

**DNGS Community Advisory Council**  
**Darlington Nuclear Information Centre**  
**Tuesday, January 24, 2023**  
**Highlights**

**Emergency Preparedness Highlights**

Scott Preston reviewed OPG emergency preparedness activities in 2022 and priorities for 2023. CAC members found the OPG approach to emergency preparedness reassuring and asked many questions about the details.

**Site Update, Darlington New Nuclear and Refurbishment**

Kathleen Carew talked about the operating status of the four units at Darlington and a recent outage of Unit 2 to install equipment for the creation of molybdenum-99 (Mo-99), a medical isotope. Kathleen also reviewed Darlington activities in 2022. Among the items mentioned: Darlington receiving a recognition of excellence for the sixth time in row; refurbishment of Unit 3, as of Dec. 31, 92 percent complete; and two units in refurbishment at the same time. Jesara Holla presented an update on the Darlington New Nuclear Project.

**Public/Community Affairs**

Jesara Holla presented an update on recent and forthcoming OPG activities in the community. Among the items mentioned: a public hearing on Jan. 25 – 26 on a licence renewal application for the Darlington nuclear sustainability services facility; OPG being a gold level sponsor of the Ontario Parasport Games; forthcoming station tours for various municipal councils and their staffs; a Bring Back the Salmon hatchery launch.

**Results of CAC Member Surveys**

Dave Hardy presented the results of recent interviews with members of the Darlington and Pickering Community Advisory Councils. Areas covered included: public awareness of OPG/nuclear; subjects considered important by the CACs; ideas for refreshing the CACs; and topics for a CAC Report to the Community.

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**DNGS CAC:**

Jim Boate (by phone)  
Jim Cryderman  
Mary Novak  
Pat Pingle  
Penny Smith

Regrets:

Sheila Hall

**Guests:**

Heather Anderson  
Sami Elhajjeh  
Cara Gregory  
Bethany Matovic  
Jennifer O'Meara

**OPG:**

Kathleen Carew  
Richard Geofroy  
Chris Grills  
Jesara Holla  
Scott Preston

**Hardy Stevenson and Associates:**

Francis Gillis  
Dave Hardy

**Topic #1: Review of Minutes**

The minutes from the joint meeting of the Darlington and Pickering Community Advisory Councils of Dec. 6, 2022, were approved without changes.

## **Topic #2: Safety Moment**

Following a Land Acknowledgment, Jesara Holla, Senior Manager Corporate Relations and Projects, talked about OPG warning workers to be aware of surroundings and weather conditions during the winter months. This includes wearing proper foot ware on ice and snow.

Jesara noted that Covid governance was ended in mid-December, but OPG continues to monitor for Covid-related risks. Employees are asked to maintain proper Covid protocol where appropriate, e.g., hand washing, staying home when sick.

## **Topic #3: Emergency Preparedness Highlights 2022 and 2023**

Scott Preston, Senior Manager Emergency Preparedness, reviewed Enterprise Emergency Management (EEM) activities in 2022 and plans for 2023 (Appendix 1).

Scott noted that the EEM mandate of is to ensure that OPG has adequate provisions to mitigate the effects of a nuclear emergency and protect the health and safety of the public, staff and the environment. OPG's emergency management team works to connect seamlessly with provincial and municipal authorities and, in partnership with them, demonstrates its preparedness through exercises and realistic simulations of nuclear emergencies. OPG ensures it has a strong rapport with off-site emergency authorities and stakeholders before any event actually occurs.

Scott discussed 2022 highlights, including: enhanced proficiency of OPG's Emergency Response Organization (ERO); drills and exercises; distribution of over 500,000 potassium iodide (KI) pills; innovation; and a successful Emergency Management Review Visit (EMRV) by the World Association of Nuclear Operators (WANO) at Darlington in June.

Scott also discussed a list of 2023 priorities, among them embedding emergency preparedness in new nuclear and redevelopment. An important event in November 2023 is Grid-Ex, the seventh biennial grid security and resilience exercise, led by the North American Electric Reliability Corporation (NERC).

