

Garbage: Burn it or bury it?

Brampton incinerator is no solution to garbage conundrum

By Roger Hunziker

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In last year's mayoral election John Tory was the only candidate to support the building of a trash-burning incinerator within Toronto's borders. His opponents immediately challenged the notion, and the public's reaction ranged from mild misgivings to vehement opposition.

Incinerators, though widely used in Europe, have a bad reputation in North America. Toronto, like most municipalities in Canada, disposes of its garbage in landfills, a method not without controversy. Heavy metals such as mercury leak into the groundwater, seagulls flock to the smell of rotting garbage. In this light, the idea of burning garbage in special waste incinerators seems to have a lot of appeal.



The Tipping Floor, where garbage is sorted

AlgonquinPower operates an Energy from Waste plant in Brampton for Region of Peel municipality. Binda Gupta, Technical Analyst in Waste Management for the Region of Peel, explains the process: trucks deliver the garbage to the Tipping Floor. After approximately five hours in the incinerators, the waste has been reduced to blocks of dense, cooled ashes. The Air Pollution Control stage reduces the emission of some of the highly toxic substances produced during the incineration - such as barium, chromium, manganese, copper, arsenic, and aluminium- and a filter removes poisonous particles. In a further attempt to limit the release of lethal gases into the air, a Catalytic Reduction stage destroys dioxins and petroleum-like substances.

Gupta sees many advantages in this method of waste disposal: "[our] municipal waste incineration plant represents the best compromise at the present time...The combustion process destroys organic pollutants and heavy metals... Incineration reduces the overall volume of the waste by 90% and mass of wastes by 75%. The energy created by the combustion process is largely converted into utilizable electricity and heat".

This energy is considered by proponents of incineration as one of the main advantages.

"The heat generated is used to produce electricity. Our facility can produce up to 9.3 megawatts of electricity [per day], 75% of which is sold to Hydro One", explains Gupta. "9.3 megawatts can power between 4909 to 6136 homes." This, of course, helps ease the pressure on the power grid.

Philip Byer, Professor at the University of Toronto's Civil Engineering Department and expert on solid waste management, agrees that through incineration "less waste would be land filled, which would reduce groundwater pollution, noise, litter, and odours." But he sees some dangers, too: **"Air pollution [from incinerators] affects human and ecological health. The type and level of air pollution can depend greatly on the types of waste incinerated, the design of the process and the pollution controls. There is also the problem of disposal in of the residue, i.e. ash, from the unburned material and from air pollution controls. Their disposal in a landfill can have environmental impacts, including groundwater pollution."**



Gupta replies that emission guidelines are stringent, but Gord Perks, spokesperson for the Toronto Environmental Alliance disagrees: **“Ontario guidelines are terribly dangerous. They are rate based, not health based. For example, take dioxin: the emissions [at the Peel incinerator] are within the government’s guidelines, but exceed the tolerance levels set by health organisations.”**

The Brampton waste incinerator

Perks, a vocal opponent of incinerators, says that neither landfill nor burning garbage is an acceptable solution: “We need a mixture of solutions to tackle the garbage problem. First, we need what are called Extended Productivity Responsibility legislation as it exists in many European nations: if you manufacture a product, you also have to take on responsibility for its disposal. Your computer breaks: instead of throwing it in a landfill, you return it where you bought it. Essentially, you try to apply the return-the-bottle system to other products such as electronics, cars, etc. Second, we need to dramatically expand our composting programmes. Third, local businesses have to participate in municipalities’ recycling efforts. Such legislation exists, but is not enforced. If we do all these things, we can reduce the garbage to 10% of what is today! Incinerators are short-term solutions that stand in the way of implementing all of the above.”

In trying to decide between incineration or landfill we are caught between the proverbial rock and hard place, so the suggestion that the answer lies in not creating any more garbage than necessary makes sense. Einstein’s theories on energy apply to garbage: it never disappears, it is only transformed. In other words: as long as we create garbage, we have to live with the damage it wreaks on our health and environment.

Photographs courtesy Region of Peel