



POWERING
the FUTURE

BrucePower
Innovation at work

BRUCE POWER

Formed in 2001, Bruce Power is an electricity company based in Bruce County in the Province of Ontario.

Our 4,200 employees are the foundation of our accomplishments and are proud of the role they play in safely delivering clean, reliable, low-cost nuclear power to families and businesses across the province.

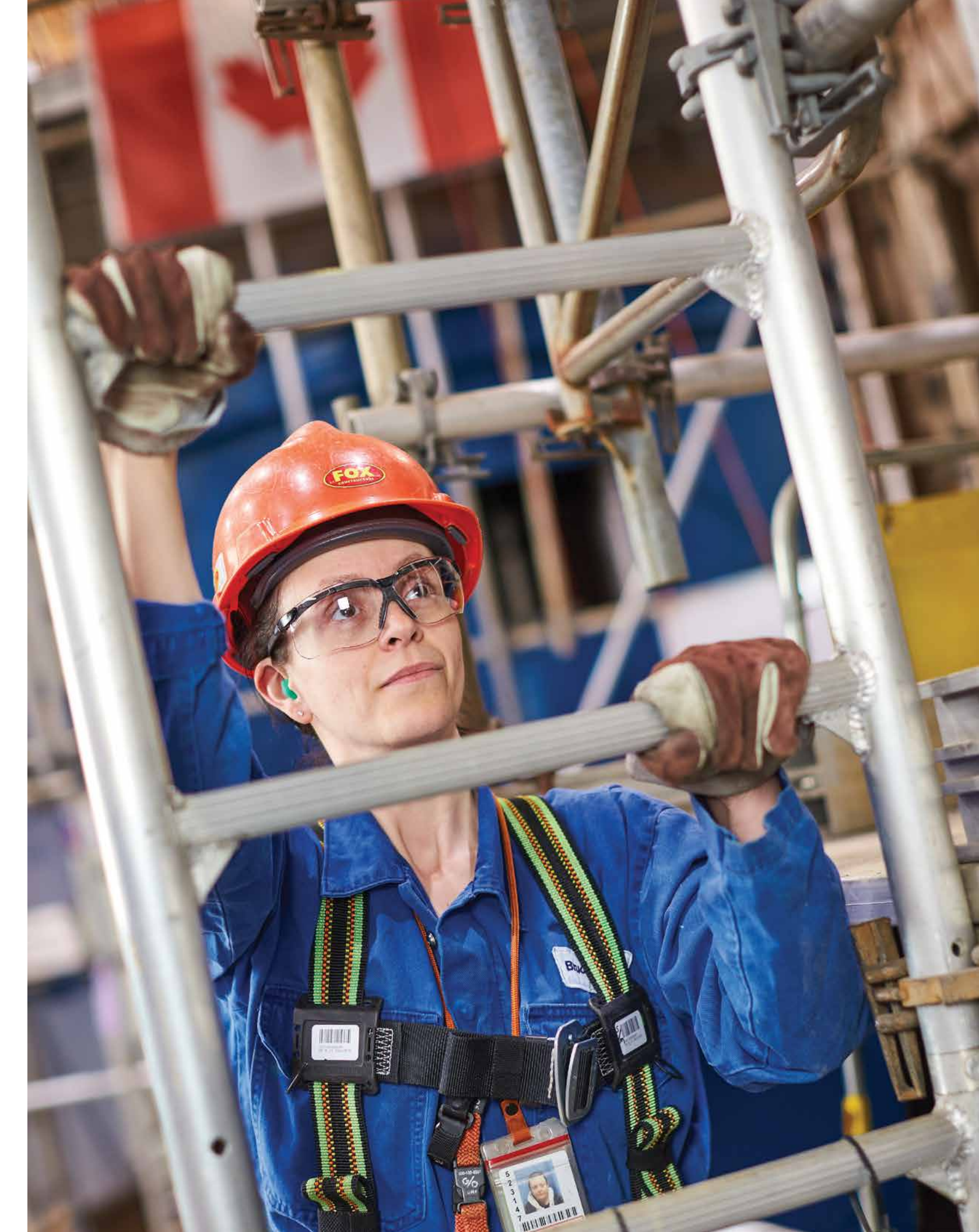
Bruce Power has worked hard to build strong roots in Ontario and is committed to protecting the environment and supporting the communities in which we live.



