Ontario Power Generation

Sean Granville
Chief Operations Officer & Chief Nuclear Officer |Enterprise Operations

Subo Sinnathamby
Senior Vice President | Nuclear Refurbishment

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ONTARIO POWER GENERATION

Who we are

We are Ontario's largest clean power generator and clean technology innovator.

100% owned by the Province

18,876 MW generating capacity

More than 9,300 employees

Leading producer of nuclear isotopes

Our assets

We have one of the most diverse generating portfolios in North America.

66 hydro stations on 24 river systems

2 nuclear stations

2 leased nuclear stations (Bruce Power)

1 bio-mass station

1 dual-fueled oil and gas station

4 gas stations (Atura Power)

1 solar facility

85 US hydro stations

Our assets

2 — 6,612 MW — **Nuclear** Stations

2 — 6,430 MW — Leased **Nuclear** Stations

2 — 2,305 MW — **Thermal** Stations

1 — 44MW — **Solar** Facility

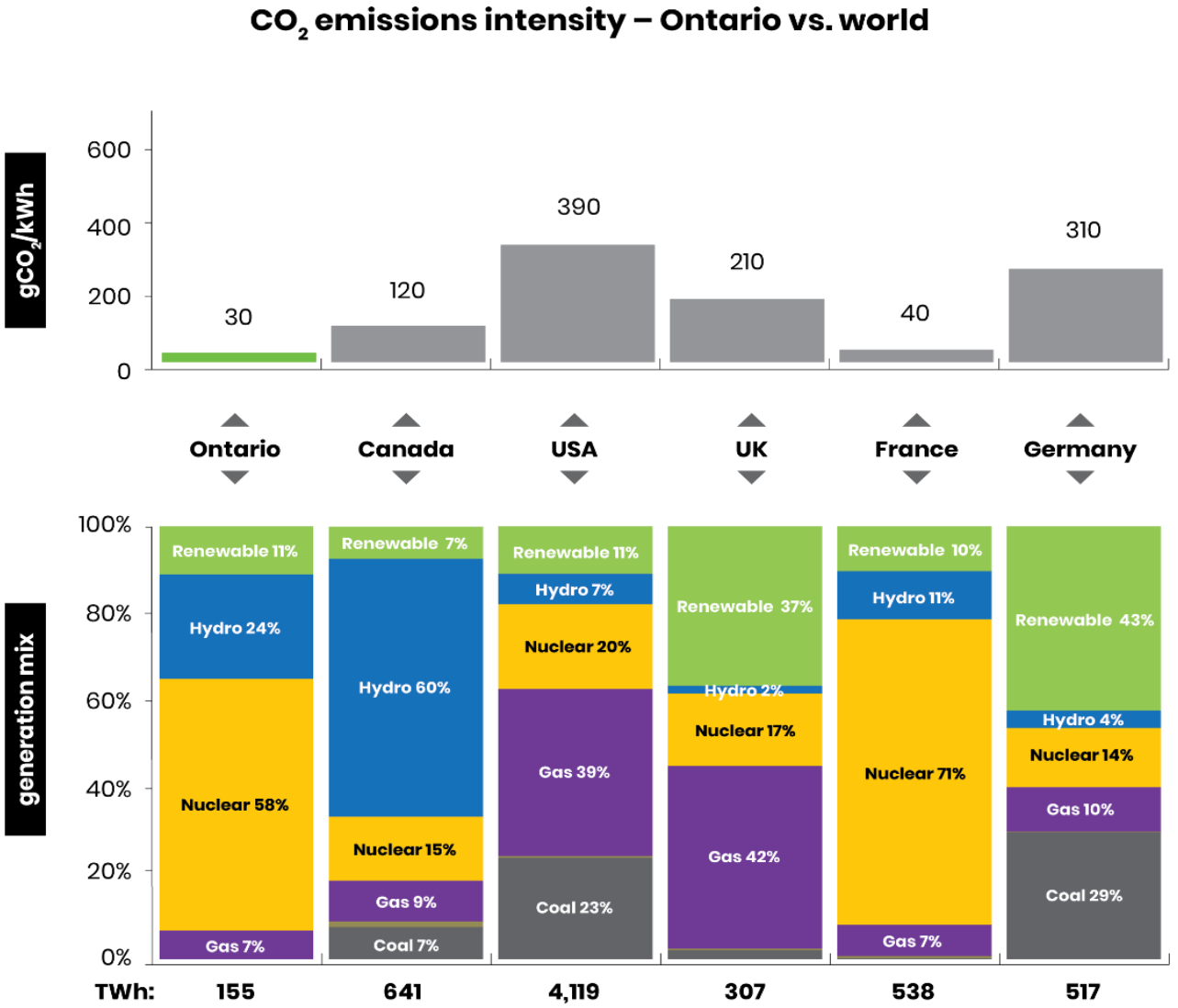
66 — 7,478 MW — **Canada Hydroelectric** Stations

86 — 640 MW — **US Eagle Creek Renewable Energy Hydro** Stations

4 — 2,715 MW — **Atura Power Gas-Fired** Stations

Setting a global example

Globally, Ontario's electricity sector ranks among the best from a carbon intensity perspective when compared to other progressive jurisdictions.