Scott presented a summary video of the 2022 Exercise Unified Command, showing how nuclear emergency response is a responsibility of OPG but also of municipal, regional and federal government participants. (Control + Click to follow link: <https://vimeo.com/718360117/3ace682b21>)

Richard Geofroy, Senior Vice President, noted the CANDU division of design: two different and separate systems are in place to shut down the reactor if a nuclear event occurs. If all else fails, generators and pumps can be deployed to shut down reactors. Scott's team plans to devise an event that would bypass the two CANDU shut-down systems.

Scott responded to Council questions:

- *Are there back-up supplies of KI pills for people who want them?*  
Yes, we maintain a supply of KI pills. These pills were pre-distributed to all residents and businesses within a 10-kilometre radius of the Pickering and Darlington plants. And 6 million pills are now in stock at pharmacies.
- *So backup supplies are available. Are there reminders to replace the pills once they've reached their expiry dates?*  
Yes, Durham Region has a public education and awareness program about KI pills and their expiry dates. There is a mechanism to re-distribute pills as they reach their expiry dates.
- *As the population grows, transportation becomes harder and harder. Has there been any consideration to evacuating people across the lake in a nuclear or other emergency?*  
I don't think that option has been explored. Studies are underway of our road networks, including the potential to change highway directions to facilitate evacuation. Such an option would be ordered by the province and implemented by the municipality.
- *If all else fails, are there redundant evacuation routes being planned for?*  
The Provincial Nuclear Emergency Response Plan (PNERP) defines emergency planning zones. The zones are more defined as they get closer to the plants. These line up with evacuation studies we've done.
- *How would evacuation plans deal with specific populations, for example school children? Parents are going to want to pick up their kids before evacuating.*  
The municipality works with school boards, long-term care homes and other organizations to address the evacuation of the young, the old, the constrained, etc.
- *Durham Region has conducted an advertising campaign to inform the public about KI pills. How often are such campaigns run?*  
Durham Health has a web page that informs the public not just about KI pills but more broadly on how to get information during an emergency: <https://www.durham.ca/en/health-and-wellness/nuclear-awareness.aspx>. This web page notes that the best way to order KI tablets is directly from the <https://preparetobesafe.ca> website. OPG's Neighbours Newsletter has also carried this kind of information.
- *There is a fear that, if the war in Ukraine were to escalate to a world war, nuclear plants and surrounding communities could become a target.*

Richard Geofroy noted that, through various worldwide organizations, OPG keeps in touch with, and exchanges information with, the nuclear industry in Ukraine and other areas. Regarding an advertising campaign about nuclear emergency response, he remarked that the goal is to inform the community while not instilling fear.

CAC Facilitator Dave Hardy noted the role of CAC member observers at drills.

Richard said that “observers shadow us during the exercise and provide feedback after the drill.”

## **Topic #4: Site Update, Darlington New Nuclear and Refurbishment Updates**

Richard Geofroy, Senior Vice President, introduced Kathleen Carew, the first female plant manager at Darlington. He noted that Allan Grace, the previous plant manager, is on a secondment with World Association of Nuclear Operators (WANO) headquarters in Atlanta, Georgia. He will come back to Darlington to apply what he has learned.

Kathleen presented a site update:

- Units 1 and 3 are in refurbishment, which is progressing well. Units 2 and 4 are operating at full power.
- There was a recent outage of Unit 2 to install equipment for the creation of molybdenum-99 (Mo-99). Also, Unit 2 can now create cobalt-60 while the reactor is on line, a first in the nuclear industry. Cobalt-60 and Mo-99 are medical isotopes. (Richard noted that Unit 2 is the only reactor to produce Mo-99.)

Richard noted that strategic sessions with about 500 employees were held today, beginning the roll-out of OPG’s business plan for 2023. The roll-out will include additional sessions with other employees.

Richard talked about a Globe and Mail article published in early January that challenged the integrity of pressure tubes in CANDU reactors. He described the article as uninformed and not based on facts. He noted that the pressure tubes, which house the fuel bundles in the reactors, are regularly tested to provide assurance that they are safe to operate. This testing and data collection takes place in Canada and in CANDU reactors worldwide, a procedure not captured in the article. The Canadian Nuclear Safety Commission (CNSC) has expressed confidence that CANDU reactors are operating safely.

