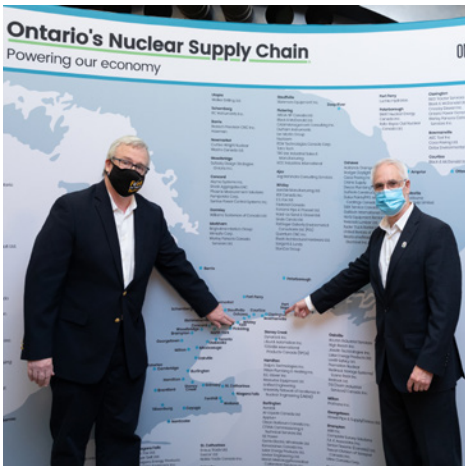
DARLINGTON NEW NUCLEAR PROJECT



"By moving forward, with our industry-leading technology partner GE Hitachi on deployment of innovative technology for an SMR at Darlington, OPG is paving the way on the development and deployment of the next generation of nuclear power in Canada and beyond."

Ken Hartwick,
President & CEO, OPG

"Clarington is a willing host and we are proud and excited for all the announcements today having an impact, not just here in Ontario, but Canada and the globe."

Adrian Foster,
Clarington Mayor

"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."

John Henry,
Durham's Regional Chair

In this insert:

ONTARIO POWER GENERATION

Where a brighter tomorrow begins.

TAKING ACTION ON C

OPG's Darlington New Nuclear Project

GE Hitachi: BWRX-300

(Above) Conceptual rendering of a BWRX-300 power plant design.
(Below) BWRX-300 reactor design.

Net Zero Vision:

As a key part of Ontario Power Generation's (OPG) Climate Change Action Plan, OPG and GE Hitachi Nuclear Energy (GEH) are taking real action to fight climate change and work towards net zero by progressing the development and detailed planning activities of a Small Modular Reactor (SMR) technology. This will better position OPG to be able to deploy this innovative technology more efficiently and cost effectively at the Darlington site by the end of this decade.

With the goal to grow and leverage our existing nuclear supply chain, along with OPG's strong operational history and nuclear project execution, we aim to build one of the world's first commercial SMRs, right here in Ontario.

New nuclear production would serve as an important piece of Canada's diverse electricity generation mix moving forward, and could enable intermittent renewables, decrease reliance on fossil fuels and support the electrification of our transportation sector.

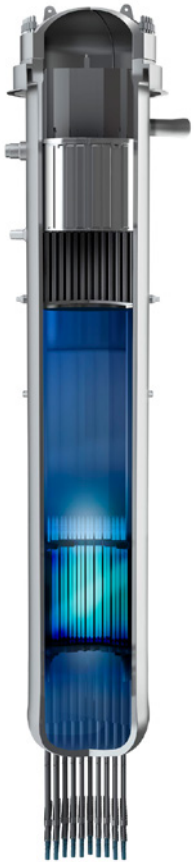
Technology overview:

GEH SMR Technologies Canada, Ltd., is the Canadian division of the world-leading provider of reactor technology and nuclear services.

As a tenth generation of GE's proven reactor design, the BWRX-300 is their most simple yet advanced design since GE began developing nuclear reactors in the 1950s.

This reactor's innovative features include the use of natural circulation and passive cooling systems, which are designed to cool the nuclear fuel under all conditions without the need for external power or external water supply for extended periods.

To generate electricity, the BWRX-300 reactor relies on nuclear fission to heat water, which turns into steam and then drives a steam turbine to produce power.



Why SMRs?

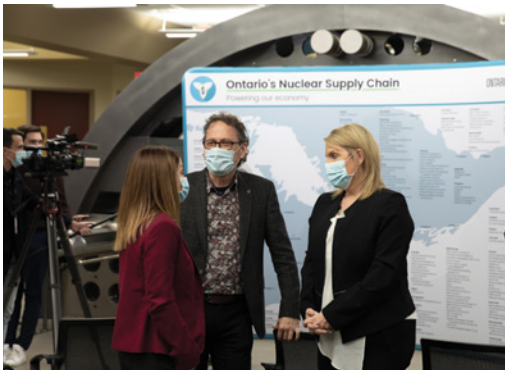
- A ~300 MWe grid-scale SMR built in Ontario could:
  - Power ~300,000 homes.
  - Improve Gross Domestic Product of over $2.5 billion.
  - Create ~2,460 jobs over the course of the plant's life.

