

# Sustainability Report 2021





## Message from the CEO

Bruce Power is committed to strengthening our communities, protecting our environment and enhancing a clean, safe and sustainable way of life for present and future generations.

From the beginning of our sustainability journey we have always come from a place of actions and results and that there is no time like the present to move forward with ideas, plans, and actions to meet the challenges of today to secure tomorrow. Our company vision and mission is to “power the future.” We lead by example and take action to see change.

Countries around the world are recognizing that climate change is a pressing concern that demands action. Canada is no different, and a national consensus is growing that we can and must do more to address the realities of a changing climate and other forms of pollution.

Nuclear power provides a clean, reliable, and affordable base source of electricity and is an integral component for Canada and the rest of the world to reduce emissions, and achieve greenhouse gas emissions targets.

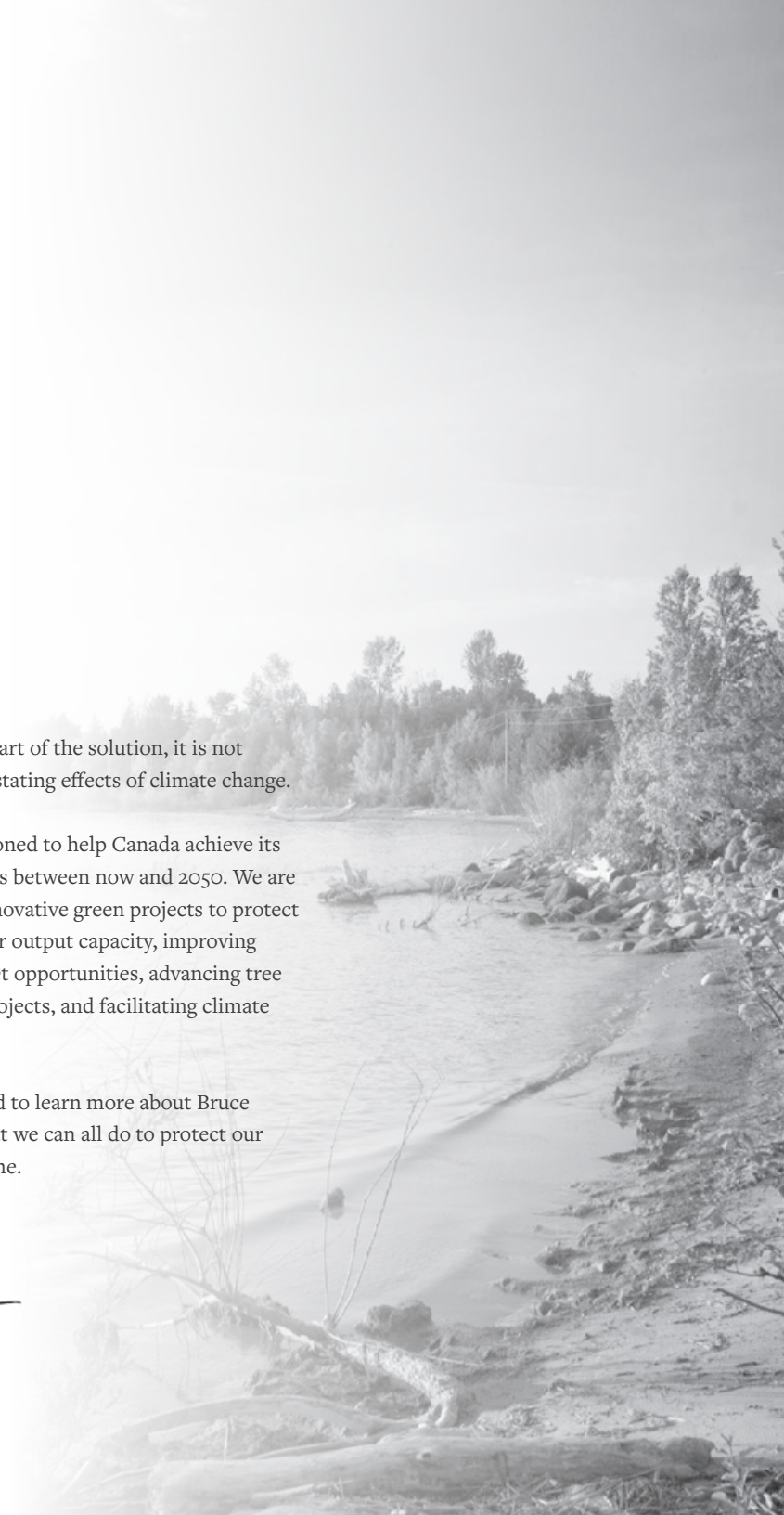
Simply put, without nuclear power as part of the solution, it is not possible to affordably combat the devastating effects of climate change.

At Bruce Power, we are uniquely positioned to help Canada achieve its economic and climate change objectives between now and 2050. We are excited to be collaborating on many innovative green projects to protect the environment, such as increasing our output capacity, improving our waterways, developing carbon offset opportunities, advancing tree planting, invasive species mitigation projects, and facilitating climate change studies.

I encourage you to read the pages ahead to learn more about Bruce Power’s sustainability journey, and what we can all do to protect our planet today and for generations to come.

Mike Rencheck,

*Bruce Power President and CEO*







## Welcome, on behalf of the Environment and Sustainability Oversight Committee

In 2020, Bruce Power formed the Environment and Sustainability Oversight Committee. This leadership level governance was the next natural step in taking our ongoing ESG efforts to the next level. As a committee we are dedicated to overseeing critical sustainability initiatives at Bruce Power while ensuring the enhanced integration of ESG monitoring and goals into our short, medium and long-term business strategy.

We have a responsibility to both the environment we rely on for our operations, as well as society, to implement sustainable business practices and to foster a culture of equality. We recognize that these practices can be achieved while ensuring the continued delivery of energy to the province at an affordable rate. In fact, ESG done right will see the alignment of profits with people and the planet, where one does not lose over the other.

ESG stands for Environmental, Social and Governance, and refers to the three key factors when measuring the sustainability and ethical impact of an investment in a business or company. ESG has gained increasing attention over the past few years, and many companies, including Bruce Power, are embracing the approach.

### What is ESG?

**E – Environmental** – The E is perhaps one of the most important concerns of the 21st century – the environment. How companies use energy and manage their environmental impact have far-reaching consequences on society and the planet.

**S – Social** – How a company fosters its people and culture will have ripple effects on the broader community. Our inclusivity and diversity will pave the way for a sustainable future.

**G – Governance** – There are two parts to this principle. One is ensuring transparency and industry best practices, and dialogue with regulators. The other is the internal system of controls, practices and procedures to govern and make effective decisions.

As leaders we commit to driving our ESG goals with forward-thinking innovation, making decisions for the greater good; and in doing so, making the world a better place for generations to come.

Sincerely,

### **Bruce Power Environment and Sustainability Oversight Committee**

**James Scongack**, *Chair of the Committee and EVP, Corporate Affairs and Operational Services*

**Chris Mudrick**, *EVP and Chief Nuclear Officer*

**Kevin Kelly**, *EVP, Finance, and Chief Financial Officer*

**Cathy Sprague**, *EVP, Human Resources*

**Brian Hilbers**, *Vice President, Strategy and Chief Legal and Risk Officer*



## Executive Summary

In 2020, Bruce Power took a major leap in the evolution of how we talk about ESG within our company and externally. Our approach is evolving from a once very public facing qualitative narrative to a quantitative narrative. We commit to clear, relevant disclosure, with actions that drive real, tangible benefits in the near term, in lieu of idealistic commitments two to three decades away.

The 2021 edition of Bruce Power's Sustainability Report focuses on quantitative disclosure for 22 of our ESG Key Performance Indicators (KPIs) and targets. We also share qualitative progress to KPIs in other areas of our ESG program, however some of these indicators are in the early stages of development, and we recognize the importance to ensure our quantitative disclosure in the public ESG space is meaningful, assured and has rigorous methodology allowing for others to learn from our journey and inspire personal action.

Bruce Power's approach to sustainability is integrated across the organization and builds on well-established and existing efforts, which have significant positive impacts on our local community, and provincially as we support the province with its decarbonization goal. Our sustainability program has always and continues to focus on four key areas: Environment, People and Safety, Products and Services, and Community.

### Environment

To support the fight against climate change, Bruce Power is taking steps to ensure it minimizes and offsets emissions to achieve Net Zero status by 2027. Bruce Power's commitment to achieving net zero greenhouse gas (GHG) emissions will account for all direct and indirect emissions that occur from sources that are owned or controlled by the company. In 2021 we have set a target of 5 per cent reduction of 2019 baseline. This commitment will solidify our leadership role in reducing emissions in Ontario. Previously we've provided 70 per cent of the electricity Ontario needed to shut down its coal plants (accomplished in 2014).

Given the heavy regulation of the nuclear industry in Canada, Bruce Power carries out extensive risk analysis covering a broad set of issues, including potential impacts from climate change, both on our operations and the environment and communities surrounding us. We have built and refined downscaled climate risk models that assess a variety of factors for our local area, and in 2021 we will continue to refine the further integration of climate change knowledge across the organization, with specific focus on our regional downscaled data sets.

### People and Safety

Our number one value is 'Safety First.' We live this value in every decision we make. Our employees are expected to work as safely as possible and we encourage an environment where we learn from any issues at all levels of the company. Our goal is to have employees go home to their families as healthy as they were when they came to work that day. In 2020, we continued to focus on our Industrial Safety Accident Rate for Site and Contract employees seeing a 0.02 per cent and 0.08 per cent respectively.

Bruce Power is committed to employing a diverse workforce. We have defined diversity as the acknowledgment and

appreciation that each individual has unique perspectives and life experiences.

In 2020, 24 per cent of hires into non-traditional roles (trades, maintenance, and operations) were filled by women, a large increase from five years ago. In 2021, the company will continue to focus on increasing the number of women into roles where they are traditionally underrepresented along with members of visible minorities, persons with disabilities, Indigenous peoples and lesbian, gay, bisexual and transgender/ transsexual people.

### Products and Services

Supply Chain will take into consideration a variety of ESG factors, which are weighted according to the nature of the procurement at issue. Bruce Power expects its suppliers to support and respect human rights, diversity and equal opportunity within the workplace. Based on the scoring of the supply chain process, suppliers with a local presence score higher than those with a provincial, and then national presence.

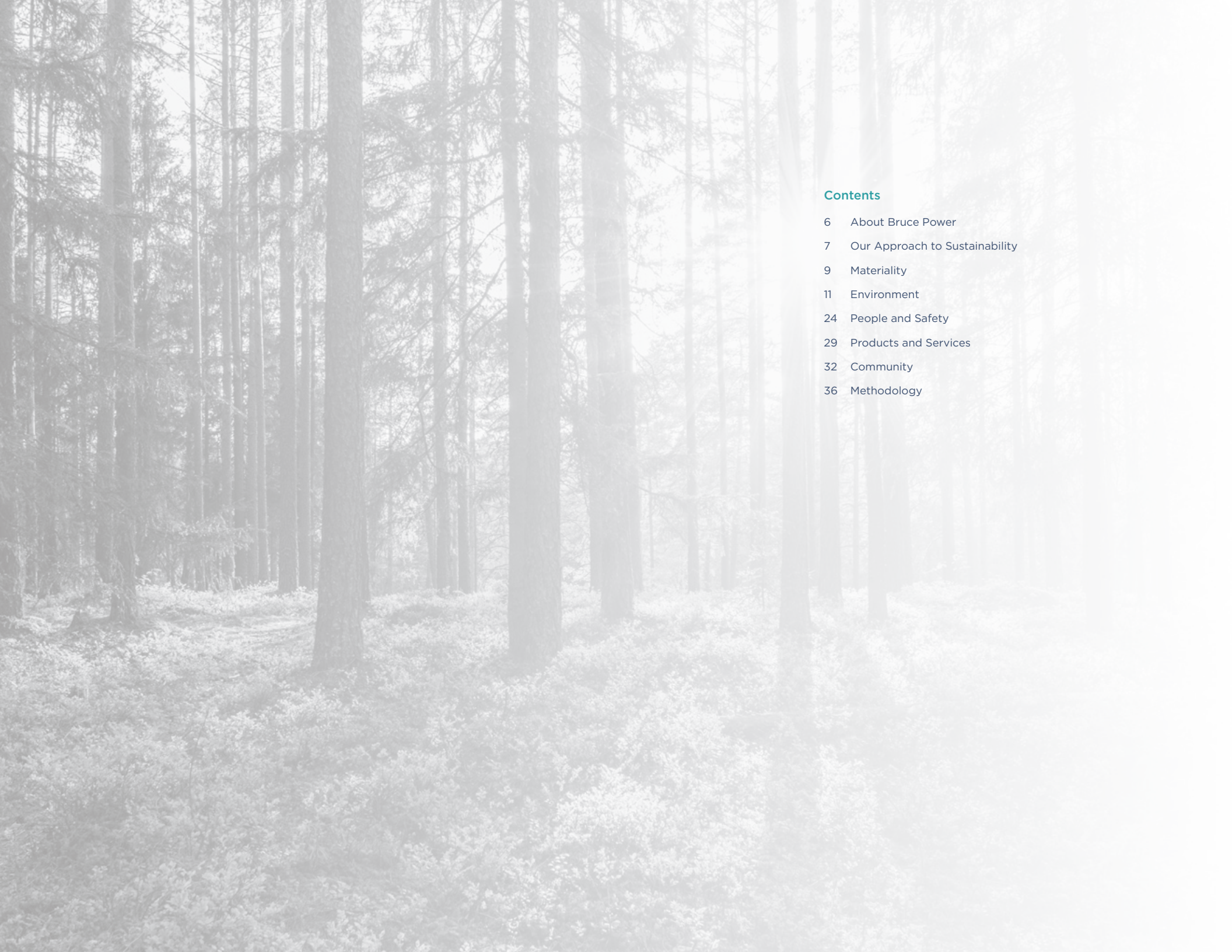
The scoring process also gives consideration to companies which have documented local Indigenous components of their business (which again scores higher than at the provincial and national levels). In 2020, 85 per cent of our KPI % services and materials were spent in Ontario.

