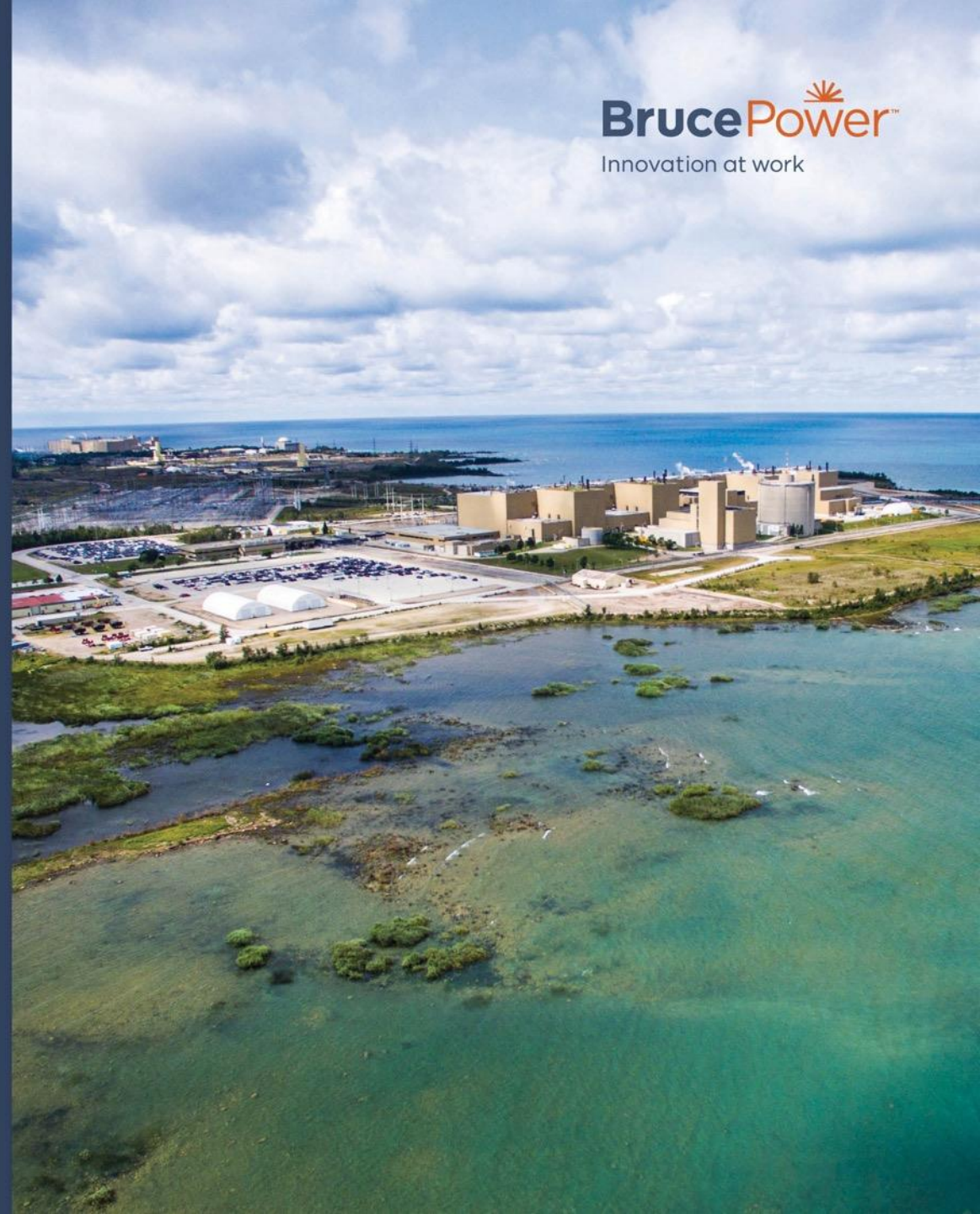


Progressive Partnerships in Action at Bruce Power

EnergySolutions Annual Conference

January 18, 2023

BrucePower™
Innovation at work

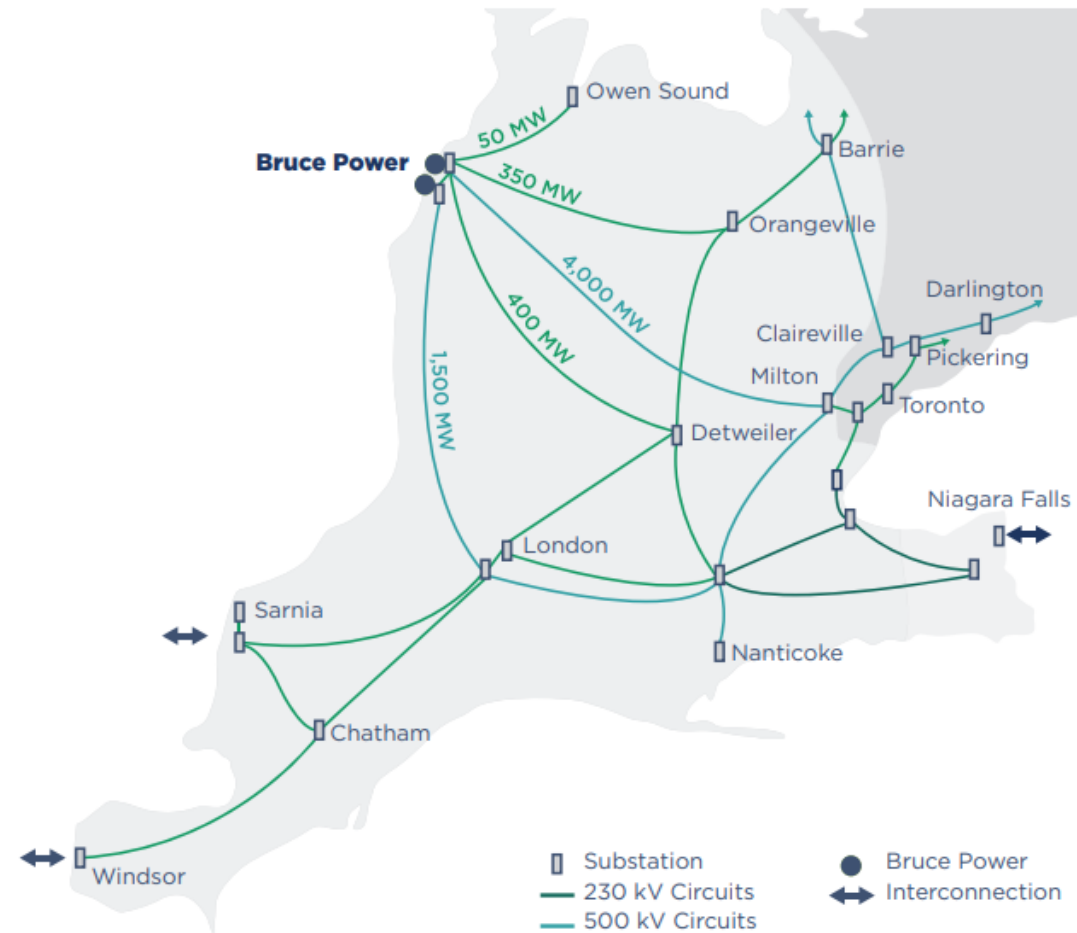




Bruce Power acknowledges and honours the fact that its site lies within the traditional treaty territory of the Saugeen Ojibway Nation and the traditional harvesting territory of the Métis Nation of Ontario (Region 7) and the Historic Saugeen Métis.

We continue to build relationships with our hosts as we work towards true reconciliation.

Situated on the shore of Lake Huron, Bruce Power provides nuclear power to one in three homes, hospitals, schools and businesses in Ontario and medical isotopes across the globe to keep medical equipment sterilized and assist in fighting disease.



