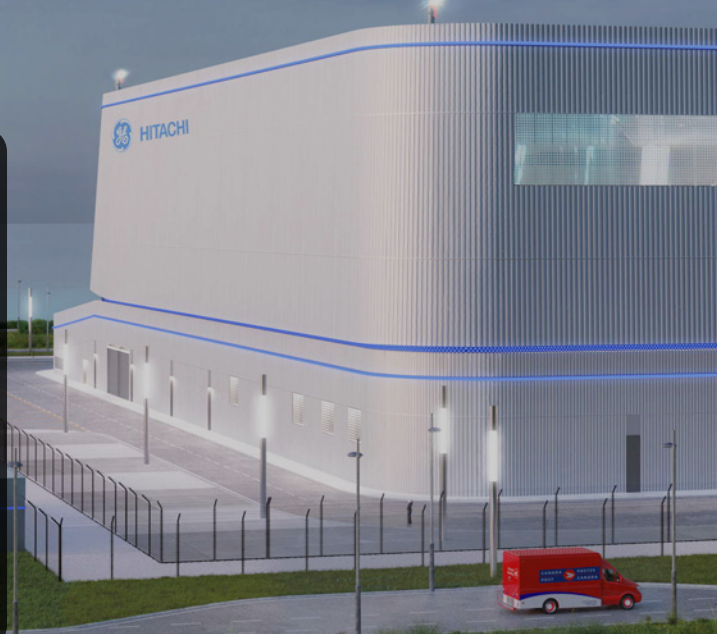


Darlington New Nuclear Project

BIG things start **small**.



What is a Small Modular Reactor?

Just like cell phones and laptops have gotten smaller as technology advances, Small Modular Reactors (SMRs) take the concept of a traditional nuclear station and put it into a smaller package.

Much like the reactors OPG safely operates today, SMRs use nuclear

fission to heat water, which turns to steam and drives a turbine to produce power.

OPG is working with GE Hitachi Nuclear Energy to deploy their SMR design, the 10th generation BWRX-300 at the Darlington site; the first grid-scale SMR in Canada.

OPG's preliminary schedule is to complete construction of the reactor by 2028 with commercial operation in 2029.

The Darlington site is the only site in Canada licensed for new nuclear build with an accepted environmental assessment.

SMRs will make a big impact on climate change. Why?

A single 300 megawatt SMR at Darlington could:



Power
300,000
homes



Avoid **160,000**
gas cars worth of
greenhouse gas
emissions
annually



Provide **60 years** of
safe, reliable,
low-carbon electricity
to combat
climate change



Increase
GDP by
\$2.5 billion

Want to learn more about SMRs and the Darlington New Nuclear Project? Visit opg.com/newnuclear, or drop by the **Darlington Nuclear Information Centre** which is located at 1855 Energy Drive, Courtoise, and can be reached by phone at **905-623-7122** or toll-free at **1-800-461-0034**.

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Province and community leaders highlight milestone on project



On December 2, Premier Doug Ford, Minister of Energy Todd Smith and members of OPG's Darlington New Nuclear Project (DNNP) were on-site to celebrate on-going site preparation activities and to showcase the progress we've made over the last year towards building Canada's first grid-scale SMR.

"With global businesses looking to expand in jurisdictions with clean and cost-effective electricity, SMRs will help compete for and attract more game-changing investments in Ontario's economy," said Premier Doug Ford.

"This project leverages OPG's decades of experience in providing reliable, safe and affordable electricity as well as Ontario's strong nuclear supply chain to develop the next generation of nuclear power," said Ken Hartwick, OPG's President and CEO.

Also in attendance were local Members of Parliament (MPs) and Members Provincial Parliament (MPPs), Clarington Mayor Adrian Foster, and Durham Regional Chair John Henry, highlighting the strong relationship OPG has with the community.

"We are going to change the world and it's great that it is going to happen right here in Durham, the new energy capital of the world," said John Henry about OPG's new nuclear project.

Once built, the BWRX-300 SMR, designed by GE-Hitachi Nuclear Energy, could power about 300,000 homes, create about 2,500 jobs over its 60-year lifespan, increase GDP by \$2.5 billion, and become instrumental in helping OPG and Ontario meet their climate change goals.



OPG applies for a Licence to Construct to CNSC

Throughout the life cycle of a nuclear power plant, a number of licenses are required by the nuclear regulator, the Canadian Nuclear Safety Commission (CNSC). A Licence to Construct is required before any construction work on an SMR at Darlington can begin. OPG's application for this licence was submitted in the Fall of 2022.

What work falls under the Licence to Construct Application?

A licence to construct would allow OPG and our contract partners to begin activities including, the construction and commissioning of a SMR, and the construction of support structures. OPG's preliminary schedule is to complete construction of the reactor by 2028 with commercial operation in 2029.

What is my role and how can I participate in the Licence to Construct process with the CNSC?