### Community

At Bruce Power, we rely on the support and commitment of the surrounding communities and everyone who lives here. We have the privilege of contributing to the community and encourage our partners to do the same.

In 2020, the company provided \$ 4 million in total value of sponsorships and donations. That funding was used to help food banks, local and national organizations in financial distress and for the production of ventilators used to treat COVID-19 patients.





## Contents

- 6 About Bruce Power
- 7 Our Approach to Sustainability
- 9 Materiality
- 11 Environment
- 24 People and Safety
- 29 Products and Services
- 32 Community
- 36 Methodology

# About Bruce Power

**About Bruce Power** ○

- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology

We provide safe, reliable, clean energy to businesses and families across Ontario, as well as life-saving medical isotopes to the world's health-care community. We power the future.

## Our Mission

Our Mission at Bruce Power is to safely provide clean, affordable, reliable power and life-saving medical isotopes while strengthening our communities and protecting the environment to secure tomorrow. Given the challenging year that was 2020, and into 2021, our mission and Powering Today for Tomorrow has never been so important not just here at home in Canada, but around the world.

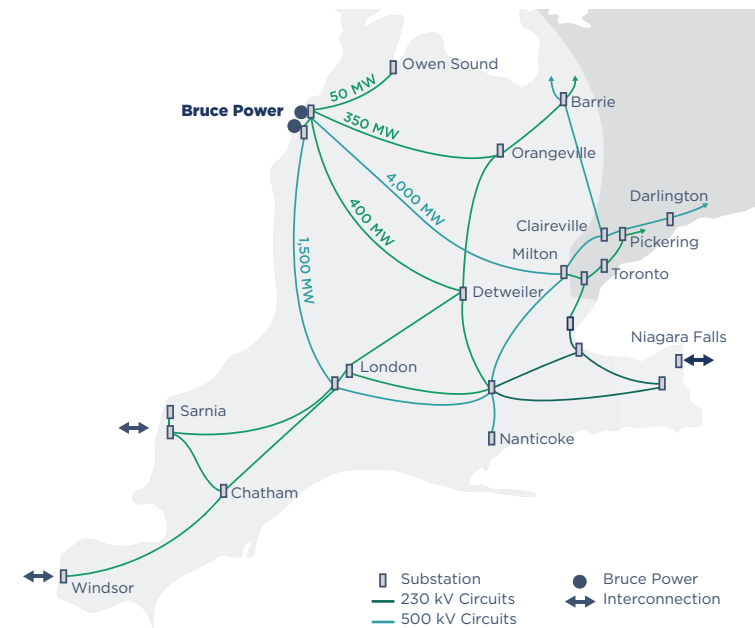
## We put Safety First

Bruce Power and our employees are committed to protecting the safety of our people, our plant, and the environment. Every decision reflects our number 1 value of Safety First. Safety is engrained in our culture, because we all want to protect each other and the communities we call home.

Safety is personal. We all count on each other to ensure everyone goes home safely at the end of their shift. It's about our commitment to following procedures and working safely. Every step. Every time. Every day.

## We power more for less

Bruce Power is the source of 30 per cent of Ontario's electricity at 30 per cent less than the average cost to generate residential power. Our site is home to eight operating units, capable of generating enough clean, reliable, low-cost electricity to power one in three homes, hospitals, schools and businesses in Ontario. We also help save lives by providing a reliable source of medical isotopes for the world's health care community.



**To learn more about Bruce Power and its Board of Directors visit our [website](#).**





# Our Approach to Sustainability

- About Bruce Power
- Our Approach to Sustainability** ○
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology

Sustainability is not something new. Since our inception as a business in 2001, we have been continuously improving the aspects of Environment, Social and Governance (ESG) of our business.

Bruce Power's approach to sustainability is integrated across the organization and builds on well-established and existing efforts which have significant positive impacts on our local community, and provincially as we support the province with its decarbonization goals. The program is led by the Environment and Sustainability Department, which reports quarterly to the Environment and Sustainability Oversight Committee. The company's strategy also looks to support both provincial and federal climate change goals, while contributing to economic growth, innovation and environmental protection.



**Danielle LaCroix**  
Director, Environment & Sustainability

Danielle LaCroix is the Director of the Environment and Sustainability Department. Through her leadership of a team of more than 20 Environmental staff and two Managers, she leads the company's overall development and organization of the ESG program and strategy, including the Net Zero 2027 commitment and on-going plan development.

As the Director she is responsible for the development and implementation of strong governance, oversight and support to ensure environmental protection and drive sustainability in our operations and in our partnerships. She is responsible for developing and advancing our cross functional Environment & Sustainability program; ensuring the identifications of Key Performance Indicators and Targets, and driving ambitious ESG goals across multiple departments; including Environment, Safety, Human Resources, Finance, Operations, Supply Chain and Government & Community Relations. She is a strong

proponent of the integration of Climate Change risk into short, medium and long-term business decision-making and has worked closely with the company's Finance team to deliver on key Sustainability linked financial benefits and offerings.



**Emily Johnston**  
Environment & Sustainability Lead

Emily Johnston is the ESG Program lead reporting directly to the Director of Environment and Sustainability. The program lead is the single point of contact for all ESG contributors in the organization, providing guidance on current standards, policies and trends, as well as the communication of a cohesive quantitative strategy. While working closely with each ESG contributor she helps to set ambitious targets, while also advocating externally for a more standardized approach to disclosure and reporting. She believes that all corporations have the ability to put forth immediate action, while in parallel driving innovation.



**Cherie-Lee Fietsch**  
Environment Regulatory and Research Manager,  
Environment and Sustainability

Cherie-Lee is the Regulatory and Research Manager in the Environment & Sustainability Department at Bruce Power where she leads a strong team of passionate people. As the manager, she is the central point for sustainability initiatives including Land Use and Biodiversity, Interactions with Lake Huron, Climate Change, and Environmental Risk Assessment. Her work with industry peers, researchers and consultants to develop solutions and approaches for continued environmental protection results in Bruce Power being a leader in driving innovation. She is active with many community, research and innovation entities and works with local Indigenous Communities to incorporate values into monitoring and assessment.

About Bruce Power

**Our Approach to Sustainability** ○

Materiality

Environment

People and Safety

Products and Services

Community

Methodology

As the world grapples with COVID-19, the businesses that will emerge strongest are those that have Environmental and Social principles rooted in their core values. The pandemic has been devastating, but out of tragedy also comes hope, including an encouraging global growth in ESG development and the expectations that socially responsible companies embrace these principles. In 2020, we took a major leap forward in the evolution of ESG commitment within our company. Our strategy is evolving from a very qualitative narrative to a quantitative one. We commit to clear, relevant disclosure, with actions that drive real tangible benefits in the near term. The decisions we make now will allow us to meet the ambitious targets we've set.

**Our Sustainability Program has always and continues to focus on four key areas:**



Environment



People & Safety



Products & Services



Community





# Materiality

- About Bruce Power
- Our Approach to Sustainability
- Materiality** ○
- Environment
- People and Safety
- Products and Services
- Community
- Methodology

Material metrics are those that are relevant to an organization with respect to stakeholder interest and the company's ability to influence and drive improvements.

## How We Assess Materiality

These are identified metrics that have linkages to significant economic, environmental and social impacts. The materiality of a metric will be heightened if it is a concern to stakeholders or partners, as well as areas that the organization has a significant opportunity to influence to drive improvements. At Bruce Power we have 12 main areas of materiality; corporate governance being our overarching structure for the ESG program, and the 11 remaining items of materiality falling within each of our four focus areas.

## Materiality Approach and Focus

We have developed >40 internal Key Performance Indicators (KPIs) and Targets to support our ESG program. These were based on guidance from the United Nations Sustainable Development Goals (UN SDGs), Sustainability Accounting Standards Board (SASB), Task Force on Climate Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI). It is important to note that at this time Bruce Power is not claiming full conformance to any of the standards above, rather has used each standard to guide disclosure based on materiality.

The 2021 edition of Bruce Power's Sustainability Report focuses on quantitative disclosure for 22 of our ESG KPIs. We also share qualitative progress to other area's KPIs, however, as a business it is important to ensure our quantitative disclosure in the public ESG space is meaningful, assured and has rigorous methodology allowing for others to learn from our journey and inspire personal action. As we continue on our journey we will enhance disclosure of the number of KPIs and targets.

### Bruce Power's 12 main areas of materiality

- |                         |                               |
|-------------------------|-------------------------------|
| 1. Corporate Governance | 7. Water Use                  |
| 2. Health and Safety    | 8. GHG emissions              |
| 3. Community Relations  | 9. Non - GHG Emissions        |
| 4. Product Governance   | 10. Effluents                 |
| 5. Business Ethics      | 11. Waste                     |
| 6. Human Capital        | 12. Land Use and Biodiversity |



- About Bruce Power
- Our Approach to Sustainability
- Materiality** ○
- Environment
- People and Safety
- Products and Services
- Community
- Methodology

Our materiality assessment is based on a wide variety of sources including but not limited to; input from public opinion research, routine community polling results, public inquiry information, surveys during stakeholder engagement events, routine engagement with local Indigenous communities, routine discussions with regulatory bodies, intervention submissions during our Power Reactor Operating License renewal process, as well as third party risk rating analyses.

Bruce Power continues to advocate for more standardized and straightforward disclosure criteria in the ESG space, as well as increased emphasis on tangible short, medium and long-term actions that not only rely on the development of innovation but also result in corporations doing what they can right now with best-available, economically feasible options. Since the beginning of our sustainability journey we have consistently advocated for timely actions and results. We don't have the luxury of time to wait and count every element before action is taken or commitments are made.

#### The United Nations' 2030 Agenda For Sustainable Development

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries — developed and developing — in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth — all while tackling climate change and working to preserve our oceans and forests.

As part our sustainability strategy, we routinely review the United Nations Sustainable Development Goals (SDGs) to understand which are relevant to our business and how we can connect them to our ongoing sustainability efforts, as well as identify areas of continued opportunity to grow our strategy and be a global contributor within this area. Following

this review process for 2020, Bruce Power identified and committed to 10 SDGs that we believe will have the greatest impact. This includes two new commitments since our 2019 report and these goals will guide our ongoing efforts.

We wanted to acknowledge that the goal of Life Below Water does not explicitly state Freshwater, however, the Great Lakes are one of the largest aquatic ecosystems and vitally important to North America and we do take significant efforts to ensure the protection of Lake Huron, rivers running into the lake as well as the broader Great Lakes ecosystem. These efforts are identified within our environmental area of focus.

#### Bruce Power's 10 Sustainable Development Goals

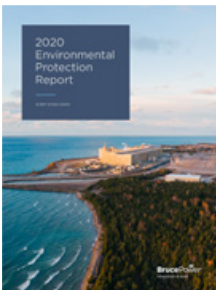
1. No Poverty
2. Good Health & Well-Being
3. Gender Equality
4. Reduced Inequities
5. Affordable & Clean Energy
6. Decent Work & Economic Growth
7. Responsible Consumption & Production
8. Climate Action
9. Life on Land
10. Life Below Water



# Environment

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

Read our 2020 Annual Environmental Protection Report [here](#).



We take very seriously our responsibility to provide clean energy, especially at such a pivotal time for our climate, not only here in Ontario, but across Canada and around the world.

We have a duty to ensure our decision-making process incorporates environmental, social, cultural and economic systems, and that we allow future generations to meet their needs. We are committed to environmental protection in all areas of our business, to minimizing our environmental footprint, and have adopted applicable best industry standards and requirements of ISO 14001 as a framework for achieving continual improvement and sustainable performance excellence.

Environment	Standard(s) guidance is taken from *	2020	2021 Target
Greenhouse Gas Emissions (tons CO <sub>2</sub> eq) (Scope 1)	IF-EU110a.1, GRI-305-1, TCFD	7,862	See Net GHG Emissions
Greenhouse Gas Emissions (tons CO <sub>2</sub> eq) (Scope 2)	IF-EU110a.2, GRI-305-2, TCFD	7,105	See Net GHG Emissions
Net GHG Emissions (Scope 1, 2, RECs, Offsets)	See Methodology	14,967 (**Combined Scope 1 & 2 no REC's no offsets)	5% reduction of 2019 Baseline
Carbon Removal Via Tree Planting (tons CO <sub>2</sub> eq)	See Methodology	15,076	≥ 10,000
Emissions avoidance via operation (tons CO <sub>2</sub> eq) based on TWh	See Methodology	20,726,400	19,200,000
Volume of Conventional Waste Generated (mt)	GRI-306-2	1707.692	Disclosure
Conventional Waste Diversion rate (%)	GRI-306-2	68.43%	70%
Net water consumption from Lake Huron (million cubic meters)	GRI-303-3	2.24	≤ 2.3
Total Water Drawn from Lake Huron (million cubic meters)	GRI-303-3	9,408.66	Disclosure

\* Bruce Power does not claim to conform to any of the standards identified, rather guidance has been taken from those standards identified. ESG Metrics have been chosen that reflect items material to our business. As noted we have a larger subset of internal metrics and as our program matures we will continue to add to the metrics that we release into the public domain. Bruce Power remains committed to advocating for more standardized disclosure, and remains committed to staying up to date on policy and frameworks that are attempting to bring more clarity to information that is crucial for disclosure from a financial, environmental and social standpoint.

