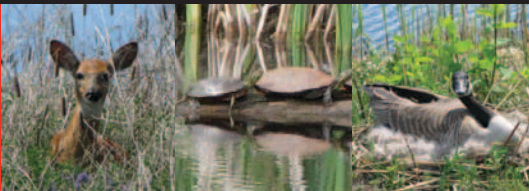




Lambton

Generating Station

Ontario Power Generation



ONTARIO **POWER**
GENERATION

Ontario Power Generation produces about sixty per cent of the electricity Ontario's communities need.

billions
of kilowatt-
hours

Ontario Power Generation (OPG) is owned by the people of Ontario and each year our 65 hydroelectric stations, three nuclear stations and five thermal stations generate billions of kilowatt-hours*. Our commitment to you is to provide safe, reliable electricity for families, communities, farms, businesses and industries across Ontario – now and in the future.

*an Ontario household will use around 12,000 kilowatt-hours of electricity each year.



OPG's thermal stations help Ontario meet peak electricity demand.

OPG's thermal stations contribute to a reliable supply of electricity by satisfying electricity demand that cannot be met by Ontario's nuclear, hydro and growing portfolio of wind and solar energy sources. OPG operates four coal-fuelled generating stations (GS): Atikokan GS and Thunder Bay GS in northwestern Ontario, Lambton GS and Nanticoke GS in southwestern Ontario; and the oil/natural gas-fuelled Lennox GS in southeastern Ontario. OPG is also a partner in the natural gas-fuelled Portlands Energy Centre in Toronto, and Brighton Beach station in Windsor.



The balance between supply and demand on the electricity system needs to be maintained every second. Thermal

plants help maintain this balance by being able to quickly respond to sudden changes in demand while running, starting and stopping on short notice. This flexibility means that electricity production from these plants will vary from minute to minute and day to day.

OPG is making the transition to a lower carbon future and will phase out the use of coal by the end of 2014. We are committed to staffing, maintaining and operating our coal-fuelled plants as safe, reliable and environmentally responsible producers of electricity for as long as they are required.



Lambton Generating Station

Ontario Power Generation's (OPG) Lambton Generating Station (GS) is located on the St. Clair River, in St. Clair Township, 26 kilometres south of Sarnia, Ontario. Its two operating electricity generating units are capable of producing 950 megawatts (MW) of power. Historically, with four generating units, the station's annual electricity production has been as high as 12 billion kilowatt-hours (kWh), enough to supply electricity to about 1 million homes for a year. More recently, due to economic downturn, new electricity supply and emission regulations, Lambton GS's role has changed to providing reliability during peak demand times and back up electricity generation when other sources are not available.

Lambton GS employs about 300 people from the surrounding community. Their skills and experience are essential to safe and reliable operation. As a team, Lambton GS employees strive to maintain a safe work environment that is respectful, supportive and committed to performance excellence.

Over the past 20 years, Lambton GS has invested over \$500 million in the installation of flue gas desulfurization (FGD) and selective catalytic reduction (SCR) equipment to improve the plant's environmental performance.

Looking to the future, Ontario's Long-Term Energy Plan, announced by the Minister of Energy in November 2010, recognized that converting Lambton GS generators to natural gas is an option for the future, if needed for system reliability. Co-firing of natural gas and biomass may be considered in the future for OPG stations which are first repowered to natural gas. Biomass, in the form of wood pellets or agricultural by-products, is recognized around the world as a renewable source of energy, with climate change benefits. OPG's biomass program does not use food crops and requires fuels to be from sustainable sources. For more information, visit opg.com.

Caring for the Environment

OPG and its employees at Lambton GS are committed to caring for the environment and reducing our impact on it.

Some examples are:

- Lambton GS generating units are among the cleanest coal-fuelled units in North America for sulphur dioxide, nitrogen oxides, and mercury emissions per unit of energy produced.
- Sulphur in coal is captured in Lambton's scrubbers and converted into wallboard quality gypsum. Lambton GS was the first coal-fuelled station in Canada to be equipped with scrubbers.
- Lambton GS is certified to the internationally recognized ISO 14001 Environmental Management standard, which promotes continuous improvement.
- The Wildlife Habitat Council has certified Lambton GS's site biodiversity plan.



