

**Bruce C Project.
Planning for the
Next Generation.**

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To support Ontario's long-term energy needs and climate change goals, Bruce Power is evaluating the feasibility of expanding its nuclear fleet, to create an option to help grow Ontario's nuclear capacity in the future.

What is the Bruce C Project?

This project, which is referred to as Bruce C, will conduct an Impact Assessment to consider the option of adding up to 4,800 megawatts (MW) of nuclear capacity to complement the existing Bruce A and Bruce B generating facilities which provide clean, reliable nuclear energy for 30 per cent of the province's current electricity needs and cancer-fighting medical isotopes across the globe.

This is the beginning of planning the future of the Bruce site. The company is advancing this process with a focus on Indigenous and public engagement, including with the Saugeen Ojibway Nation (SON), which is comprised of Saugeen First Nation and Chippewas of Nawash Unceded First Nation; the Historic Saugeen Métis (HSM); the Métis Nation of Ontario (MNO); and local municipalities. Bruce Power is engaging with the community early in the process, and will use the Impact Assessment as a planning tool to support Ontario's long-term energy needs.



Capacity

ONTARIO'S CLEAN ENERGY NEEDS

Today, Ontario benefits from a deeply decarbonized electricity grid, which is 90 per cent emissions free, thanks to a clean baseload supply of nuclear and hydroelectricity.

Through its Life-Extension Program, which consists of Major Component Replacement (MCR) Projects on Units 3-8 and a lifetime Asset Management program, Bruce Power is refurbishing its existing fleet to extend the operational life of its site to 2064 and beyond. This is Canada's largest private sector clean energy infrastructure project, and continuing to deliver the refurbishments on time and on budget is a key priority for Bruce Power to ensure the people of Ontario have a reliable supply of clean energy for decades to come.

Looking to the future, Ontario's Independent Electricity System Operator's (IESO) outlined a scenario in its Pathways to Decarbonization Report to fully decarbonize its grid by 2050, while meeting increased demand from economic growth and electrification. It predicts that in less than 30 years, Ontario could need to more than double electricity generating capacity, from 42,000 MW today to 88,000 MW in 2050, including 17,800 MW of additional nuclear capacity.

In July, the Ontario government announced its long-term electricity framework for the province in its Powering Ontario's Growth report, with the goal of meeting future electricity demand, growing the economy and achieving a net-zero future. A key element to this plan was to commence pre-development work, in collaboration with the Province through the IESO, for up to 4,800 MW of new nuclear capacity on the Bruce Power site. Commencing this pre-development work now creates a valuable option for the Province in future electricity planning.

Beyond electricity supply and net-zero targets, this pre-development work will evaluate the opportunity to create and sustain high-quality jobs in the region and across the province by supporting a highly technical and robust supply chain, as well as supporting opportunities for Indigenous communities. The opportunity to grow our leadership role in producing cancer-fighting medical isotopes will also be explored through this process.

Connected

OPPORTUNITIES ON THE BRUCE POWER SITE

Bruce Power is situated on a 932-hectare site, which has existing transmission corridors and significant space for expansion. The site is supported by a skilled workforce and an engaged and supportive local community.

The Bruce Power site is a highly studied and characterized property and has been safely generating nuclear power for more than 50 years. The company's ongoing operations are stringently regulated by the Canadian Nuclear Safety Commission (CNSC) as a requirement of its operating licence.

The environmental impacts of site operation are known and verified. Bruce Power's environmental monitoring program conducts extensive year-round sampling to verify the protection of the local environment. This includes water temperature and surface water quality sampling on site and in Lake Huron, and routine monitoring of soil, sediment, groundwater, vegetation, agricultural products, and wildlife. Environmental monitoring ensures that the health of the environment and people are protected and verifies that emissions and effluents from operations result in negligible environmental impacts.

Bruce Power is evaluating suitable areas, located within its existing site, for potential development. The Bruce Power site provides a tremendous opportunity to advance clean energy targets leveraging an existing site, which can provide a valuable option for future new nuclear expansion in the province.

