

**DNGS Community Advisory Council
and
PNGS Community Advisory Council
Joint Virtual Meeting
Tuesday, June 21, 2022
Highlights**

Site Updates

David Rogers presented site updates for Darlington and for Pickering. He talked about the operating status of the units at each site, progress of the refurbishment of Units 1 and 3 at Darlington, and the planned outage in October of all six units at Pickering for vacuum building inspection at that site.

Darlington Refurbishment Progress Report

Ebraheem Waraich said that the refurbishment project at Darlington continues to progress well. He talked about the safety performance of the project, the identification of efficiency opportunities, and the expectation that the project will be completed on time and on budget.

Darlington New Nuclear Project Update

Dragan Popovic talked about site preparation for construction of a small modular reactor (SMR) on the Darlington site, applying to the CNSC for a licence to construct (a process that could take up to two years), and details about the type of reactor to be built. The overall plan is for up to four SMRs at the Darlington site.

Phragmites Removal Hydro Marsh, Pickering

Invasive Phragmites (European Common Weed) are a plant that has been causing damage to Ontario's biodiversity, wetlands and beaches for decades. Janice Gilbert forwarded an overview of invasive phragmites control at Coots Pond and Hydro Marsh, including work to take place after Labour Day.

Public/Community Affairs Report

Carrie-Anne Atkins talked about an event at Darlington and at Pickering to commemorate National Indigenous History Month, the reopening of the public information centres at both sites, Tuesdays on the Trail, and other community based activities.

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DNGS CAC:

Jim Boate
Janice Jones
Penny Smith

Regrets:

Shirley Crago
Jim Cryderman
Mary Ann Found
Sheila Hall
Brenda Metcalf
Mary Novak

PNGS CAC:

John Earley
Natalie Harder
Tim Kellar
Pat Mattson
Sean McCullough
Cody Morrison
Peter Ottensmeyer
Helen Shamsipour
Dan Shire

Regrets:

Jill Adams
Frank Dempsey
Donna Fabbro
Bill Houston
Tracy MacCharles
Tavis Nimmo
John Simpson

OPG:

Carrie-Anne Atkins
Charmane Bhagan
Lucas Curran
Olivia Mar
Dragan Popovic
David Rogers
Ebraheem Waraich

Invasive Phragmites Control Centre (IPCC)

Janice Gilbert

Hardy Stevenson and Associates:

Francis Gillis
Dave Hardy

Topic #1: Health and Safety Moment

Following a Land Acknowledgement, David Rogers, Director of Operations and Maintenance, Pickering Nuclear, mentioned a personal story involving a death in a basement due to the lack of a carbon monoxide monitor. A sober reminder of the importance of these monitors, he said.

David noted that a crisis management team that has managed COVID-19 at the Pickering and Darlington stations for two-and-a-half years has been stood down. OPG's response to the pandemic has included mobilizing on-site testing clinics, extensive safety protocols and a number of other measures.

COVID numbers are now quite low at the stations, and OPG is now in a post-pandemic recovery mode. Among other modifications, masks are now optional. A post-pandemic recovery person provides a weekly update.

Topic #2: Review of Minutes

Minutes of the Pickering CAC meeting of May 17, 2022 were approved without changes.

Minutes of the Darlington CAC meeting of May 24, 2022 were approved without changes.

The next Pickering CAC meeting will be on Sept. 20, and the next Darlington CAC meeting will be on Sept. 27. It is hoped that the September meetings will be in-person.

Francis Gillis has sent a letter suggesting topics for the forthcoming CAC Report to the Community. The Report and its contents will be discussed at the September meetings.

OPG will also be asking the CACs for their suggestions regarding additional Council members.

Carrie-Anne Atkins noted that co-op student Olivia Mar is joining us tonight and will be attending several future meetings.

Topic #3: Site Updates

David Rogers presented a site update for Darlington and for Pickering:

- At Darlington, Units 2 and 4 are operating at or near full power, and Units 1 and 3 are in refurbishment.
- Reactor reassembly work continues on Unit 3. When this is done, the reactor will be fully refurbished. Unit 1 was safely defueled by April 23. Refurbishment of both Units 3 and 1 are progressing ahead of schedule, safely and efficiently.
- At Pickering, all six units (1, 4, 5, 6, 7, and 8) are operating at or near full power.
- On May 13, on day 130 of a planned outage, Unit 5 was successfully synchronized to the grid and, as of May 16, the unit reached full power and the outage was officially ended.
- In October, all Pickering units will be in a planned outage so that vacuum building inspection can take place. The vacuum building is inspected every 12 years, the last inspection being in 2010.
- Recently, Bruce Power completed a successful vacuum building outage. Pickering Nuclear sent a team to benchmark and look for the next level of innovation to make the Pickering outage even better than previous vacuum building outages.

