centre will be connected to the meeting at the Pickering Information Centre via Microsoft Teams Meeting technology.

Darlington and Pickering CAC meetings will return to in-person sessions with a meal served beginning in January 2023. There will be five meetings during the year, but these will be longer, more in-depth sessions. In the months when sessions are held, the Darlington CAC will meet on the last Tuesday of the month. The Pickering CAC will meet on the third Tuesday of the month. Hopefully, we will see a couple of new members at each CAC meeting in January.

The minutes from the Pickering CAC meeting on Sept. 20 and from the Darlington CAC meeting on Sept. 27 were approved without changes.

Dave noted that, since the last meeting, Francis and he, with the help of Eileen Clark, have reached out to CAC members to ask: 1) whether you are getting the information you need to provide to community members you may report to, such as friends and neighbours (this information will help to craft future agendas); 2) topics you want to see addressed in the Report to the Community and other topics.

### **Topic #3: Site Updates**

Site updates were presented for the Pickering and Darlington stations:

#### **Pickering Nuclear**

Senior Vice President Jon Franke talked about recent events at the station:

- Units 4, 5, 6, 7, and 8 are all operating at full power.
- Unit 1 is in a planned outage, which is currently 90 days ahead of schedule.
- The vacuum building outage (VBO) has been completed. The vacuum building is physically attached through a concrete duct to all units at the Pickering station. There is a VBO every 10 to 12 years, the previous one occurring in 2010. The VBO that just occurred was completed in 30 days, 12 days shorter than previous VBOs. All units were shut down during the outage, and a lot of inspection tasks were completed. In the past, scaffolding was used in the building to complete these tasks. This time OPG used drones, and the use of underwater cameras meant the water at the base of the building did not have to be drained.
- On Sept. 29, the Ministry of the Environment made an announcement regarding the future of the energy industry in Ontario, including plans for new nuclear and a call to extend the operation of PNGS Units 5, 6, 7, and 8 through July and August of 2026. A second MOE announcement asked OPG to consider the feasibility of refurbishing Units 5 to 8 for reliable operation for a further 30 years. Such a project would involve Canadian Nuclear Safety Commission (CNSC) review and approval.

Jon, and Richard Geofroy, responded to Council comments and questions:

- *Regarding the use of drones during the vacuum building outage, has there been any talk of leaving the drones there for remote operations?*

Jon: There is not much need for drones in the vacuum building for ongoing operations, but we are using robots in the reactor buildings.

- *Is the thinking about the shelf life of nuclear reactors now changing on the worldwide level?*

Jon: Around the world, companies are now looking at high temperature methods of fixing embrittlement of reactor vessels containing nuclear fuel, and thus extending the operating life of reactors. (The vessel containing the fuel is the largest component of those reactors. Over time, neutron radiation from the reactor core causes the vessel to become brittle.) CANDU reactors are unique in that the fuel is contained in pressure tubes, which can be replaced to extend the life of the reactor, as is happening in the refurbishment of reactors at Darlington and at Bruce Power.

- *Could Units 1 to 4 at Pickering be replaced with SMRs?*

Richard: That's not a decision we would make today, though we may consider it as we move forward. It is possible that the new nuclear project at Darlington may ultimately include four SMRs. We haven't talked about SMRs at Pickering yet, but it's not outside the realm of consideration in the future.

- *Why is Pickering refurbishment now being considered?*

Richard: The world has changed dramatically since refurbishment at Pickering was first considered in 2007/08. We are now looking at a carbon net-zero goal. Natural gas can't get us to net-zero, though it still has a role as a back-up source of energy. Climate change policy has led to reconsideration of the long-term feasibility of refurbishment at Pickering.

Jon: As well, the Bruce and Darlington refurbishment experience has demonstrated the ability to execute multi-billion-dollar projects. This adds to the credibility of the refurbishment option at Pickering.

Richard: The continued performance improvement at Pickering and Darlington over the years is also a big factor.

## **Darlington Nuclear**

Site Vice President Richard Geofroy talked about activities at Darlington:

- Refurbishment at Darlington, which includes a lot of investment in component replacements, will extend operations at the station for 30 years.
- Two units in refurbishment at the same time is a first for Darlington and probably a first for the nuclear industry worldwide. Refurbishment at Unit 3 is ahead of

schedule; the unit is expected to be back in operation in early fall of next year. Unit 1 refurbishment is also progressing well; OPG is taking advantage of lessons learned from previous refurbishments.

