

Neighbours

Nuclear Sustainability
Services — Western



OPG's Nuclear Sustainability Services practices good stewardship of nuclear by-products, emphasizing the three Rs – reduce, reuse, recycle.

OPG team at Western site puts focus on sustainability



What's in a name? Plenty, when your mission is all about supporting clean energy and protecting the environment.

Since November 2021, OPG's former Nuclear Waste Management division has a new name – Nuclear Sustainability Services (NSS) – and a new strategy based on the three Rs: reduce, reuse, recycle.

The NSS strategy aligns with OPG's Climate Change Plan, posted online at opg.com, to help the economy achieve net-zero carbon emissions by 2050 with clean energy.

The NSS team, at the Western facility within the Bruce nuclear site, is

applying the three Rs to materials already in storage. Some items stored for many years as “waste” are no longer contaminated, as radioactivity falls to harmless levels over time. Some items formerly thought “non-processible” can be incinerated today, to greatly reduce volumes. Clean tools can be re-used, while clean metals can be recycled.

As well, some nuclear by-products are not “waste” at all, but highly valuable:

- Tritium, produced in reactors, is used in emergency lighting, as a biomedical tracer and in fusion research.
- Helium-3, which comes from tritium,

is used in quantum computing, neutron research and health care.

- Medical isotopes Cobalt-60 and Molybdenum-99, are used in millions of medical procedures a year to sterilize medical equipment, diagnose illness and treat patients.

The new NSS strategy is driving innovations and investments in materials sorting and processing. Reducing volumes means building fewer storage buildings, reducing OPG's environmental footprint.

In these ways, supporting zero-carbon nuclear energy, the NSS team is at the front line of the fight against climate change, doing their part for the environment.

To learn more, see the video “OPG's Nuclear Sustainability Services” at [YouTube.com](https://www.youtube.com).

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Mindful of future generations



As we consume clean, low-cost and reliable nuclear energy today, we also must protect the environment for future generations.

That is why OPG remains committed to the safe and permanent disposal of nuclear materials – because it is the right thing to do for our grandchildren and great-grandchildren.

For disposal of used fuel, OPG supports work by the Nuclear Waste Management Organization (NWMO) to develop a Deep Geological Repository (DGR) for all of Canada. DGRs exist today or are being built in countries such as the U.S., South Korea, Sweden and Finland.

For disposal of lower-level materials, OPG is participating in the Natural Resources Canada (NRCAN) review of the federal policy framework for radioactive waste, a public process launched in 2020. In February 2022, released a draft of its “modernized” policy, inviting comment.

NRCAN also seeks a supporting strategy, to ensure the new policy will be effectively implemented across Canada’s nuclear sector. NRCAN delegated the development of this strategy to NWMO, which has invited public engagement at its website “A Next Step,” at radwasteplanning.ca

Working together on lasting solutions for disposal will allow Canadians to enjoy the benefits of nuclear energy with peace of mind.



From left, OPG employees Renata Dewar, Jason Van Wart, Mike McDowall, Kris Proboadiak and Christine John at Habitat for Humanity’s project at the Nawash community.

Giving OPG’s help where it’s needed



The COVID-19 pandemic created new hardships for many across Ontario through the past two years, but OPG has been there to help.

OPG’s top priority was to keep the lights on in Ontario, ensuring the continued and reliable delivery of electricity to the province’s homes, business and hospitals.

Our front-line staff continued to run all of our generating stations, while observing extra safety protocols for the virus – wearing masks, maintaining physical distance, and practising good hygiene.

In addition, OPG provided special assistance to communities in need, from donations of personal protection equipment such as masks, to donations to hospitals and other community services. As just one example, OPG gave \$250,000 in 2021 to support 1,200 Feed Ontario food-relief agency partners across the province.

Across the Bruce area in 2021, OPG delivered more than \$220,000

in sponsorships and donations to a variety of worthy causes, including food banks and hospital foundations in Kincardine and other communities, shelters, fish hatcheries, tree plantings, Pumpkinfest, a feature exhibit at the Bruce County Museum and Cultural Centre, and much more.