\*\*99.6% returned via once through cooling

BRUCE POWER'S

## Environment & Sustainability Policy

### You can count on Bruce Power to:

- Ingrain a healthy nuclear safety culture which promotes nuclear safety, radiological safety, industrial safety and environmental safety and sustainability;
- Commit to excellence by meeting or exceeding all relevant legal and voluntary requirements to which Bruce Power subscribes;
- Understand our environmental impact and verify environmental protection through monitoring the environment, collaborating with industry and the community, and driving related strategic research and innovation;
- Focus on continuous improvement by adopting applicable industry best practices and requirements of ISO 14001;
- Ensure our business decisions support the application and practice of sustainability principles by protecting, conserving, and restoring our resources through energy conservation, reducing water consumption, supporting waste diversion, and considering product life cycle in our Supply Chain;
- Hold ourselves accountable to prevent pollution through robust management of emissions, effluents and waste, as well as implementation of spill mitigation measures;
- Promote environmental stewardship and awareness at work, in the community, and across Ontario;
- Uphold the trust of the community through open and transparent communication with partners, Indigenous communities, and stakeholders on environmental interests;
- Play a leading role in keeping the air clean and fighting climate change; supporting emissions reduction strategies to achieve a Net Zero Canada by 2050; adopting ambitious net reduction strategies for Bruce Power to achieve Net Zero (GHG); and
- Support partners, communities and organizations to drive innovations and projects to offset and sequester carbon in a real and tangible way.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

## Greenhouse Gas (GHG) Emissions and Avoidance

Bruce Power's direct (Scope 1) site emissions are primarily the result of running safety system tests on Standby Generators, and secondarily from the on-site vehicle fleet that supports operations.

Our indirect site emissions (Scope 2) are the result of energy usage on site. These are the direct and indirect GHG emissions our Net Zero 2027 strategy will target.

Historically we have focused on and quantified our site scope 1 and 2 emissions, and as part of our Net Zero 2027 commitment and strategy development are working to quantify the additional scope 1 and 2 impact of the off-site buildings and facilities, which we occupy and are under our operational control. We will be updating our 2019 baseline and all annual emissions to reflect this and this will be reported in the next Sustainability Report.

extensively and scientifically assess those activities and take action to implement a comprehensive, sustainable strategy.

We are investing in innovation to increase clean electricity output from the Bruce Power site, which will further displace GHG emissions from the electricity grid in Ontario.

On-site GHG reduction efforts including efficiency upgrades, fleet optimization, evaluation of electrification opportunities in conjunction with modest offsetting amounts, and implementation of more influential (broader reaching) sustainable strategies will ensure our GHG Net Zero 2027 commitment (discussed below) is upheld.

Our reduction targets for these site emissions are displayed below. These are relative to a 2019 baseline.

2021	2022	2023	2024	2025	2026	2027
5%	12.5%	25%	37.5%	50%	75%	100%

16,000 tons of CO<sub>2</sub>e = 3,487 cars annually



16,000 tons of CO<sub>2</sub>e = 1,666 Ontario Homes



### Scope 1 GHG Emissions 2015 - 2020 (tons of CO<sub>2</sub> (eq))

2015	2016	2017	2018	2019	2020
10,308	9,003	6,278	8,766	8,854	7,862

### Scope 2 GHG Emissions 2015 - 2020 (tons of CO<sub>2</sub> (eq))

2015	2016	2017	2018	2019	2020
8,309	7,334	5,830	5,091	6,658	7,105

Other emissions which are indirectly related to, or are a result of, interactions with other businesses and our supply chain, that occur from sources not owned or controlled by our company (Scope 3) will be further evaluated over the course of 2021.

### Tree Planting

Nature-based solutions is a term that has launched into mainstream media over the past few years, especially over the course of 2020, in parallel with the dialogue of decreasing carbon. Although the methodology of carbon benefit remains in flux, globally what is agreed upon is that tree planting is one of the best, immediate actions anyone can take to help lock up carbon. During the World Economic Forum (Davos 2020), the global initiative to grow, restore and conserve one trillion trees around the world, was launched aiming to restore biodiversity and help fight climate change on a united global scale.

We recognize we have an opportunity to influence these supporting businesses. We are currently working with a GHG consultant to



- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

Learn more about  
Bruce Power's Net  
Zero 2050 strategy.

Since 2012, Bruce Power planted trees annually with a cumulative total of more than 203,000 trees, through our partnerships with the Pine River Watershed, SauGREEN, Saugeen Valley Conservation Authority, Huron Stewardship Council and the Penetangore Watershed Group. Following the onset of the pandemic most organizations we partnered with to deliver tree planting efforts in 2020 managed to safely ensure more than 15,000 trees were planted.

In 2021, we have committed additional funding to tree planting through Saugeen Valley Conservation Authority, Penetangore Watershed Group and SauGREEN. We are optimistic that those efforts will allow us to reach, if not exceed, our carbon removal via tree planting goal for 2021. More detail on how we calculate our current carbon removal efforts through this action can be found in our methodology section.

### Emissions Avoidance

Energy is something that everyone needs, however, oftentimes it is not until we experience a power outage that people really take a moment to pause and think about where that energy comes from and why it is so important to our livelihood. The generation of electricity is not a simple one dimensional discussion; to appreciate and make informed decisions, a holistic, lifecycle discussion must take place. In the case of the Bruce Power facility operations and annual megawatt hour (MWH) of electricity generated per year, the potential emissions avoided is equivalent to approximately 19 million tonnes of CO<sub>2</sub>e.

Ontario's electricity grid is deeply decarbonized; however, the capacity of electricity to replace that of the Bruce Power site could not be solely made up by existing renewable capacity nor imports from neighbouring electricity grids without the use of more GHG intense electricity forms. Therefore the assumption built into this currently looks at a combined natural gas equivalent GHG comparison factor. More detail on this calculation is found in the methodology section.

## Net Zero 2027 and 2050

At Bruce Power, we are uniquely positioned to help Canada achieve its economic and climate change objectives between now and 2050.

Today, Canada is a leader in nuclear innovation and we need to ensure that status doesn't change so that future generations will benefit. The Canadian nuclear industry is growing – from isotopes that sterilize medical equipment around the world and treat various cancers, to new Small Modular Reactor and fusion technology to power and heat communities, to hydrogen and clean fuel production, and enabling electrification of industrial processes and transportation.

### Bruce Power's NZ-2050 strategy consists of five pillars:

1. Optimize and leverage existing investments in Canada's largest private-sector infrastructure project to drive further decarbonization.
2. Foster innovation in new energy technologies, including new nuclear and fusion energy.
3. Use nuclear power generation to produce clean fuels and electrify industrial processes and transportation with an historic opportunity to contribute to a national hydrogen and clean fuels strategy.
4. Create an ecosystem of "green collar" jobs, including the nuclear, manufacturing, and energy development sectors with a focus on diversity and more representation from women, visible minorities and Indigenous peoples.
5. Inspire innovation by supporting strong social responsibility and sustainability, and providing contributions to global health, such as life-saving medical isotopes as the world battles COVID-19.

- About Bruce Power
- Our Approach to Sustainability
  - Materiality
  - Environment** ○
  - People and Safety
  - Products and Services
  - Community
  - Methodology

**Learn more about  
Bruce Power's Net  
Zero 2027 plan.**

Bruce Power's Net Zero 2050 strategy is building on the strong foundation of Canada's largest clean energy infrastructure program on our site. That program has contributed significantly to the nuclear sector's successful phasing out of coal-powered generation in Ontario – the largest emissions-reduction initiative in Canada this century.

### Net Zero 2027

This builds on the company's Net Zero 2050 plan that will help Canada meet its emissions targets by 2050.

On April 1, 2021, Bruce Power formally announced its commitment to be a Net Zero company by 2027. We will be the first nuclear operator in North America with such an ambitious commitment.

This will solidify our leadership role in reducing emissions in Ontario. Previously we've provided 70 per cent of the electricity Ontario needed to shut down its coal plants (accomplished in 2014).

We will leverage our strong foundation and contribute to Canada achieving Net Zero 2050 by optimizing our existing assets, partnering with Indigenous and non-Indigenous communities, exploring hydrogen and fusion technology, assisting public health in a post-pandemic world, isotopes, new nuclear, and electrification of transportation.



Bruce Power has launched a Carbon Offset Co-op that will fund grassroots Net Zero initiatives that will both remove and offset carbon emissions.

The Co-op will bring together Indigenous and non-Indigenous communities, and business and agricultural organizations across southwestern Ontario to support initiatives focused on removing and offsetting carbon from the atmosphere.

The Carbon Offset Co-op has launched its website at [www.carbonoffsetcoop.com](http://www.carbonoffsetcoop.com) and is now seeking ideas for projects, with funding to begin in 2022 as part of Bruce Power's commitment to achieve Net Zero by 2027.

**To submit a proposal for 2022, visit  
[www.carbonoffsetcoop.com](http://www.carbonoffsetcoop.com).**



- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

## Climate Change

Bruce Power goes beyond regulatory compliance by driving innovation and strategic research in environmental protection. We have long considered the surrounding environment and climate change vulnerabilities. We have worked with multiple partners to better understand climate change impacts on Lake Huron with a focus on the area near the facility. We have extended this assessment to the Grey, Bruce and Huron regions with a focus on municipal and agricultural sectors and work with Indigenous communities to focus on improved understanding and potential advanced solutions to build resiliency.

A large supply of cooling water is an inherent design requirement for the operation of CANDU reactors and the placement of our business along the Lake Huron shoreline results in several unique interactions with the natural environment. Bruce Power monitors changing environmental

conditions in particular, there is a focus on long-term trends, current conditions, and a summary of the changes that are predicted to occur in the next 30-50 years. Changing environmental conditions, such as high water levels and increased water temperatures that are outside of optimal operating conditions, can pose additional risk that may require new mitigation strategies.

The intent of this section is to briefly summarize the short- and long-term changes in air temperature, ice cover, precipitation, wind, lake water levels, water temperature, and debris loading Bruce Power currently looks at under the suite of Climate Change Metrics.

Corporate business risks describe some of the existing operational challenges and a list of risk logs with relevance. Over the course of 2021 we continue to refine the further integration of climate change knowledge across the organization, with a specific focus on our regional downscaled data sets.

### How is Climate Change information handled within Bruce Power?



Environment Research and Regulatory Team evaluates/models changing environmental conditions



Risk Log Entries related to potential climate change risk are captured in Corporate Risk Log



Information disseminated to Design Engineering for evaluation on operational equipment and infrastructure



Under improvement for 2021: Enhancements of further monitoring data and risk assessment information into medium and long-term business planning

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

### Data collaboration on climate change

Bruce Power works with various corporate entities and academic institutions to strengthen its regional understanding of climate change impacts. This includes active projects with Golder Associates, the Council of the Great Lake Region (CGLR) and the Climate Risk Institute (CRI) and Candu Owners Group (COG). The work with CGLR & CRI is a multi-year study to understand the state of climate science in the Great Lakes, focusing on Bruce, Grey and Huron counties. The work has three areas of focus (agriculture, municipalities and Indigenous communities), targeted for a broader understanding on key sectors identified during community workshops. The information provided below is from climate change projections conducted by Golder Associates which were downscaled to the local region, with some information also from a literature review completed by the University of Toronto as part of the CGLR partnership. The COG Strategic Research and Development program for Climate Change developed a road map for application.

### Key Environmental Trends we look at

#### Air Temperature:

Climate modelers have high confidence that the mean annual air temperature in our region will continue to rise at an increased rate (1.9–3.9°C warmer by mid-to late-century). The predicted median air temperature increase for our region is 2.2°C (2054–2074). We should expect an increase in the frequency of warm temperatures, and given the impact of high ambient temperature on operations, this knowledge requires us to evaluate for any future equipment challenges, or changes to existing trends of employee heat stress days.

#### Precipitation:

The long-term total annual precipitation increased at a rate of 2.7 mm/year over the last 70 years. The rate of increase was highest in the winter, spring and fall. Summer precipitation during 1989–2019 was lower than the preceding period confirming that summers are becoming drier. Precipitation is projected to increase everywhere in Canada over the 21st

century. Our region is expected to receive less summertime precipitation in the future. There is high confidence that the incidence of extreme precipitation events will rise.

#### Wind:

The strongest winds in our region are experienced in the fall and winter months. The frequency of days with wind gusts > 60 km/h has decreased over the last 60 years. Climate projections of future wind patterns have large uncertainty and very little modelling has been completed for our region.

#### Ice Cover:

The duration of lake ice coverage has declined across Canada over the last 50 years due to later ice formation and earlier spring ice breakup. The fraction of the Great Lakes surface covered in ice has varied considerably through the years as well as the timing of maximum ice coverage.

#### Water Levels:

Sources and sinks of water in Lake Huron are not regulated. Large oscillations have occurred over the last century (range >1.9 m), and it is reasonable to expect steep changes to occur into the future. Water levels are at an all-time high and the current water level is the highest on record (1918–present day). The last three years have been exceptionally wet for the Great Lakes basin. Short-term predictions indicate water levels will remain high for at least the next 12 months, but it is unlikely that water levels will exceed the levels observed in 2020.

Most regional climate models predict that we will experience decreased ice coverage, and increased evaporation, lake-effect snow and precipitation. The future Net Basin Supply of water to Lake Huron is expected to decrease causing a small decline in lake levels. Current models suggest future water levels will be similar to existing conditions (perhaps lower) and we should be prepared for variability.



About Bruce Power  
Our Approach to Sustainability

Materiality

**Environment** ○

People and Safety

Products and Services

Community

Methodology

Bruce Power needs to continue to be prepared for variable levels, and have contingency plans in place if levels exceed the current state.

#### Water Temperature:

There is no discernable change in Lake Huron water intake temperatures from 1997 to 2020. On a seasonal basis the coolest intake waters are measured in January-March and the warmest conditions occur July-September. The risk of frazil ice formation in future decades may increase as the duration of ice cover in Lake Huron is expected to decrease. Winter readiness continues to be a top priority.

Climate change is projected to increase water temperatures and the depth of vertical mixing. Increased air temperatures in the winter and spring are expected to cause earlier spring warming and greater heating of deeper water. Climate warming is expected to increase lake temperatures near Bruce Power by an average of 1.3°C to 2.3°C under median and extreme warm climate change scenarios. Under the extreme cold scenario, water temperatures would be slightly lower than current conditions.

