

Inver Grove plant would be first in U.S. to turn garbage into ethanol

By BOB SHAW | bshaw@pioneerpress.com | Pioneer Press

PUBLISHED: March 18, 2017 at 7:00 am | UPDATED: March 19, 2017 at 12:25 am

Dump it today, drive with it tomorrow.

That's the promise of the nation's first waste-to-ethanol plant, proposed for Inver Grove Heights.

The \$200 million biofuels plant would process Dakota County's garbage into ethanol, to be blended with gasoline for use in cars and trucks.

If the plant works as described, it would make the county more environmentally friendly, said county Environmental Resources Director Georg Fischer.

The plant would be built by the Canadian company Enerkem Inc. and SKB Environmental Inc., a St. Paul-based waste and recycling company. The companies made a preliminary presentation to the Inver Grove Heights City Council in February but have not yet made any formal proposals to the city.

"There seems to be a potential for a lot of benefits, but there are also a lot of unknowns," said city administrator Joe Lynch.

If the council and state and federal agencies approve, the plant could be operating by 2020, according to David McDonnell, Enerkem's vice president for business development for North America.

The companies would build the plant near existing landfills, south of 117th Street and about 1 mile west of U.S. 52.

The plant would employ 100 workers and would pay Inver Grove Heights about \$1.5 million annually in fees and taxes. "Economically, there is an attraction here," Lynch said.

Enerkem operates two waste-to-ethanol plants in Canada. One is a small demonstration facility at the company's headquarters in Quebec, and the other is a commercial plant for the 800,000-population city of Edmonton.

The Minnesota plant would be the first in the U.S. and would be twice of the size of the Edmonton plant.

Dakota County's Fischer described how the plant could revolutionize garbage processing for the county, which produces 400,000 tons of garbage a year — half recycled and half going into landfills.

At the biofuels plant, workers would pick through the garbage destined for landfills a second time for recyclables, boosting the county's recycling rate from 50 percent to about 70 percent, according to Fischer. The remaining material would be shredded into 2-inch pieces, heated and processed into ethanol.

The garbage-based ethanol, just like corn-based ethanol, would be blended into automotive fuels. The plant would produce about 20 million gallons of ethanol annually.

COULD USE WASTEWATER

There's another environmental advantage to the plant — the re-use of water.

McDonnell said Enerkem likes the site because the plant could use water from the Empire Wastewater Treatment Facility in Empire Township. The Empire plant processes sewage from the metro area and pipes the wastewater to the Mississippi River.

If the ethanol plant used that water, it wouldn't have to pump water up from aquifers.

The savings? About 1.6 million gallons annually.

"If they were able to do that, it would become more and more of a green project," Fischer said.

He said that by slashing the volume of garbage going into landfills, the plant would help the county meet environmental goals set by the state.

State law lists environmental practices from worst to best: landfilling, landfilling that captures flammable gases, composting or burning garbage, composting yard waste and food waste, recycling, and reduction and re-use.

The biofuels plant, said Fischer, would move Dakota County up two levels. "In that respect, it would be a great thing," he said.

The waste-to-ethanol process is so new that many environmental groups and the Environmental Protection Agency don't list it under methods they have evaluated.

The EPA's website, like Minnesota's waste-management hierarchy, places "energy recovery" in the mid-range of treatment options. Presumably, "energy recovery" would include turning garbage into ethanol.

"The process, if it works as they say, could potentially be a good alternative for us," said city administrator Lynch.