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London

A landfill in southwestern Ontario is turning garbage into green energy

Gas from the organic waste at Ridge Landfill is expected to power 40,000 homes

Michael Lacasse · CBC News · Posted: Oct 17, 2023 5:00 AM EDT | Last Updated: 4 hours ago



Methane gas can be seen coming from the stacks over an organic waste pile at the Ridge Landfill near the town of Blenheim, Ont. (Amy Dodge/CBC News)

A renewable natural gas facility being built at a landfill near the town of Blenheim, Ont., southwest of London, will soon turn eye watering fumes from rotting food, paper, and other organic waste into green energy.

The nearly complete renewable natural gas facility is a partnership between Waste Connections of Canada, which owns the Ridge Landfill site, and Enbridge Gas.

"The large mounds you see around the [landfill] are piles of underground decomposing organic waste that produces methane," said Justin Egan, a business development specialist for Enbridge Gas, pointing to mounds of garbage.

The methane produced from the garbage piles will be collected through a pipe system being built by Enbridge at the Ridge Landfill then purified to become a renewable natural gas. It will then be pumped to an injection point 6 km away in Blenheim where it will be added to the regular natural gas supply.

 Province approves Chatham-Kent project that will turn landfill methane into renewable natural gas

Enbridge Inc. has invested over \$70-million into the facility which began construction in July and is expected to be up and running by summer 2024, according to Egan.



Parts of the pipeline under construction that will be used to convert methane gas from organic waste into renewable natural gas. (Amy Dodge/CBC News)

The landfill is expected to generate enough renewable natural gas to power 40,000 homes a day and should keep supplying energy for the next 20 years, said Nicole Brunner, the manager of new energy supply at Enbridge Gas.

"It's an opportunity to use methane that would otherwise just be wasted and go into the atmosphere," Brunner said.

She added consumers also won't have to worry about higher energy bills when the facility is finally operational since natural gas made from organic waste is nearly identical to the conventional kind.

More landfills across the province being turned into power plants

The Blenheim site is just one of the natural gas projects in different stages of development across the province meant to create renewable natural gas to help Ontario reach its emissions targets, Egan said.

"As long as there are humans and animals, there's going to be waste and so why not use that waste as a renewable source of energy?"

• Could bio coal be the answer the steel industry needs to decarbonize?

The provincial government previously promised a 30 per cent reduction of greenhouse emissions compared to 2005 levels by 2030 putting Ontario in line with Canada's target under the Paris Agreement. To meet this goal, the province needs to drop annual emissions down to 144 megatonnes.

The province produced 150.6 megatonnes of greenhouse gases in 2021 according to a recent report by Environment and Climate Change Canada. Brunner added that the facility, and those like it, will each lower emissions by around 110,00 tons a year.

"That's the equivalent of 24,000 passenger vehicles off the road every year," she said.



Justin Egan, a business development specialist for Enbridge Gas and Nicole Brunner, the manager of new energy supply at Enbridge gas at the Ridge Landfill site near Blenheim, Ont. (Amy Dodge/CBC News)

A landfill near Sarnia is also hoping to convert it's methane gas emissions into renewable energy.

Enbridge is waiting on an approval by the Ontario Energy Board before it can break ground to lay pipes at Twin Creeks Landfill and Environmental Centre in Watford, Ont.

• Renewable natural gas could help slow climate change, but by how much?

If approved, building could start as soon as the end of 2023 and is set to power around 35,000 homes and businesses a day in the province, said Jessica Kropf, the senior communications manager with WM, the waste management company that owns the landfill.

"We're doing everything that we can to make sure that we're making sustainable choices," Kropf said.

The project includes a 15.3 km long pipeline that will move the renewable natural gas between the landfill facility they are planning to build and the mainline valve in the municipality of Brooke-Alvinston.



The Twin Creeks Landfill and Environmental Centre in Watford, Ont. is the proposed site of a new facility set to be built by the end of the year. (Provided by Jessica Kropf)