Future lake temperature increases will be gradual. Sudden and sustained temperature increases are not expected. Natural variability will continue to occur and we will experience warmer and cooler years. Lake water levels do not significantly impact water temperature under any future climate scenario.

#### Condenser Cooling Water Blockage Risks from Fish, Algae, Mussels and Other Debris:

Our ability to understand, quantify and predict the amount and timing of fish, algae, mussel and other debris is a top focus for our company. High volumes of algae, mussels, terrestrial debris or fish can occur at any time of the year. Continued maintenance and improvement of travelling screens, bar screens and fish monitoring equipment is very important so that debris can be removed and prevented from blocking Condenser Cooling Water (CCW) flow. WANO SOER 2007-2 Cooling Water Blockage effectiveness reviews are conducted every two years. This includes understanding of changing environmental conditions, such as debris loading (i.e. fish, algae, mussels, and other debris).

The dynamic nature of Lake Huron is evident in debris loading trends, with algae loading highest between July and December and mussel loading generally increasing in recent years. Fish impingement remains low, is monitored daily, and remains well below annual limits set by the Fisheries Act Authorization. The authorization requires offsets of annual losses by increasing fish production in the watershed and this is in progress with monitoring post the Truax Dam removal, joint Coastal Waters Monitoring Program with Saugeen Ojibway Nation, and developing projects with Indigenous nations and communities.



About Bruce Power
Our Approach to Sustainability
Materiality
<b>Environment</b> ○
People and Safety
Products and Services
Community
Methodology

### Climate Change study

Bruce Power is partnering with the Council of the Great Lakes Region (CGLR) and the Climate Risk Institute (CRI) to produce knowledge and information products that address opportunities and risks related to climate change and specific environmental, cultural, and socioeconomic values and activities in the counties that host or surround Bruce Power facilities.

This project is part of a multi-year study to understand the state of climate change science in the Great Lakes and the impacts of the changing climate on various sectors and ecosystems in the region.

Together we have:

- Reviewed what could be done to better understand and manage current and future climate risks in the region,
- Identified the most useful information products to be developed,
- Obtained feedback from farmers and other stakeholders on ways to mainstream key information to members of the regional agricultural/farming community.

To learn about the climate change study, visit [The Climate Risk Institute](#).

## Non-GHG Emissions, Effluents and Waste

### Waste Management

Bruce Power manages many different forms of waste, including: hazardous waste (oils, chemicals, lighting lamps and ballasts – some of these are recycled), recyclable waste (glass, plastic, metal, cardboard, paper, wood, batteries, and electronics), organic waste (compost), and landfill waste. Bruce Power also manages radioactive waste in partnership with Ontario Power Generation (OPG). Bruce Power complies with all waste regulations and requirements of the relevant Federal, Provincial, and Municipal authorities. Further, Bruce Power has taken an active role for many years to reduce all forms of waste: from an environmental and financial standpoint waste reduction is good for our company and the community in which we reside. Our philosophy employs a whole life-cycle approach in that we reduce waste at the consumer level, generate less waste at the company level, find opportunities to reuse products (on-site, off-site donations, or sell them at auction), and implement recycling programs that are available in the ever-changing recycling market. To minimize the amount of waste sent to landfill each day, Bruce Power has implemented a number of initiatives that apply the principles of reduce, reuse, recycle, and recover. Wherever its fate, each waste stream generated at Bruce Power is processed and disposed of in a safe and environmentally-responsible manner.





About Bruce Power
Our Approach to Sustainability
Materiality
<b>Environment</b> ○
People and Safety
Products and Services
Community
Methodology

### Conventional Waste

The primary objectives of the Conventional Waste Program are to process conventional wastes in a safe and environmentally responsible manner while achieving waste minimization through the application of reduce, reuse, recover, and recycle principles. Bruce Power's Conventional Waste Program ensures that safety is the paramount consideration guiding decisions and actions by complying with all regulatory requirements, including:

- The Ontario Environmental Protection Act [R-58]
- Ontario Regulation 347, General Waste Management [R-120]
- Ontario Regulation 103/94, Industrial, Commercial and Institutional Source Separation Programs [R-121]
- Ontario Regulation 102/94, Waste Audits and Waste Reduction Work Plans [R-122]
- Ontario Regulation O. Reg. 153, Record of Site Condition
- Transport Canada's Transportation of Dangerous Goods (TDG) Act [R-123], when transferring waste to a landfill

Management of conventional waste includes all non-hazardous and non-radiological items: recyclables, compost, and waste destined for landfill. As defined in Ontario Reg. 103/94 [R[1]121].

Under the Environment Protection Act, Bruce Power is considered to be a large manufacturing establishment and is mandated to have recycling programs in place for the following materials:

- Aluminum
- Cardboard (corrugated)
- Fine paper
- Glass
- Newsprint

- Polyethylene (high density) jugs, pails, crates, totes, and drums
- Polyethylene (linear low density and low density) film
- Polystyrene (expanded) foam
- Polystyrene trays, reels and spools
- Steel
- Wood (not including painted, treated, or laminated wood)

The Conventional Waste Program at Bruce Power demonstrates our values of uncompromising high standards by not only meeting regulatory requirements, but by going above and beyond by implementing 16 additional source separation programs on-site, including but not limited to:

- Compostable paper towels
- Boxboard
- Food waste
- Yard waste composting
- Battery recycling
- Office supply recycling

### Radiological Waste

Bruce Power manages and fully funds the storage and disposal of its radioactive waste in partnership with Ontario Power Generation (OPG). Since the 1970s, OPG has responsibly managed, transported, stored and processed all radioactive waste from Bruce Power's site. Waste is currently stored on an interim basis until long-term disposal facilities are established. Upholding the company's commitment to Indigenous communities, a proposal for a deep geologic repository at the Bruce Power site was ended in 2020.

About Bruce Power  
Our Approach to Sustainability  
Materiality

## Environment ○

People and Safety  
Products and Services  
Community  
Methodology

### Nuclear Waste Management

- Nuclear is the only industry that has a plan for its waste that is fully costed and takes into the account the full life cycle of our product.
- Nuclear waste handling is highly controlled and regulated by the Canadian Nuclear Safety Commission, one of the world's most well regarded nuclear authorities.
- The nuclear industry's waste strategy supports rural host communities by providing significant economic benefits and jobs.
- Deep Geological Repositories are the world's scientifically-accepted method for long-term storage of used nuclear fuel. Many countries which have benefitted from nuclear power for decades are progressing plans for in more than a dozen countries from Scandinavia to Asia.
- The Nuclear Waste Management Organization (NWMO) is responsible for Canada's plan for the safe, long-term management of used nuclear fuel, including that created using new or emerging technologies such as small modular reactors.

### Non-GHG Emissions And Effluents

To learn more about our Non-GHG emissions, effluents and waste see our [Annual Environmental Protection Report](#).

### Water Use

The Bruce Power site is located within the Saugeen Watershed along the shores of Lake Huron. For more information on the Saugeen Watershed visit [Saugeen Valley Conservation Authority](#). Lake Huron is the eighth largest lake in the world by volume at 3,540 km<sup>3</sup>.

Although we are fortunate to be operating in an area that is not currently impacted by water stress, we recognize that water is a precious global resource that has to be used respectfully and sustainably by all. Water levels in Lake Huron are at an all-time high with current levels at ~177.25 m. A maximum water level of 177.5 m was reached in July-August 2020; similar levels have not been experienced since 1986. Large oscillations in water levels have occurred over the last century, and it is reasonable to expect steep changes to occur into the future.

Each year, Bruce Power consumes ~2 million m<sup>3</sup> of Lake Huron water for domestic water uses and water demineralization for boiler feedwater. In 2020, the company consumed 2,242,709.61 m<sup>3</sup>. The consumed water is then treated before eventually being fully returned to the lake basin.

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Lake Huron is the eighth largest lake in the world by volume at 3,540 km<sup>3</sup>.



About Bruce Power	
Our Approach to Sustainability	
Materiality	
<b>Environment</b>	<b>○</b>
People and Safety	
Products and Services	
Community	
Methodology	

As an operation that takes more than 50,000 liters of water per day from a lake, river, stream, or groundwater source, Bruce Power must obtain a Permit to Take Water (PTTW) from the Ministry of Environment Conservation and Parks (with a few exceptions). These permits help to ensure the conservation, protection, management, and sustainable use of Ontario's water. A permit will not be issued if the ministry determines that the proposed water taking will adversely impact existing users or the environment. Bruce Power has a separate PTTW for Bruce A (1813-8MLLHG), Bruce B (2233-8MLN8J), and Centre of Site (COS) (1152-8MLPCR). Bruce Power remains in compliance with all PTTW requirements in 2020. Further information on this can be found in Bruce Power's [2020 Environmental Protection Report](#).

Bruce Power recognizes the value and importance of its interactions with Lake Huron. Bruce Power uses the cold, deep Lake Huron water in a once-through cooling process to supply operational needs including consumption for boiler feedwater and domestic water. We greatly value this resource and return more than 99 per cent of the water used for once-through cooling. This process is highly regulated, including provincial permits for water taking and imposing protective limits on water quality for waters returned to the lake. This ensures the conservation, protection, management and sustainable use of Ontario's freshwater resources.

In our effort to uphold and support these goals, we monitor our usage, including the amounts returned directly to the lake with no chemical changes, and report on daily amounts drawn. Beyond considerations of water quantity management, we are committed to monitoring and ensuring the protection of the quality of water, and our fish habitats in and around our shores and the greater region.

In addition to the permitting process, our environmental monitoring verifies water quality and conducts extensive monitoring year-round

which accounts for ecosystem dynamics. This includes sediments and soil, water, vegetation and biota, such as fish. Environmental monitoring ensures, through measurement, sampling, and analysis, that the health of the environment and people are protected. Sampling of the local area verifies that emissions and effluents from operations result in low to negligible environmental risks; this continues to verify that the natural environment and human health are protected.

Bruce Power goes beyond regulatory compliance by driving innovation and strategic research in the environmental protection field. We have long considered the surrounding environment and climate change vulnerabilities. We have worked with multiple partners to better understand climate change for Lake Huron with a focus on the area near the facility. We have extended this assessment to the Grey Bruce and Huron regions, with a focus on municipal and agricultural sectors and are working with Indigenous communities to specifically focus on improved understanding and potential advanced solutions to build resiliency.

We continue to support conservation and restoration of the natural environment through our ongoing sustainability projects, which include restoration of coastal wetlands by controlling the highly invasive Phragmites reed which is overtaking natural vegetation. We have also collaborated with the Town of Brockton and the Lake Huron Fishing Club to remove the Truax Dam in Walkerton to improve fish passage in our largest local river system, the Saugeen River, whose watershed contributes greatly to Lake Huron. We partner with community groups and conservation authorities to further strengthen resource protection while aligning with community needs for long term provision for ecosystem protection. We continue to understand changing environmental conditions with a focus on the Great Lakes ecosystem dynamics so we can contribute to the health of this precious resource which is also paramount to our business needs for clean and cool water.



- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

## Land Use and Biodiversity

Bruce Power is home to a naturally diverse environment that contains more than 235 species of plants and more than 270 species of wildlife. The protection of these species and the habitats that support them is an important aspect of our environmental initiatives.

In 2020, we set an internal target to protect/maintain 887 hectares of Bruce Power land undisturbed or equivalent off site. As we prepare for and conduct Major Component Replacement, there are times when development on site is essential. In such cases, the company will then work with organizations to ensure we are maintaining this 887 hectares of undisturbed and bio-diverse land total. The formal and quantitative company commitment is new, however, since 2017 we have conserved 61.6 hectares of land through organizations like Nature Conservancy Canada, Ontario Nature and Bruce Trails Conservancy..

### Wildlife Habitat Council Certification

Bruce Power was recently the proud recipient of the Wildlife Habitat Council Conservation Certification for our commitment to environmental stewardship. A main focus of the site program is continued stewardship of the Baie du Doré provincially significant wetland located near the Bruce Power site. In 2014, Bruce Power led an initiative that found *Phragmites australis* a highly aggressive invasive species had infiltrated 60 per cent of the 107-hectare wetland. This species alters the landscape and impacts ecosystem function and associated biodiversity. Through the leadership of Bruce Power nearly 40 hectares of *Phragmites* has been removed from Baie du Doré and the remaining is planned to be removed within five years. This will increase the diversity of native shoreline vegetation and allow the re-establishment of natural habitat.

**61.6 hectares of land  
have been conserved  
since 2017**

#### Examples of Bruce Power's conservation partnerships:

- Malcom Bluff Nature Reserve Bruce Peninsula
- Petrel Point Nature Reserve Bruce Peninsula
- Turtle Habitat within Bruce County
- Kemble Wetland Nature Reserve via Bruce Trails Conservancy
- Sauble Dunes Nature Reserve



Kemble Wetland Nature Reserve. Source: Bruce Trails Conservancy

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment** ○
- People and Safety
- Products and Services
- Community
- Methodology

## Phragmites Removal

Another target that we formally set as a company is to continue restoration of the nearshore habitat of Baie du Doré via phragmites removal. Phragmites is an invasive species choking out shoreline communities. The aerial images show the extent of phragmites coverage and density in 2014 prior to removal efforts and now in 2020 after several years of control. Bruce Power has partnered with the Invasive Phragmites Control Centre (IPCC) to equip the fight against this invasive species. We also support work by other organizations battling phragmites including the Kincardine Residents Against Phragmites and Indigenous communities.

Parcel	Size (ha)	Density
1	3.53	Thick to sparse
2	3.45	Thick
3	5.66	Thick
4	0.41	Thick
5	0.38	Thick
6	4.12	Thick to sparse
7	0.37	Thick to sparse
8	1.17	Thick
9	5.45	Thick
10	0.43	Thick
11	0.79	Thick
12	21.04	Sparse
13	5.47	Sparse
14	2.13	Sparse
15	0.9	Sparse
16	3.51	Sparse
17	0.24	Sparse
18	3.45	Sparse
<b>Total area of BDD evaluated</b>	<b>63 ha</b>	
Phragmites Density	Thick	28%
	Thick to sparse	13%
	Sparse	59%

In 2014, phragmites were established in 60% of the 107 hectares of the Baie du Doré wetland complex.

