Laurentis Energy Partners

Leading a cleaner and healthier future for the next generation

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A diverse and innovative company

- Founded in 2012, as a subsidiary of Ontario Power Generation
- Originally named Canadian Nuclear Partners
- Rebranded in 2020 as Laurentis Energy Partners
- Retains the name Canadian Nuclear Partners S.A. (CNPSA) in Romania as a subsidiary of Laurentis

Values

Safety

Tested / Rigour / Setting standards / Security

Citizenship

Community-driven / Respectful / Committed / Established

Integrity

Honest / Transparent / Reliable / Consistent

Excellence

Trusted / Credible / Quality / Proven

People

Collaboration / Diverse / Expertise / Resourceful

Laurentis is moving the global energy industry forward

1

Isotope production

As a world-leading isotope producer, Laurentis partners in the production of vital radioisotopes for medicine, security, and advanced research.

2

New nuclear services

From SMRs to new, large-scale nuclear facilities, Laurentis provides end-to-end engineering and business solutions.

3

Nuclear lifecycle services

Laurentis supports clients along the entire lifecycle of a nuclear reactor, from inspections and maintenance, to complete refurbishment, all the way to decommissioning and safely managing all waste products.

Isotope production

- Laurentis plays a vital role in the production of various isotopes for Ontario and the world, including:

  3 He Helium-3 **Helium-3 (He-3)**, used in border security, medical imaging, quantum computing, and neutron research

  99 Mo Molybdenum **Molybdenum-99 (Mo-99),** which decays to Technetium-99m (Tc-99m), used in 80% of nuclear medicine imaging scans worldwide

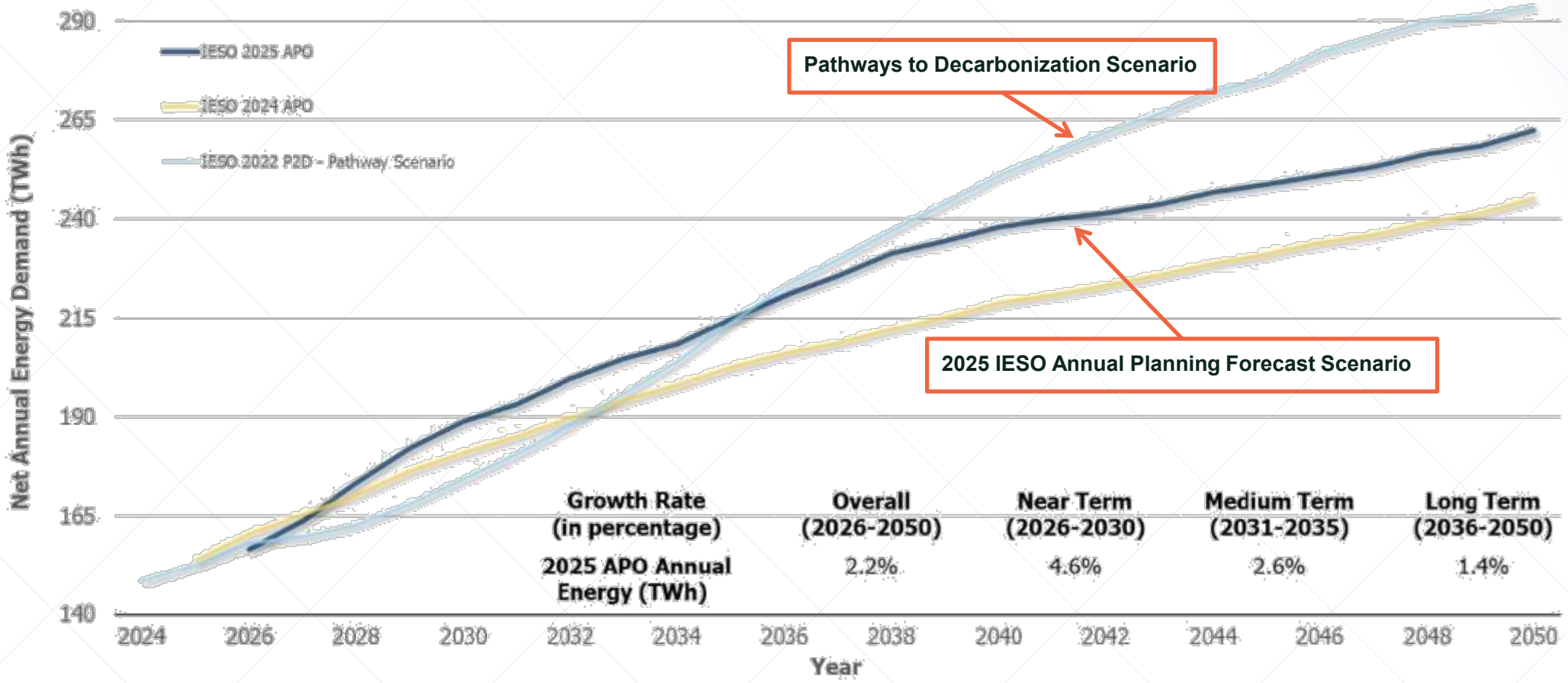
  90 Y Yttrium **Yttrium-90 (Y-90)**, used to treat liver cancer and other large inoperable cancers

