

Burn, baby, burn

Critics of incinerators make urban analyst RICHARD GILBERT burning mad. He says shipping away Toronto's garbage doesn't make sense

By RICHARD GILBERT

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Waste management in Canada's largest city is a shame, a health risk, and a puzzle.

Every day, Toronto sends more than 100 large truckloads of municipal waste 500 kilometres to a hole in the ground in Michigan. There it will rot for a hundred years or more, polluting the air around it. When the liners that contain the rotting garbage fail, it will pollute the soil and watercourses nearby.

Each truck's return journey generates a tonne of carbon dioxide and large amounts of locally acting pollutants that affect hundreds of thousands of people living along the route to the landfill site. This export of waste shows shameful disregard for the health and well-being of residents of Michigan and southwest Ontario.

Exporting waste is a health risk as well because the border to the U.S. can be closed at any time. There is no clear back-up plan. When the border was closed in May -- because of concerns about mad-cow disease -- officials scrambled to find alternative sites. The health risks associated with dumping garbage in Toronto's parks were narrowly avoided.

Waste management in Toronto is a puzzle because for decades experts have advocated an in-Toronto solution that is environmentally sound, cost-effective and generally popular: to recycle what can reasonably be recycled, incinerate the remainder with energy recovery, and make productive use of the resulting ash. Polls have consistently shown support for this kind of solution. The most recent survey, reported on Oct. 12, indicated support by 70 per cent of Toronto residents.

Nevertheless -- and here's the puzzle -- Toronto politicians have repeatedly rejected incineration with waste recovery, including all but one of the prominent candidates in the current mayoralty race.

Ideological fixations and scaremongering have worked at City Hall to obscure the substantial superiority of incineration over all landfill and much recycling. The superiority is especially clear when environmental and financial costs are assessed on a full life-cycle basis, taking into account, for example, the need

to manage landfill sites for 1,000 years beyond closure.

Several European countries have banned land-filling of combustible waste, requiring incineration of what is not reused or recycled. All will have to do so by 2006, to conform to European Union regulations. In North America, residents of Brampton, Burnaby, Syracuse, Tampa, and numerous other locations live happily with their waste-to-energy plants. Yet in other cities, notably Montreal and New York, anti-incineration campaigns ensure that waste continues to be dumped in distant landfill sites.

Toronto's choice of landfill over incineration flies in the face of a weight of scientific evidence. A 1999 Ontario government study found that a modern landfill is a thousand times more hazardous to its neighbours, in terms of cancer risk, than a modern incinerator. A 2002 Harvard University study confirmed the Ontario finding. Both found emissions of dioxins, furans and other pollutants from modern incinerators to be negligible.

The City of Toronto claims justification for polluting large parts of North America with garbage trucks and exposing Michigan residents to elevated cancer risk from rotting garbage, saying that exporting the garbage is a temporary measure pending attainment of 100-per-cent diversion of municipal waste in 2010. Assessments of this plan's feasibility have been driven more by unsupported notions that recycling is always beneficial, than by solid appraisals of available evidence.

They have been driven too by irrational beliefs that "new and emerging technologies" can become available to divert what cannot be recycled. Most of those proposed to the city would involve gasification or pyrolysis. These processes are variations on incineration that are insufficiently proven and have not found favour elsewhere. (Why pyrolysis could be acceptable and not incineration is another puzzle.) Other proposed technologies would involve anaerobic digestion of biodegradable waste, an expensive process that works only at a scale far below Toronto's requirements. No new or emerging technology offers clear environmental and financial advantages over modern incineration with waste recovery.

Indeed, hard-nosed analyses suggest that modern incineration with waste recovery is environmentally superior to much (not all) recycling. Where it is difficult to choose between the two on environmental grounds -- e.g., for the management of most paper and cardboard waste -- the recycling route is usually the more expensive alternative. Of the 85 per cent of municipal waste that is combustible, recycling provides clear environmental advantages over incineration with energy recovery only for some plastics.

Incineration does not deter beneficial recycling. West of Toronto, more than a quarter of the municipal waste generates electricity at the Brampton

incinerator, but almost half of the waste is recycled, a much larger share than in Toronto. In general, municipalities with incinerators recycle more than those that rely on landfill.

Where should incinerators be located? As with all modern waste-management facilities, the major nuisances and environmental impacts result from associated truck traffic rather than from the facilities themselves. Toronto has seven transfer stations, where waste from collection trucks is compressed into the huge transporters that ferry it to Michigan. Each station could be the site of a waste-to-energy facility, with resulting reductions in truck traffic. And seven small incinerators would distribute the truck traffic evenly.

But seven small facilities would cost \$15-million a year more to operate than two large incinerators. For this amount, two neighbourhoods could have first-class recreation centres and swimming pools constructed as integral parts of the waste facilities (as in Japan) and lower-cost home heating (as in Denmark).

For such incentives, neighbourhoods in Canadian cities may one day soon bid against one another for the privilege of hosting waste-to-energy plants.

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