Bruce Power

Canada's only private-sector nuclear generator, with a capacity of 6,550 MW and a key source of life-saving isotopes

Equivalent to the annual energy use of more than 5 million homes

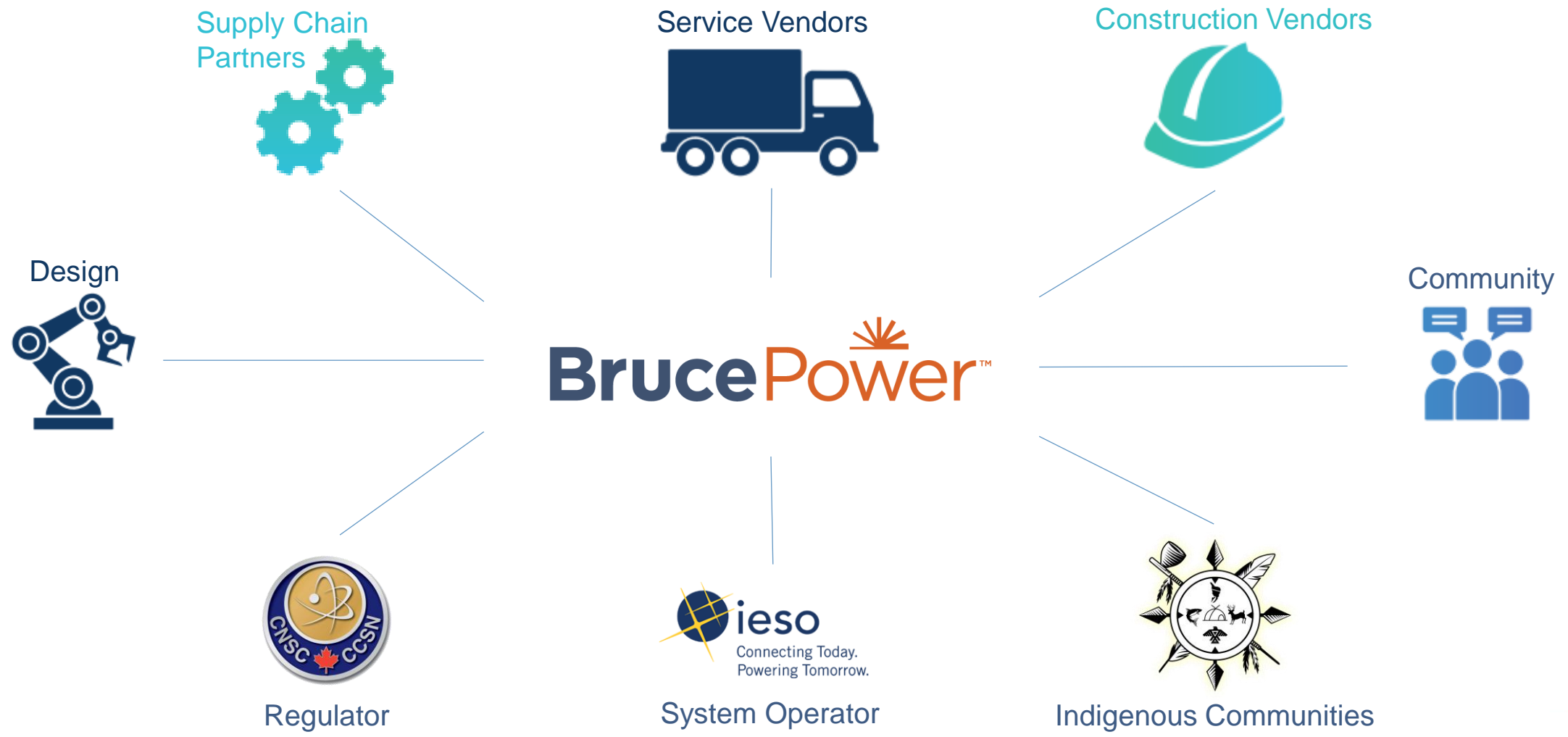
Long-term, reliable source of power

We generate 30% of Ontario's clean electricity



Bruce Power is Canada's largest Public Private Partnership

Progressive Partnerships in Action



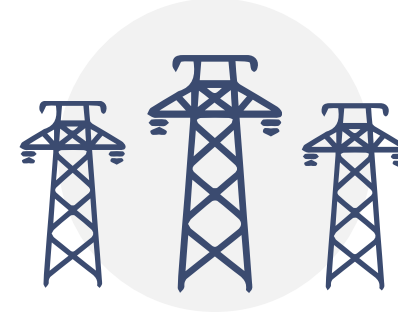
The Net Zero Challenge



The Government of Canada has committed to achieving **Net Zero carbon emissions by 2050** with 40% below 2005 levels by **2030**