David responded to Council questions raised in the on-line meeting chat:

- *How long will the vacuum building outage last?*
That outage is scheduled for 30 days.

- *I would think that the complete outage of Pickering in October reduces power to the province massively. How is that coordinated and managed so that the people of Ontario don't suffer a power outage?*

OPG is working with the Independent Electricity System Operator to ensure security of supply in October.

Topic #4: Darlington Refurbishment Progress Report

Ebraheem Waraich, Director, Project Execution, Nuclear Refurbishment, presented a progress report on Darlington refurbishment (Appendix 1). He noted that the safety performance of the project continues to exceed the performance of the construction industry in Ontario.

Key points:

- Project execution continues to progress well.
- The overall program is tracking the budget.
- Additional opportunities are being identified and incorporated into the plan to achieve further gains.
- Darlington refurbishment is one of OPG's key climate change initiatives.
- The refurbishment of the four Darlington units remains on plan for completion by the end of 2026. Refurbishment of Units 2 and 4 was previously completed.

Ebraheem responded to Council questions:

- *You mentioned the removal of pressure tubes as part of the refurbishment. With the advent of small modular reactors (SMRs), there will be a demand for zirconium. Are there any plans to recycle the zirconium in those removed pressure tubes?*

Currently, the volume of the pressure tubes is reduced, and they are stored in safe containers.

- *At \$30,000 a ton, zirconium is very valuable.*
- *Given the challenge of COVID, there has been competition for skilled workers. There has also been a significant amount of professional turnover. How are you managing workforce availability?*

We have put a lot of effort into technical trades retention. We have worked in partnership with the nuclear and other industries.

David Rogers noted that, when other companies were laying off skilled trades people, OPG kept them on in preparation for the next unit to be refurbished, which garnered a lot of loyalty. They like being in one, safe place, he said.

Topic #5: Darlington New Nuclear Project Update

Dragan Popovic, Vice President SMR Execution, presented an update on the Darlington New Nuclear Project (Appendix 2).

Dragan noted that, in March 2022, OPG awarded a contract to ES Fox for site preparation, construction services and support infrastructure. Planning and design work is currently underway, with site preparation work to begin on site toward the end of this year.

On Dec. 2, 2021 OPG announced it will work together with GE Hitachi Nuclear Energy to deploy a small modular reactor (SMR) at the Darlington new nuclear site. Dragan pointed out that no nuclear construction can take place until OPG applies for and receives a licence to construct from the Canadian Nuclear Safety Commission (CNSC). It will take up to two years to get this licence.

The planned 300-megawatt SMR is a light water boiling reactor, a different technology from CANDU reactors. The overall plan is for up to four SMRs at the Darlington site, pending successful completion of the first.

Dragan also talked about underwater work to conduct geotechnical investigations for the lake water cooling structure for new nuclear. He noted that the use of lake water for cooling means that the planned SMR will not require cooling power.

Dragan remarked that, for geopolitical reasons, there is a market for SMRs across the world. This market represents a significant opportunity for OPG.

Dragan responded to Council questions:

- *I recognize that the technology for the first SMR at Darlington has been chosen, but I am trying to persuade OPG to go for a different technology for future SMRs, fast-spectrum reactors with recycling of used fuel. I would like to discuss this option in further detail with you. (See also Council member's comments in meeting chat, Appendix 3.)*
Yes, please feel free to contact me. (Dragan shared his email at the meeting.)
- *How are SMRs going to help small areas in Northern Ontario?*
We plan to deploy up to four megawatts in Northern Ontario. As well, in June 2020, Ultra Safe Nuclear Corporation, and Ontario Power Generation announced that they had formed a joint venture partnership called Global First Power, which will own and operate the proposed micro reactor at Canadian Nuclear Laboratories' Chalk River site. (Link to details: <https://www.globalfirstpower.com/about-us>) This partnership aims to develop and deploy small modular reactor technology as an alternative to fossil-fuel

generation in remote communities and mines that are not connected to provincial electricity grids.

- *A question I get frequently from contacts in the community is: will OPG be able to handle electricity demand in the future? What is a good response?*
A key driver to meeting demand will be to put more SMRs into service after 2028. (Carrie-Anne Atkins noted that the Independent Electricity System Operator (IESO) is mandated to manage long-term demand. They have a response to the public about handling future demand that she can share with Council members.)

Topic #6: Phragmites Removal Hydro Marsh, Pickering

Janice Gilbert, Executive Director, Invasive Phragmites Control Centre (IPCC), forwarded a slide presentation on this topic (Appendix 4). Charmane Bhagan, Environmental Advisor, Pickering Nuclear, participated in the discussion.

In the Meeting Chat, a CAC member asked: What are phragmites?

