

Alternatives

Any decisions about the incinerator, regardless of cost or safety, have to start with the question, "Is incineration the best way or even a good way to get rid of our residual garbage? Are there viable options? - what are they?"

The EA for the incinerator had several flaws in our opinion – health concerns were clearly one of them. But a glaring omission was a proper consideration of diversion as an alternative. A second related flaw in the process was the Business Case which also avoided diversion as an alternative.

History of Diversion in Durham Region

- Late 80s - diversion 0%
- 2005 - diversion 36% = approx 2.4% increase per year
- 2007 - 49% = 6.5% increase per year
- 2010 - 51% - stalled because of the emphasis on the incinerator
- 2016 – 70% = projected 3.2% increase per year based in large part on the Golder Report that the Region has been sitting on since March 2009

Where do we go from there?

These numbers are derived from the Deloitte Business case and include population increases

Increasing Diversion by 1% per year after 2017				Build Incinerator	
Year	Diversion rate %	Residual %	Projected Residual tonnes	Maximum Diversion which will still leave 100,000 tonnes	Ash Landfill tonnes
2012	60	40	106,568		
2017	70	30	79,035 ‡	62	40,000
2022	75	25	90,604 ‡	72	40,000
2027	80	20	79,150 ‡	75	40,000
2032	85	15	63,607 ‡	76	40,000
2037	90	10	45,456 ‡	78	40,000

‡ all of these numbers are below the 100,000 tonnes that the Region is committed to supply to the incinerator

Fallacy: If we don't build this incinerator, we will be buried under an enormous mountain of trash. We have no alternative.

Fact: We can achieve equal or better results through diversion

Fallacy: People can't change

Fact: People have embraced new recycling initiatives as fast as they have been introduced – people are engaged on the subject of waste

Fallacy: Incineration will drive diversion

Fact: In 2037 the maximum diversion possible which will still supply 100,000 tonnes of residual to the incinerator is 78%, at 120,000 tonnes the maximum diversion would be 74%

Recycling is scalable - the incinerator is not – It must have a minimum tonnage to operate

Can we do it?

- Most of these numbers are from the Golder Report March 2009 The various fractions of recycled waste are essentially the same as what the products were made from originally

Current Composition of our Waste

Blue Box materials

Currently being collected	13
Currently not being collected	3

Compostibles

Currently being collected	31
Currently not being collected	19

Backyard composting – estimated	2
Grasscycling – estimated	3

Hazardous	1
WEEE	0.3% (actual 2007)
Tires	0.3% (actual 2007)

Other Plastics

plastic film	9.2
other plastics	7.0
polystyrene	1.2

window glass and glassware

mattresses	0.2
pet waste	1.8

diapers & sanitary products

2.3% (2008 US EPA)

<http://knowaste.com/>

carpeting

>1% (US EPA estimate)

<http://carpetrecovery.org/>

textiles	0.5
reusable items	3.6
hard goods	0.2% (actual 2007)
construction & demolition	1.4% (actual 2007)

103.5% (greater than 100% due to different sources of information)

These figures are for curbside stream – multi-unit dwellings have somewhat different profiles and different challenges

Durham has lead the province in recycling for several years but other communities have caught up and are passing us because we have spent most of our energy trying to justify an incinerator

There is nothing on this list that cannot be collected and recycled.

The various fractions of recycled waste are essentially the same as what the products were made from originally

Everything on the list is currently being recycled somewhere.

Is Diversion cost effective? It is cheaper than incineration!!

Cost Comparisons:

1) **York Region Report:** Erin Mahoney, Commissioner, Env Services, to York Region Council Dec. 16, 2010

Blue Box	\$24 to \$40/tonne
Source Separated Organics	\$154 to \$253/tonne
Leaf and Yard Waste	\$67 to \$110/tonne
HHW and Other	\$604 to \$991/tonne
CEC Diversion (Re-use-it type centre)	\$153 to \$251/tonne
Waste to Landfill	\$96 to \$157/tonne
Waste to Dongara	\$123 to \$202/tonne
Waste to Durham-York EFW	NA, \$312 to \$154/tonne

Apart from HHW (household hazardous waste) **incineration is the most expensive**

Question for Durham Staff: What is the breakdown of Durham's waste management expenses?