As we embark on the next phase of our Life-Extension Program I see tremendous opportunity for Bruce Power. We are uniquely positioned to help deliver the deep decarbonization needed for Ontario and Canada to reach their climate change goals while

reliably delivering power to homes at 30 per cent below the average cost. We are creating jobs, boosting the economy, and through innovation we continue to expand our medical isotope production to help save lives around the world.

Mike Rencheck
President and Chief Executive Officer



OUR FUTURE IS NUCLEAR

Bruce Power truly is powering the future. As we embark on the next phase of our Life-Extension Program with the launch of Major Component Replacement (MCR), we're ensuring a continued source of low-cost, zero-carbon, reliable electricity for Ontario's families and businesses. It's a destiny project and we're ready to deliver. We're creating thousands of jobs and economic opportunities for our communities. We're also preparing for the next generation as we move forward with the Nuclear Innovation Institute.

As the world wrestles with the reality of climate change, Ontario is an example of a jurisdiction that has reduced greenhouse gas emissions while maintaining a low-cost, reliable electricity supply. Over the past decade, greenhouse gas emissions in Ontario's electricity sector have been reduced by 80 per cent — thanks to nuclear.

We see great opportunity in powering the future of life-saving medical isotopes and ensuring Canada continues to be a leader in isotope production. As we look ahead, we see opportunity all around us and we're ready to seize it.



INVESTED IN ONTARIO'S FUTURE

Bruce Power is now four years into its 40-year Life-Extension Program, which will allow the company to provide carbon-free, cost-effective electricity through 2064. To do so, Bruce Power has signed an agreement with the province to refurbish six of its eight units, investing 13 billion private dollars into these publicly-owned assets. The Life-Extension Program will create and sustain 22,000 jobs annually while injecting \$4 billion into Ontario's economy each year.

13

billion dollars of private investment in Bruce Power's Life-Extension Program

6

units to be refurbished between now and 2033

4

billion dollars in annual Ontario economic benefit through direct and indirect spending