  177 Lu Lutetium **Lutetium-177 (Lu-177),** used in targeted radionuclide therapy to treat neuroendocrine tumors and prostate cancer

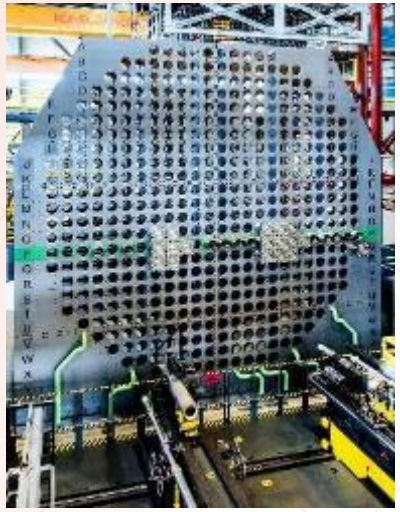
- Laurentis is exploring the production of other isotopes, using its Target Delivery System (TDS) installed at the Darlington NGS, in addition to other irradiation sources.

Ontario's energy growth

IESO 2025 Annual Planning Outlook now forecasting a 75% increase in energy demand by 2050 in Ontario.



New nuclear market segments

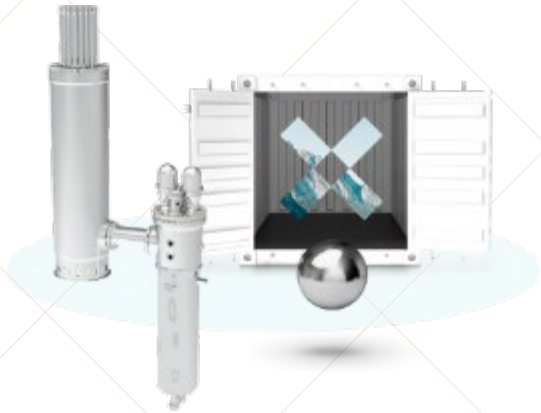


Large nuclear

- >600 Mwe
- Large scale, baseload energy
- Established supply chain

On-grid SMRs

- 150 to 300 Mwe
- Baseload power
- Displace carbon emitting generation
- Deployment in 2020s



Advanced reactors

- 10 to 150 Mwe
- Heavy industrial applications (e.g., mining, oilsands)
- Deployment mid-2030s

Off-grid SMRs

- 1 to 10 MWe
- Remote industrial and off-grid communities
- Development in the 2020s

Darlington Refurbishment Project

- One of Canada's largest clean energy projects
- $12.8-billion overhaul
- 30+ years of clean, reliable power
- Darlington is one of the world's top-performing nuclear stations
- It provides about 20% of Ontario's electricity

