

Providing customers with environmentally friendly energy options.

Waterloo Landfill Gas

Green Power

is a clean alternative that substantially reduces the amount of air pollution, greenhouse gas emissions and other impacts that would have been produced from generating comparable amounts of electricity using conventional energy sources.

Emission Reduction Credits

The Pilot Emission Reduction Trading (PERT) project is part of a provincial emissions reduction strategy. By placing a dollar value on emission reductions, companies are provided with an innovative economic incentive to find appropriate means of reducing air emissions associated with their operations. Under PERT, emission reduction credits (ERC) are recognized only for those companies which reduce emissions beyond their regulated requirements.

To ensure there is a net emissions reduction, and that environment quality is improved over time, 10% of all emission reduction credits created are immediately "retired" – they cannot be used, banked or sold.

Green Power



Green Power is energy produced from renewable resources such as wind, solar or biomass energy (such as landfill gas), or small run-of-the-river hydroelectricity.

The Project

Through a network of gas collection wells, landfill gases including methane (CH_4), sulphur dioxide (SO_2) and nitrous oxides (NO_x) are used to fuel a state-of-art electricity generating station. The station replaces a network of 52 gas collection wells that were used to burn off the landfill's noxious gases, redirecting them to a 3.5 MW power plant. By 2003, plans call for expanding the gas collection network to 80 wells and augmenting the power plant's output to 8.0 MW. This project is certified under Environment Canada's EcoLogo process.

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Methane is one of the most harmful greenhouse gases; it absorbs more than 20 times as much heat in the earth's atmosphere as carbon dioxide (CO₂). Collecting it before it is released to the atmosphere will virtually eliminate a persistent source of greenhouse gases while providing a reliable source of fuel to produce electricity.

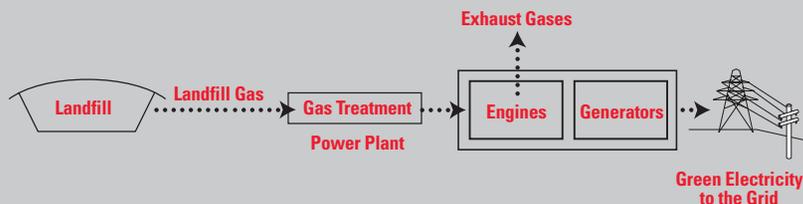
The Site

The Waterloo Landfill has been owned and operated by the Regional Municipality of Waterloo since it was opened in 1972. To date, the 72 hectare site has received more than 5 million tonnes of refuse. While the site is expected to reach capacity by 2028 (15 million tonnes), it will produce sufficient methane to fuel the on-site electricity generating station well into the middle of the 21st century.

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The Region's Role

As the owner and operator of the landfill site, the Region has entered into a long-term landfill gas utilization agreement with Toromont Energy. The Region receives a royalty from Toromont Energy for the right to utilize the gas for the production of electricity.

Toromont Energy's Role

Toromont Energy designed, constructed, owns, and operates the landfill gas power plant. To facilitate the development of this project, Toromont Energy and Ontario Power Generation have entered into an agreement that will allow the production of green electricity for use on the grid.

OPG's role

OPG is committed to reducing air emissions associated with its electricity production activities and to offering customers a choice of "green power" alternatives. The agreement with Toromont Energy includes the purchase of power and emission reduction credits produced from this green power source.

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