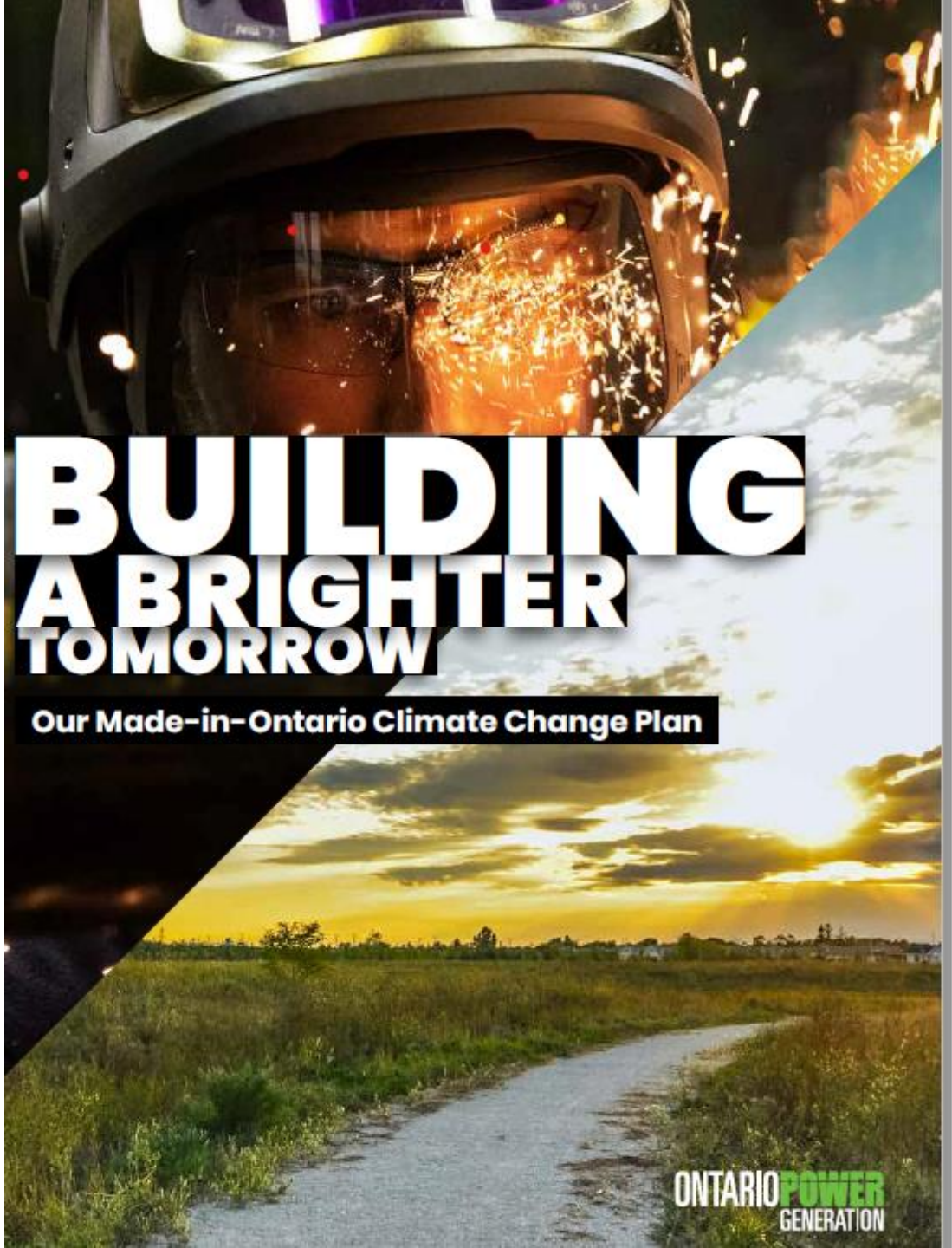
Notes:

- Based on actual 2019 generation for Ontario, USA, UK, France & Germany, and 2018 generation for Canada.
- CO_2 emissions intensity estimates are for in-region generation only; CO_2 from imports and life-cycle emissions are not included.
- Renewable excludes hydro and includes wind, solar, biofuels and geothermal; small brown portion is oil.
- CO_2 emissions intensity estimates calculated assuming emissions of 450 gCO_2e/kWh for gas, 800 gCO_2/kWh for oil and 900 g/KWh for coal .