- A planned outage of Unit 2 is beginning this month to launch production of molybdenum-99, a critical isotope for nuclear medicine. Darlington will produce about 80 percent of Mo-99 for nuclear diagnostic use worldwide. The unique CANDU design allows for Mo-99 production while the reactor is on line. Retrofitting at Darlington is taking place to allow for production of Cobalt-60 as well. Cobalt-60 is used in nuclear medicine and in industry.
- Unit 4 is operating at full power. Its refurbishment will begin in the third quarter of 2023.

#### **Topic #4: OPG New Nuclear Update**

Dave Tyndall, Director New Nuclear Engineering, reviewed the history of the Darlington New Nuclear Project (DNNP), going back to 2006, and presented an update on the small modular reactor (SMR) project at the site (Appendix 1). Karim Osman, Director DNNP Design Engineering, also participated in the discussion.

Dave noted that, in 2021, the OPG received a site preparation licence from the CNSC and selected an SMR technology. In 2022, site preparation activities began and a licence to construct application was submitted. OPG anticipates that a licence to construct will be issued in 2024 and a licence to operate in 2027, with commercial operation by the end of the decade.

Dave talked about geotechnical work completed to date, including studying onshore and offshore soil and bedrock to ensure suitability for future condenser cooling water tunnel construction.

Site preparation work began at the end of September and will run through early 2025.

The technology selected in December 2021 for deployment at the Darlington site was the GE Hitachi BWRX-300 SMR. OPG has reviewed the Environmental Impact Statement (EIS) submitted to the CNSC in 2009. The results of the EIS Review indicate that the deployment of the SMR at the Darlington site does not change the EIS conclusion and is not likely to cause significant adverse environmental effects, provided certain mitigation measures are implemented.

Dave and Karim responded to Council questions:

- *The progress of this project is really exciting. I understand that OPG picked an SMR technology that is well known. But why not switch to new, more sophisticated technology for subsequent reactors?*

Karim: Yes, the chosen design is the most mature available.

Dave: We have not yet selected technology for future reactors. We have looked at two of the technologies that the Council member mentioned, but we have not made that decision yet.

- *Significant blasting used by the limestone excavation company neighbouring the Darlington site (particularly closer to the new SMR) was an issue discussed in the EIS of 2009. Will the new technologies be vulnerable to blasting events?*

Dave: Seismic monitoring systems are factored into the designs of new reactors. I don't foresee any changes arising from the current project or from new technologies, but it is something we always take into consideration.

## **Topic #5: Pickering Community Engagement Discussion**

Elaborating on items mentioned in Jon's site update, Dave Tyndall and Jon Franke discussed extending Pickering commercial operations to 2026 and a Pickering Refurbishment feasibility study (Appendix 2).

### **Pickering Operations to 2026**

Under a proposed plan, supported by the province of Ontario, OPG will shut down Units 1 and 4 in 2024 and Units 5 to 8 in 2026. Dave and Jon talked about OPG steps to date in considering the proposal and noted that a formal application requesting extension will not be submitted to the CNSC until some time next year.

### **Pickering Refurbishment Study**

In September 2022, the Province of Ontario asked OPG to conduct a feasibility assessment on the potential for refurbishing Units 5 to 8. Over the next year, OPG will conduct a comprehensive technical examination and hope to submit a final recommendation to the province by the end of 2023. The Pickering Refurbishment project was previously initiated in 2006. An approved Environmental Assessment was received for the project in 2009. Any decision about the station's refurbishment would be subject to considerable review and licensing application through the CNSC, community consultations and endorsement of the Ministry.

Dave asked CAC members to discuss what questions OPG should be asking the community and how should the community be engaged.

A Council member felt that, in contrast with the situation 20 years ago, 95 percent of Pickering residents are supportive and appreciative of OPG. He added that the Neighbours Newsletter has shown itself to be the best vehicle for outreach to the community.

Another member remarked that refurbishing Pickering Units 5 to 8 would preserve jobs and maintain the huge economic benefit that the station brings to Pickering.

## Decommissioning Plan

Analiese St. Aubin, Manager Corporate Relations, Decommissioning, talked about OPG's decommissioning strategy and community engagement in that strategy (Appendix 3). She noted that OPG has been reviewing various decommissioning strategies around the world to determine an "optimized plan" for each plant. Under an optimized plan, some assets would be decommissioned earlier and other assets would remain in safe storage for a period of time. She said that community feedback is critical to ensure the optimized plan will meet the needs of all stakeholders.

Factors for community input on decommissioning include environment, socio-economic impact, health and safety, security and waste.