In 2020, phragmites were only remaining in 26 hectares.

### Phragmites at Baie du Doré



# People & Safety

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety** ○
- Products and Services
- Community
- Methodology

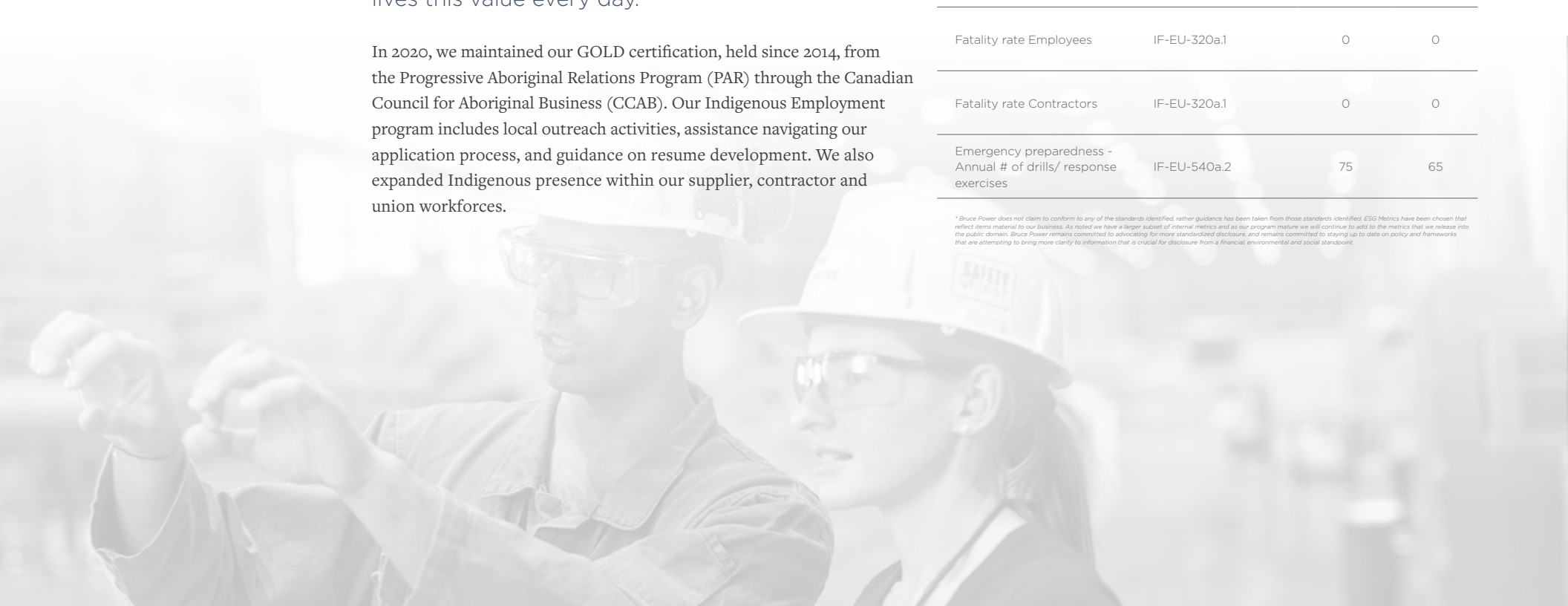
## Diversity, Equity, and Inclusion

Bruce Power is committed to employing a diverse workforce. We have defined diversity as the acknowledgment and appreciation that each individual has unique perspectives and life experiences. By embracing and respecting these visible and invisible differences, we create an environment where each employee feels empowered to achieve their best. Our commitment is enhanced through our Equity and Diversity Committee, which ensures the company lives this value every day.

In 2020, we maintained our GOLD certification, held since 2014, from the Progressive Aboriginal Relations Program (PAR) through the Canadian Council for Aboriginal Business (CCAB). Our Indigenous Employment program includes local outreach activities, assistance navigating our application process, and guidance on resume development. We also expanded Indigenous presence within our supplier, contractor and union workforces.

People & Safety	Standard(s) guidance is taken from *	2020	2021 Target
Women hired into Non-Traditional Roles	GRI- 405-1	24%	≥20%
Women promoted into Non-Traditional Roles	GRI- 405-1	26%	≥20%
% of Women Relative to the workforce	GRI- 405-1	21%	22%
Visible Minorities hired	GRI- 405-1	12%	≥12%
Industrial Safety Accident Rate (ISAR) Site	IF-EU-320a.1	0.02	≤0.00
Industrial Safety Accident Rate (ISAR) Contractors	IF-EU-320a.1	0.08	≤0.00
Fatality rate Employees	IF-EU-320a.1	0	0
Fatality rate Contractors	IF-EU-320a.1	0	0
Emergency preparedness - Annual # of drills/ response exercises	IF-EU-540a.2	75	65

\* Bruce Power does not claim to conform to any of the standards identified, rather guidance has been taken from those standards identified. ESG Metrics have been chosen that reflect items material to our business. As noted we have a larger subset of internal metrics and as our program matures we will continue to add to the metrics that we release into the public domain. Bruce Power remains committed to advocating for more standardized disclosure, and remains committed to staying up to date on policy and frameworks, that are attempting to bring more clarity to information that is crucial for disclosure from a financial, environmental and social standpoint.





- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety** ○
- Products and Services
- Community
- Methodology

Bruce Power continues to integrate diversity, equity and inclusion into our business with: the continued evolution of our Diversity Strategy; evolving our Recruitment Strategy to include Diversity, Equity and Inclusion at every stage; and through the signing of the Leadership Accord on Gender Diversity. The Leadership Accord on Gender Diversity is a public commitment by employers, educators, unions and governments to promote the value of diversity, equity and inclusion in their organizations. The Accord provides a platform to create a culture of equality and inclusion, while facilitating opportunities for women in traditionally male-dominated roles. At Bruce Power, we have placed a business focus on hiring, promoting and developing females in non-traditional roles.

Additionally, we have focused on the integration of diversity, equity and inclusion into our employer branding, new hire orientation, and our Leadership Development programs. Through our Diversity, Equity and Inclusion committee, we sponsor and participate in many events which include local Multicultural Day, community Pride events, International Women's Day celebrations and the annual National Indigenous Peoples Day celebration.

#### **Pledge to continue commitments to fight racism**

In June of 2020, Bruce Power CEO Mike Rencheck joined other CEOs and made a statement to band together to fight racism in all its forms. The signing of the Black North initiative takes that commitment one step further as we commit to the actionable goals outlined in this pledge, which move toward ending anti-black systemic racism and creating opportunities for underrepresented groups. In addition, we are excited to be working with NPX on a Nuclear Against Racism commitment, which will include a partnership of companies in the industry to make impactful change together.

We are proud to be continuing this important work and remain committed to ensure we are listening, learning and teaching one another

as we move forward as an inclusive and respectful organization. You will continue to see updates as we track progress towards the goals outlined in the Diversity, Equity and Inclusion program specifically including the Black North pledge and Nuclear Against Racism commitments.

#### **Canada Best Diversity Employers**

In March of 2021, Bruce Power was named one of Canada's Best Diversity Employers in recognition of its exceptional workplace diversity and inclusiveness programs. The Canada's Top 100 Employers Project 2021 Best Diversity Employers list has recognized the company for its Diversity, Equity and Inclusion program, which incorporates diversity at every stage, from new hires to career advancement opportunities.

As a signatory of the Leadership Accord on Gender Diversity in the electricity industry, Bruce Power made a public commitment to promote the value of diversity, equity and inclusion in the organization. The Accord provides a platform to create a culture of equality and inclusion, while facilitating opportunities for women in traditionally male-dominated roles.

To that end, 24 per cent of hires into non-traditional roles (trades, maintenance, and operations) were filled by women in 2020, a large increase from five years ago. The company will continue to focus on increasing the number of women into roles where they are traditionally underrepresented along with members of visible minorities, persons with disabilities, Indigenous peoples and lesbian, gay, bisexual and transgender/transsexual peoples.

Building a more diverse and inclusive workforce is good for business. With more perspectives comes greater creativity and innovation, which sets us up for success as we work towards a clean energy future for Ontario and Canada.

**In March of 2021, Bruce Power was named one of Canada's Best Diversity Employers in recognition of its exceptional workplace diversity and inclusiveness programs.**

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety** ○
- Products and Services
- Community
- Methodology

## Ethics

Bruce Power's Code of Conduct applies to the Board of Directors, Board Committee members, employees, complementary staff, and suppliers.

The Code of Conduct sets the expectation for acceptable behaviour both at Bruce Power and while performing work for or on behalf of Bruce Power at other locations. The Code of Conduct helps to maintain the ethical workplace culture that we have worked hard to establish. At Bruce Power, ethical values like integrity, respect, honesty and transparency matter, and they are reflected in the daily actions of our workers, and our company policies and procedures.

Workers are expected to act with integrity and treat each other with respect, and deal with colleagues, customers, suppliers, partners, owners, shareholders and the community ethically and responsibly. We believe every employee has the right to a safe work environment, free from harassment, discrimination and retaliation. We expect all individuals to behave in a manner that meets or exceeds Bruce Power's values, which we adhere to through our Code of Conduct standards.

We always strive for excellence and do our job to the best of our ability to ensure the interests of Bruce Power, our local communities, our colleagues and the environment are safeguarded. We perform our duties in accordance with all applicable laws, regulations and other legal and business requirements, as well as observing company policies, procedures and rules.

Bruce Power ensures that all workers accessing site are properly trained by requiring the completion of Code of Conduct Training.

### Political Donations, Government Lobbying and Political Activity

Our Corporate Affairs Division manages all of Bruce Power's political donations to the extent permitted by law. Lobbying-related activities are managed by the Corporate Affairs Division for federal, provincial and

municipal governments, and the required reporting of these activities is overseen by the Bruce Power Code of Conduct Office. These activities and those registered as Lobbyists on behalf of Bruce Power are also reported annually to the Bruce Power Code of Conduct Oversight Committee.

We may participate in the political process as an individual, in accordance with our own political views and the laws and regulations governing this activity. In doing so, however, we may not use Bruce Power's name, nor indicate that we represent Bruce Power, unless we have been authorized to do so.

### Anti-Corruption

We promote integrity and ethics in all aspects of our business activities. We comply with all applicable laws and regulations on corruption, bribery, prohibited business practices and extortion. Bruce Power prohibits the offering or acceptance of bribes or kickbacks of any kind, whether in dealings with public officials or individuals in the private sector. A bribe is generally defined as a gift or promise of undue reward or payment, financial or otherwise, to influence the behaviour of government officials or business for the purpose of gaining a commercial advantage. A kickback is similar to a bribe, but usually occurs after the fact. We respect our relationship with government employees. As a representative of the company, workers are expected to be aware of and comply with relevant laws and regulations that govern relationships between government, customers and suppliers.

In terms of mitigating against corruption, together with Finance, the Bruce Power Code of Conduct Office regularly conducts fraud risk scenario reviews to review or establish controls to mitigate against the risk of fraud occurring in the business. In addition, a fraud risk assessment was completed as part of a commercial internal audit, along with a survey of workers.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety** ○
- Products and Services
- Community
- Methodology

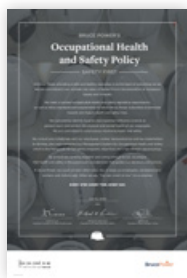
**Openness**

At Bruce Power, we are dedicated to connecting with the community in an open, transparent and meaningful way. We are committed to conducting business ethically, respectfully, safely and with professionalism at all times. Our company values guide Bruce Power's communications while respecting the bounds of commercial confidentiality and disclosure obligations of its listed partners. Bruce Power strives to maintain a positive working relationship with those who have an interest in our business. We are committed to open communication with community members, Indigenous communities and other stakeholders, including local residents, government representatives, charities, service clubs, schools and students.

**Occupational Health and Safety**

Our number one value is 'Safety First.' We live this value in every decision we make. Our employees are expected to work as safely as possible and we encourage an environment where we learn from any issues at all levels of the company. Our goal is to have employees go home to their families as healthy as they were when they came to work that day. Safety goes beyond doing everything we can to guard against serious, long-term injuries. We don't want people incurring any type of injury on site. When you enter the Bruce Power site, you will see a sign that shows the number of days that have passed since one of us was hurt. That's a change from the previous message of hours worked without a lost-time injury. Our "You Can Count On Me" safety communications initiative was recognized with a Gold Quill Award for Excellence in Safety Communications by the International Association of Business Communicators (IABC) in 2019. Our goal is always zero occupational injuries or illnesses, and we are proud of our employees for these sustained runs of safe performance. We look forward to learning from past experiences and consistently achieving the highest safety standards possible.

**Bruce Power's Health and Safety Policy**



**COVID-19 response for the safety and health of our people**

Bruce Power committed \$1 million to Bruce, Grey and Huron counties through the Be a Light campaign to continue the fight against COVID-19. It supported Public Health Communications, Additional Community Protections, Buying Local, Mental and Physical Health Initiatives and Lending a Helping Hand.

The health and safety of our employees and communities is paramount. Since the beginning of the pandemic Bruce Power has been proactively planning and communicating in response to COVID-19. We have stayed ahead of all government guidance and worked with our Emergency Response Organization and a number of oversight committees to ensure a coordinated response.