Our climate goals

A net-zero carbon company by 2040

A catalyst for a net-zero carbon economy by 2050



Key initiatives

Development of small modular reactors.

Advancing electrification initiatives in the province.

Exploring hydrogen clean fuel applications.

Continued investment in our hydroelectric generation.

Focus on adaptation and resiliency of our assets.

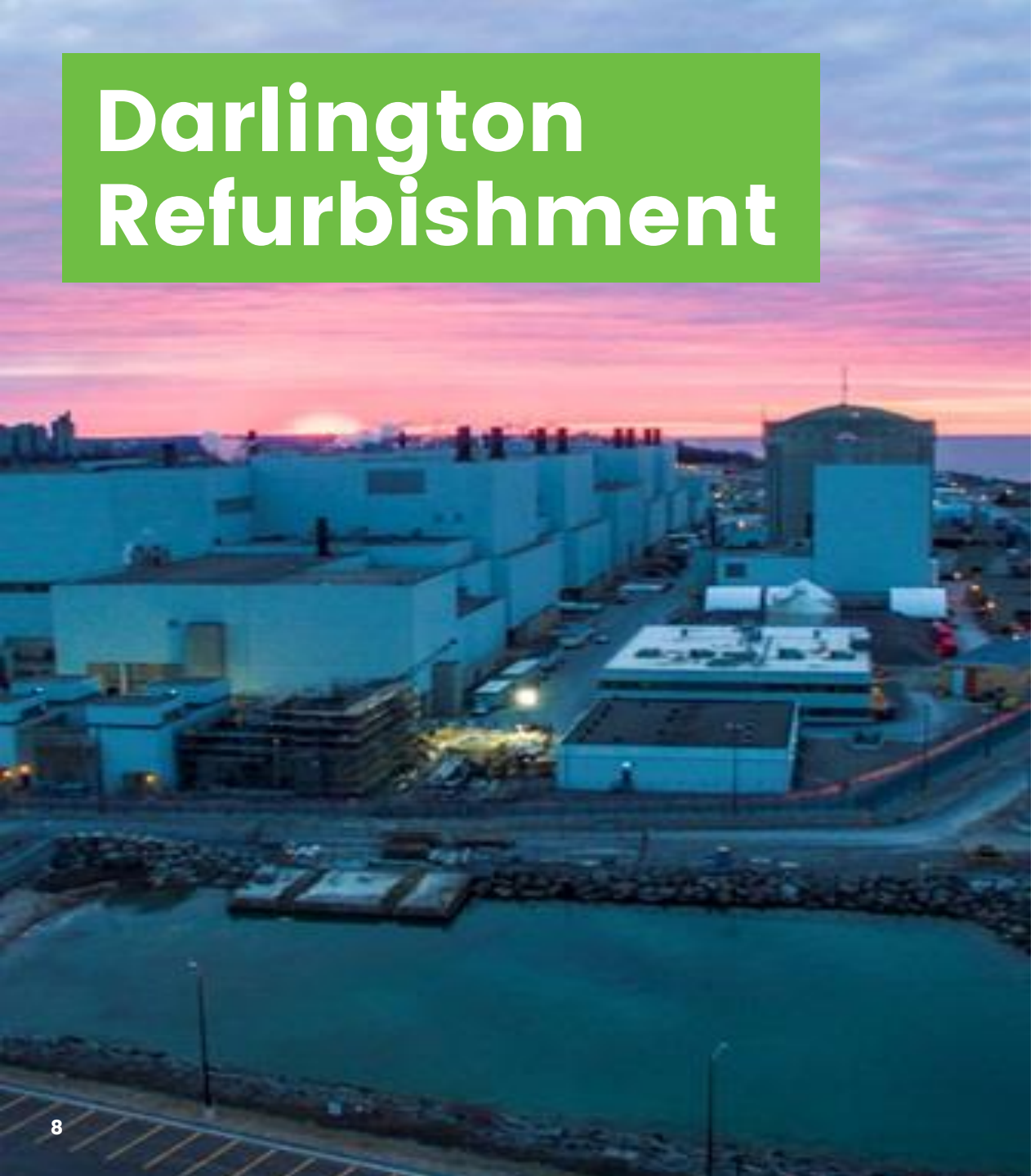
Exploring opportunities in non-hydro renewables and energy storage.

Investigating negative emissions technologies.

Supporting nature-based solutions and biodiversity initiatives.