30

per cent of Ontario's electricity is produced by Bruce Power

30

per cent below the average cost to generate power for Ontario residents



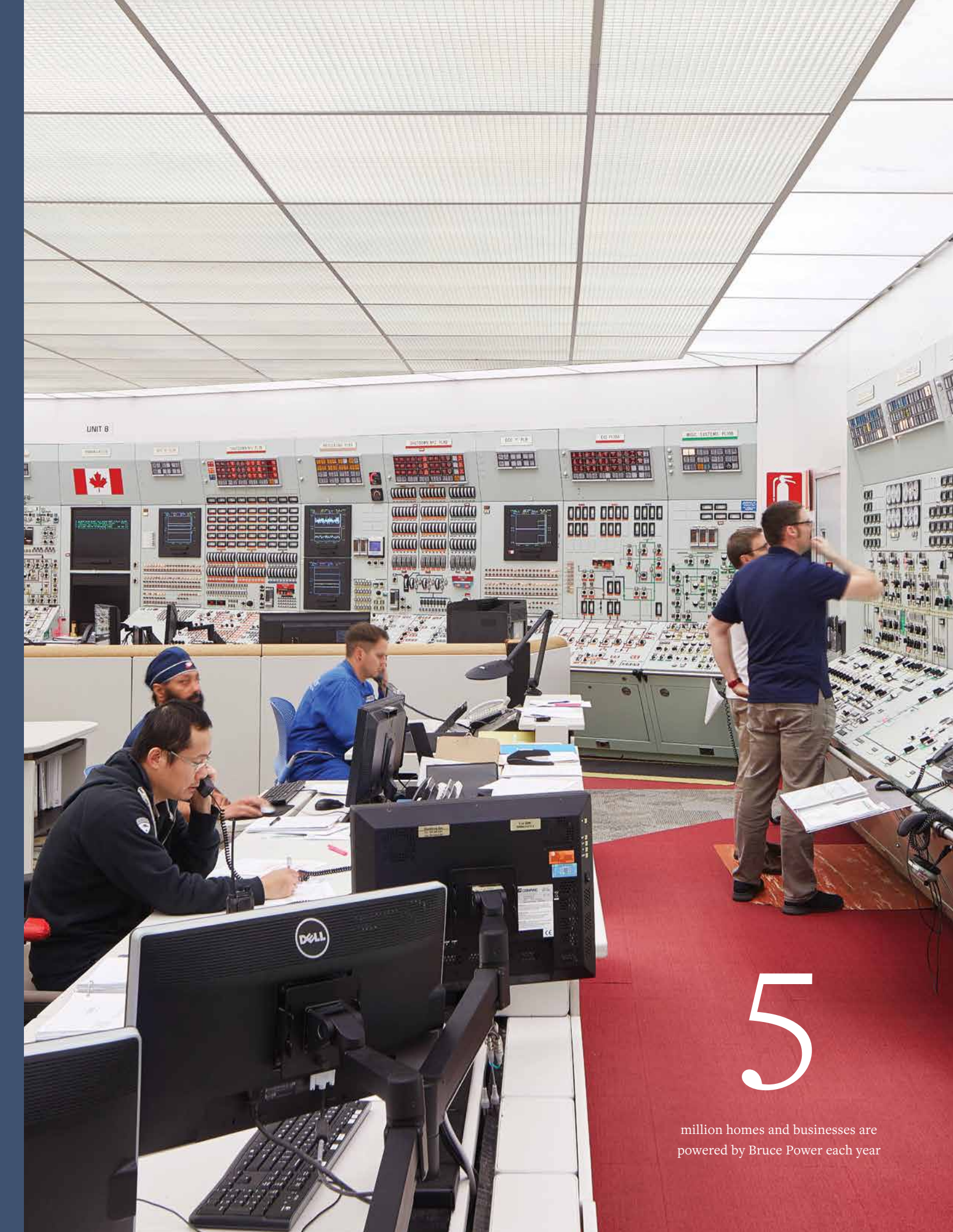
PREPARING OUR SITE FOR THE FUTURE

A busy 2019 was highlighted by final planning and preparation for the start of the MCR Project. MCR runs from 2020 to 2033 and comprises all activity concerning refurbishment of six of Bruce Power's eight reactors. Starting with Unit 6 in 2020, the company will replace major components on Units 3-8 over the next 13 years.



MCR is so much more than a refurbishment project that will power the province for years to come. It's a project which will empower people and communities now and into the future.

Eric Chassard
Executive Vice President, Projects and Engineering



5

million homes and businesses are powered by Bruce Power each year



INCREASING OUTPUT THROUGH INNOVATION

Thanks to the creativity, innovation and attention to detail by engineers, technicians and operators, Bruce Power realized an additional 22 megawatts of energy in 2019. Innovative technology investment projects in a planned outage raised the site's overall peak site output to more than 6,400 MW.

The extra 22 megawatts provides enough energy to power approximately 22,000 homes — equivalent to supplying all the homes in Ontario cities the size of North Bay and Belleville. The expanded output continues to help the province through periods of high demand. Bruce Power's units also provided needed flexibility to the electricity system through dynamic response capability, ensuring that Ontarians have the power they need to live and operate their businesses.

22

additional megawatts of output from our units realized in 2019



480

calandria tubes and fuel channels to be replaced in each unit

Starting with Unit 6 on January 17, 2020, Bruce Power will carry out its intensive MCR Program. The MCR Program focuses on the replacement of key reactor components in Units 3-8 including steam generators, pressure tubes, calandria tubes and feeder tubes.

The refurbishment of Unit 3 will begin in 2023 and Unit 4 in 2025. Each will be of the highest quality, shorter in duration and ultimately more cost effective than the last.



130 45

drills and exercise events conducted by Bruce Power annually

per cent of Bruce Power Emergency and Protective Services Fire employees also volunteer on municipal fire departments



SAFETY FIRST

Safety is personal. It's about looking out for ourselves and each other, knowing you can count on everyone to work safely so that we can all go home to our families and friends, healthy in body and mind.

Bruce Power is always prepared to protect our people, our plants, the community and the environment. While Canadian Deuterium Uranium (CANDU) reactors are inherently safe, with layer upon layer of safety systems built into their design, we prepare for all situations — even beyond the plant's design — to ensure we're ready to protect employees and the public against any kind of emergency.