Other supports were made with in-kind donations or the simple rolling-up of sleeves, such as when OPG staff supported the Habitat for Humanity project to build housing at the Nawash community.

OPG sponsorships occur through its Corporate Citizenship Program (CCP), which accepts applications from charities and not-for-profit initiatives in our local communities. Priority goes to environmental, educational and cultural activities that reach many people.

In the Bruce area, CCP applications go to Communications Officer Kaitlyn Nevill at kaitlyn.nevill@opg.com.

New facility to support nuclear as truly clean



Shovels hit the ground in November 2021 for a new facility in Kincardine that will help Ontario Power Generation (OPG) show how nuclear power is truly clean energy.

The 42,000-square-foot facility, called Western Clean-Energy Sorting and Recycling (WCSR), is being built at the Bruce Energy Centre industrial park, just east of the Bruce nuclear site – with completion expected around the end of 2022.

Overseeing the project is OPG subsidiary Laurentis Energy Partners, working with Dancor Construction. Licensing support is coming from Energy Solutions Canada.

The WCSR will employ 25 people, mostly from OPG's Nuclear Sustainability Services. Their work will boost OPG's drive to sort low-level radioactive materials from its nuclear operations, including items stored at the Bruce site since the 1970s.

Innovative research by Laurentis and McMaster University, at a laboratory at the McMaster Innovation Park in Hamilton, has



Breaking ground are, from left, OPG's Jason Wooland, Kincardine Councillor Dorne Fitzsimmons, James Lauritsen of Laurentis Energy Partners, Steve Rambajan of Dancor Construction, Pat O'Connor (representing MP Ben Lobb), and Kincardine Deputy Mayor Randy Roppel.

proven that as much as 60 per cent of materials classified as "waste" can be processed for big volume reductions, or even free-released as clean.

Sorting the materials – to see what is clean or processible – is key to applying the three Rs: reduce, reuse, recycle. OPG's investment in this strategy will help to reduce the number of buildings to store materials – helping to reduce the company's environmental footprint.

Nuclear generation is a zero-carbon source of electricity – and the lowest-carbon energy source of all as measured over its entire life-cycle, according to a study by the United Nations Economic Commission for Europe. This makes nuclear a vital tool in the fight against climate change.

By practicing good stewardship of the by-products, OPG is further showing that nuclear is truly clean.

These three letters can help solve climate change.



Small is beautiful at Darlington



OPG has announced it will work with GE Hitachi Nuclear Energy to deploy a Small Modular Reactor (SMR) at the Darlington Nuclear Power Plant site in Clarington.

SMRs are an integral part of OPG's Climate Change Plan, providing clean, reliable, and cost-effective energy to help achieve a net-zero economy by 2050.

Darlington is the only site in Canada licensed for a new nuclear build. Leveraging a strong Ontario-based supply chain, this clean-energy project will create jobs across the province.

To learn more about SMRs and Darlington New Nuclear, please visit www.opg.com.

OPG in the Community



OPG remains committed to supporting local initiatives and activities in Bruce County, home to its Nuclear Sustainability Services – Western facility.



OPG's Nuala Zietsma, Kaitlyn Nevill and Christine John attend a trade market and art show held by Saugeen Ojibway Nation in Wiarton last fall.



In an event held just before Christmas at the Bruce Museum and Cultural Centre, OPG delivered sponsorship funding totalling \$30,000 to various community organizations in Saugeen Shores.



Kaitlyn Nevill and Lynda Cain channel their inner elves, at the OPG-sponsored Formosa Country Christmas festival, a drive-through event.



Families came to Hi-Berry farm in Port Elgin last fall, to pick up activity kits on OPG's Pumpkin Pack Wednesdays, part of OPG's sponsorship of the virtual Pumpkinfest event in 2021.

Neighbours



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