You are encouraged to participate in the licensing process through public engagement activities such as information sessions, workshops and public hearings. For more information on the Licence to Construct process and how you can be involved, visit cnsccsn.gc.ca, and opg.com/newnuclear.



OPG project team visits Curve Lake First Nation and Petroglyphs site

In October, OPG's new nuclear team and members of Curve Lake First Nation travelled to the Petroglyphs site, located about an hour north of Peterborough, Ontario. As stewards of the historic and sacred site, members of Curve Lake shared their knowledge and its cultural significance including meanings of some of the more than 1,000 rock carvings present at the site.

Our team then had the privilege of going to the Whetung Ojibwa Centre located at Curve Lake First Nation. The Centre features a spectacular collection of Native crafts, fine arts, jewelry, moccasins, leather work, sculptures and more. Opened in the early 1900s by the Whetung family, the Centre continues to be family owned and operated to this day.



Seeking to enhance our understanding of Indigenous knowledge remains a focus across OPG. We recognize we have a lot to learn about the perspective of Indigenous Nations and Communities across Ontario, and visits like this continue our education and our commitment to foster relationships based upon trust and mutual understanding.

Darlington New Nuclear Project timeline

➤ **October 2022**

- OPG applies to the CNSC for a Licence to Construct.
- OPG begins site preparation activities at the Darlington site.
- The Canada Infrastructure Bank (CIB) finalized an agreement with OPG to commit \$970 million towards the project.

➤ **May 2022**

The CNSC has approved OPG's revised financial guarantee, outlining our strategy to fund decommissioning activities associated with site preparation work.

➤ **March 2022**

OPG awarded E.S. Fox Ltd. the contract to complete site preparation activities.

➤ **December 2021**

OPG selects GEH to further develop the BWRX-300 SMR design, with the mutual goal of constructing Canada's first commercial, grid-scale SMR.

➤ **October 2021**

After a hearing in June 2021, the CNSC announced approval of OPG's application to renew the existing Site Preparation Licence for a 10-year period.

➤ **November 2020**

OPG announced resumption of planning activities for future nuclear power generation using a SMR at the Darlington site.

➤ **June 2020**

OPG submitted an application to the CNSC seeking renewal of the Site Preparation Licence.

➤ **December 2013**

Citing lower than planned power consumption growth and a strong supply situation, the Government of Ontario requested OPG defer construction of new nuclear reactors but maintain the existing licence for future generation.

➤ **August 2012**

The CNSC issued the Licence to Prepare Site to OPG for a period of 10 years.

➤ **May 2012**

The Government of Canada accepted the recommendation of the Joint Review Panel (JRP) and the Environmental Assessment (EA).

➤ **March 2011**

The JRP hosted 17 days of public hearings on the EA, addressing the project need, purpose and alternatives and potential effects on all aspects of the environment.

Meet the Darlington New Nuclear Team – Jordan Zenhenko



After graduating in 2020 from Mechanical Engineering at Ontario Tech University, Courtice-raised Jordan Zenhenko has brought his unique and energetic perspective to the project team through OPG's Indigenous Opportunities Network (ION) program.

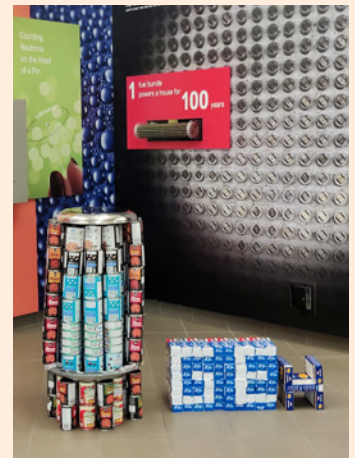
As an Assistant Project Leader, Jordan is responsible for organizing, coordinating, and eventually, the execution of large civil construction aspects of the new nuclear project. He is passionate about

halting anthropogenic (human made) climate change and believes that everyone has a responsibility to build a sustainable future for the next generation. He sees nuclear power as an important piece of that puzzle.

"I was born and raised in Courtice, so I have always understood the influence the nuclear industry has had on our community," said Jordan. "We are lucky to have a large employer of highly skilled jobs in our community and the construction of the first grid-scale SMR will continue to allow for growth in our community."

When Jordan isn't busy with SMRs, you'll find him skateboarding, or playing lacrosse, having previously played for the Clarington Green Gaels and Oshawa Blue Knights. He is also very passionate about learning the Anishinaabemowin language.

DNNP team supports Feed the Need Durham



The DNNP team took part in an OPG fundraising initiative for Feed the Need Durham which raised 2,693 meals for those in need across Durham. OPG and GE Hitachi Nuclear Energy collaborated to build a replica of the BWRX-300.

Want to learn more about SMRs and the Darlington New Nuclear Project? Visit opg.com/newnuclear, or drop by the **Darlington Nuclear Information Centre** which is located at 1855 Energy Drive, Courtice, and can be reached by phone at **905-623-7122** or toll-free at **1-800-461-0034**.

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