The company's 2019 emergency preparedness training schedule was highlighted by Huron Resilience, a three-day exercise that tasked the company with the challenge of dealing with a simulated earthquake that affected the site.

ENVIRONMENTAL IMPACT

We care deeply about people and the planet. Bruce Power goes to great lengths to ensure it has minimal impact on its surrounding environment, while generating carbon-free electricity for more than 30 per cent of Ontarians.

Although we are one of the largest power producers in the province, we go to great lengths to take care of our own backyard. Our 2,300-acre site is home to six kilometres of Lake Huron shoreline, containing more than 464 species of plants and more than 275 species of wildlife, which includes 61 varieties of fish, 159 bird species, 23 kinds of reptiles and amphibians, and 34 types of mammals.

60

kilometres of beaches/shorelines monitored for information on wind, waves, pollution and biological factors

46

schools funded to take part in education in the life cycle of fish with the Lake Huron Fishing Club

62

per cent of the funding for Lake Huron Centre for Coastal Conservation's Coast Watchers program comes from Bruce Power





Our kids and grandkids are counting on us to continue to take action to address climate change; nuclear energy is pivotal to this. Our mission is to operate safely while protecting the environment, and cultivating a culture where we are dedicated to preserving, rehabilitating and educating where we can, and ensuring our environmental footprint remains low.

Danielle LaCroix
Director of Environment & Sustainability

19,000+

people toured the Bruce Power Visitors' Centre in 2019, including the Discover Energized Environmental Resources (DEER) program, energy education, events, and the highly-popular summer bus tours



2

million dollars is the amount that our Community Investment and Sponsorship Program donate to local organizations and events that make southwestern Ontario a welcoming place to live, work and play

COMMUNITY INVESTMENT

Among Bruce Power's core values is a focus on social responsibility and being a good corporate partner to our surrounding communities.

In 2019, the company gave more than \$1.3 million to grassroots initiatives, community organizations and disaster relief funds. With the support of our employees and stakeholders, we focus our community investment on health and wellness, arts, culture and recreation events, Indigenous programs, military, veterans and first responders.

We also contribute hundreds of thousands of dollars annually to partnerships that we build and sponsorships we undertake, particularly around sustainability commitments and environmental policy.



ECONOMIC DEVELOPMENT

The MCR Program is providing a major boost to Ontario's economy. More than 95 per cent of the \$2 billion in MCR contracts have been spent on materials and labour remaining in the province. Bruce Power and the County of Bruce have also focused efforts on the Economic Development and Innovation Initiative, which has seen 59 supplier partners open offices or manufacturing facilities in Bruce, Grey and Huron counties since the beginning of the Life-Extension Program in 2016.