2) Calculated Incineration Cost

272 million (fall 2009 estimate for Courtice Incinerator)
Interest costs \$110 million (est – 3%, 25 year amortization)
Equals \$15.3 million per year for 25 years

Question: What is the current estimate for the overall capital cost of the Courtice incinerator?

Plus operating costs – \$17 million per year (2008 Business case estimate)

Question for Durham Staff: What are the current projected operating costs including all add-ons for monitoring, compliance, ash disposal, etc.?

Total \$32.3 million per year / 140,000 tonnes garbage = **\$231 per tonne**

3) Ontario Government Reported Recycling costs

From Waste Diversion Ontario's Ontario Municipal Datacal

“In 2008, diverting Blue Box materials cost Durham Region \$97.55 net per tonne.”

- Overall provincial average - \$181 net per tonne
- average for large urban municipalities – “nearly \$159”
- urban regional municipalities - \$129 net per tonne”

4) Incremental Recycling Costs from Golder Report

- Proposed increase in diversion from 50% to 70.9% = 21% = **55,950 tonnes increase**
- Projected Capital cost - \$7.5 million (\$8.7 million amortized over 10 years) = **\$0.87 million per year**
- Projected Operating cost - **\$5.9 million per year**
- Total = \$6.8 million per year / 55,950 tonnes = **\$121,500 per tonne**

No matter how you crunch the numbers, Diversion is cheaper than Incineration!

A Vision for the Future of Waste Management

- No Incineration
- Interim limited Short term Landfill
- Aggressive Ramped-up recycling

1) Change of Approach – Waste in Durham is treated as 2 very different streams

1. Disposal is given priority - has to be done, costs money
This attitude explains why the incinerator has almost doubled in cost without anyone batting an eyelash
2. Diversion has been treated as secondary – driven by specific provincial directives, markets, and special grants from provincial agencies
3. Waste needs to be treated as one stream with one goal - reduction in the most cost effective and safest manner. The Region will save money by diverting

2) Getting close to Zero

- Emphasis has to shift to those fractions that are currently not being recycled
 - increased compostibles (19%)
 - additional plastics (17.4%)
- these would increase diversion to over 85%
- These (and most other fractions) can be removed by secondary sorting at a facility like the MRF
 - **NOTE: This is only one of many ways to sort waste and probably not the best** – Source separation would be better but this would require a major rethink of Durham's waste program
 - Such a facility will likely be required anyway by the incinerator in order to remove the hazardous waste (batteries, fluorescent lights, etc.).
 - For reference, Whitby's MRF cost \$16.6 million, so for the cost of the incinerator you could build and operate a dozen MRFs (only one would be required)

Question for Durham Staff: How will Durham comply with the Minister's directive that only non-hazardous waste can be burned? What will be the cost of pre- or secondary sorting?

3) Markets – Waste recycling is an extractive industry and Durham has to work with its customers to ensure the waste fractions:

- meet specifications
- are priced competitively with 'virgin' raw materials
- are readily available in sufficient quantity to satisfy customer demand
- All extractive industries stockpile a reserve of their product.
 - Storage in bales of clean, separated raw material
 - No greenhouse gases
 - Gives the Region some leverage on prices
 - Ready access for inspection and shipping

Recycling should not be focused on the next handout from the province



4) Participation: to get anywhere near zero waste you need to have near 100% participation. This will require a range of strategies which might include: (these have all been implemented in other jurisdictions)

- By-law that recycling is mandatory (including apartment buildings), the use of Clear Bags and aggressive enforcement of anti-dumping
- Charge by the bag for all residual garbage to cover the cost of sorting it at a MRF
- Combination of penalties and rewards to encourage recycling
- Specific 'eco' charges for pickup of special items like mattresses
- Wider range of recycling opportunities – tell people that everything is recyclable and then tell them how
- More convenient waste management facilities (such as local malls)
- Recycling stations in larger apartment buildings