All enabled by **Darlington Nuclear Refurbishment.**

Darlington Refurbishment

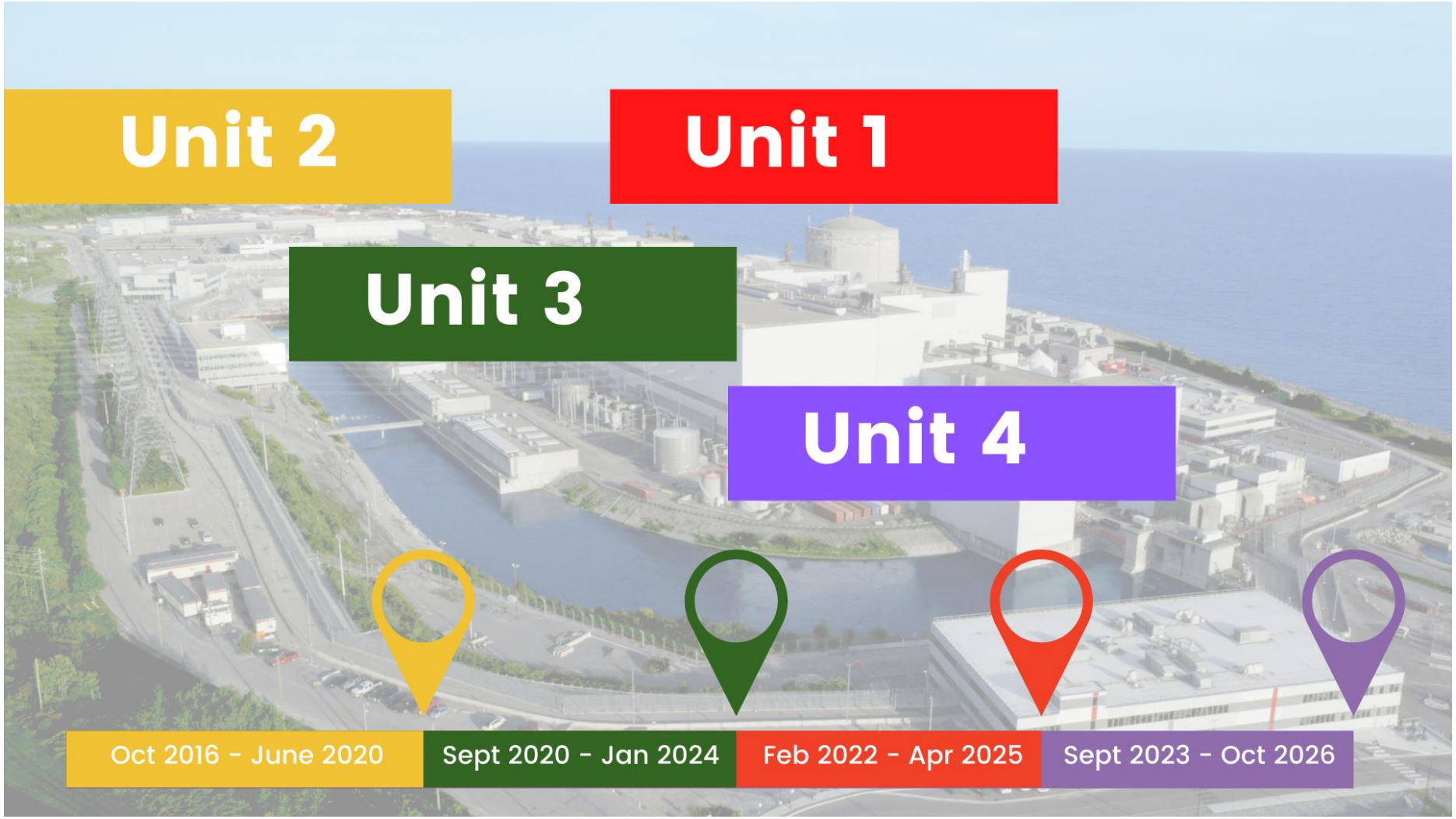


- **Darlington Nuclear Station placed in-service in the early 1990's and has provided over 25 years of clean, competitive, reliable power to the citizens of Ontario.**
  - Four Units: 3524 MW net Output
  - 20% of Ontario's Electricity – power for 2 million homes

- **Recognized internationally for excellent safety, equipment reliability, and operating performance.**

- **Darlington's design requires a mid-life refurbishment to allow for 30 or more years of ongoing operations. The time for Darlington is now.**
  - 20 year project – 10 planning, 10 execution
  - $12.8 Billion investment – 12,800 jobs; $89.9 Billion boost to Ontario's GDP

Darlington Refurbishment Schedule



Refurbishment Scope and Vendors

Defuel, Fuel Handling, Special

BWXT
BWX Technologies, Inc.

