

TURNING COW WASTE INTO ENERGY: SUN PRAIRIE

With the nickname “The Dairy State,” it’s a given that Wisconsin has a lot of cows. Those cows in turn create a lot of waste. Gundersen Health System is turning that waste into a usable renewable energy source.

Gundersen constructed a dairy digester on the Maunasha River Dairy near Sun Prairie, Wis. The farm’s approximately 1,300 cows supply more than enough manure to make the project viable. The project—known as the Sunny Side Digester—represents approximately 9 percent of Gundersen’s renewable energy production.

How does the project work?

The Sunny Side Digester project uses a biogas and a generator to create energy. Cow manure from the farm is processed in an air-tight digester tank that is heated to about 100 degrees. Microbes in the digester thrive in these conditions, and they consume solids in the manure while releasing methane gas.

The methane is captured at the top of the digester and then used as fuel in a generator to create electricity. Excess heat from the generator warms the digester. The digester operation

generates about 5 million kilowatt hours of electricity annually, enough to power about 530 homes a year. The electricity is added to the local grid in Dane County through Alliant Energy. The process also creates a clean, organic-fiber by-product that is used for cow bedding.

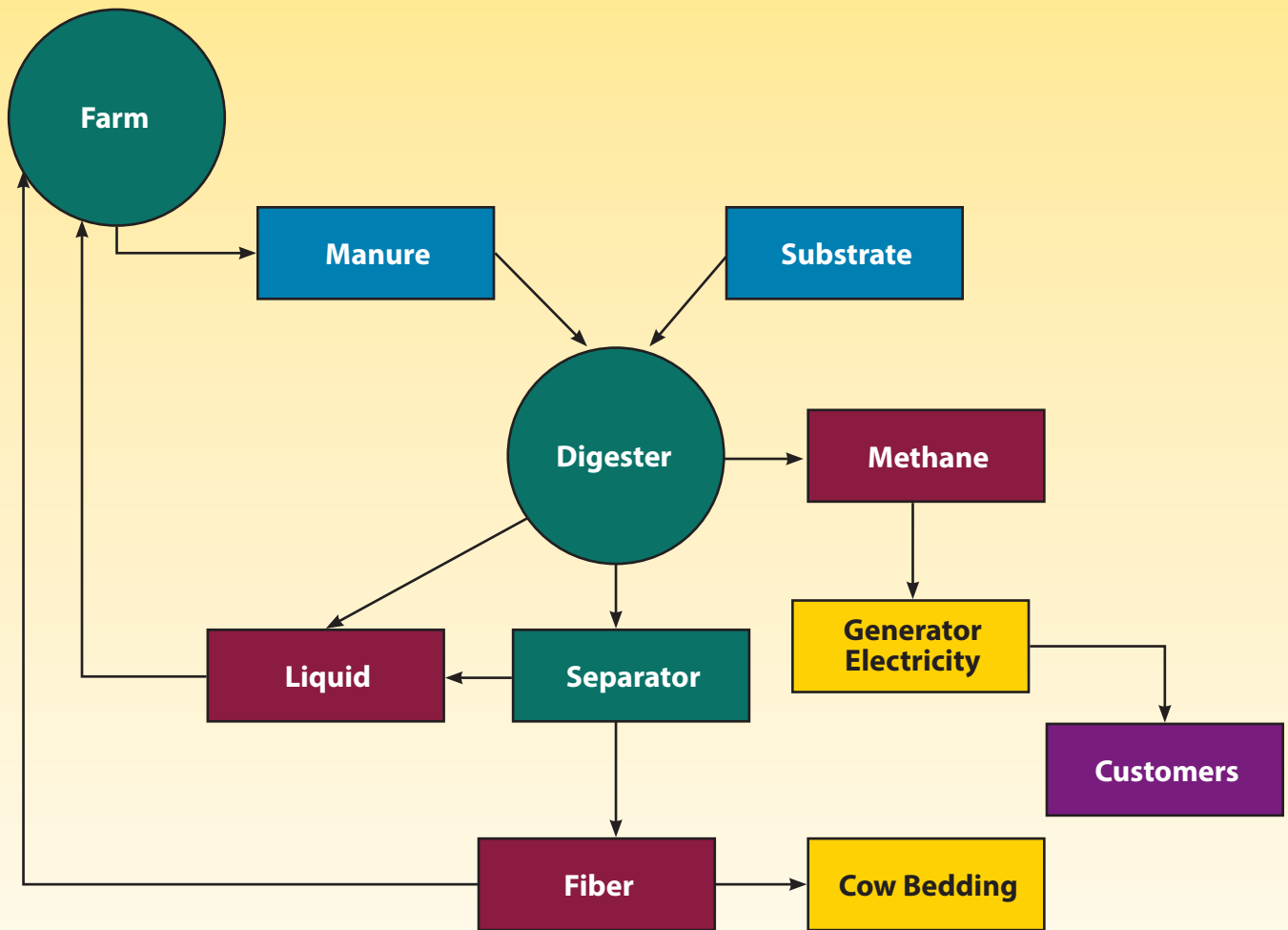
The biogas project started production in April 2014.

The Sunny Side Digester Project is Gundersen’s second dairy digester project. Gundersen also constructed a dairy digester project just outside Middleton, Wis.

The Sunnyside Digester project is part of Gundersen Health System’s Envision® program to lead the healthcare industry in environmental stewardship and lower energy costs. Gundersen Health System is headquartered in La Crosse, Wis., with hospitals and clinics in Wisconsin, Minnesota and Iowa.

For more information, call (855) 669-1653 (toll free), email envision@gundersenhealth.org or go to gundersenenvision.org.





How it works:

- Cow manure from Mauneshia River Dairy will be processed in an air-tight digester tank.
- The tank will be heated to about 100 degrees—just like a cow’s stomach which will release the methane gas from the manure.
- The methane will be captured at the top of the digester and then used as fuel in a generator to create electricity.
- The electricity will be added to the local grid in Dane County through Alliant Energy.
- The remaining material is a clean, organic fiber by-product that can be used for cow bedding or land fertilizer.