Caring for wildlife

We share the concerns people have about carbon dioxide (CO₂), a greenhouse gas, and climate change. OPG is working to reduce emissions from all aspects of its business in a manner that is consistent with Ontario's regulatory framework.

OPG's environmental performance is published in the annual Sustainable Development Report that can be found at opg.com.



Employees dedicated to performance excellence

Commitment to the Community

As a large company and a major employer in many Ontario communities like Sarnia-Lambton, OPG and its employees believe we have a responsibility to be good corporate citizens and neighbours. That means operating our electricity generating facilities in a safe, efficient and environmentally responsible manner and giving back to the community. We want to make a positive difference by supporting community projects and events, youth recreation, educational and environmental initiatives. It doesn't stop there. Our employees contribute hundreds of hours of volunteer time to community organizations.

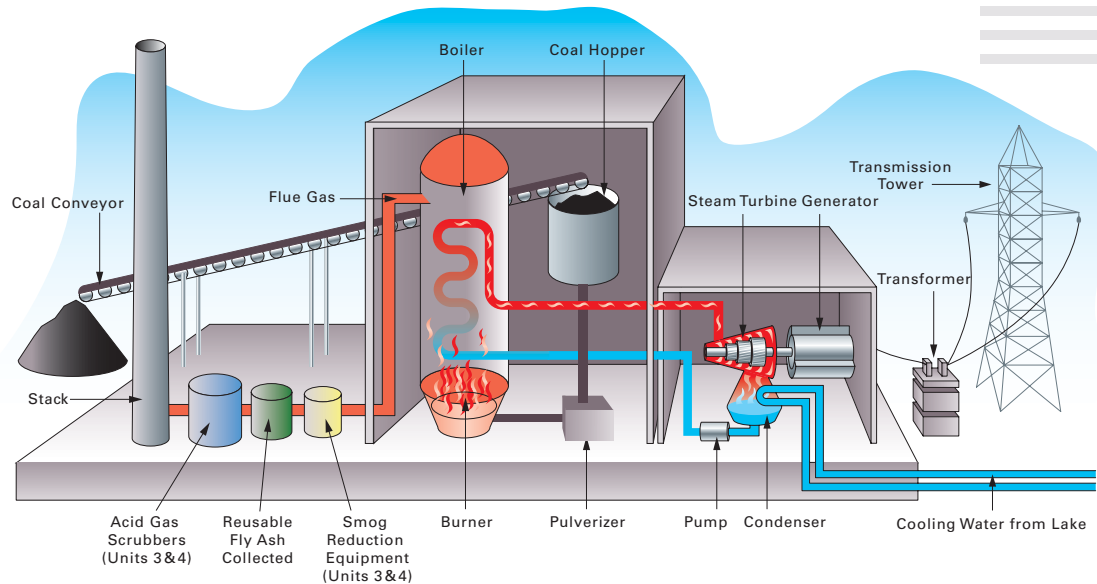


Lambton GS volunteer and fundraising event



Lambton GS hosts community and student tours

In a coal-fuelled station, finely crushed coal is burned in a large industrial furnace surrounded by walls of water-filled boiler tubing. When this water turns to steam, it moves at high speed to a turbine. There, it pushes the blades of the turbine, which is connected to a shaft or rotor, causing the rotor to spin. The spinning rotor is a large electromagnet that produces rotating magnetic fields. These fields move across coils of wire in the generator, producing electricity that can be sent across transmission lines to customers.



The steam from the turbine is condensed back in to water, using cooling water from a lake or river, and reused in the boiler.

See the "How It Works" video at opg.com.

Safety is our Top Priority

OPG is committed to the safety of our neighbours and employees. Our primary objective is to promote excellence in public and employee safety through a corporate culture of safety across all of our generating stations.

In 2010, OPG became the first employer in Ontario to be awarded the Infrastructure Health and Safety Association's ZeroQuest® Platinum Safety Award, which recognizes excellence in Health and Safety Management.

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Materials used in this report are environmentally friendly. Cover and text stocks are recycled and recyclable, with a minimum of 30% post-consumer waste. Vegetable-based inks have been used throughout.

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