Retube and Feeder Replacement

SNC·LAVALIN Nuclear
AECON Joint Venture

Turbine / Generator

GE
SNC·LAVALIN Nuclear
AECON Joint Venture

Steam Generators

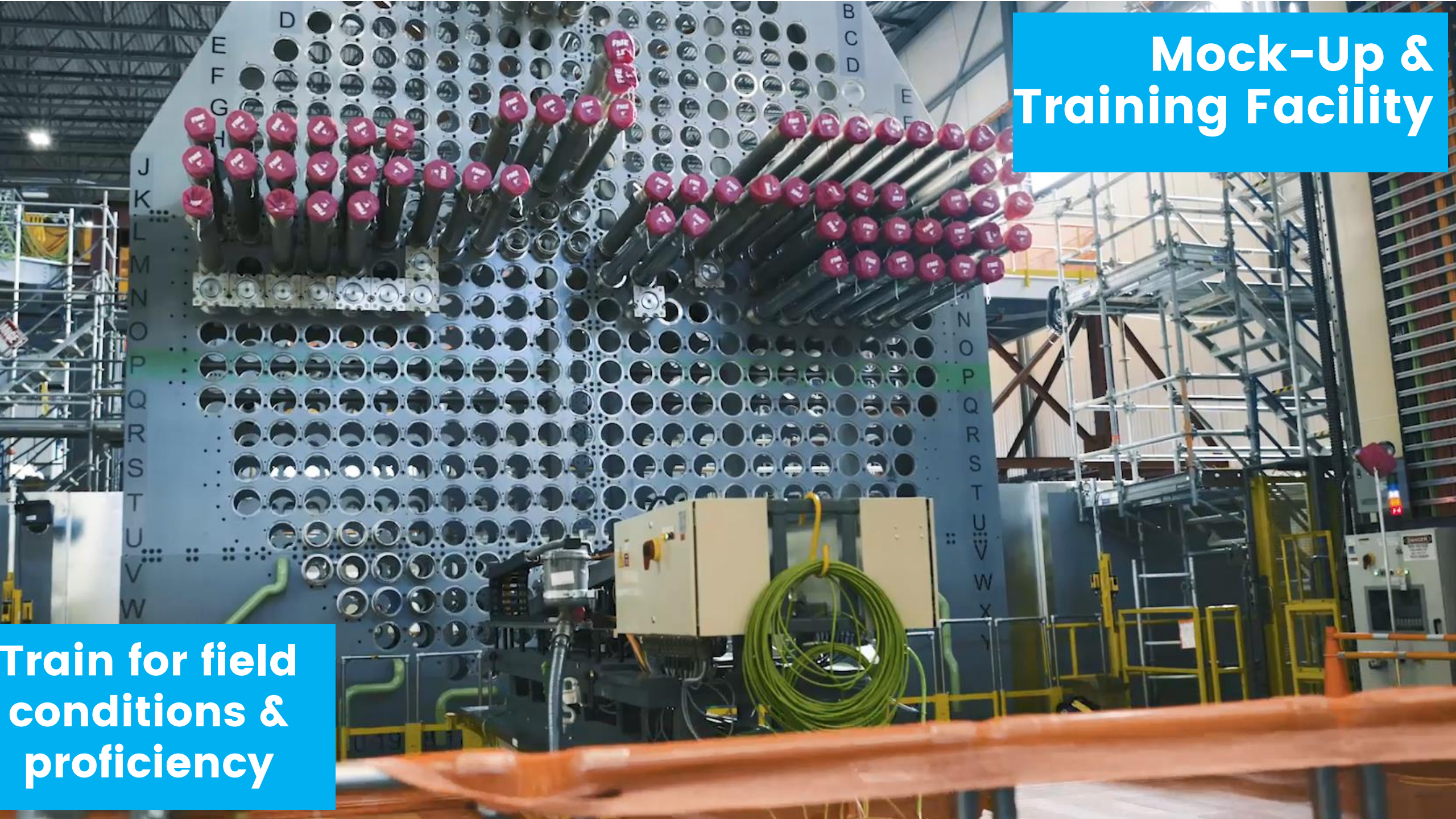
BWXT
BWX Technologies, Inc.

