

**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?"**

What are the Options

Burn or Bury?

The EA failed to properly assess all the alternatives

- Particularly failed to consider diversion**
- The Business Case also avoided diversion as an alternative.**

History of Diversion in Durham Region

- Late 80s - diversion 0%
- 2005 - diversion 36% = 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/year based largely on the Golder Report that the Region has been sitting on since March 2009
- **Average 2.7%/year over 26 years**

After 2016 - What then?

Will incineration deliver what it promises?

Will it drive further diversion as claimed?

Will it do as well as Diversion on its own?

Increasing Diversion by 1% per year after 2017					
Year	Diversion rate %	Residual %	Projected Residual tonnes		
2012	60	40	106,568		
2017	70	30	79,035		
2022	75	25	90,604		
2027	80	20	79,150		
2032	85	15	63,607		
2037	90	10	45,456		

Derived from the Deloitte Business Case - 2008

But the Region is contracted to supply
a minimum of 100,000 tonnes of
waste to the incinerator

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+

Derived from the Deloitte Business Case - 2008

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%. Without the incinerator, it could be over 90%

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

**Recycling is scalable - the
incinerator is not**

It will block advances in recycling for
the next 25 years

So, can diversion do the job?

Can it do it better?

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 7.0

polystyrene 1.2

window glass and glassware 1.5

mattresses 0.2

pet waste 1.8

diapers & sanitary products 2.3% (2008 US EPA)

carpeting >1% (US EPA estimate)

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)

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

Everything on the list is currently being recycled somewhere.

<http://knowaste.com/>

<http://carpetrecovery.org/>

Our time to Lead

- **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**

Is Diversion cost effective?

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**

Incineration is the most expensive apart from HHW

2) Calculated Incinerator 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
- Plus operating costs – \$17 million per year (2008 Business case estimate)
- 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 = **\$121.50 per tonne**

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

Burn or Bury?

Neither!

A Vision for the Future of Waste Management

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

1) Change of Approach Needed

Waste in Durham is treated as 2 very different streams

- **Disposal**
 - priority - has to be done, accepted that it costs money
 - This attitude explains why the incinerator has almost doubled in cost without anyone batting an eyelash
- **Diversion**
 - secondary
 - driven by specific provincial directives, markets, and special grants from provincial agencies
- Waste needs to be treated as one stream with one goal - **reduction** in the most cost effective and safest manner

2) Getting close to Zero

- Emphasis needs to shift to the largest fractions that are currently not being recycled
 - increased compostibles (19%)
 - additional plastics (17.4%)
- these would increase diversion to over 90%

Secondary Sorting

- 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 properly 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)

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

- All extractive industries stockpile a reserve of their product.
 - Storage in bales of clean, separated raw material
 - No greenhouse gases
 - Gives the Region leverage on prices
 - Ready access for inspection and shipping
- No Landfill



Cans



Plastic bottles



Paper



Cardboard



Glass

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

Zero Waste is doable

Next Steps

1. Council needs a new Business case to either verify or refute the numbers in this presentation
 - Business case must include diversion as an option
 - Region and consultants needs to work more closely with residents
2. Suspend further action on the Incinerator pending the outcome of the new business case
 - Even if canceling the Covanta contract costs \$25 million, the Region will still be way ahead financially and will avoid all the health concerns associated with incineration.
3. The world will beat a path to your door

“If we don’t change direction,
we’ll end up where we’re
heading.”

old Chinese proverb