Analiese, Jon, Carrie-Anne Atkins, and Theresa Dekker, Vice President Nuclear Decommissioning Program, responded to Council comments and questions about decommissioning and community outreach:

## Decommissioning

- *Are there plans to turn the Pickering site back to its natural state?*  
Analiese: Plans regarding the future of the site are constantly developing, and there is no specific plan in place right now. OPG will continue to engage with stakeholders and the community as the plan is developed.
- *Repurposing the Pickering site into something useful rather than returning it to a greenfield would be much more positive. But clear direction from OPG is needed.*
- *A lot of information about repurposing is already available. We need a clear decision from the CNSC and the Government of Ontario.*
- *One option is to construct an SMR at Pickering rather than refurbishing. Is that being discussed?*  
Carrie-Anne: The SMR option is being looked at as part of the refurbishment feasibility study.

Jon remarked that, for the next year, we are going to be "riding two horses," refurbishment of Pickering versus decommissioning. He stated that we have to get comfortable with not knowing until some time next year.

- *The decommissioning discussion should focus on Units 1 to 4, while the other camp looks at the feasibility of refurbishing units 5 to 8.*
- *If decommissioning is going to take place, why will it not be carried out more quickly? I understand that, under current plans, it will be 40 to 50 years before dismantling of structures.*



Theresa: The benefit of deferred dismantling is that it allows more decay of radioactivity in the structures before they are dealt with. However, we are looking at innovations and advances in technology that would help us advance timelines, which is part of creating an optimized plan.

### **Community Outreach**

- *Community consultation should take different types of population densities into consideration. Concerns and attitudes in Bay Ridges are very different from those of Pickering or Oshawa.*
- *There is a feeling in South Pickering that we have a higher-than-normal incidence of thyroid cancers. We understand now that this perception has arisen from a higher testing rate in the area. But people are still concerned, so OPG needs to address that.*
- *Does OPG have any plans to address the new municipal council at Pickering?*  
Carrie-Anne: With new councils coming in across Durham Region, we have plans to engage all of them. We are going to be very busy presenting information about Pickering operations to 2026. The refurbishing study is going to be part of that.
- *Education of the public is a huge component of that outreach. Safety and environmental impact are key issues.*

Regarding preliminary comments resulting from the survey of CAC members completed by Francis, Eileen and himself, Dave stated that we heard the CAC saying that there should be more frequent Reports to the Community about plans for the Pickering site. A synopsis of the comments of CAC members will be prepared shortly.

Dave Hardy noted that a list of early engagement questions had been sent to CAC members by OPG along with the invitation to comment (Appendix 4). Essentially, OPG was beginning the conversation by getting Council feedback on the engagement process. The questions were about lifetime extension, refurbishment and decommissioning and asked CAC members their views about evaluation criteria that could be considered as part of OPG decision-making. The questions were sent out to the CAC to begin broad community dialogue. Dave thanked Council members for their preliminary comments this evening. This is “just a start” of OPG outreach to the CAC and the community on the future of the Pickering site, he said.

### **Topic #6: Other Business**

A Council member asked Carrie-Anne about OPG’s involvement in addressing invasive phragmites in Durham Region. He also asked about the use of goats to deal with invasive plants at OPG’s Niagara sites.

Carrie-Anne said she would send information to the member about the phragmites removal project at Hydro Marsh. OPG and the Invasive Phragmite Control Centre (IPCC) are implementing a three-year control plan with a number of different phases. She would also send a link to a report about the use of goats in invasive plant control: [Our story > Ricardo the goat and friends helping to keep OPG's Niagara sites clear of invasive plants - OPG](#)

Information about phragmite removal was emailed to Council members on Oct. 7, including a link to a public information session:

- On Wednesday, July 13 from 6:30 to 8 p.m. OPG, IPCC, Pickering Naturalists, TRCA and the City of Pickering co-hosted a public information session. To watch the information session and learn about invasive species management initiatives taking place in your community, click [here](#).

## **Topic #7: Concluding Remarks**

Richard thanked the OPG presenters and the CAC for a great discussion and for excellent questions from Council members.

Jon seconded Richard's comments.

Dave said the next meeting will take place on Tuesday, Dec. 6. This will be a joint in-person session at the Pickering Nuclear Information Centre and the Darlington Nuclear Information Centre. A meal will be provided.

Carrie-Anne announced that Chief Nuclear Officer Steve Gregoris will present a review of OPG activities in 2022.

## **Next Meeting**

Joint Darlington and Pickering  
Community Advisory Councils  
Tuesday, December 6, 2022  
5:30 pm – 7:30 pm  
Darlington Nuclear Information Centre  
Pickering Nuclear Information Centre