Balance of Plant

FOX E.S. LTD. CONSTRUCTORS

Cyclic Outage

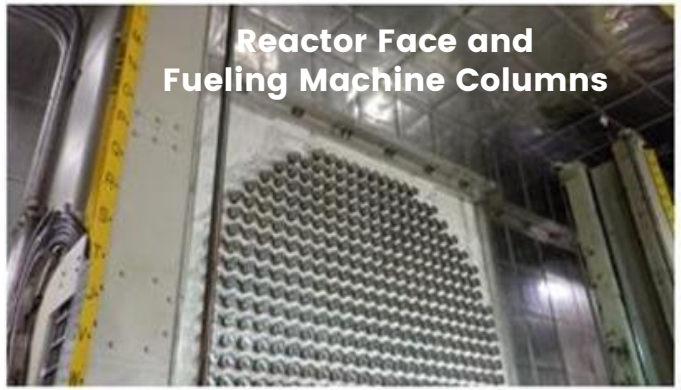
Black & McDonald



Mock-Up & Training Facility

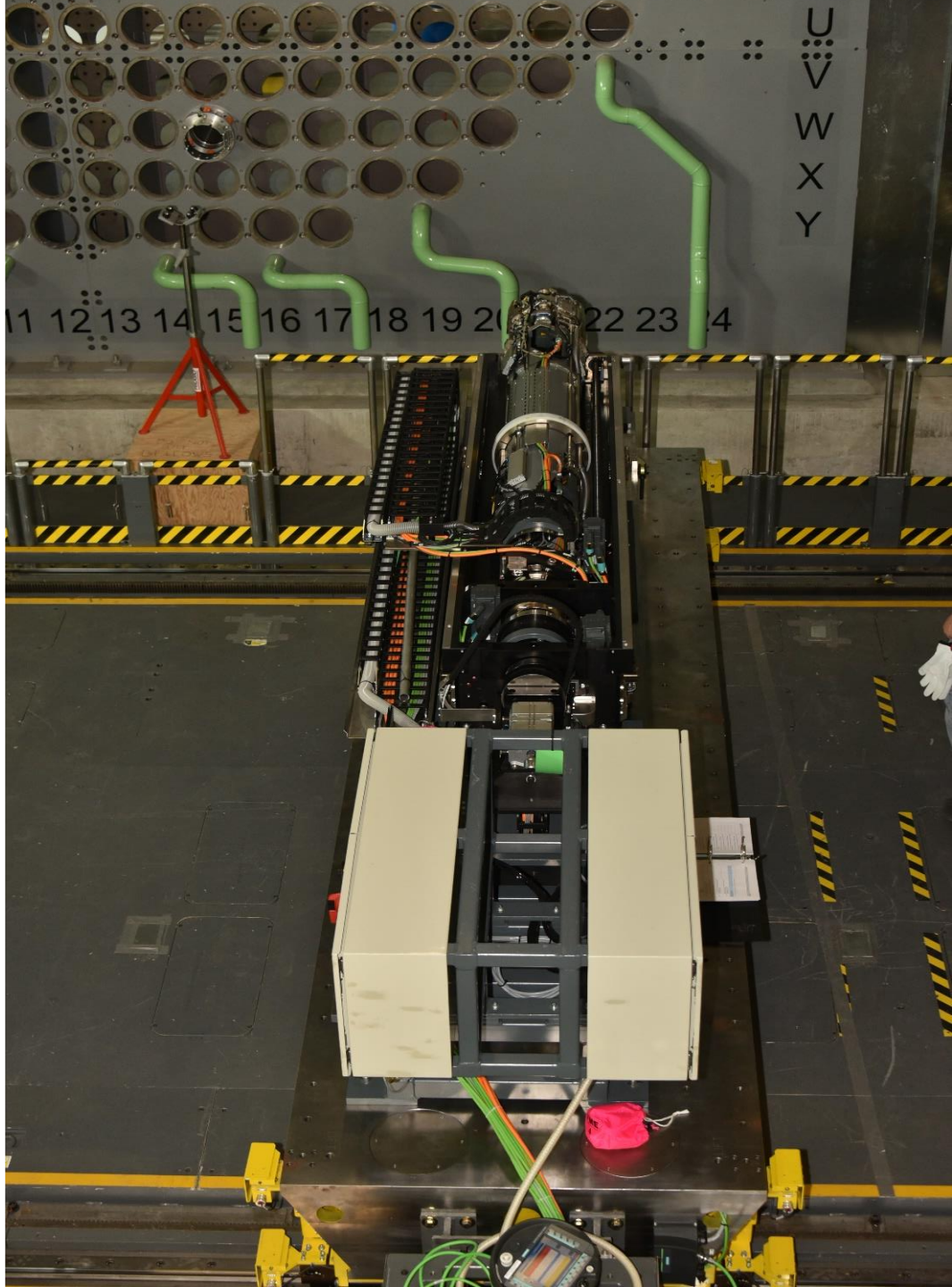
Train for field conditions & proficiency

Unit 2 Reactor Vault



Lessons Learned

- Over 4,000 lessons learned from the knowledge and experience gained on Unit 2 planning and execution
- Lessons learned built into plans for Unit 3, **including:**
  1. Industrial Safety and Radiological Practices
  2. Tooling changes/upgrades
  3. Critical task training
  4. LEAN/Kaizen process improvements
  5. Work stream optimization and organizational alignment
  6. OneTeam culture advancements



OneTEAM

- Success reliant on vendor partners and construction trade unions
- ~ 2,000 trades required to support the remaining Refurbishment activities for Units 3, 1, & 4

