



Problem plastics fuel diesel project

Company boss impressed by interest in project

Amanda Stephenson, Calgary Herald

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An Airdrie-based company's vision of converting waste plastic to diesel fuel is generating interest from municipalities across Canada.

By next summer, Durham Energy Recovery hopes to have its first plant up and running at an as-yet-un disclosed site in southern Alberta. Expected to be the only one of its kind in Canada, the plant will use a process called thermal degradation to turn unwanted plastic into transportation-quality diesel fuel.

Durham is still in the financing stage of the project, but customers - including the Town of Canmore and the Mountain View Regional Waste Management Commission - have already signed up to deliver waste plastic to the plant, which will cost \$18.6 million to build and will employ 15 to 20 people.



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Peter Brown, president of Durham Energy Recovery, says interest in the project is growing.

Colleen De Neve, Calgary Herald

Company president Peter Brown said interest in the project is growing from as far away as Saskatchewan, Manitoba, and Ontario.

"It's overwhelming for us," said Brown, who worked in environmental waste management for 25 years before founding Durham. "We could easily get enough plastic to build five or six of these plants around the province. And there'd still be plastic left over."

According to Statistics Canada, about 25 million tonnes of nonhazardous waste was landfilled in 2010 in Canada.

Plastics accounted for seven to nine per cent of that amount by weight and 30 per cent by volume - and that doesn't include agricultural plastics that were buried or burned on farms across the country or dumped in rural landfills.

For municipalities and waste management organizations, plastics are a growing problem. North America once shipped millions of tonnes annually of mixed plastic waste to China, where there was a market for this type of raw material. But the Chinese government recently restricted the amount of foreign recyclables it will accept, causing the bottom to fall out of the international waste plastics market. "It's caused a huge backlog for municipalities," Brown said. "Most people are stuck either landfilling this plastic or stockpiling it ... So the timing just seems perfect

for us to do this."

The Durham Energy Recovery plant will heat plastic inside a sealed, de-oxygenated chamber until it transforms into a vapour. That vapour will then be condensed down to a liquid form that can be distilled into diesel fuel. The gas byproduct produced will be used to heat the plant and the solids that are left over can be sold to tire and rubber pipe manufacturers.

"It's very environmentally friendly," said Brown. "It's as close to a zero-waste proposition as we can get."

The plant will be able to handle up to 20,000 tonnes of plastic per year, producing 20 to 26 million litres of diesel. Brown said while his company will start with just one operation, it hopes to eventually build between three and five plants in Alberta, with the possibility of further expansion.

Grant Cameron - executive director of the Alberta Plastics Recycling Association - said the Durham facility won't interfere with recycling programs that are already in place, such as bottle depots. It will simply be a solution for certain classes of mixed plastic that are increasingly difficult to dispose of.

"We're very excited by the possibilities with Durham," Cameron said. "We are able to take a certain percentage of plastic out of the waste stream and recycle it now, but there's a certain percentage that remains in the waste stream. And a part of that will now be able to be taken out by Durham."

Municipalities that take their plastic waste to the Durham facility won't be paid for it, but they will save money on landfill tipping fees.

Al Graham - chief administrative officer for the Mountain View Regional Waste Management Commission - said there will be even greater benefits in the long run.

"The beauty of it for us is the money we're saving by not having to build a new landfill in a shorter amount of time than we thought," Graham said. "For the residents of the county of Mountain View, we now have a solution that other areas don't. And we're extremely proud of that."

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