Winter 2021

Neighbours

Pickering | Darlington
Nuclear Generating Stations

Darlington New Nuclear relicensing

OPG has applied to the Canadian Nuclear Safety Commission (CNSC) for renewal of the Site Preparation Licence to support the Darlington New Nuclear Project (DNNP). The licence allows for pre-construction preparatory activities to take place at the new nuclear site, which is located adjacent to our operating station.

Additional generation at Darlington allows for low-carbon, reliable nuclear energy to continue being an important part of Ontario's energy mix into the future.

The licence is one step in the regulatory approvals process for new nuclear at Darlington, that also includes a construction licence and an operating licence. The approved Environmental Assessment in place was granted following extensive public engagement and a 17-day public hearing held in Clarington.

The application will be considered by the CNSC at a public hearing later this year. Learn more at **nuclearsafety.gc.ca/darlington-nuclear-project**. To learn more about the relicensing process and stay informed on future virtual information sessions with OPG project staff, visit **opg.com/newnuclear**.

Bring Back the Salmon goes virtual

At OPG, we believe it's our duty to protect and nurture Ontario's environment and unique biodiversity. That's why we have proudly partnered with the Ontario Federation of Anglers and Hunters (OFAH) and other organizations on Bring Back the Salmon since 2011 – a program aimed at restoring an Atlantic salmon population to Lake Ontario.

This year, from the virtual classroom, more than 3,400 students from 115 classrooms across Ontario will observe Atlantic salmon development and learn about their biology, history and ecology through weekly videos. Teachers will also receive curriculum-linked lesson plans to use throughout the year.

The 15-week program provides excellent educational opportunities connected to fish biology, natural and cultural history, habitats, ecosystems, and environmental stewardship. It also includes rearing salmon eggs for release in Duffins and Coburg Creeks, contributing to the restoration program. Learn more at **bringbackthesalmon.ca**.

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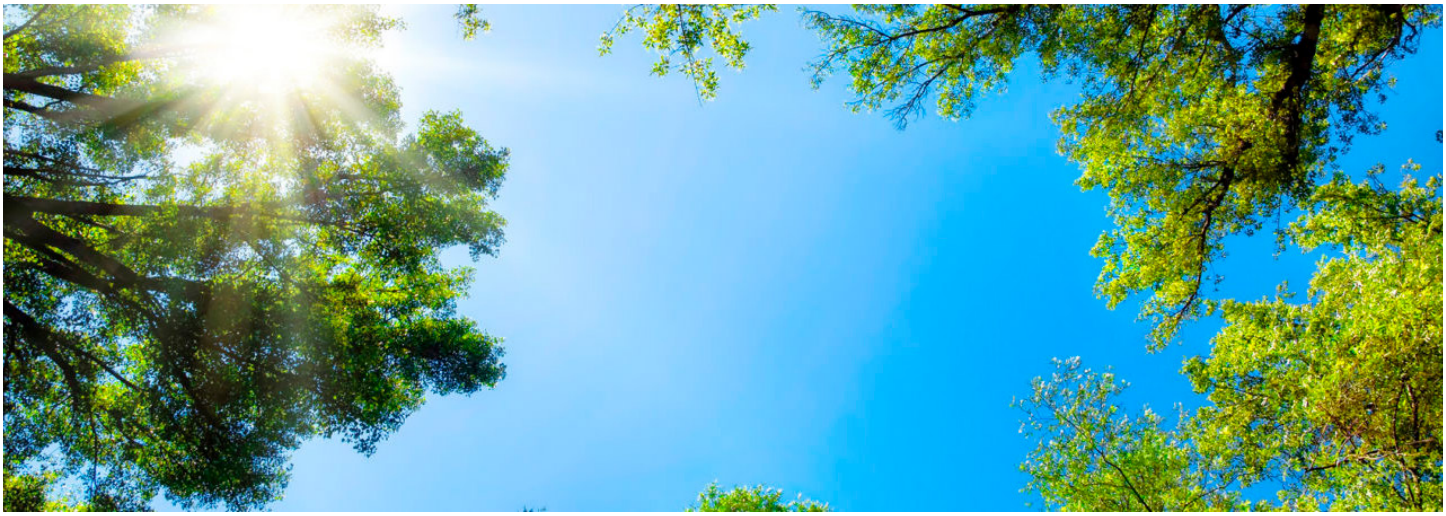
ONTARIO POWER GENERATION



Our power is changing the world

OPG's first-ever climate change plan includes ambitious goals that will guide our promise to be a catalyst for efficient, economy-wide decarbonization and economic renewal, while protecting the environment. And, we are determined to do even more to be part of the climate change solution, by mobilizing our expertise, suppliers, and industry partners to create a cleaner environment and more prosperous, resilient communities in Ontario and beyond.