59

companies have opened offices and expanded their operations locally since 2016

3

counties take part in the Economic Development and Innovative initiative

9

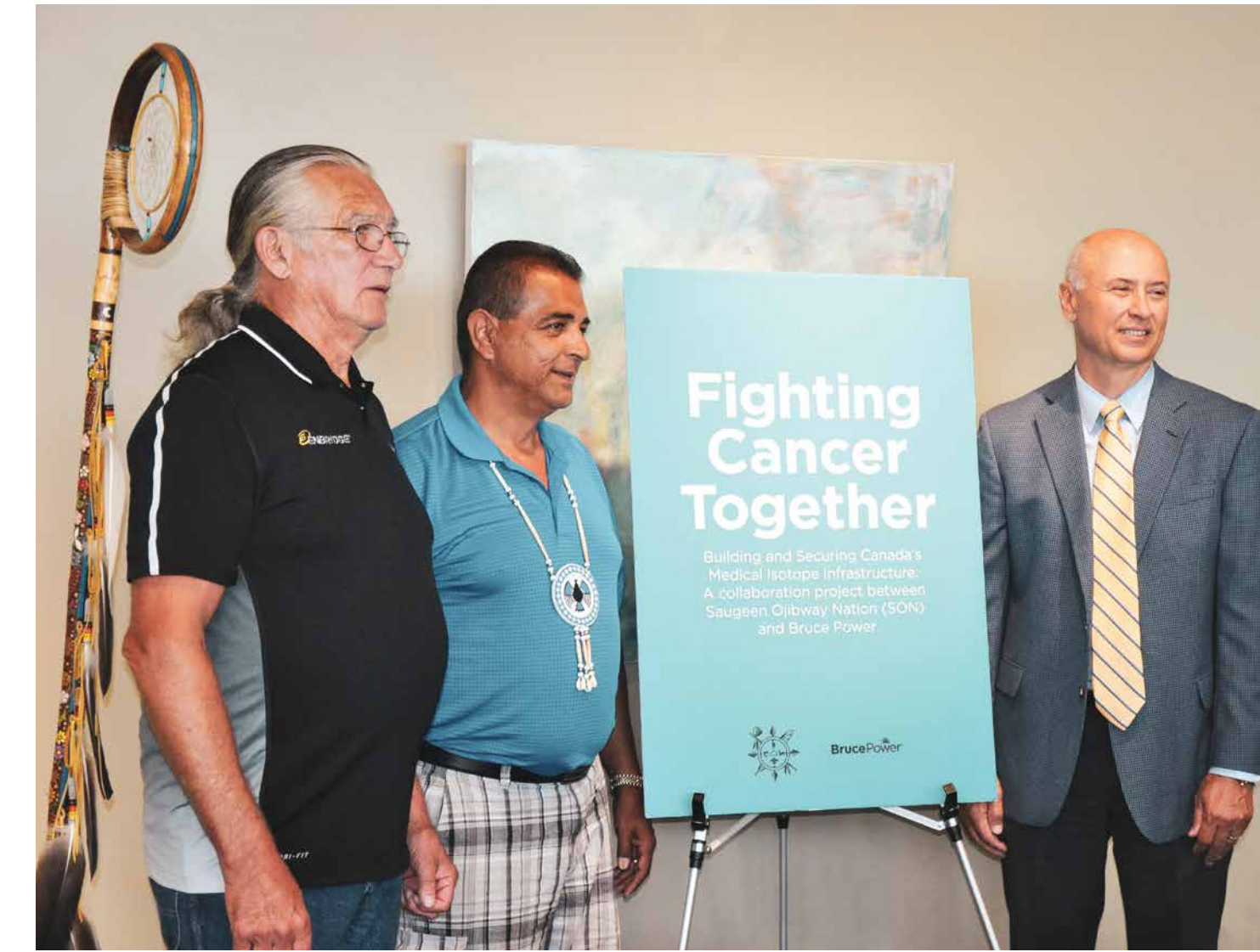
acres of land purchased for new builds

2

billion dollars in manufacturing contracts to companies across Ontario

22,000

direct and indirect jobs created in Ontario



INDIGENOUS RELATIONS

Bruce Power proudly lies within the Traditional Territory of the Saugeen Ojibway Nation (SON), which includes the communities of Saugeen and Nawash Unceded First Nations.

The company continues to foster a positive relationship with the SON, as well as the Historic Saugeen Métis and Métis Nation of Ontario, as they seek ways to empower and employ their citizens.

Bruce Power and the SON have entered into a collaboration agreement to jointly market new medical isotopes in support of the global fight against cancer while also working together on creating new economic development opportunities within the SON territory by establishing new isotope infrastructure.

Bruce Power has long been a Gold-certified member and Procurement Champion with the Canadian Council for Aboriginal Business for its Progressive Aboriginal Relations.

MEDICAL ISOTOPES

Over the past four years, Bruce Power has been increasing its presence around supporting the production of medical isotopes that are used to help save lives every day across Ontario and around the world. Four of our reactors produce Cobalt-60, which helps to sterilize 40 per cent of the world's medical devices like syringes, gloves and masks, while also being used to diagnose and treat complex forms of cancer.

We continue to seek ways to expand the types of isotopes we can produce to treat other forms of cancer. In 2019, we announced a partnership with several stakeholders to advance an innovative project which will enable the production of Lutetium-177 for the treatment of prostate cancer.