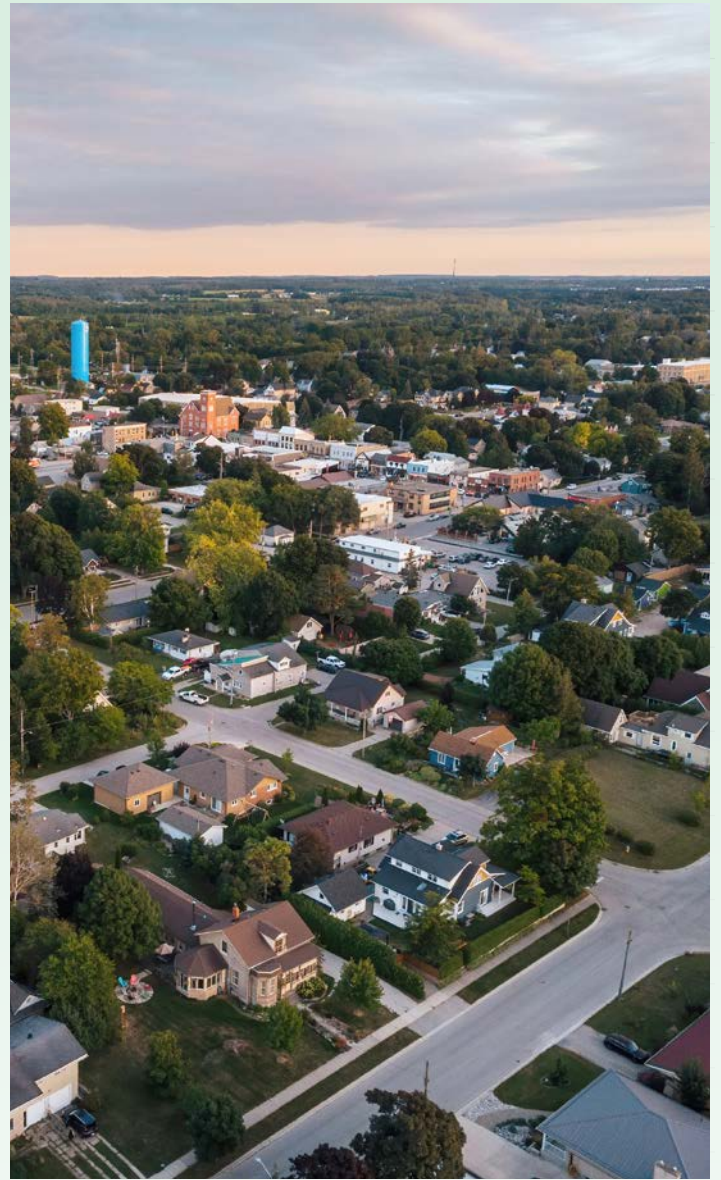




Context

ABOUT THE IMPACT ASSESSMENT PROCESS

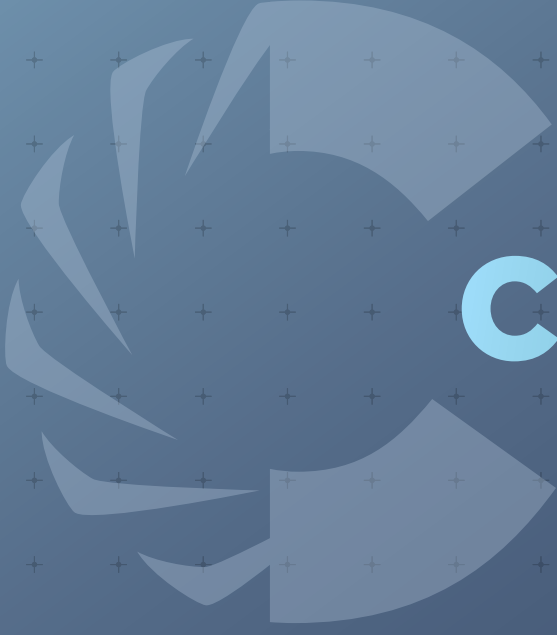
Bruce Power notified the Impact Assessment Agency of Canada (IAAC) and the Canadian Nuclear Safety Commission (CNSC) of its intent to commence the Impact Assessment (IA) process for Bruce C in early 2024, potentially adding up to 4,800 MW of new nuclear generation on the Bruce site. Bruce Power is committed to advancing this process in a proactive, open and transparent manner with the SON, HSM, and MNO communities, as well as local municipalities and the public.



The IA process is a legislated planning and decision-making tool used to identify and assess potential positive and negative environmental, health, social and economic effects of proposed major resource and infrastructure projects before they start. IAs consider a wide range of factors for proposed projects, including how they foster sustainability, how the rights of Indigenous peoples are respected, as well as proposed measures and monitoring to reduce or avoid potential negative effects and enhance positive ones. As part

of the IA, Bruce Power will complete additional socio-economic studies to understand how this project could impact our community and region.