Kathleen then presented a review of Darlington activities in 2022 (Appendix 2):

- As part of its Reconciliation Action Plan, OPG has given Indigenous students access to equipment for training purposes.

- For the sixth time in a row, Darlington received a recognition of excellence from WANO, something the station is particularly proud of. (Richard commented that receiving this biennial recognition indicates that Darlington has been operating at a level of excellence for over 12 years. Darlington will continue to improve, he added.)
- Darlington achieved the lowest backlog of tasks ever. This means the station is even safer and more reliable.
- On June 4, 2020, Unit 2 was reconnected to Ontario's electricity grid, after a three-and-a-half-year refurbishment. With every unit refurbished, OPG draws on lessons learned to make the next refurbishment more efficient.
- As of Dec. 31, refurbishment of Unit 3 was 92 percent complete. This refurbishment is significantly ahead of schedule. The goal is Unit 3 in commercial operation by July of this year.
- Unit 1 is defueled and reactor disassembly is underway. When the refurbishment of Unit 1 began in the first quarter of 2022, for the first time ever at Darlington, two units were being refurbished at the same time.
- On completion of Unit 3 refurbishment, Unit 4 will be taken off line for refurbishment. Unit 4 is scheduled to return on line in 2026, completing the Darlington refurbishment project. (Jesara remarked that refurbishment means the plant provides an additional 30 years of service.)

### **Darlington New Nuclear Project (DNNP)**

Jesara talked about recent DNNP developments (Appendix 2, last slide). She noted that the DNNP team held virtual public information sessions, one before Christmas with over 100 in attendance and one in January with over 300 in attendance. She remarked that participants asked really thoughtful and challenging questions. Recordings and Q&A are posted at [www.opg.com/newnuclear](http://www.opg.com/newnuclear).

Several more such workshops will be held in the coming months, including targeted workshops with the CAC and other groups.

OPG has applied to the CNSC for a licence to construct a small modular reactor (SMR). Public hearings will be held in 2024. The schedule is to complete construction in 2028 and begin commercial operation in 2029, pending regulatory approvals.

Richard, Kathleen and Jesara responded to Council questions:

- *Is WANO engaged with the SMR construction?*  
Richard: The CNSC provides the primary oversight for the project. WANO is now in the process of designing an oversight protocol for the new SMR.

Kathleen: There is a program at WANO addressing new units, such as the planned boiling light water SMR at Darlington.

Jesara: The SMR at Darlington is based on 10<sup>th</sup> generation technology of boiling water reactor technology used around the world today.

Richard: It's analogous to the history of CANDU technology at Pickering and Darlington. After Pickering, the Darlington reactors were a later generation of CANDUs and were larger and more advanced.

Richard noted that a portion of the Waterfront Trail will be diverted to avoid DNNP site preparation activities and rerouted north, along Energy Drive.

## **Topic #5: Public/Community Affairs**

Jesara presented an update on recent and forthcoming OPG activities in the community:

- In December, CTV ran a story about the nuclear renaissance in Canada, discussing SMRs and new nuclear at Darlington. The program includes video footage and the Pickering and Darlington plants. (Control and click to follow link: [CTV National News: Future of nuclear power | CTV News](#))
- The latest Neighbours Newsletter went out over the holidays. OPG is now planning for the Spring 2023 newsletter. 'Neighbours', is distributed to over 250,000 members of the public.
- OPG is now getting back to in-person programming. Forthcoming site tours and presentations include: new municipal council and staff station tours during the first quarter of this year; virtual tours and presentations for local Probus Clubs (clubs for retired or semi-retired people) in February and March. On Jan. 10, the Durham Trailblazers Pathfinders Club (ages 12 – 13) visited the Darlington Information Centre.
- As part of the Bring Back the Salmon program, two salmon hatcheries will be launched at the Darlington Nuclear Information Centre on Jan. 30. With its community partners, OPG will deliver an educational program over the coming months to students at the Bowmanville Central Public School. The program will focus on the lifecycle of Atlantic salmon. When the eggs mature into fry, they will be released into Duffins Creek and Bowmanville Creek.
- March Break this year will be back to in-person activities. OPG will be offering free public skates across Durham Region.
- In February, OPG will again be a gold level sponsor of the Ontario Parasport Games, to take place at various venues throughout Durham Region. OPG's robot dog "Spot" will do a ceremonial puck drop.