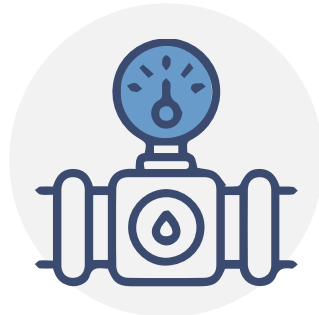
Demand from electrification
EVS and electrifying heavy industry; all new passenger car sales to be zero-emissions models by 2035



As Canada moves away from fossil fuels, **non-emitting energy sources must step up to meet demand.**
Net Zero grid by 2035



Emerging supply gaps
IESO has identified a gap in energy supply needed (capacity and reliability)

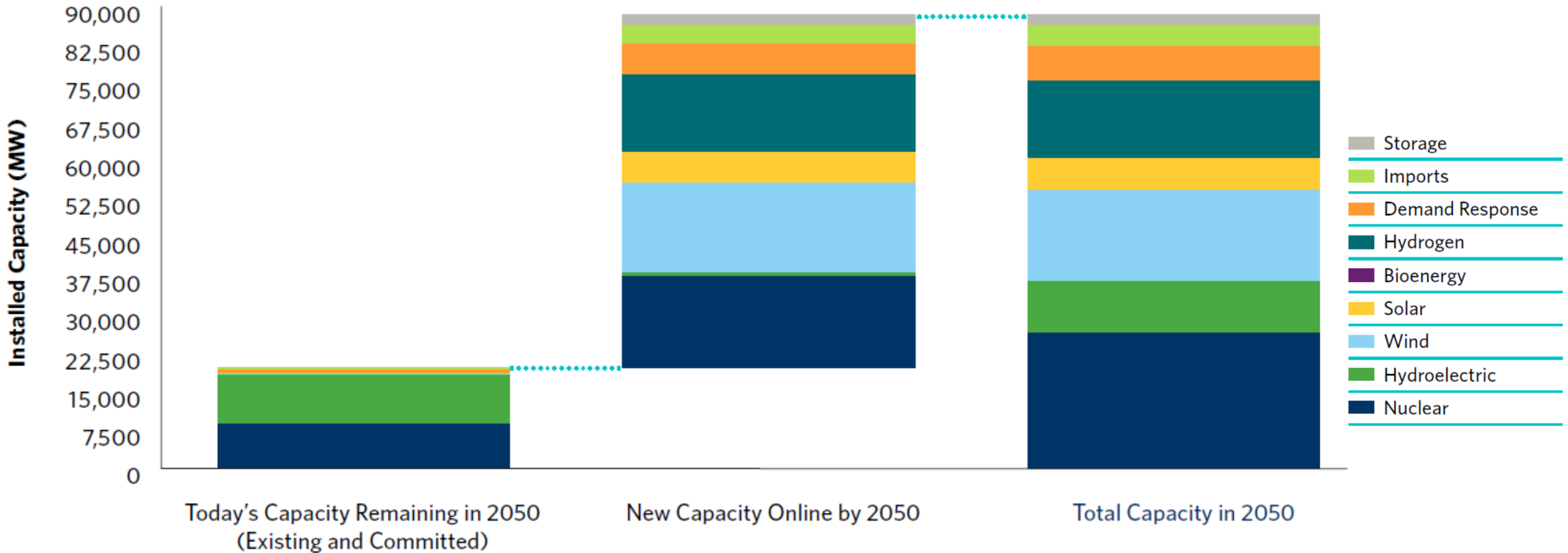


Existing natural gas fleet will be used to **replace output from Pickering** when it is retired



