While some raise questions, others defend technology

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DURHAM -- Could incineration prove to be a solution to Durham's mounting waste problem? There are some who scream 'no'.

Suzanne Elston is a community activist living with her family in Courtice. The former executive director of the Recycling Council of Ontario, she was on the founding board of Waste Diversion Ontario and is currently the chairwoman of the Durham Environmental Advisory Committee.

"The more I read about (incineration), the more I felt it was a really dumb idea on a whole pile of levels," Ms. Elston said. "Burning garbage is one of the most expensive ways of getting rid of trash; it is not a cheap way of producing electricity and that is a great public misconception."

Another common misconception, according to Ms. Elston, is that an incinerator eliminates the need for a landfill, which is not the case.

"When you burn garbage, what remains is about 20 per cent by weight and 10 per cent by volume, but through the process of incineration that relatively inert garbage becomes toxic," Ms. Elston said. "So instead of having a landfill that is a little stinky and has flies and seagulls you have a toxic waste disposal property."

She also said incineration is counter productive to other more constructive waste-reduction and reprocessing initiatives. These facilities burn 24 hours a day, seven days a week, she says, to maintain a certain temperature. That level of consumption will require importing garbage, she adds, as well as burning papers and plastics or feeding the plant with natural gas.

"So it is very expensive, counter productive to other three 'R' initiatives, requires us to import and leaves us with landfill," she said. "For me, the biggest issue and the biggest reason I oppose incineration is that once you burn something it's done. It is no longer recoverable as a resource."

In order to solve Durham's waste issues, Ms. Elston suggests there needs to be a public paradigm shift.

"Once we get the idea that once we take possession of waste it then becomes our responsibility, we may shift our priorities," she said. "The biggest problem we have with waste management is that we have never, ever owned it. Our idea of responsible waste management is making sure the blue boxes and the garbage bags are out to the curb on time. We don't look at waste as something we are responsible for; we don't look at it as something we generate."

On the other side of the coin is Professor Nickolas Themelis, director of the Earth Engineering Centre at Columbia University in New York.

"I think (incineration) is a very necessary thing," Mr. Themelis said. "Everything we use ends up as waste at the end and so far the principal way we do is landfill."

He said 1.4-billion tonnes of material is landfilled around the globe annually, which takes up land forever, takes up greenfields, and turns them into something you can't do anything with in the future except maybe put some grass over it.

So, if rather than landfilling waste it can by used to produce energy and recover metals, Mr. Themelis said the production of energy is preferable.

"You avoid the use of land and you reduce the mining for coals," Prof. Themelis said. "In one (incineration) plant in the (United States) I visited they recover something like $800 in coins everyday -- it is amazing."

As for emissions, Mr. Themelis said the same amount of carbon dioxide would be generated if you used fuel instead of waste to generate the same amount of electricity.

"The only alternative is landfilling. You can't compare it with recycling because you should recycle as much as you can; you should compost as much as you can. But at the end of the day there is a lot of material to be landfilled."

The representatives from the four facilities visited by a waste management delegation from Durham and York regions minimized the pull between the for and against incineration groups in Europe. However the groups exist and continue to fight against the technology.

According to Andrew Male, communications co-ordinator for Greenpeace Canada, incineration is not something it has looked at in any great detail. This is not the case in Europe.

"When we started in 1997, Greenpeace was very active in Sweden against incineration," said Jonas Eek, manager of the energy department at the Sysav energy-from-waste facility in Sweden.

"But their arguments weren't validated," he said. "It is basically based on an old report from the 1980s when you didn't have any flue gas treatment. Today it is completely different. Today I would say that we in energy production have the lowest emissions of all different kinds of fuels that are used in energy production."

In 1985, while processing 1.5-million tonnes of waste, the dioxins were measured at 100 grams a year. Today, Mr. Eek said while processing two-million tonnes the dioxins measure less than one gram a year.

A May 2006 paper, 'Dirty Truths, Incineration and Climate Change', released by a United Kingdom environmental campaigning organization, Friends of the Earth, concludes incinerators are being sold to the public as a source of green electricity.

However, after examining fossil-fuel-derived CO2, the report states, "it makes no sense to promote this type of technology when there are better waste management options available," mainly anerobic digestion.

At the facility in Amsterdam, the environmental approval to operate it was gained without objection.

Evelien Jonkhot, who is responsible for corporate communications at the Amsterdam facility, said that in 2005 Greenpeace in the Netherlands stated that they are more or less neutral when it comes to incineration, although they did not put that in writing.

The Amsterdam plant gives all interested non-government organizations and regional environmental parties all of its reports.

"Emissions is a non-topic," Marcelle Van Berlo, an engineer at the Amsterdam plant, said. "It is a topic from the past. I know it is sensitive to the public but it is an issue from the 1980s."