How will we do it?

- **Mitigate:** We will reduce carbon emissions from our operations, and help the markets where we operate do the same.
- **Adapt:** We will ensure our operations are resilient to the impacts of a changing climate and our site communities are safe.
- **Innovate:** We will develop and deploy new technologies to speed up Ontario's energy transformation.
- **Lead:** We will work with others to lead the decarbonization of Ontario's economy, and share our province's lessons with the world.

We hope to make our province proud as we bring our made-in-Ontario experience, our ingenuity, and our commitment, to the world. Together, we will create a brighter tomorrow. Read the full plan at **opg.com/climatechange**.

The future of nuclear power generation

As we've learned with mobile phones and home computers, innovative design has made products more compact, more efficient and more technologically advanced over time. Ontario's next generation of nuclear technology is no exception, and OPG is helping to lead the way in advancing Small Modular Reactor (SMR) technology – the future of nuclear power generation.

SMRs, like current nuclear reactors, are designed to provide reliable, carbon-free electricity, but with a much smaller land footprint than current reactors. From one to 300 megawatts, SMRs are a reliable alternate energy source to diesel for remote and rural communities, and offer a significant growth opportunity for OPG and Ontario.

Factory constructed and modular, many SMRs are delivered to site and can be used for generating electricity and producing heat used for other applications like district heating for commercial or residential needs, hybrid energy systems, water desalination, or heavy industry applications.

OPG has been at the forefront of the Canadian nuclear industry's collective efforts to consider the option of SMR technologies as part of our future energy mix, including a key role in the development of the Canadian roadmap study for SMR deployment.

And, with a history of more than a half-century of safe nuclear operations, proven operations and project management success, OPG now leads the development and deployment of SMRs in Canada. To learn more about how the next generation of emissions-free, safe and sustainable nuclear energy will benefit Canadians, please visit **opg.com/smr**.

Disassembly of second reactor gets underway at Darlington Nuclear

OPG maintains momentum on four-unit clean energy project

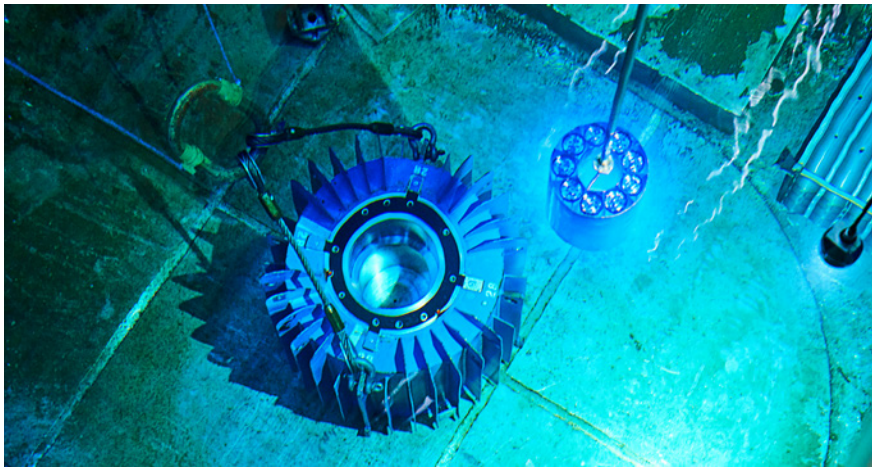
With the second reactor scheduled for refurbishment at the Darlington Nuclear Generating Station successfully 'islanded' from the power plant, OPG and our project partners have begun preparations for the next phase of the Darlington Refurbishment Project: reactor disassembly.

"Islanding is how we create a safe and defined work area for a unit's refurbishment," notes Subo Sinnathamby, Senior Vice President, Nuclear Refurbishment. "While adhering to enhanced health and safety measures due to the pandemic, the project team islanded Unit 3 ahead of schedule, allowing workers to start dismantling the unit for refurbishment."