**Protecting our employees against COVID-19**

- Main Gate Screening
- Temperature Screening
- Mandatory Mask Use
- On-site Testing
- Sanitization
- Hand Hygiene
- On-site Vaccination Clinic





About Bruce Power

Our Approach to Sustainability

Materiality

Environment

**People and Safety** ○

Products and Services

Community

Methodology

[Watch highlights from the Huron Resilience Drill](#)

To learn more about emergency preparedness [visit our website](#)

### Emergency Preparedness

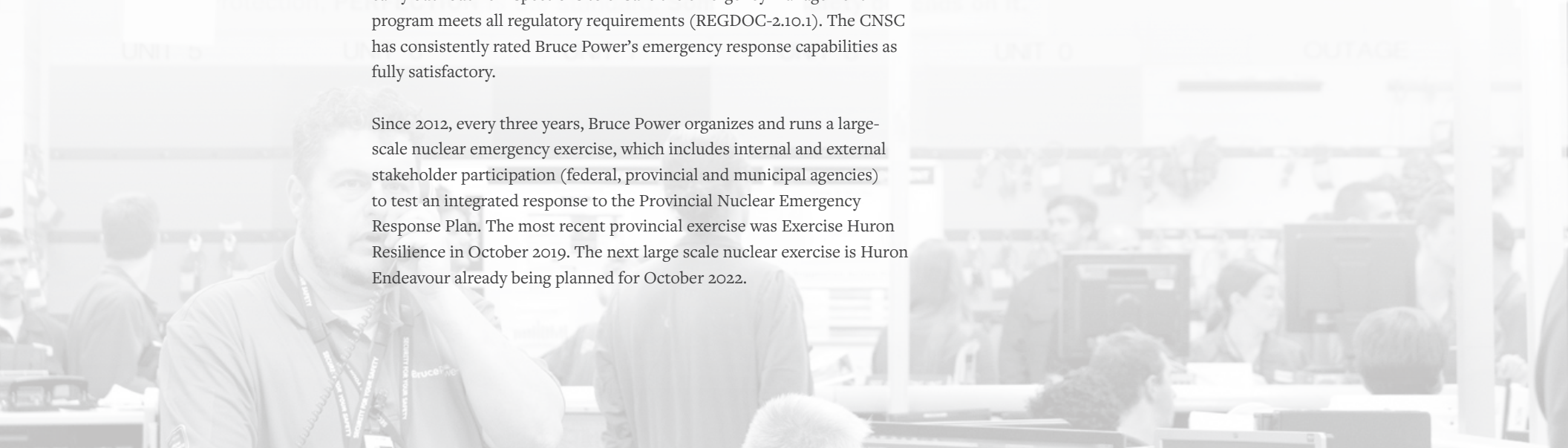
Bruce Power is prepared for all types of possible emergency events, including the unlikely event of a nuclear emergency. This is known as an 'all hazards' approach to emergency planning. While emergency preparedness is part of Bruce Power's Operating License for its generating facilities, Bruce Power recognizes the importance of maintaining a robust and multi-faceted emergency response program as part of its number one value of Safety First as well as social responsibility.

Bruce Power's emergency response program includes complement staff on site (who are on site 24 hours a day, seven days a week), on-call (available 24/7 and can be operational within 90 minutes) and call-in staff who are available to support the site during an emergency.

### Regulated by the Canadian Nuclear Safety Commission

The effectiveness of Bruce Power's emergency response program is continuously evaluated through a series of drills and exercises. Every year, the company's emergency response organization undertakes nearly 50 drills and at least one major exercise, which is also evaluated by the Canadian Nuclear Safety Commission (CNSC). In addition, the CNSC carry out routine inspections to ensure the emergency management program meets all regulatory requirements (REGDOC-2.10.1). The CNSC has consistently rated Bruce Power's emergency response capabilities as fully satisfactory.

Since 2012, every three years, Bruce Power organizes and runs a large-scale nuclear emergency exercise, which includes internal and external stakeholder participation (federal, provincial and municipal agencies) to test an integrated response to the Provincial Nuclear Emergency Response Plan. The most recent provincial exercise was Exercise Huron Resilience in October 2019. The next large scale nuclear exercise is Huron Endeavour already being planned for October 2022.



# Products & Services

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services** ○
- Community
- Methodology

Products and Services	Standard(s) guidance is taken from *	2020	2021 Target
% of services and materials sourced from suppliers in the Indigenous Relations Supplier Network	See Methodology	61.51%	Disclosure
% services and materials spent in Ontario	GRI-203-2, GRI-201-1	85.9%	Disclosure
% services and materials spent in Canada	GRI-203-2	92.0%	Disclosure

\* Bruce Power does not claim to conform to any of the standards identified, rather guidance has been taken from those standards identified. ESG Metrics have been chosen that reflect items material to our business. As noted we have a larger subset of internal metrics and as our program matures we will continue to add to the metrics that we release into the public domain. Bruce Power remains committed to advocating for more standardized disclosure, and remains committed to staying up to date on policy and frameworks that are attempting to bring more clarity to information that is crucial for disclosure from a financial, environmental and social standpoint.

## Indigenous Procurement Policy

Bruce Power is proud to be recognized as a Procurement Champion and awarded Progressive Aboriginal Relations Gold certification through the Canadian Council for Aboriginal Business. We are committed to working with local Indigenous communities to define objectives and targets that will increase participation in contracting and procurement opportunities and developing concrete mechanisms in support of those objectives. Bruce Power's Indigenous Procurement Policy supports the ability to ensure a meaningful, measurable impact on contracting and procurement opportunities for local Indigenous companies as well as greater opportunities for regional and national Indigenous companies.

In June 2017, Bruce Power created the [Indigenous Relations Supplier Network \(IRSN\)](#) as part of our site's commitment to ensure local Indigenous communities are able to participate fully in the business development, procurement and economic activities taking place through the next phase of our operation.

### Bruce Power's Indigenous Procurement Policy

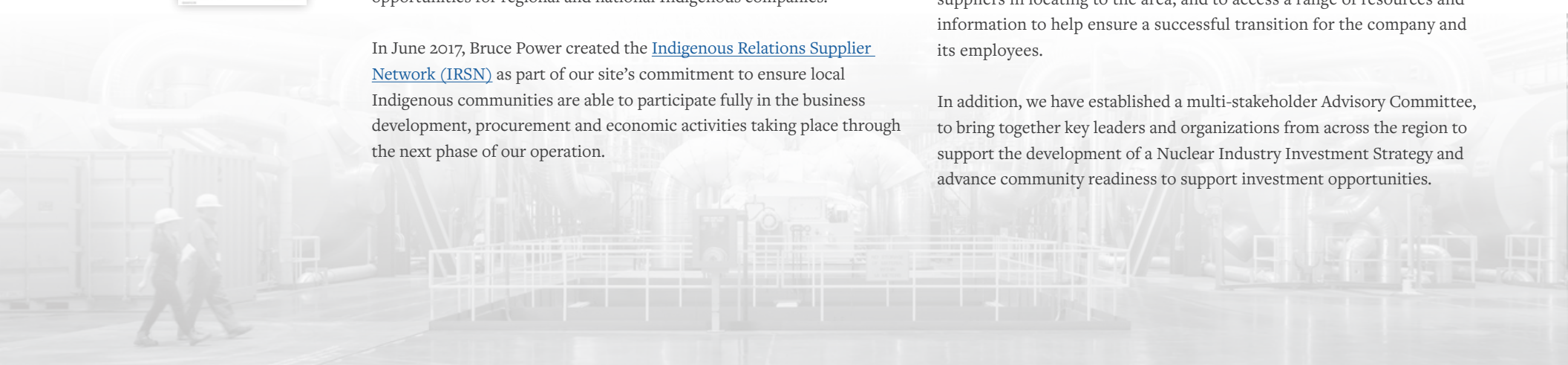


## Economic Development

Bruce Power and the County of Bruce have teamed up to establish a regional [Economic Development and Innovation Initiative](#) to leverage economic opportunities for communities in Bruce, Grey and Huron counties, given Bruce Power's multi-year, multi-billion investment program.

A jointly funded Director of Clean Energy Frontier Program position has been established to create a single interface to facilitate a range of economic development and innovation ideas as part of the multi-year investment program at Bruce Power, in addition to the company's core economic impact through operations. The position focuses on assisting suppliers in locating to the area, and to access a range of resources and information to help ensure a successful transition for the company and its employees.

In addition, we have established a multi-stakeholder Advisory Committee, to bring together key leaders and organizations from across the region to support the development of a Nuclear Industry Investment Strategy and advance community readiness to support investment opportunities.



- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services** ○
- Community
- Methodology

## Isotopes and Business Development

Bruce Power does more than supply 30 per cent of the electricity used by Ontario's families and businesses.

Medical isotopes supplied by Bruce Power are vital resources to the medical community, and the company continues to seek ways to expand the types of isotopes it produces. An agreement signed in 2019 brought together Bruce Power, IsoGen (Kinectrics and Framatome) with a group of biotechnology and radiopharmaceutical companies to collaborate on establishing Ontario as a global hub for medical isotopes, including research, development, production, processing and export.

By joining forces with the health-care sector and research facilities, nuclear energy producers like Bruce Power can continue delivering life-saving medical isotopes to hospitals around the world – improving the quality of life of millions of people in the process.

### Cobalt-60 and Lutetium-177

Four of Bruce Power's reactors produce Cobalt-60, an isotope which helps to sterilize 40 per cent of the world's medical devices, and treat complex forms of cancer – including brain tumors – through non-invasive procedures like the Gamma Knife.

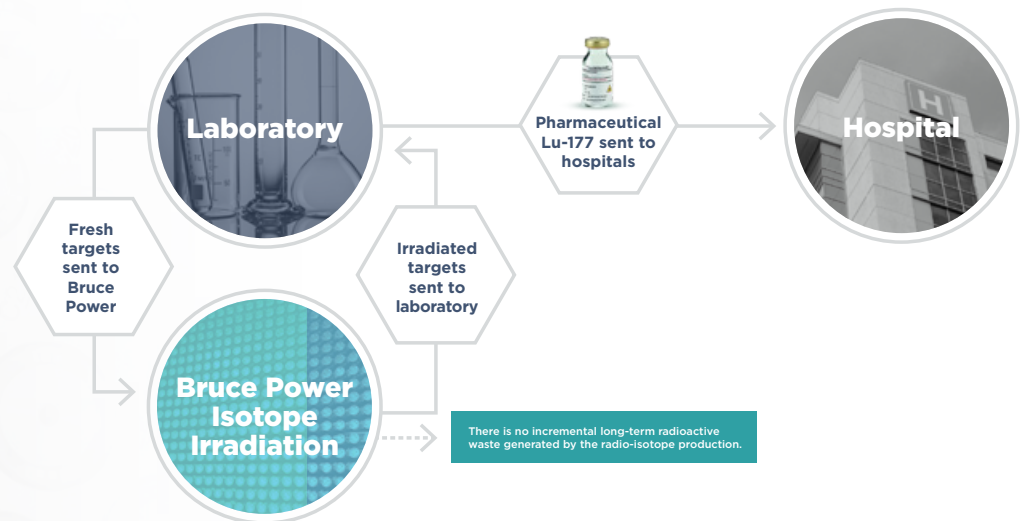
Production of Lutetium-177, a key isotope used to treat prostate cancer, is expected to be enabled at Bruce Power as soon as 2022 thanks to a partnership with IsoGen to advance this innovative project.

#### What is Lutetium-177?

Lutetium-177 is used in targeted radionuclide therapy to treat neuroendocrine tumors and prostate cancer. Lutetium produced in nuclear reactors is used to destroy cancer cells while leaving healthy cells unaffected.

#### How does Lutetium-177 treat cancer?

The radioactive Lutetium-177 binds to a molecule that attaches itself to the diseased cells to destroy them. It has achieved success in inducing long-term remission in some prostate cancer patients.





- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services** ○
- Community
- Methodology

**Fighting Cancer Together**  
A collaboration between  
Saugeen Ojibway Nation  
(SON) and Bruce Power



### How is Lutetium-177 produced?

Lutetium-177 is produced by irradiating Ytterbium-176. The process involves placing Ytterbium-176 source material in special sealed containers that are then conveyed into one of the Bruce Power reactors using the proprietary Isotope Production System (IPS). The IPS, designed and manufactured in Ontario by Bruce Power's partner IsoGen, offers flexibility to produce isotopes while maintaining the safe and reliable production of electricity. The resulting Lutetium-177 is then sent for further processing into highly-pure pharmaceutical grade Lutetium-177 for subsequent distribution to health-care facilities worldwide.

The Saugeen Ojibway Nation (SON) and Bruce Power are excited to introduce a [new project name and logo](#) for their medical isotope partnership. The project name, "Gamzook'aamin aakoziwin" translates to "We are teaming up on the sickness." The Anishinaabemowin (Ojibwe or Anishinaabe language) name was developed through consultation with SON Knowledge Holder, Polly Keeshig-Tobias and her collaboration with other SON Community knowledge holders and elders.

SON and Bruce Power entered into a collaboration agreement in 2019 to explore ways of jointly marketing new isotopes in support of the global fight against cancer, while also working together to create new economic opportunities within the SON territory. The partnership will use the made-in-Ontario Isotope Production System installed into Bruce Power's nuclear reactors to produce Lutetium-177 and other isotopes used in the diagnosis and treatment of cancers in hospitals around the world.

Bruce Power and SON have been exploring this opportunity to work together for many months, and this agreement followed extensive dialogue and community engagement sessions at both Saugeen First Nation and the Nawash Unceded First Nation in the summer of 2019.

We've spent many years forging a strong relationship where we have listened to and learned from each other, and have collaborated on many projects that will have lasting benefits for SON community members

## Working With Our Suppliers

At Bruce Power, we take great pride in the relationships we have with our suppliers, who are an integral part of our business. We work very closely to make sure they understand and are aligned with our core values. Responsible sourcing in preparation for the Major Component Replacement project that began in January 2020, local sourcing was a key focus and incorporated into our agreements with new suppliers. More than 60 suppliers had established offices in Bruce, Grey and Huron counties (for more details, go to the Economic Development and Innovation Initiative, and the Working with Bruce Power sections of our [website](#)). Based on the scoring of the supply chain process, suppliers with a local presence, score higher than those with a provincial, and then national presence. The scoring process also gives consideration to companies which have documented local Indigenous components of their business (which again scores higher than at the provincial and national levels).

