

Garbage to gas: Edmonton biofuel plant to enter final stage

'We firmly believe the end is in sight,' says city's utilities manager

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The Enerkem waste-to-biofuels facility is fully commissioned, but won't be completely operational until 2016 at the earliest. (Enerkem)

By next year, the same garbage that Edmontonians place curbside should be converted into a component of the gasoline they use to fuel their cars.

Enerkem Inc., which partnered with the city in 2008 on a pioneering project to construct a biofuel plant that turns municipal solid waste into methanol, and soon ethanol, is adding the finishing touches this fall.

"We firmly believe the end is in sight," said Chris Ward, the city's utilities manager, who provided an update to city councillors at the utilities committee meeting Wednesday. "We're still working through the bottlenecks of making sure that everything's happening."

The plant will be shut down for three months while Enerkem adds modules that convert the methanol the plant currently produces into ethanol.

The project, which was supposed to be completed in its entirety in 2012, is both overdue and over-budget.

At \$80 million, the Enerkem project is partially funded by the province. That doesn't include the \$40-million facility to prepare the waste for conversion.

The idea is to convert 100,000 tonnes of garbage that would otherwise be sitting in landfills into biofuel. Enerkem will sell the biofuel and share the profit with the city.

Ethanol has higher market value

In 2014, Enerkem began producing methanol, but not a lot of it. Since a dryer was added to control moisture levels, the plant is ramping up to double the output.

But ethanol, with a higher market value, is more desirable.

When Coun. Mo Banga asked during the meeting whether the city has a backup plan, Ward said he's confident the project will proceed as planned.

Ward said given the scale and complexity, the fact that there have been some complications is not surprising.

One challenge, he said, relates to dealing with items in the garbage that are hard to break down.

"You're dealing with waste," Ward said. "To get energy out of waste, if it was all one material, it would be easy. It's not."

Energem is being sued by companies contracted by one of its former suppliers, which went bankrupt. There are numerous related lawsuits making their way through the courts, and the City of Edmonton has been named in one of them.

Ward said the next court date is Sept. 12. He expects to have more information after that on whether there is substantive evidence to include Edmonton.

He said the legal challenges Energem faces have not been a complicating or delaying factor.

As it stands, Edmonton is diverting a little more than 50 per cent of its waste. That figure includes recycling and composting in addition to biofuel conversion.

The projection for 2017 is between 60 and 70 per cent. The long-term target is 90 per cent.

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With files from Sylvain Bascaron and Laura Osman