OPG has demonstrated it can change the narrative on large nuclear projects

OPG

Refurbishment support in Romania

- Laurentis has strategically enhanced its relationship with Societatea Nationala Nuclearelectrica (SNN) over the past five years
- Through its European subsidiary CNPSA, announced activities supporting the SNN refurbishment of Cernavoda Unit 1 (C-1) include:
  - $4.8M contract for Conservation Program to protect the integrity of SNN's Unit 1 water systems during refurbishment (Feb 2021)
  - Owner's Engineer contract for refurbishment technical assistance, planning, cost estimates, plant-condition assessments, and more (Aug 2021)
  - Three- to six-month on-site training of C-1 Refurbishment staff, supported by the Darlington Refurbishment project (2022-23)
  - Signed a long-term, ~$400M Framework Agreement to provide project management organization services for the preparation and implementation of the C-1 refurbishment (July 2024)

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Darlington New Nuclear Project

Darlington New Nuclear Project site
July 2024

BIG things start small.

Building a BWRX-300 at the Darlington Site

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

OPG selected GE-Hitachi Nuclear Energy's BWRX-300 Small Modular Reactor Technology in Dec. 2021.

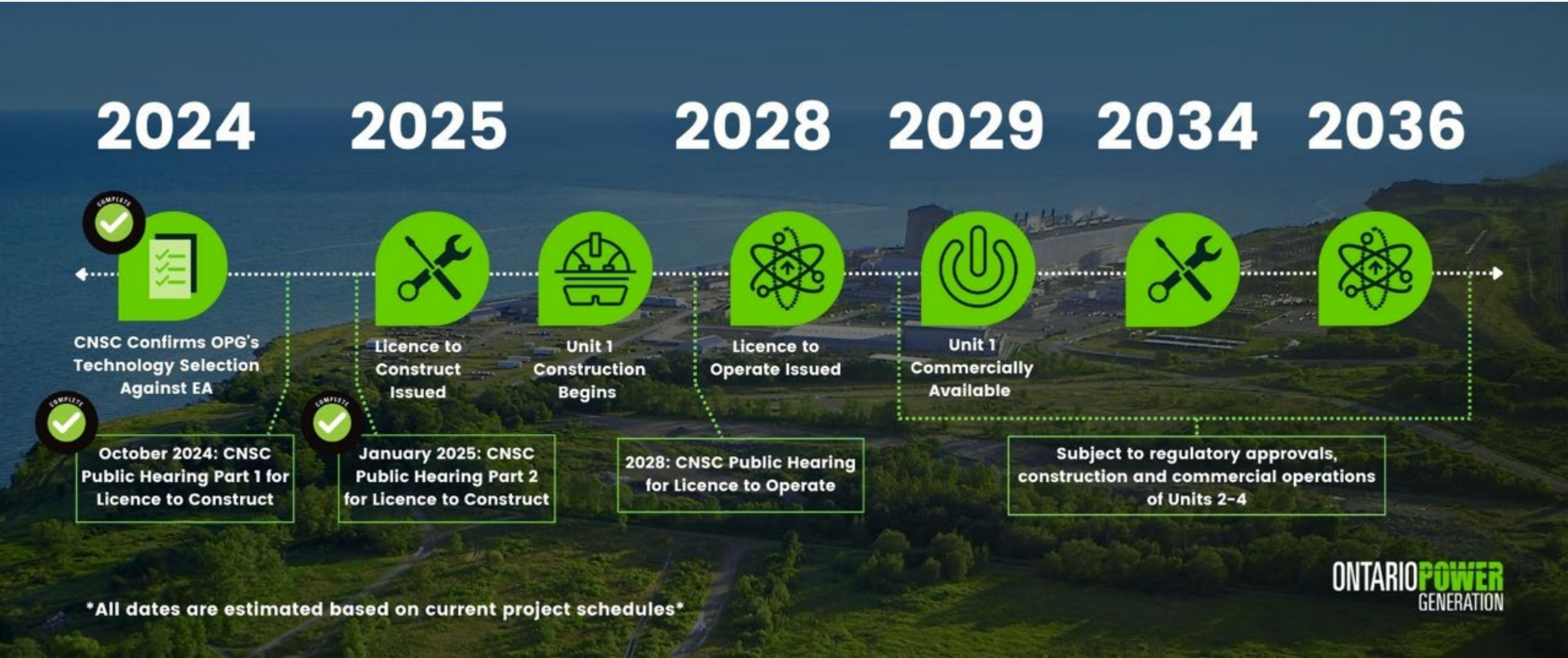
Project partners announced: OPG, GE-Hitachi, AtkinsRéalis and Aecon.