50

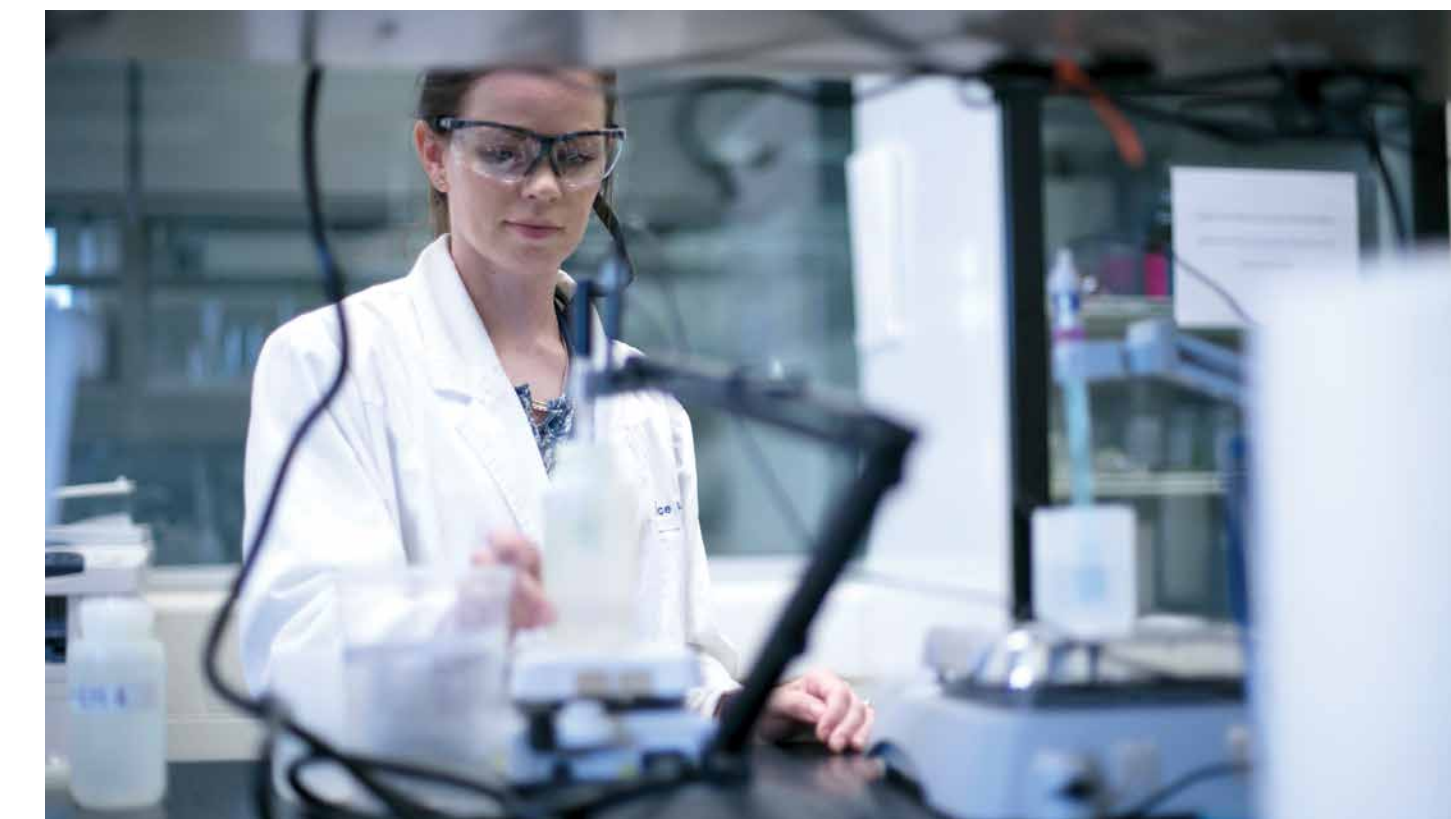
per cent of the world's Cobalt-60 supply comes from Ontario

35

million cancer patients treated with medical grade Cobalt-60 in the past 60 years

Bruce Power's leadership role in the nuclear industry includes our involvement in the production of life-saving isotopes. With the work we perform on site, and through our coalition with the Canadian Nuclear Isotope Council, we will continue to lead on the world stage.