Did you know?

In Canada, nuclear energy helps avoid 80 million tonnes of CO_2 emissions per year (equivalent to removing 15 million cars from the road)?

HITACHI

CLIMATE CHANGE



You can watch the announcement on opg.com or by scanning the QR code.

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
The Canadian Nuclear Safety Commission (CNSC) announced approval of OPG's application to renew the existing Site Preparation Licence for new nuclear at the Darlington site for a 10-year period.

June 2021
The CNSC held a two-day virtual hearing to consider OPG's application to renew its Site Preparation Licence for the Darlington site.

November 2020
OPG announced resumption of planning activities for future nuclear power generation at its Darlington site, to host a new nuclear facility using SMR technology.

June 2020
OPG submitted an application to the CNSC seeking renewal of the Site Preparation Licence.

2013 - 2020
OPG continued to maintain the licence in accordance with licence conditions.

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, valid from August 17, 2012 to August 17, 2022.

May 2012
The Government of Canada accepted the recommendation of the Joint Review Panel (JRP) and the Environmental Assessment (EA).

August 2011
The EA Report was submitted to the Federal Minister of Environment. The overall conclusion was consistent with OPG's findings – the Darlington New Nuclear Project (DNNP) would not result in any significant adverse environmental effects given available mitigation.

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. The JRP received submissions from OPG, Indigenous groups, federal, provincial and local governments, environmental groups, community residents, individuals and organizations interested in the project application and scope.

October 2009
A JRP was mandated to assess the environmental effects of the project and review the application for the Licence to Prepare Site.

September 2009
OPG submitted the Environmental Impact Statement (EIS), and an updated Application for a Licence to Prepare Site.

April 2007
OPG submitted a project description for the EA.

June 2006
OPG directed by the Province of Ontario to begin the federal approvals process for new nuclear at an existing site.

WHY SMALL MODULAR REACTORS?

SMRs OFFER THE BENEFITS OF TRADITIONAL NUCLEAR REACTORS BUT ARE SMALLER IN SIZE AND OUTPUT, & EASIER TO BUILD AND OPERATE.

By providing clean, reliable, cost-effective power, SMRs contribute to the fight against climate change while also providing economic benefits.

Due to their **scalability and modularity**, SMRs can meet demands ranging from those of remote industries, to on and off-grid communities, to powering a province with **clean energy**.

In Canada, nuclear energy helps avoid **80 million tonnes of CO^2** emissions per year (= removing 15 million cars from the road).

SMRs will play a key role in helping to reinvigorate Ontario's economy and further support the province and country as they work toward meeting their climate change targets of **zero emission electricity**.

Deployment of an SMR at Darlington would mean supporting Canadian companies in the areas of construction, engineering, and supply chain.

Effectively addressing climate change means mobilizing **EVERY NON-EMITTING** technology, including nuclear, hydro, renewables, hydrogen, carbon capture and storage.

Leveraging Ontario's strong, existing nuclear supply chain is key to being a **leader in the deployment** of new nuclear in Canada.

Ontario, Saskatchewan, New Brunswick and Alberta are working together to position Canada as a global competitor in an emerging nuclear sector.

DNNP awarded a **2021 Canadian Electricity Association Centre of Excellence award** for innovation contributing to a Net Zero by 2050 future.

How many homes could a 300 MWe SMR power?

~300,000

How much more land is needed for **solar** and **wind** compared to nuclear?

SOLAR : 100 TIMES MORE LAND

WIND : 500 TIMES MORE LAND

Over the course of its lifetime, a 300 MWe grid scale SMR built in Ontario and operated over 60 years could create:

2,460 jobs

$2.5 billion GDP increase

Want to Learn More?

We want to know what you'd like to know more about.

Get in touch by phone **1-800-461-0034** or email **darlingtonnuclear@opg.com**

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