Site preparation activities are underway at Darlington with main construction activities scheduled to begin in 2025. CNSC issued a construction licence to OPG on April 5, 2025.

SMRs are not the thing of the future, but the thing of the present

Darlington New Nuclear Roadmap

BIG things start **small**.



A Fleet Approach

OPG is planning for four SMRs
at the Darlington site.

Four units would produce a total 1,200 MW, equivalent to **powering 1.2 million homes**.

Multiple units will allow common infrastructure to be shared across units, further **reducing cost**.

Pending regulatory approvals by CNSC, additional SMRs could come **online between 2034 and 2036**.

Ontario's **robust nuclear supply chain** is uniquely positioned to support SMR development and deployment in Ontario, Canada and globally.

Economic Benefits of Four SMRs

A 2023 Conference Board of Canada study

Contribute approximately **$15.3 billion to Canada's GDP or $13.7 billion to Ontario's GDP**

It will create and sustain **2,000 jobs** each year in Canada over the next 65 years.

Project will also generate **$4.9 billion in tax revenues** to municipal, provincial and federal governments over 65 years.

Ontario will reap **89 per cent of the economic benefit**

Can share common infrastructure like cooling water intake over four units, **reducing overall project costs**.

The Conference Board of Canada

Integrated Project Delivery Model

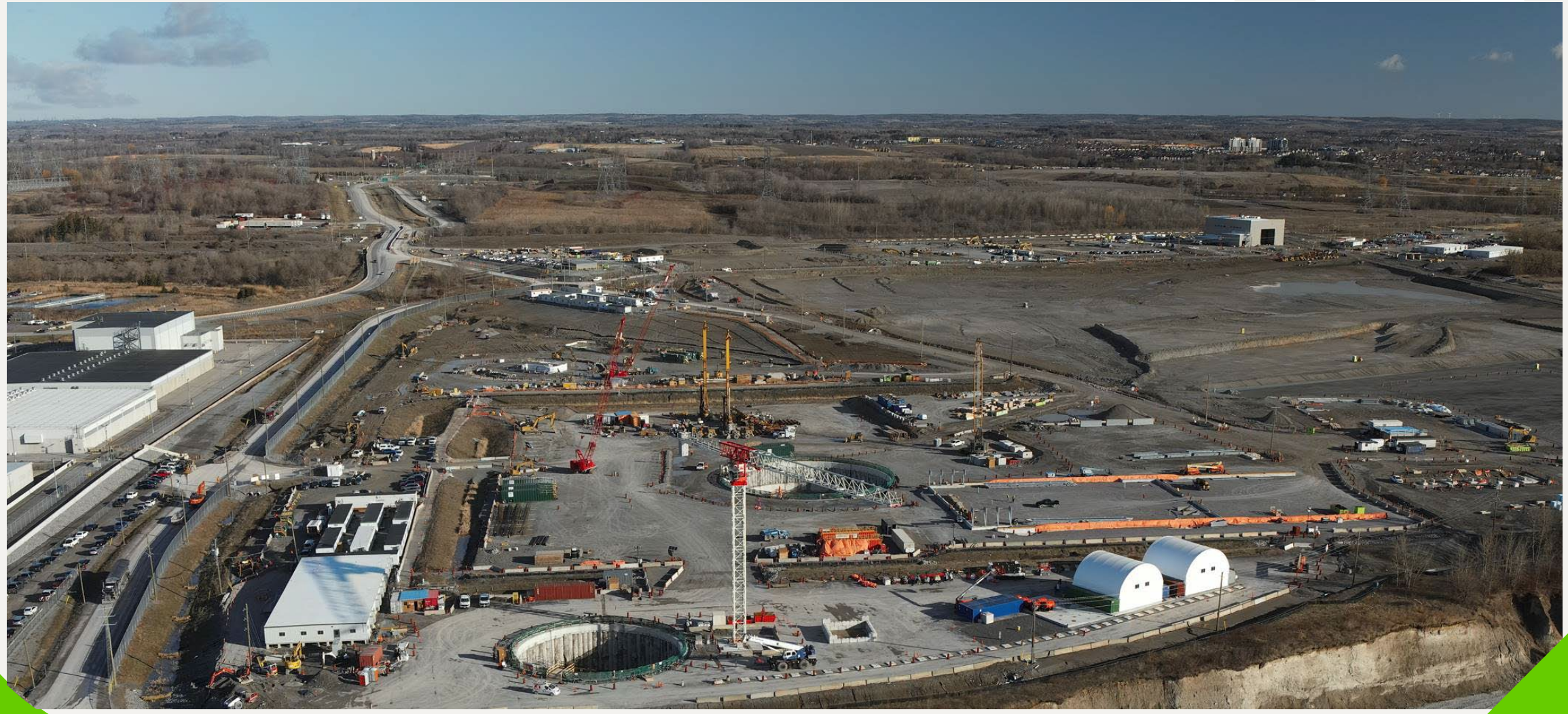
Darlington New Nuclear Project

Owner and Licence Holder	Architect Engineer	Technology Developer	Constructor
ONTARIO POWER GENERATION	AtkinsRéalis	GE HITACHI	AECON

Why the Integrated Project Delivery (IPD) model?

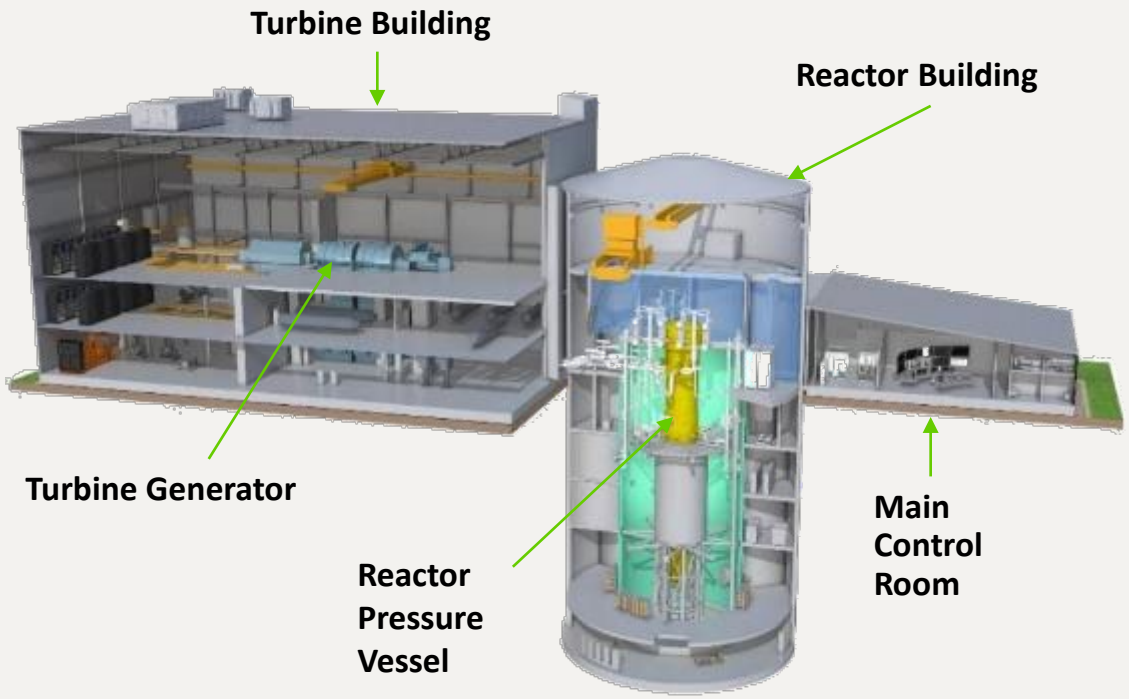
One team approach was a success on Darlington Refurbishment project	Integrates people, systems, business structures and practices	Joint management and collaborative decision making to achieve goals	Unique cost and profit structures to promote teamwork

DNNP progress (April 2025)



