

Using Waste to Create Energy

When you think “landfill” you probably don’t think “renewable energy source.” But, that’s just what the La Crosse County landfill in Wisconsin has turned into for Gundersen Health System. The health system teamed with the County on a project that uses waste biogas created from the waste at the landfill and turns it into electricity and heat.

How does work? At the La Crosse County landfill, waste degrades underground. As the solid waste decomposes, it gives off about 300 cubic feet of biogas a minute. A little more than half of that gas is methane. Previously, the methane was captured and flared off at the landfill, and the natural resource was wasted.

The project allows the gas to be put to good use. Instead of flaring it off, the County pipes the biogas to an engine installed on Gundersen’s Onalaska Campus. The landfill gas powers the engine, and turns a generator that produces electricity. The clean electricity is sent to the power grid to be used by households and businesses throughout the community. The engine also creates heat, which is used to heat buildings and water on the campus. While there are many examples of landfill gas-to-energy projects in the United States, it is rare to capture the heat that is produced by the engine and use it to heat healthcare buildings.

This project produces more energy than Gundersen’s Onalaska Campus consumes, making that multiple building healthcare campus the only one in the country to be 100 percent energy independent.

The landfill project is an excellent use of a previously unused natural resource and is a wonderful example of what a public-private partnership can achieve in communities across the country.

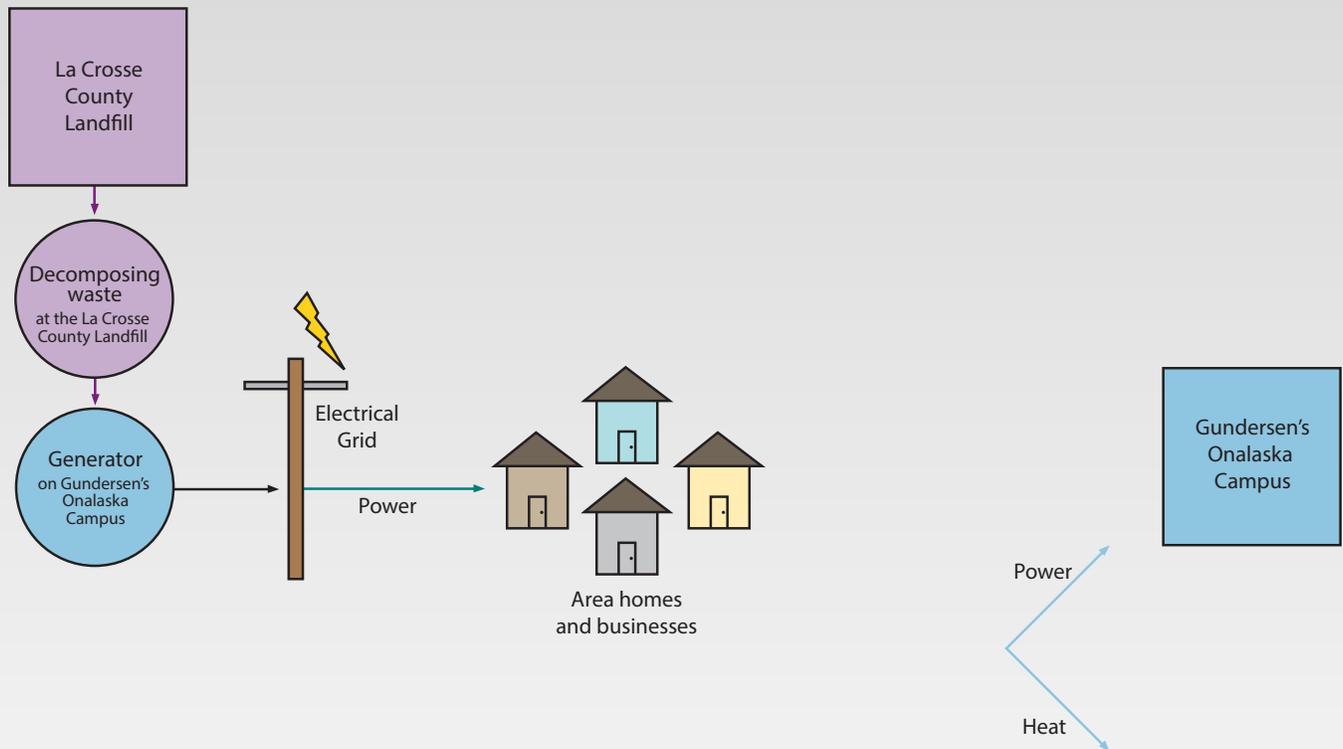
The project with La Crosse County is just one of the renewable energy solutions Gundersen’s Envision® program is using to lower energy costs and lead the healthcare industry in environmental stewardship. The health system reached its first day of energy independence on 10/14/14.

Gundersen Health System is headquartered in La Crosse, Wis., with hospitals and clinics in Wisconsin, Minnesota and Iowa. For more information on Gundersen’s Envision program, call (855) 669-1653 (toll free), email envision@gundersenhealth.org or go to gundersenenvision.org.



Gundersen Health System and La Crosse County teamed up on a project that is turning methane gas from a landfill into electricity and heat on Gundersen’s Onalaska Campus. The project produces more energy than Gundersen’s Onalaska Campus consumes, making the campus 100 percent energy independent.





How the process works:

- Waste degrades underground at the La Crosse County landfill. As it decomposes, it gives off about 300 cubic feet of gas a minute. More than half of that is methane.
- The methane is captured and piped to an engine installed on Gundersen's Onalaska Campus.
- The gas powers an engine and turns a generator that produces electricity.
- The electricity is sent to the power grid and used by households and businesses throughout the community.
- The engine also creates heat, which is used to heat buildings and water on Gundersen's Onalaska Campus.