- OPG has applied to renew the licence for the Darlington Nuclear Sustainability Services facility for another 10 years. A public hearing hosted by the CNSC will be livestreamed Jan. 25 – 26.
- On Dec. 21, OPG's Corporate Citizenship Program partnered with the Rotary Club of Pickering to provide Christmas care baskets to residents of Bay Ridges long-term care facility. The baskets included winter essentials, including blankets, robes, slippers, etc.
- On Friday, Jan. 27, an OPG team will announce details around the DNNP Integrated Project Delivery model. Stakeholders and the Minister of Energy will be among those in attendance.
- OPG and the Clarington Board of Trade will participate in the Canadian Nuclear Association conference held in Ottawa. This is the largest Canadian nuclear conference and is an opportunity to interact with nuclear industry and supply chain vendor from across Canada.

## **Topic #6: Results of CAC Member Surveys**

CAC Facilitator Dave Hardy presented the results of recent interviews with members of the Darlington and Pickering CACs. The purpose of the interviews was: to touch base with the CACs; to gain information on refreshing the Councils; to find out what members are hearing from community contacts regarding OPG; and to get a list of topics that should frame future community dialogue.

Interviews were conducted by the CAC support team of Dave, Francis Gillis and Eileen Clark. A series of questions was sent to CAC members in advance. Most responded in telephone interviews, but there were also some written responses. Eighteen of 25 members responded.

The interviews covered four areas:

- OPG/Nuclear awareness and understanding
- Important CAC subjects
- Ideas for refreshing the CACs
- Topics for the Report to the Community

### **OPG Nuclear Awareness and Understanding**

CAC responses indicated that OPG does not come up as an issue for the general public in Durham Region. Among engaged groups, there is good knowledge of OPG and the Darlington and Pickering plants. There is, however, a lack of awareness and understanding within the general public about most issues, not just nuclear. There is

some confusion about the future of nuclear operations. Active anti-nuclear advocacy is influencing some groups in society.

### **Important CAC Subjects**

The following topics were cited as important for future dialogue with the community:

- Current and future plant status
- Information about new technologies such as SMR
- Future of Pickering plant
- Socio-economic implications of future changes affecting Pickering, Clarington and other Durham Region communities
- Safety and emergency preparedness – particularly the preparedness of local hospitals and institutions
- Groundwater, health, and storage of used fuel

### **Ideas for refreshing the CACs**

Members appreciate the effectiveness of the current CAC process, but provided a number of suggestions to enhance the CACs:

- Members to prepare before the meetings by noting questions about OPG they were hearing
- Addition of new members representing greater diversity
- OPG asking CAC members specific questions
- OPG to tell story and then explain with technical details
- Occasional workshop
- In-person meetings and an earlier start
- Orientation of new members

### **Topics for the Report to the Community**

Regarding a CAC Report to the Community, which will be distributed to the public in late 2023 or early 2024, members developed a short list of topics:

- Darlington new nuclear SMR status
- OPG, Durham College, Ontario Tech University partnership
- Isotope production launch
- Darlington Refurbishment
- Emergency preparedness and environmental monitoring
- Pickering operations to 2026

Jesara responded to a Council question:

- *How do we get the younger generation aware of OPG and energy issues?*  
New education material on energy has been embedded in the curriculum in key grades. OPG is working on a fleet-wide education program to amplify education resources for students.

## **Forthcoming Meetings**

Dave noted that there will be an onboarding session for new CAC members, and interested current members, in March. This session will include a CANDU 101 presentation, a meal break and a station tour. The next meeting of the full CAC will be in April.

### **Onboard New CAC Members**

Darlington Nuclear Information Centre

Tuesday, March 28, 2023

4 pm – 7 pm

### **DNGS Community Advisory Council**

Darlington Nuclear Information Centre

Tuesday, April 25, 2023

4 pm – 7 pm