Technology Overview

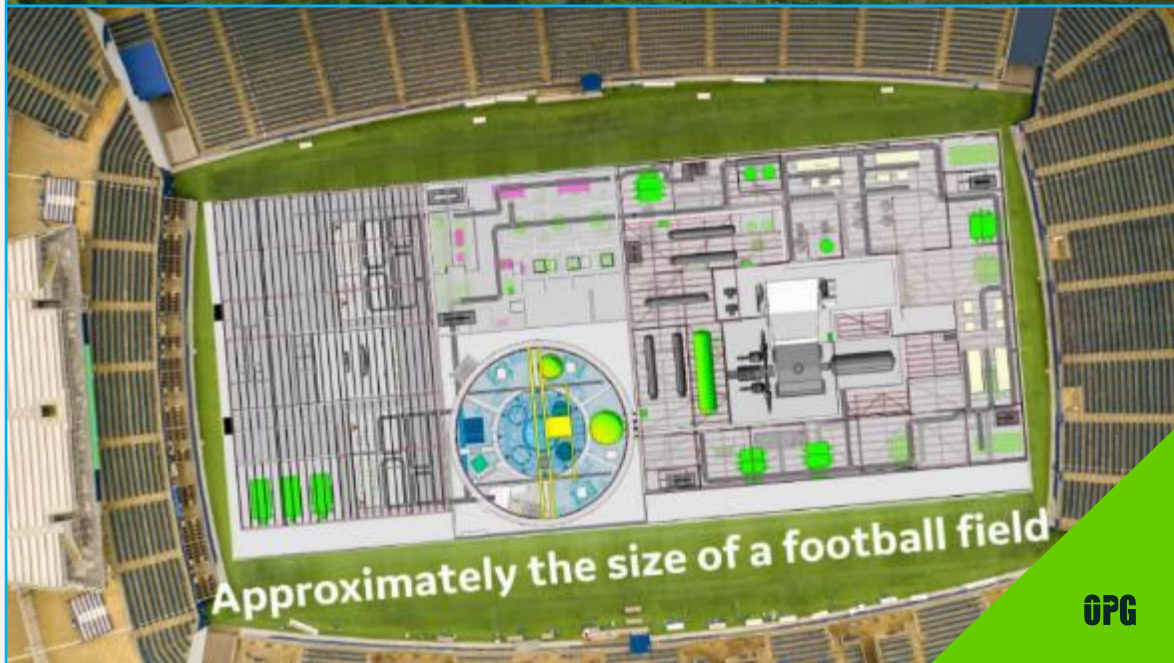
GE Hitachi: *BWRX-300*



Designed for a 60-year operational life

~300 megawatts, which is enough to power 300,000 homes

Boiling water reactor using natural circulation