Carrie-Anne wrote: Invasive Phragmites (European Common Weed) is an invasive plant that has been causing damage to Ontario's biodiversity, wetlands and beaches for decades. Phragmites spread quickly, reduce open water and provide little food or diversity of habitat for native plants and animals.

Phragmites growing in water can be controlled using the cut-to-drown method whereby stalks are cut as close to the sediment as possible. In addition to managing phragmites, it is also important to inform the public not to move them around, as they can then grow in new locations.

Charmane noted that the invasive strain of phragmites is very aggressive and is taking over wetlands. OPG, the City of Pickering and the IPCC are working together to remove the invasive Phragmites from Frenchman's Bay and Hydro Marsh. The IPCC got funding this year from OPG to address invasive phragmites at Coots Pond and Hydro Marsh. Where phragmites were cut and removed last year, herbicide is being used this year. Herbicide use requires approval from the Ministry of Northern Development, Mines, Natural Resources and Forestry.

Pickering Naturalists have agreed to help OPG and IPCC to educate the public about invasive phragmites and what is being done about them. Signage will be erected around Hydro Marsh 24 hours before the herbicide treatment, which will take place after Labour Day, when the public won't be using the waterfront trail as much. However, access to the area will not be restricted during the treatment period.

Charmane noted that, on Wednesday, July 13 from 6:30 to 8 p.m., OPG, IPCC, Pickering Naturalists, Toronto and Region Conservation Authority (TRCA) and the City of Pickering will co-host a virtual public information session about invasive Phragmites

and steps being taken to control them. It was agreed that details about the session and a link to register would be sent to CAC members.

A Council member remarked that invasive phragmites are a serious problem in Canada. They are a very aggressive weed that chokes out other plants and are so thick they prevent birds from accessing food. He complimented OPG, the City of Pickering and the IPCC for the great work they are doing to control this species.

Slide presentation forwarded by Janice:

Overview of Invasive Phragmites Control at Coots Pond and Hydro Marsh

Key Points (see photos in Appendix 4):

Invasive Phragmites Control at Coots Pond

Control Recommendations:

Year 1: 2022

- i) Pond
 - use amphibious, all-terrain vehicle (Fat Truck) to treat large, high-density cells in dry section with herbicide
 - use backpack spray units to treat small and low density areas
 - manually cut plants in water
- ii) Upland habitat: herbicide
 - use Gator with hose and handgun and backpack spray units
- iii) Adjacent agricultural field: herbicide
 - use Fat Truck to treat large, high-density cell
 - use Gator and backpack spray units in sparse area

Herbicide: WeatherPRO

Invasive Phragmites Control at Hydro Marsh

Control Recommendations:

2021

- i) Phragmites in water: cut-to-drown
 - 2 Truxors were used to cut and remove phragmites on Nov. 30 and Dec. 1, 2021

2022

- ii) Dry areas: herbicide
 - amphibious all-terrain vehicle (Fat Truck) to treat large, high-density cells
 - backpack spray units to treat small and low density populations

Herbicide: WeatherPRO

Topic #7: Public/Community Affairs Report

Carrie-Anne Atkins, Manager Corporate Relations and Communications, presented an update on OPG activities in the community:

- On June 23, the Darlington Energy Complex will host a small event to commemorate National Indigenous History Month.
- In September, the first Community Open House since 2019 will be held at the Darlington Energy Complex –Saturday, Sept. 24 for employees and members of the public. This is an opportunity to speak one-on-one with VIPs. CAC members are invited as well.
- The Pickering and Darlington nuclear Public Information Centres will reopen to the public on Monday, July 4.
- Tuesdays on the Trail (now returned to its old title) is taking place this summer on July 12 and 19 and August 9 and 16, all four dates hosted by the Pickering and Darlington sites. The program is a hybrid one this year, offering both virtual and in-person participation. Weekly registration will be offered through www.opg.com.
- Recent tours at the Darlington site include the Federal Conservative Caucus Tour on May 26 and Japan's Ministry of Economy, Trade and Industry on June 9.
- On July 9, OPG will be participating in the Pickering Public Library Summer Reading Launch.
- OPG and community partners will co-host an information session on July 13 about invasive species, specifically phragmites and the work that is being done by the IPCC in Hydro Marsh.

Topic #8: Concluding Comments:

Facilitator Dave Hardy thanked the CACs for their participation and wished everyone a great summer.

David Rogers expressed appreciation for Council member questions this evening and wished all a safe and well-lived summer.

Next Meetings

Pickering Community Advisory Council

Tuesday, September 20, 2022

PNGS Community Information Centre (tentative venue)

6:00 pm – 8:15 pm

(Light supper available at 5:30 pm)

Darlington Community Advisory Council

Tuesday, September 27, 2022

Darlington Energy Complex (tentative venue)

6:00 pm – 8:15 pm

(Light supper available at 5:30 pm)