AECON

SNC·LAVALIN

FOX E.S. LTD. CONSTRUCTORS

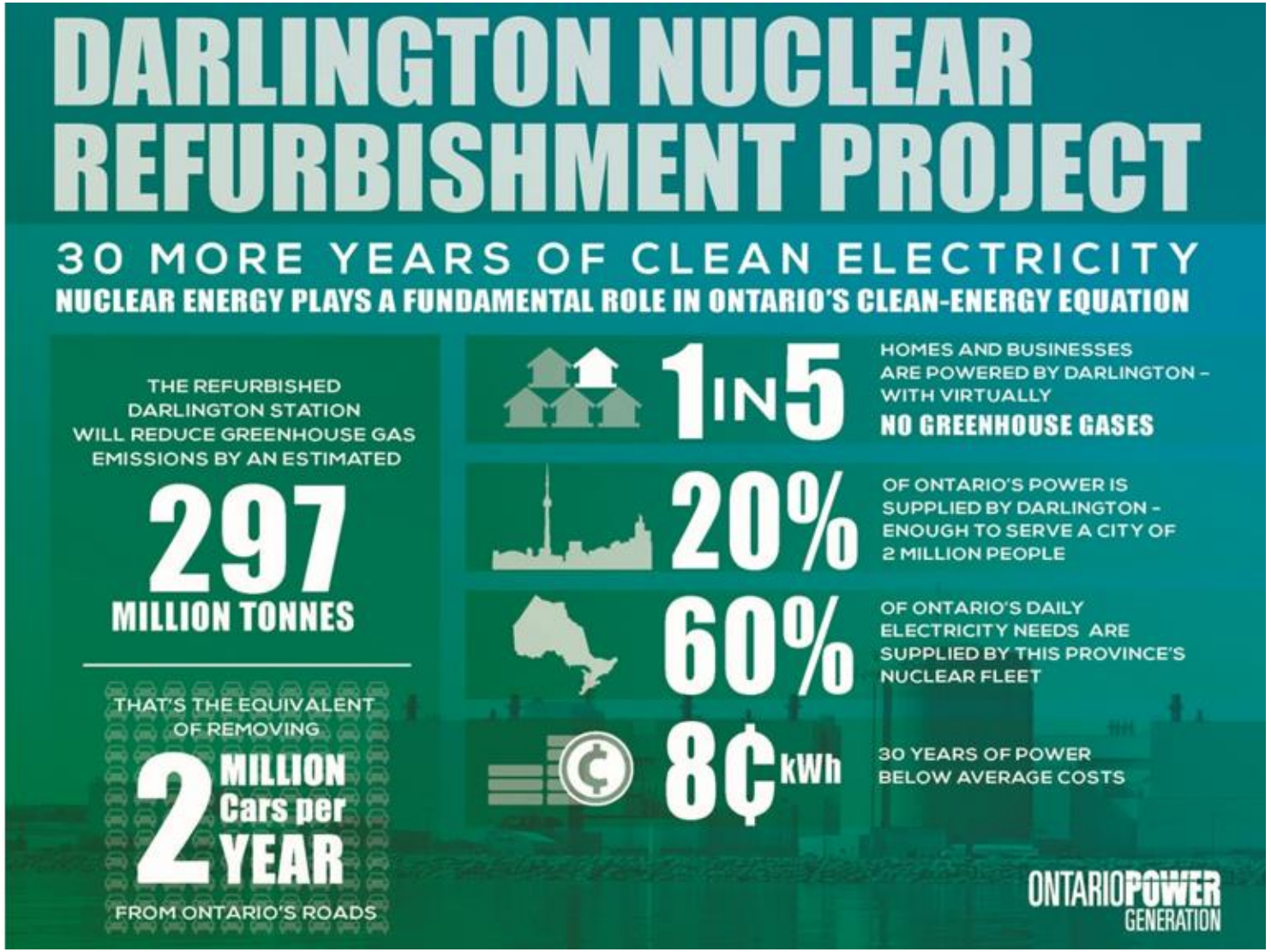
Black & McDonald

BWXT

Unit 3

- Unit 3 Refurbishment started September 3, 2020
- Safety continues to be our top priority - COVID-19 measures are in place to protect staff and workers
- Lessons Learned from Unit 2 are providing value to Unit 3:
  - Defueling of Unit 3 and containment isolated
  - Currently in the removal phase
  - On day 200 of the project, ahead of plan
- Planning for Unit 1 and 4 is underway with Unit 1 scheduled to commence its Refurbishment on Feb. 15, 2022.