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

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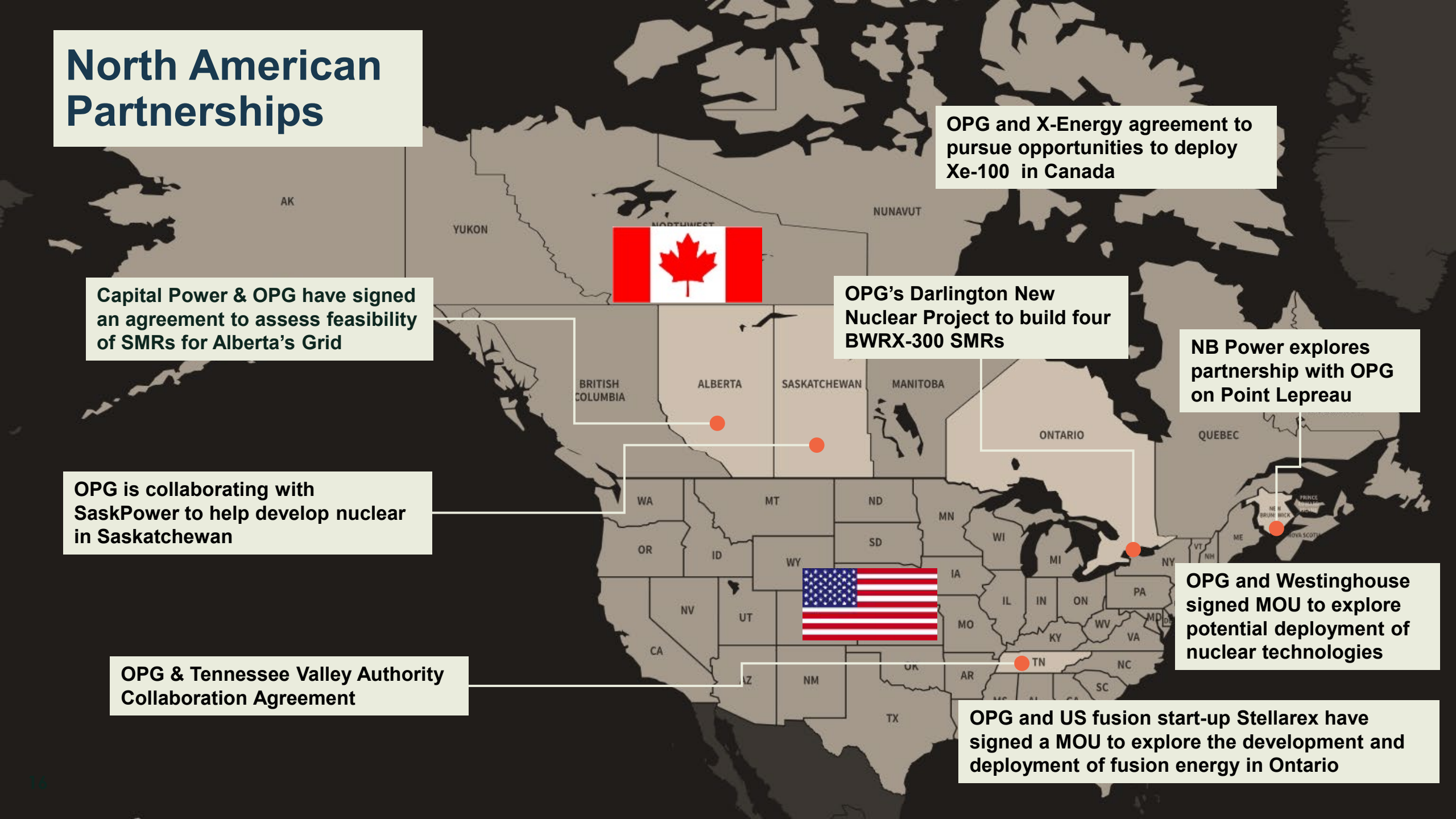
North American Partnerships



Capital Power & OPG have signed an agreement to assess feasibility of SMRs for Alberta's Grid