Although no decision has been made to advance with a project, the Bruce C IA will be used as an early engagement and planning tool for potential nuclear expansion, and is the first step in a multi-year process, to provide a high value option for the Province if it decides to expand nuclear capacity in Ontario.



Choice

TECHNOLOGY EVALUATION

The IA will use a technology-neutral approach, which involves the consideration of multiple nuclear technologies to provide options to the Province in long-term electricity system planning.

In parallel with the IA activities, Bruce Power has commenced a process in which it has requested Expressions of Interest from nuclear technology providers in order to identify and explore technologies that could help meet growing demand for clean electricity and advance decarbonization efforts in Ontario.

Bruce Power's evaluation of prospective nuclear technologies will focus on safety, reliability, cost and schedule adherence and will factor in value for ratepayers, opportunities for Indigenous peoples, as well as social and economic benefits for the Clean Energy Frontier region of Bruce, Grey and Huron counties.



Have your say!

Sign up for updates on the process and learn more about how you can be involved at brucepower.com/BruceC

Community

BRUCE POWER'S COMMITMENT TO ENGAGEMENT

Bruce Power owes much of its success to the support and commitment from surrounding communities. Bruce Power does not take this support for granted and is committed to earning the support of the community each and every day through continuous improvement and an ongoing focus on openness, transparency and strengthening the community.

Bruce Power is committed to proactive, open and transparent engagement with the SON, HSM, and MNO, as well as local municipalities and the public and will provide multiple opportunities for input, both in-person and virtually. Bruce Power's commitment to engagement with local First Nations and Métis communities means continuing to seek

opportunities to build upon our existing relationships in a way that reflects each community's unique needs and interests. Bruce Power will keep people informed and engaged throughout the process, and will provide regular updates about the proposed project through its website, news releases, newsletters, social media and videos.



Commitment

BRUCE POWER'S APPROACH TO SUSTAINABILITY

As a large-scale clean energy producer, Bruce Power has a responsibility to both the environment and society to continue to implement sustainable business practices. Bruce Power's Environmental Protection Program is built upon an integrated monitoring approach that strives to understand environmental impact, verify environmental protection, and continuously improve our performance to achieve protection by driving strategic research and innovation through collaborations with industry and community.

Bruce Power has well-established environmental monitoring programs that focus on the local area around the facility, including neighbouring communities and Lake Huron. Together, the results build an overall understanding of the risk to human health and impact on the environment. The company's strong commitment to excellence has yielded excellent environmental performance, and Environmental Risk Assessments continually show the operation of the facility has little-to-no impact on human and ecological health. This conclusion is supported by evidence independently collected by the federal and provincial governments which monitor and measure concentrations of contaminants in the environment near Bruce Power.

Through the Impact Assessment, Bruce Power will assess potential cumulative effects, including the identification and description of past, present or reasonably foreseeable projects whose effects may act cumulatively with the effects of the potential expansion of nuclear generation on the Bruce Power site.

Water resource

In support of the conservation, protection, management and sustainable use of Ontario's freshwater resources, Bruce Power monitors its water usage and reports on daily amounts drawn. Beyond considerations of water quantity management, Bruce Power is committed to monitoring and ensuring the protection of the quality of water, and fish habitats in and around near site shores and the greater region.

235 species of plants and more than **270 species of wildlife** can be found at Bruce Power



Land use and biodiversity

Bruce Power is home to a diverse natural environment which 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 a priority for the company's Environmental Protection Program.

An Ecological Land Classification study completed in 2017 found that 55 per cent of the Bruce Power site was composed of undisturbed forest, open or wetland habitats. In preparation for and conducting the Major Component Replacement project, seven hectares of land was cleared at Bruce Power over the past six years to construct a training simulator and create additional parking capacity. At the same time, Bruce Power worked with organizations like the Nature Conservancy Canada, Ontario Nature and Bruce Trails Conservancy to acquire and permanently protect more than 60 hectares of high-quality habitat from future development to compensate for this land clearing.

Further information on Bruce Power's commitment to sustainability can be found in Bruce Power's 2022 Environmental Protection Report and 2022 Sustainability Report in the Resources section of the Bruce Power website.

The Bruce Power site:



Supports **electricity demand** and **climate change goals**



Creates and sustains **high-quality jobs** in the Clean Energy Frontier region and beyond



Provides **cancer-fighting medical isotopes** across the globe

"Nuclear power has been the stable backbone of Ontario's clean electricity system for decades and Bruce Power is ready to play an integral role in addressing the province's clean energy needs, while supporting good jobs and economic prosperity in the future."

Mike Rencheck

President and CEO of Bruce Power



brucepower.com/BruceC

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