Sinnathamby credits the commitment to safety and quality demonstrated by employees and contract staff, the effective implementation of lessons learned from Unit 2 refurbishment and the subsequent improvement initiatives for the success reaching this latest milestone on the project. The world-class Mock-up and Training Facility at the Darlington Energy Complex also played a significant role. To-date, workers have completed more than 750,000 practice hours in this cutting-edge training facility.

OPG's project partner CanAtom Power Group will lead the fieldwork during disassembly, including the removal of 960 feeders; 960 end fittings; 480 pressure tubes; and 480 calandria tubes.

The four-unit Darlington Refurbishment, one of Canada's largest clean energy projects, is on track for completion by 2026.



Pickering's Cobalt-60 helps in fight against COVID-19

The latest batch of the important medical isotope, Cobalt-60 will soon be ready for processing by Nordion, an Ottawa-based health sciences company. The isotopes will be used for the sterilization of medical devices, including swabs, syringes, and heart valves. Cobalt-60 continues to provide a critical line of defence for hospitals and care facilities around the world as they continue the fight against COVID-19.

Currently, about 50 per cent of the world's Cobalt-60 is produced in Ontario's CANDU reactors. Pickering Nuclear provides 20 per cent of the global supply, making it one of the world's leading sources of this important life-saving product. Production of the isotopes Cobalt-60 and Molybdenum-99 (used for medical imaging) are also planned for Darlington Nuclear, pending regulatory approval from the Canadian Nuclear Safety Commission.

"Millions of people in Ontario and around the world enjoy a healthier and safer quality of life because of the isotopes generated from our CANDU units," said Ken Hartwick, OPG's President and CEO. "OPG is proud to continue to lead this exciting work for the betterment of Ontarians, our economy and for people around the world."

Did You Know?

Cobalt-60 is an ideal isotope for medical and industrial applications. In the medical field, Cobalt-60 is used to sterilize surgical pre-packaged medical instruments, implantable devices, syringes, and medical gowns. Pickering Nuclear's production of this critical medical isotope continues to assist in the global response to the COVID-19 pandemic.

The Nuclear Waste Management Organization (NWMO) is responsible for designing and implementing Canada's plan for the safe, long-term management of used nuclear fuel. The NWMO is currently seeking input to shape plans for the transportation of used nuclear fuel in Canada, beginning in the 2040s. You are invited to review the draft Transportation Planning Framework and provide feedback at nwmo.ca/transportationplanning.

Brought to you by Ontario Power Generation's (OPG) Pickering and Darlington Nuclear Generating Stations

Calling all educators and at-home learners!

Join OPG and community partners weekly in March and April at 10 a.m. for our brand new virtual learning sessions. Programs are free, fun, educational, and suitable for children ages 6 to 12. Learn about biodiversity, STEM, Indigenous culture, arts and climate change.

Register at opg.com/durham.

Experiment with Scientists in School

THU MARCH 25

Join a scientist who will guide you through nature's winter wonderland. Using your senses, observe and identify trees, birdcalls, and animal tracks. Investigate how insects adapt and survive the cold winter months. Get creative and build a feeder for our feathered friends.

Animal Meet and Greet with Earth Rangers

THU APRIL 1

Join Earth Rangers for an Animal Ambassador meet n' greet featuring Ontario species. Learn more about climate change mitigation activities you can try at home or in your own neighbourhood.

Indigenous Traditions with Carea Community Health Centre

THU APRIL 8

Experience Indigenous culture through traditional teachings and music with our friends from Carea Community Health Centre.

Act it Out with Driftwood Theatre

THU APRIL 22

Since 1995, the company has performed for over 100,000 people in venues across the province. Get up and moving for an acting class with the experts from Driftwood Theatre.

Give a Hoot with the Nature Conservancy of Canada

THU APRIL 29

Learn about Ontario's owls and how protecting their habitat can help us address climate change. You might even hear an owl call or two!

Neighbours

Darlington Nuclear
1855 Energy Drive
Courtice, Ontario
L1E 0E7

Contact: (905) 623-7122
Email: darlingtonnuclear@opg.com

Pickering Nuclear
1675 Montgomery Park Rd.
Pickering, Ontario
L1V 2R5

Contact: (905) 837-7272
Email: pickeringnuc@opg.com

ONTARIO POWER GENERATION

opg.com