

Expert details biogas opportunities for Wisconsin

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An expert with UW-Oshkosh says Wisconsin's farming and food production industries present a "tremendous" opportunity for biogas in the state.

UW-Oshkosh Director of Biogas Systems and Research Development Brian Langolf spoke Friday during an Appleton event hosted by UW-Madison's Wisconsin Energy Institute. Biogas is a renewable energy source that's produced when organic materials are broken down by bacteria in an oxygen-free environment through a process called anaerobic digestion.

Langolf argued Wisconsin could become a national leader in biogas production by leveraging the "huge amount of materials" produced by the agricultural sector and food processors.

He noted the state has about 1.3 million cows and 7,000 dairy farms — but only about 40 of those farms currently have a digester system for processing waste into biogas.

"There's a huge potential if we can miniaturize the technology," he said, adding that most of the state's existing digester systems are on larger farms with more than 1,000 cows. By improving the economies of scale for biogas production, he said this technology could become much more widespread.

Langolf also explained biogas can be purified to the point that it can be injected into natural gas pipelines.

"If we can tap into all these 7,000 sites, that's a huge amount of [renewable natural gas] that we can produce in our state locally for homegrown renewable energy," he said.

UW-Oshkosh has been operating a biogas project since 2015 at nearby Allen Farms, which has about 200 cows. Most of the material for the digester — about 82 percent — comes from manure gathered from the farm, although the 6 percent that comes

from food waste “actually has a lot more energy potential in it,” he said.

Langolf noted students in engineering, chemistry, marketing and other disciplines play a role in the university’s biogas programs.

“Getting students involved is part of why we’re in this business,” he said.

See more details on the Allen Farms project:

<https://uwosh.edu/biogas/small-dairy-system-bd3/>

-By Alex Moe