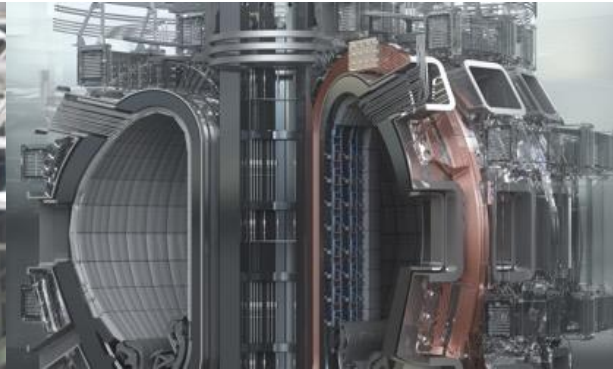
Optimizing existing assets
increased imports and some new builds will be needed in the coming decade

Ontario's Pathway to Decarbonization



Our 3-Part Plan

Bruce Power is responding to the 2050 Climate Action Challenge by maximizing production of our assets as follows:



Short Term

Unit 3-8 Life Extension & MCR
Project 2030: Increase Site Generation
Green Bond
Net Zero 2027

Long Term

New Nuclear Generation

Medical Isotopes

Bruce Power Initiatives to Support Net Zero by 2050

- Net Zero by 2027 Commitment
- Completing refurbishments (U3-U8) securing power to 2064
- Increasing Capacity of existing assets
 - Project 2030 → 700 net new MW
- Supporting OPG's Darlington nuclear project to construct, commission and deploy the BWRX300 reactor before 2030.
- Participating in industry groups to:
 - Drive change and efficiencies with regards to waste, fuel supply, licensing, regulatory reform
 - Government relations
- Working with Westinghouse on eVinci™ micro reactor.
- Mapping out the potential of our site for New Nuclear



Bruce Power positively impacts millions of people. Aside from providing carbon-free electricity for the consumers of Ontario, Bruce Power also benefits the world's health care system through the production of medical isotopes.



<p>58.933 27</p> <p>Co</p> <p>Cobalt-60</p>		
		<p>174.967 71</p> <p>Lu</p> <p>Lutetium-177</p>

Isotope partnerships

- Partnership with **Nordion** for the processing and distribution of **cobalt-60** to more than 40 countries
- Nordion is world's leading supplier of cobalt-60 sources for gamma processing
- Cobalt-60 is used to sterilize over 40% of the world's single-use medical equipment



COBALT-60

For over 35 years, Bruce Power has been a consistent, reliable source of cobalt-60 used for the sterilization of single-use medical devices and in the treatment of certain cancers.