James Scougack
Executive Vice-President, Corporate Affairs & Operational Services



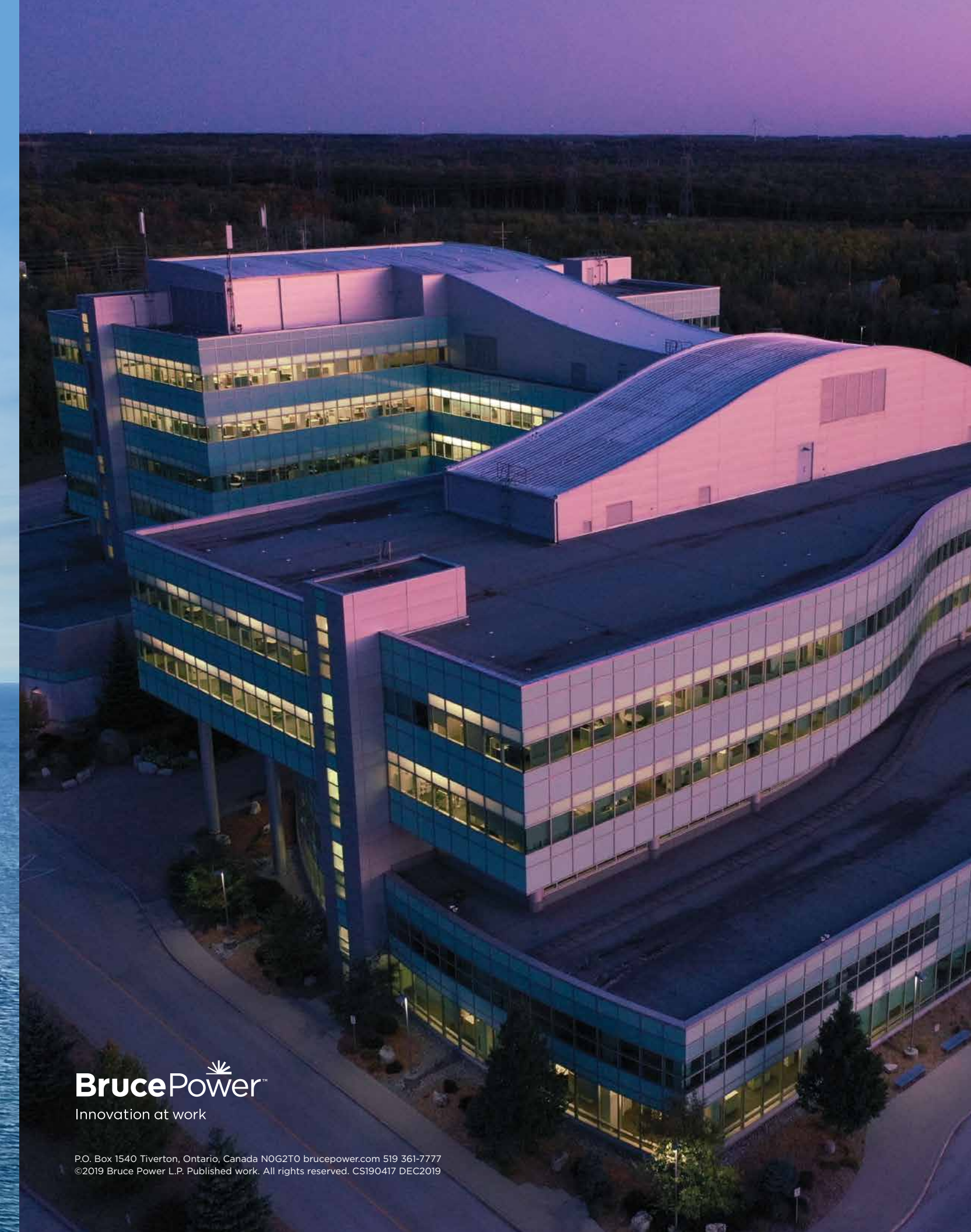
CLEAN AIR

Bruce Power is extremely proud to produce carbon-free electricity which means clean air for Ontarians.

Only nuclear power can provide such massive amounts of electricity without polluting the air we breathe. By reliably producing more than 30 per cent of the province's power while producing zero carbon emissions, the province is able to keep its coal plants closed and use natural gas plants at a minimum.

70

per cent of the power the province needed to shut down coal stations was provided by Bruce Power reactors



BrucePower[™]
Innovation at work

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