### Supplier Engagement

At the RFP evaluation phase, Supply Chain will take into consideration a variety of ESG factors, which are weighted according to the nature of the procurement at issue. Bruce Power expects its suppliers to support and respect human rights, diversity and equal opportunity within the workplace. Suppliers shall ensure all labour practices, wage payments and benefits comply with applicable laws and regulations. Most suppliers are required to register in ISNetworld and maintain the requested information. ISNetworld includes safety related metrics and grading and includes an environmental questionnaire (including questions such as ISO 14001 certification, waste, and spill management plans, etc.). The environmental questionnaire contributes to the supplier's overall rating in ISNetworld. Selected sub-contractors must in most cases secure local economic content to encourage local economic development. Every one of Bruce Power's selected suppliers is required to complete the Bruce Power code of conduct training once they have signed an agreement.

# Community

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community** ○
- Methodology

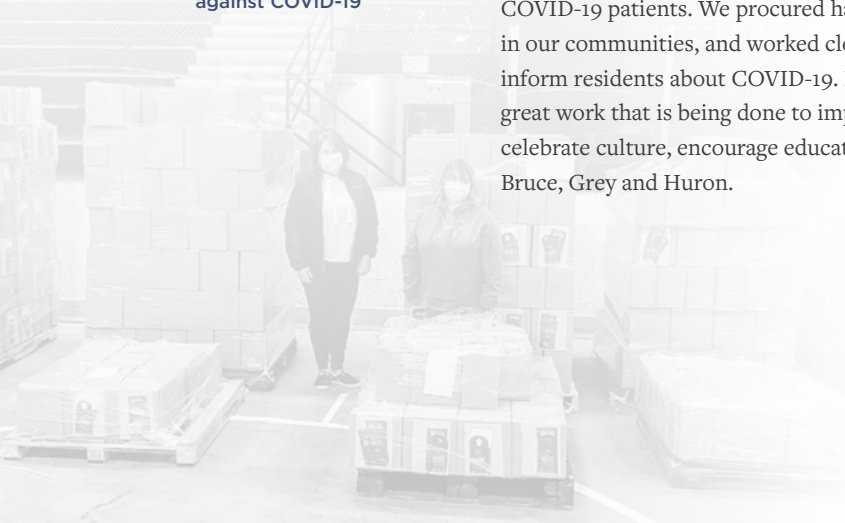
We're at our best when we help each other by working together. That's never been more obvious — and necessary — in a year when a global pandemic cost the lives of millions of people.

At Bruce Power, we rely on the support and commitment of the surrounding communities and everyone who lives here. We have the privilege of contributing to the community and encourage our partners to do the same. When the COVID-19 crisis struck, our people, our communities and our partners rallied to protect families, friends, businesses and workers. Through collaboration between our elected leaders, our employees, our partners in the nuclear supply chain and the business community, we executed a number of initiatives.

That esprit de corps played a leadership role in Bruce Power donating more than two million pieces of personal protective equipment (PPE) to health-care facilities, other front-line workers, small businesses, our Indigenous communities, and schools — the largest-announced donation of PPE from Canada's private sector. More than \$1 million was raised within the company and with support from many of our suppliers. That funding was used to help food banks, local and national organizations in financial distress, and for the production of ventilators used to treat COVID-19 patients. We procured hand sanitizer and masks to distribute in our communities, and worked closely with our public-health experts to inform residents about COVID-19. In 2020, we were there to support the great work that is being done to improve lives, protect the environment, celebrate culture, encourage education and build healthy communities in Bruce, Grey and Huron.



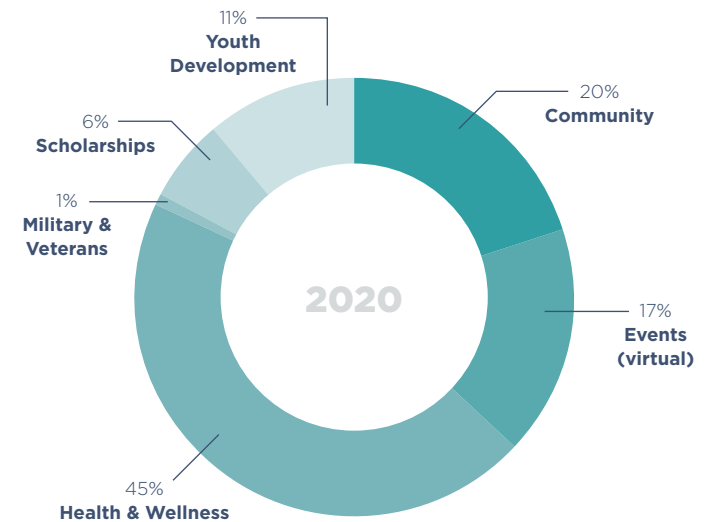
2 million pieces of PPE donated to health-care and front-line workers for the fight against COVID-19



Community	Standard guidance is taken from *	2020	2021 Target
Total Value of Sponsorships & Donations	See Methodology	\$4,000,000	≥ \$2,500,000

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## Bruce Power's Community Investment Program



"I want to thank Bruce Power for showing the true Ontario spirit and making this generous donation of PPE to support Ontario businesses, schools, and non-profits. I am incredibly proud of how the Ontario business community, including Bruce Power, has stepped up during these extraordinary times to give back to their local communities, keep people safe and healthy, and ensure we defeat this terrible virus."

**ONTARIO PREMIER DOUG FORD**

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community** ○
- Methodology

## Our Stakeholders

Our identification of stakeholders is guided through our ISO 14001 system. A stakeholder is someone who has an interest in the performance of the business and can influence objectives. A stakeholder can also be defined as “Interested Parties.” Bruce Power stakeholders/interested parties include, but are not limited to: workers, pensioners, residents of communities surrounding the Bruce Power site, Indigenous Peoples, local and regional governments, organized labour and provincial building trades, media, economic interest groups, provincial and federal government decision makers, government representatives, charities, service clubs, schools and students.

Through our Materiality assessment we recognize that there are key environmental areas important to the community as reported in 2019 there are three main community issues that we continue to work collaboratively to address.

### The three key community issues identified were:

#### Economic and Employment Issues

This remains a top public issue across Kincardine, Saugeen Shores and other Bruce County communities. In 2016, Bruce Power and the County of Bruce partnered to launch the Nuclear Economic Development and Innovation initiative. Given the company's multi-billion dollar investment program, it is important that the local communities are engaged and the local opportunities of this investment are leveraged across the region. To date, more than 60 supplier partners are having a local impact creating local jobs and career opportunities.

#### Health Care/Doctor Shortage

This remains a top issue in both Kincardine and Saugeen Shores, and throughout Bruce County. Over the last 10 years, Bruce Power has

partnered with the municipalities of Saugeen Shores and Kincardine to successfully attract new physicians to our communities. During this time Bruce Power has invested approximately \$1 million into this effort and worked alongside both municipalities to attract physicians to our communities resulting in continued excellent health care for our communities and the emergency departments at both Kincardine and Southampton hospitals remaining open. We acknowledge and congratulate the communities for their commitment to health care and investments in local infrastructure including medical clinics.

Given the Municipality of Kincardine's recent decision in 2020 to move toward a different model for physician recruitment, we felt it is a natural time to draw our previous arrangement to a close and reassess the best way we can help attract physicians on a regional basis.

Physician recruitment is a continuous cycle in an ever-changing landscape, and we will continue supporting local municipalities in their search for doctors. We remain committed to continuing to offer spousal employment when possible to assist with attracting incoming doctors.

As much as our region itself is a draw, we also recognize that physicians need access to state-of-the-art facilities. For this reason, and aside from the Physician Recruitment Program, Bruce Power remains committed to investing in health care infrastructure and it's why we provided \$1 million to Grey Bruce Health Services to assist with upgrades to Owen Sound's Cancer Centre, and the new Emergency Room at the Southampton Hospital. Bruce Power has also committed \$1 million to the Kincardine Hospital towards the purchase of a CT Scanner. More than \$2 million has also been raised for both the Saugeen Memorial and Kincardine & Community Hospital Foundations, by way of the Bruce Power Charity Golf Tournament. These funds assist with necessary equipment purchases to improve patient health and draw physicians to the region.



About Bruce Power
Our Approach to Sustainability
Materiality
Environment
People and Safety
Products and Services
<b>Community</b> ○
Methodology

### Increased Cost of Living and Housing

In August 2019 we announced a partnership with the Municipality of Kincardine to support Bruce County Housing Corporation's 35 new residential units in the municipality. The new development provides more accessible and affordable housing for existing residents and people moving to the Kincardine area.

The development includes a new service hub for Bruce County's Human Services department, which aligns with the County's strategic direction to improve efficiency and services to its residents.

In 2020, Bruce Power sponsored and participated in the Saugeen Shores Attainable Housing Task Force which examined the housing situation in the community and made 25 recommendations aimed at addressing the issue.

### Supporting our communities during COVID-19

#### COVID-19 Retooling and Economic Recover Council (RERC)

In April 2020, Bruce Power launched the Retooling and Economic Recovery Council (RERC) as a way to bring together Ontario's nuclear supply chain, and focus efforts on the fight against COVID-19. The council is comprised of a diverse group of organizations across the nuclear sector, with a common goal of leveraging their collective assets, resources and knowledge to assist in the fight against the pandemic and to help economic recovery in the province. Ontario's nuclear supply chain is well-positioned to assist in the fight against the pandemic, and the council has had a number of notable accomplishments in the short time since the group began.

- Facilitated a collective shift in production to support Ontario's fight against COVID-19, leading efforts to build new ventilators, assisting testing efforts, and supplying medical gowns among other needed supplies to fight the pandemic.

- Provided emergency response capabilities for mobile hospitals across Bruce, Grey and Huron counties, as well as deploying 150 pop-up hospital beds in Windsor-Essex.
- Raised over \$500,000 for 38 food banks in our communities, and distributed care packages for those in need and front-line workers.
- Distributed 50,000 litres of hand sanitizer to small businesses, community organizations, first responders and Indigenous communities across Ontario.
- Assisted public health officials in Grey-Bruce and Huron-Perth by hosting Virtual Town Halls and live information sessions that reached over 250,000 people.

The council has continued to focus its efforts on the critical needs of Ontarians as we battle the pandemic, and look forward to meaningful paths to economic recovery. The COVID-19 pandemic has changed the world. Fighting COVID-19 can be achieved along with retooling and lasting economic recovery. The Bruce Power Retooling and Economic Recovery Council has committed to exploring ongoing opportunities for enhancing global health through isotopes, leveraging the nuclear supply chain to be self-sufficient with PPE and furthering opportunities to expand sterilization using Cobalt-60.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community** ○
- Methodology

## Mental Health Support

Staying active and spending time outdoors has an important role to play in helping people manage the COVID-19 pandemic in Bruce, Grey and Huron counties. Bruce Power recognizes that and responded with a \$300,000 donation through its Be a Light: Beating COVID-19 Together campaign. The company announced the \$1 million funding commitment to reinvigorate efforts in fighting the pandemic across the region.

From that commitment, \$250,000 has been earmarked to support the maintenance and enhancement of the Kincardine Trails and the Saugeen Rail Trail, while also supporting a feasibility study into the development of a trail at Saugeen First Nation. Another \$50,000 is being provided to mental health initiatives supporting the tri-county region including:

- The Canadian Mental Health Association- Grey-Bruce branch
- The Westover Treatment Centre recovery support
- The Grey Bruce 'We CARE' Project in support of youth mental health

## Huron Shores Hospice

Bruce Power has been a proud supporter of the Huron Shores Hospice, which provides quality end-of-life care, at no cost, to residents of Saugeen Shores, Kincardine, Huron-Kinloss and surrounding areas. It is a community-funded organization, located within Tiverton Park Manor in Tiverton, Ontario.

Most recently, at the Huron Shores Hospice virtual hike event held May 8, Bruce Power announced a \$55,000 donation to the organization on behalf of the company's nuclear supply chain partners – more than 30 members of our supply chain who donated to the Huron Shores Hospice through Bruce Power's charitable events package. We are fortunate to have supplier partners who share our commitment to the communities in which we live, work and play.



### Bruce Power provides virtual programming for hundreds of local students

As local students and teachers continue to adapt to home-schooling and fewer camp opportunities for kids during the pandemic, Bruce Power began offering virtual programming for classes Grade 5 to 12. Classes include two virtual presentations on energy every week through the end of the school year for Grades 5-8 and 9-12 respectively, as well as a Careers presentation for high schoolers.

We have also sponsored virtual summer camp experience for students across Bruce, Grey and Huron. Last summer, when many outdoor camps were closed due to the Covid virus – Bruce Power and the Nuclear Innovation Institute (NII) created the Best Ever Summer Camp, an online gathering place for children between the ages of 7 and 12, starting in July. Designed in partnership with the highly creative minds at Nuclear Promise X (NPX), the seven-week program provided free activities for young campers to do at home, melding the joys of crafts, arts, dance and music with a fun approach to picking up science, technology, engineering, and math (STEM) knowledge.

To learn more about Bruce Power's partnership with the Nuclear Innovation Institute (NII) visit: <https://www.nuclearinnovationinstitute.ca/>

# Methodology

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

The purpose of the methodology section is to provide open and transparent information on the boundaries of how each Key Performance Indicator (KPI) within the tables of this report are calculated. It is important to note that as the ESG space continues to evolve and become more standardized we anticipate that there may come a time where calculation adjustments may need to be made. If this is ever the case, we will provide the details of this change.

At Bruce Power we have 12 main areas of materiality with corporate governance being our overarching structure and the 11 remaining items falling within each of our four focus areas. We have developed a subset of Key Performance ESG Indicators and Targets based on guidance from the United Nations Sustainable Development Goals (UN SDGs), Sustainability Accounting Standards Board (SASB), Task Force on Climate Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI). It is important to note that at this time Bruce Power is not claiming full conformance to any of the standards above rather has used each standard to guide disclosure based on materiality. Outlined below is how we are currently calculating performance and progress in each area.