Isotope partnerships

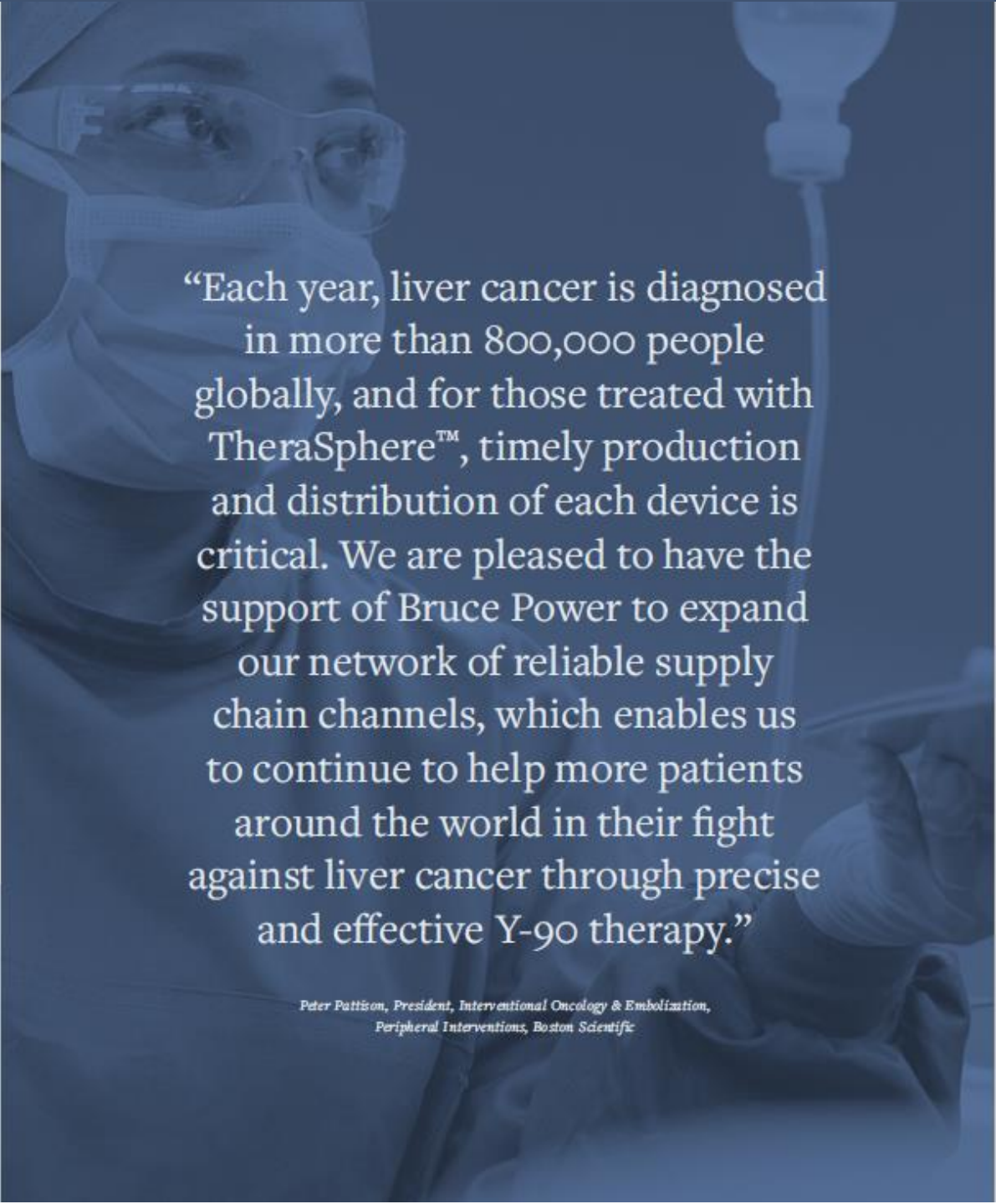
- **Historic partnership with Saugeen Ojibway Nation (SON)** to jointly market new isotopes in support of the global fight against cancer while creating new economic opportunities within the SON territory
- **Isotope Production System** – Partnerships with Isogen (a Kinectrics and Framatome company) and ITM Isotope Technologies Munich SE (ITM) to produce **lutetium-177**



Bruce Power's
Unit 7 is the first
commercial power
reactor in the world
with the capability to
produce short-lived
medical isotopes.

Isotope partnerships – what's next

- New Isotopes
 - Memorandum of Understanding (MOU) with **Boston Scientific**
 - Exploring feasibility of production **yttrium-90 (Y-90)** in Bruce Power reactors
- More Delivery Systems
 - Ramp up of Lu-177 demand



“Each year, liver cancer is diagnosed in more than 800,000 people globally, and for those treated with TheraSphere™, timely production and distribution of each device is critical. We are pleased to have the support of Bruce Power to expand our network of reliable supply chain channels, which enables us to continue to help more patients around the world in their fight against liver cancer through precise and effective Y-90 therapy.”

*Peter Pattison, President, Interventional Oncology & Embolization,
Peripheral Interventions, Boston Scientific*



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