OPG is collaborating with SaskPower to help develop nuclear in Saskatchewan

OPG & Tennessee Valley Authority Collaboration Agreement

OPG and X-Energy agreement to pursue opportunities to deploy Xe-100 in Canada

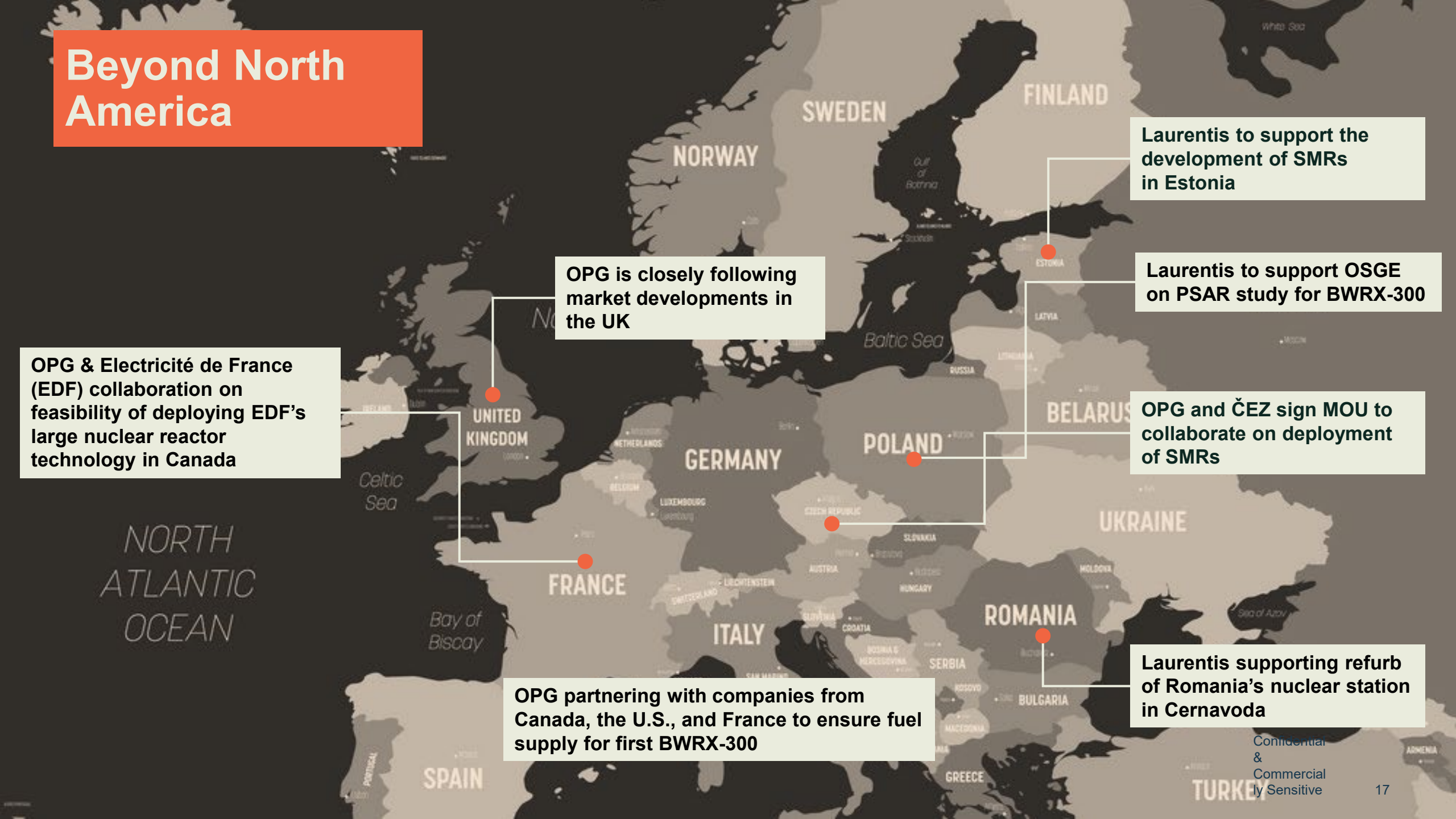
OPG's Darlington New Nuclear Project to build four BWRX-300 SMRs

NB Power explores partnership with OPG on Point Lepreau

OPG and Westinghouse signed MOU to explore potential deployment of nuclear technologies

OPG and US fusion start-up Stellarex have signed a MOU to explore the development and deployment of fusion energy in Ontario

Beyond North America



Laurentis to support the development of SMRs in Estonia

Laurentis to support OSGE on PSAR study for BWRX-300

OPG is closely following market developments in the UK

OPG & Electricité de France (EDF) collaboration on feasibility of deploying EDF's large nuclear reactor technology in Canada

OPG and ČEZ sign MOU to collaborate on deployment of SMRs

Laurentis supporting refurb of Romania's nuclear station in Cernavoda

OPG partnering with companies from Canada, the U.S., and France to ensure fuel supply for first BWRX-300

New nuclear services

- Laurentis offers new nuclear services that leverage OPG's decades of experience and project management expertise to deliver:
  - Solutions that cover the full nuclear lifecycle
  - Proven nuclear expertise that lowers risk and reduces lead times
  - Quality, on-time, on-budget delivery that fosters public trust
  - Expertise in board, government, and shareholder engagement
- Collaboration agreement with Fermi Energia to develop SMRs in Estonia (April 2022)
- MSA with Orlen Synthos Green Energy (OSGE) for SMR development in Poland (April 2023)
- MOU with SaskPower to explore SMR deployment (July 2023)
- Agreement with OSGE to support preliminary work for SMR development in Poland (November 2024)

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Questions?

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Thank you.