## Scope 1 and Scope 2 Greenhouse Gas Emissions (CO<sub>2</sub>eq)

### Boundary

The Organizational Boundary is the portions of 177 Tie Road, Tiverton, Ontario that Bruce Power has operational control of. The Operational Boundary was set with the goal of managing GHG risks, identifying reduction opportunities, participating in GHG markets and complying with federal and provincial requirements. Scope 1

and Scope 2 emissions are included in the Operational Boundary. Emissions data will be subdivided into stationary combustion emissions, mobile emissions and fugitive emissions. Note that as part of our Net Zero 2027 strategy we are currently refining operational boundaries and this may result in adjustments that will impact our 2019 baseline.

### Emission Factor References

Scope 1 emissions: Environmental and Climate Change Canada (ECCC) Greenhouse Gas Quantification Requirements.

Scope 2 emissions: ECCC Greenhouse Gas Quantification Requirements, Environmental Protection Agency's Mandatory Greenhouse Gas Reporting Rule 40 CFR Part 98, Subpart C, National Inventory Report 1990-2018: Greenhouse Gas Sources and Sinks in Canada.

## Net GHG Emissions (Scope 1, 2, RECs, Offsets)

### Boundary

Net GHG Emissions refers to the total Scope 1 and Scope 2 emissions minus any operational gains or purchased offsets. Note that as part of our Net Zero 2027 strategy we are currently refining operational boundaries and this may result in adjustments that will impact our 2019 baseline. Note that our goal for 2021 is a 5 per cent reduction of overall Scope 1 and Scope 2 emissions compared to our 2019 baseline year. This reduction and all reductions out to 2027 will be a combination of operational improvements as well as Renewable Energy Credits (RECs) and purchased offsets.

## Carbon Removal via Tree Planting per year (CO<sub>2</sub>eq)

### Boundary

Bruce Power's Carbon Removal via Tree Planting Calculation is based on the guidelines outlined within the Tree Canada Foundation

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

document entitled “What Trees can do to Reduce CO<sub>2</sub> (March 1999).” Within this document, two calculations for Carbon Removal are offered as an estimate of how to calculate tree planting efforts: Lifetime Carbon Removal and Annual Carbon Removal.

Bruce Power uses the Lifetime Carbon Removal calculation for rural planting based on the Tree Canada Foundation Document.

### Calculation

Number of trees planted = annual # funded \* 95 per cent (this incorporates the assumption of a 5 per cent death rate or a 95 per cent survival rate).

Lifetime carbon removal= Number of trees planted/ $4.4 \times 10^{12} / 44$

\*note that  $44/12$  is the ratio of the mass of a CO<sub>2</sub> molecule to the mass of carbon atom in each CO<sub>2</sub> molecule.

### Assumptions

We do not consider the type of tree that has been planted in this calculation just the number of trees.

We do not visually verify that trees have been planted rather trust that those who purchased trees via the funding agencies plant their trees.

We assume that 5 per cent of all trees die, so a survival rate of 95 per cent.

### Process in Creating the Boundary

We recognize that tree planting CO<sub>2</sub> removal is still a very active discussion in the scientific community and also recognize that there are multiple ways to calculate the benefit of tree planting. We also acknowledge that there is not one specific guidance document that is accepted globally. In the absence of a definitive requirement or guidance we are using a simple calculation to share our efforts in this space, and are

not using tree planting as a certified offset; rather want to demonstrate that our effort for carbon removal has been happening for many years. We also want to give a continued support to the importance of tree planting in addition to officially credited offsets in the carbon removal dialogue.

### References Built into this Calculation

1. <https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/forest-change-indicators/tree-mortality/17785>
2. [https://www.fs.fed.us/nrs/pubs/gtr/gtr\\_nrs158.pdf](https://www.fs.fed.us/nrs/pubs/gtr/gtr_nrs158.pdf) United States Department of Agriculture Urban Tree Mortality: A Primer on Demographic Approaches
3. Trees Canada (March 1999) What trees can do to reduce CO<sub>2</sub>
4. <http://www.tenmilliontrees.org/trees/>
5. n.d.) Urban Forestry Network. Retrieved from: <http://urbanforestrynetwork.org/benefits/air%20quality.htm>

## Emissions avoidance via operation (tons CO<sub>2</sub>eq) based on TWh

### Boundary

Bruce Power's Avoided Emissions are based on the guidelines outlined within the Working Paper by the World Resources Institute Estimating and Reporting the comparative emissions impacts of products. Within the GHG Protocol, the working paper offers a neutral framework for estimating and disclosing both positive and negative impacts. This calculation uses the “attributional estimation approach” which takes the difference in total life-cycle GHG emissions between our company's product and the emissions of Combined Natural Gas an alternative product for the province of Ontario based on our electricity grid make up would be the most logical choice of replacement in a situation where



- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

nuclear was not available to the grid. Lifecycle emissions are used from the Intergovernmental Panel on Climate Change Life Cycle Assessment 2014, the life cycle emissions for nuclear power includes Uranium mining, enrichment, and fuel fabrication, plant construction, use, decommissioning and long-term waste storage.

It is assumed that annually the actual TWh output that Bruce Power generates would be replaced in totality by the combined natural gas. The equation looks at in a normal year what the emissions would be from a lifecycle standpoint from nuclear, and then what they would be alternatively from combined natural gas and subtracts the nuclear from the combined natural gas to create the avoided emissions value.

Bruce Power acknowledges that this approach ignores market mediated effects, that this calculation is relatively simple estimation approach.

#### Process in Creating the Boundary

It is recognized that there are varying degrees in which a company can calculate the emissions avoidance. Results can vary based on the scope of each study for example one study could define Lifecycle, and include waste management and treatment in scope while some exclude waste (Ref: World Nuclear Organization (July 2011) Comparison of Lifecycle Greenhouse Gas emissions of Various Electricity Generation Sources). To not over inflate the benefit of avoided emissions the calculation created for Bruce Power uses combined natural gas which has lower lifecycle emissions than a traditional natural gas value by nearly 40 per cent.

#### Adherence Criteria

**Relevance:** Ensure that the comparative assessment appropriately reflects the GHG effects of the assessed product (in relation to the base case) and serves the decision-making needs of users and stakeholders.

**Completeness:** Include all life-cycle GHG emissions (under an attributional approach) or all changes in emissions arising from the assessed product (consequential approach) in the assessment.

**Consistency:** Use consistent accounting approaches, data collection methods, and calculation methods for the assessed product and base case.

**Transparency:** Provide clear and complete information to allow stakeholders to assess the credibility and reliability of the results, especially related to key methodological issues, such as the choice of the base case.

**Accuracy:** Reduce uncertainties as far as possible.

## Volume of Conventional Waste Generated (MT) and Diversion Rate (%)

### Boundary

A third-party vendor conducts a site review and conventional waste audit annually for Bruce Power. During the conventional waste audit, the vendor weighs and analyzes the waste samples to determine the amount, nature, and composition of the waste generated. The vendor also analyzes data on total conventional waste streams shipped off site by licensed waste haulers for the year. The results of the conventional waste audit are used to assess the site's waste diversion efforts as well as the capture rate (effectiveness) of the recycling and composting programs. The approved Waste Audit Report is posted on the Environment intranet homepage for all site employees to review and is filed annually into internal records.

### Calculations

The diversion rate refers to the portion by weight of all material diverted from disposal to the total weight of all waste material generated, expressed as a percentage.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

## Net water consumption from Lake Huron (million cubic metres)

### Boundary

Net consumption of Lake Water by Bruce Power is very small fraction of the total water taken (drawn) from the Lake Huron. Greater than 99.99 per cent of Intake water is discharged back to the Lake (environment).

Drinking water is the only water that is consumed by Bruce Power. The major opportunity/scope for Bruce Power is to minimize Domestic Water production via domestic water consumption enhancement/ improvements.

To calculate net water consumption, there are two options under consideration - (1) Get accurate data of persons on site and calculate the water consumption based on average water consumption per person and (2) Get sewage flow data of individual facilities (Bruce A, Bruce B and Central Site) at sewage processing plant. Subtract total Bruce Power sewage volume from total Bruce Power domestic water production volume .

Note: Working on both above mentioned options to get the data (if available) to calculate/ estimate the data as accurately as possible.

## Total water discharged to Lake Huron (million cubic metres)

### Boundary

Total Bruce Power water discharge to Lake Huron is equal to total water intake minus net water consumption (portion of domestic water which is mainly drinking water consumption). The intake water is calculated using Permit to Take Water (PTTW) Annual Reports for Bruce A, Bruce B and Central Site. Each site has its own system to calculate / estimate daily intake volumes.

Environment Officers verify the PTTW data against PTTW limits and the reports submit to Ministry of Environment Conservation and Parks.

## Women hired into Non-Traditional Roles

### Boundary

This metric is reported and tracked confidentially through the Talent Management Team and comprised of data from Workday.

## Women promoted into Non-Traditional Roles

### Boundary

This metric is reported and tracked confidentially through the Talent Management Team and comprised of data from Workday

## Visible Minorities hired

### Boundary

This metric is reported and tracked confidentially through the Talent Management Team and comprised of data from Workday based on self-identification of employees.

## Industrial Safety Accident Rate (ISAR) Site

### Boundary

For Bruce Power employees, injuries are reported and documented as per BP-PROC-00059, Event Response and Reporting and Condition Records are entered into Maximo. Injury Classifications and data management are controlled through SharePoint using the CANDU Owners Group (COG) Guideline for Recording & Measuring Occupational Injury / Illness Experience (COG GL 2012-01). Exposure Hours (hours worked) to generate the rate are collected through Tempus. Each month the data is verified by a peer.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

## Industrial Safety Accident Rate (ISAR) Contractors

### Boundary

For Contractors, injuries are reported and documented as per BP-PROC-00059, Event Response and Reporting and Condition Records are entered into Maximo. Injury Classifications and data management are controlled through SharePoint using the CANDU Owners Group (COG) Guideline for Recording & Measuring Occupational Injury / Illness Experience (COG GL 2012-01). Exposure Hours (hours worked) to generate the rate are collected through Tempus and ISNetworld SiteTracker for contractor management. Each month the data is verified by a peer.

## Fatality rate Employees

### Boundary

For Bruce Power employees, injuries are reported and documented as per BP-PROC-00059, Event Response and Reporting and Condition Records are entered into Maximo. Injury Classifications and data management are controlled through SharePoint using the CANDU Owners Group (COG) Guideline for Recording & Measuring Occupational Injury / Illness Experience (COG GL 2012-01). Exposure Hours (hours worked) to generate the rate are collected through Tempus. Each month the data is verified by a peer.

## Fatality rate Contractors

### Boundary

For Contractors, injuries are reported and documented as per BP-PROC-00059, Event Response and Reporting and Condition Records are entered into Maximo. Injury Classifications and data management are controlled through SharePoint using the CANDU Owners Group (COG) Guideline for Recording & Measuring Occupational Injury

/ Illness Experience (COG GL 2012-01). Exposure Hours (hours worked) to generate the rate are collected through Tempus and ISNetworld SiteTracker for contractor management. Each month the data is verified by a peer.

## Emergency preparedness – Annual # of drills / response exercises

### Boundary

An annual drill/exercise schedule is prepared in the final quarter of the previous year. A draft drill/exercise schedule goes through various approvals before the final approval from the VP of Site Services. The annual drill and exercise program covers all required regulatory, qualification and proficiency improvement opportunities to ensure emergency response is maintained to a high standard at the Bruce Power site. This is typically in excess of 100 scheduled events. The drill and exercise program is fully funded by Bruce Power which on occasion also pays for the involvement of external subject matter experts to assist (e.g., Kinectrics).

## % of services and materials spend sourced from suppliers in Bruce Power's Indigenous Relations Supplier Network (IRSN)

### Boundary

This metric is derived from a summation of the amounts paid to suppliers. This data is collected from reporting tools managed by the Supply Chain Analytics Team. The supplier payment data is compiled from Bruce Power's Enterprise Asset Management System. Identifying markers for suppliers that are part of Bruce Power's IRSN are entered into Bruce Power's Enterprise Asset Management System and then reviewed and updated regularly by the responsible Supply Chain procurement personnel to capture changes in IRSN participation.

- About Bruce Power
- Our Approach to Sustainability
- Materiality
- Environment
- People and Safety
- Products and Services
- Community
- Methodology** ○

### Calculation

% of services and materials sourced from suppliers in the IRSN = sum of the \$ value of services and materials sourced from suppliers in the IRSN / sum of the \$ value of services and materials sourced from all supplier.

## % of services and materials spent in Ontario

### Boundary

This metric is derived from a summation of the amounts paid to suppliers. This data is collected from reporting tools managed by the Supply Chain Analytics Team. The supplier payment data is compiled from Bruce Power's Enterprise Asset Management System. Identifying markers for geography are input by the responsible Supply Chain procurement personnel.

### Calculation

% of services and materials spent in Ontario = sum of the \$ value of services and materials paid to suppliers in Ontario / sum of the \$ value of services and materials paid to all suppliers.

## % of services and materials spent in Canada

### Boundary

This metric is derived from a summation of the amounts paid to suppliers. This data is collected from reporting tools managed by the Supply Chain Analytics Team. The supplier payment data is compiled from Bruce Power's Enterprise Asset Management System. Identifying markers for geography are input by the responsible Supply Chain procurement personnel.

### Calculation

% of services and materials spent in Canada = sum of the \$ value of services and materials paid to suppliers in Canada / sum of the \$ value of services and materials paid to all suppliers.

## Total Value of Sponsorships & Donations

### Boundary

A guiding document BPET-09-16 spells out our philosophy and budget and social responsibility is one of our four core values. Bruce Power's Corporate Social Responsibility Program consists of five components, each with assigned budgets within Corporate Affairs in the approved Business Plan. Funds allocated for these may be adjusted depending on broader business needs.