Darlington Refurbishment



Darlington Nuclear
for the Future

Ontario Power Generation

Creating a Stronger, Cleaner, and More Prosperous Future for all of Ontario

- Province's largest clean power generator and clean tech innovator
- A diverse mix of generating sources, which includes nuclear, hydropower, thermal and solar
- Powering the future of the transportation sector through electrification
- Advancing new technologies, like small modular reactors, micro-grids and large-scale energy storage projects
- Helping to build the next generation of Ontario's skilled trades and technology workforce
- DNGS will produce isotopes (Mo-99 & Co-60) for the medical industry to help save lives
- By partnering with impactful organizations, OPG is investing in the future – today!

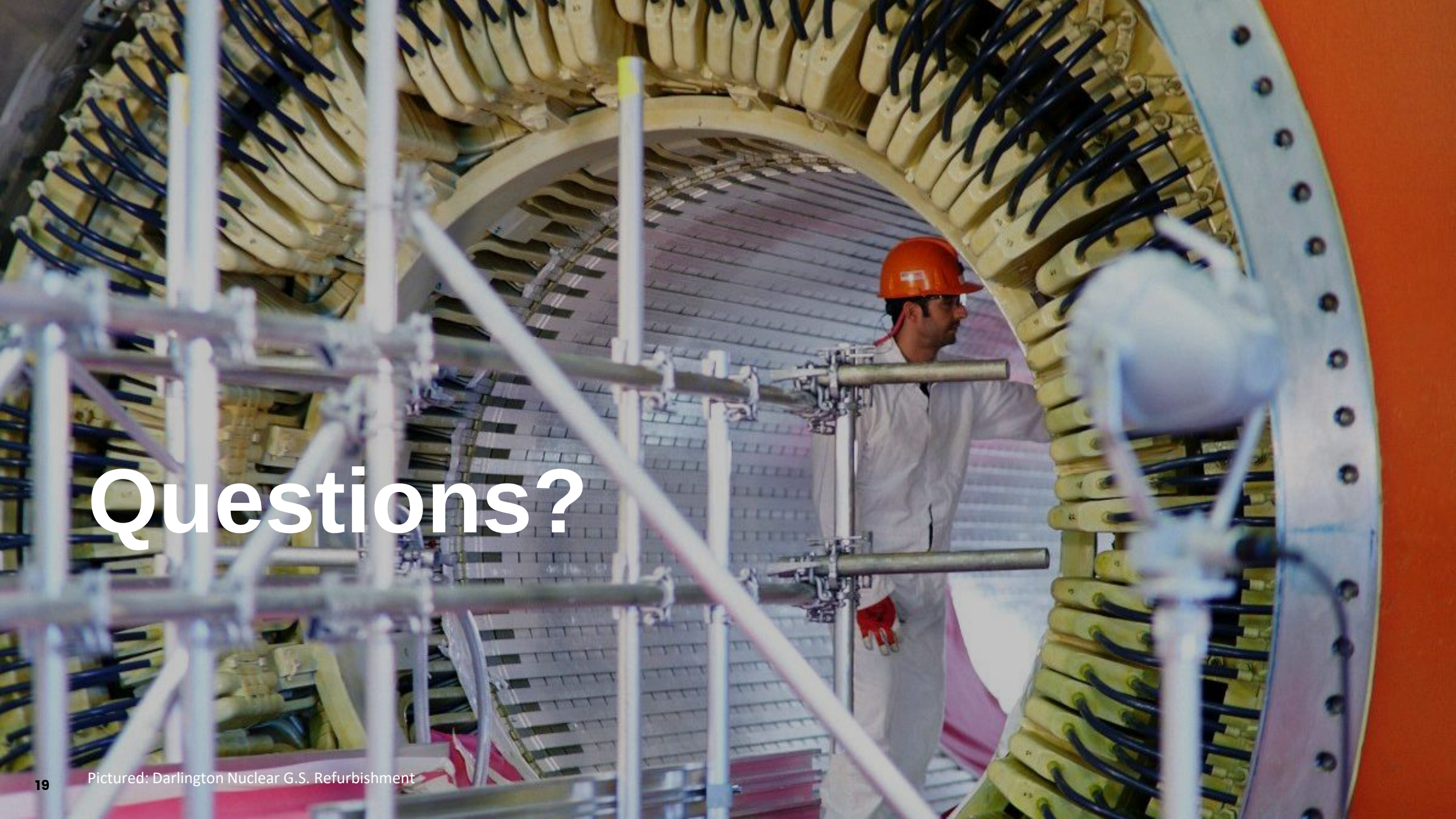
Reinvesting in Ontario

$15M In programs
To educate pool of skilled and qualified workers

2,000 Suppliers
Helping us build and modernize generating assets

$2B Yearly
In property, plants and equipment

$90B GDP boost
By investing in the Darlington Refurbishment



Questions?

Pictured: Darlington Nuclear G.S. Refurbishment

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