

To: *Toronto City Councillors and members of the Infrastructure and Environment Committee*
Re: [IE 4.1 - Long-Term Residual Waste Management Options for the City of Toronto](#)

June 2, 2023

Dear Councillors,

On behalf of the Toronto Environmental Alliance (TEA) in response to item IE 4.1 *Long-Term Residual Waste Management Options for the City of Toronto*, we urge you to focus on waste diversion, and **reject any option to send Toronto's waste for incineration or 'energy-from-waste' thermal treatment.**

The "thermal treatment" of waste - including incineration with some energy recovery or creation of refuse-derived-fuel - is an expensive and toxic form of disposal that works directly against Toronto Council's environmental commitments and Net Zero by 2040 goal.

1. Thermal treatment of waste is in direct opposition to a circular economy and a goal of zero waste.

Toronto has committed to be a leader in the Circular Economy. A circular economy is one that ensures resources and materials are reduced, reused, repaired, recycled and recirculated, eliminating the need for raw-materials extraction, and eliminating the need for disposal in landfill or incinerator.

The majority of what is in Toronto's 'garbage' isn't garbage and could be reduced, recycled or composted.

City audits over many years confirm that there is still a lot of room for improvement in recycling and organics diversion in Toronto.

- On average, approximately 20% of a garbage bag is recyclable materials, including single use packaging and plastics, that should be collected in the Blue Bin, and approximately 30% is food and organic waste that should be composted to recycle nutrients in the green bin.
- Additional analysis of City audits shows another 10 to 15% of the rest is reusable materials like textiles and household goods, or hazardous and special waste like batteries and electronics.

Toronto has made progress in this direction, but there are many more things that the City can do city wide: starting with its own operations to reduce single-use and takeaway items, remove organics from the garbage stream, especially in multi-residential buildings, and address other waste streams such as textiles and construction waste to dramatically reduce residual waste.

2. Incineration contributes to climate change.

Toronto Council has declared a climate emergency, and has committed to achieving Net Zero greenhouse gas emissions by 2040. Incineration, even with energy recovery, is a very inefficient source of *non-renewable* energy: only a small amount of energy is collected by burning mixed garbage, and most of that energy comes from burning plastics, a fossil fuel product.

The fact is that burning waste is not a clean source of energy, and it releases large amounts of greenhouse gases. For example, energy from waste facilities release 70% more carbon per kilowatt hour of energy than natural gas - that is **17 times more carbon** per kilowatt hour than Ontario's electricity grid which is largely hydro and nuclear.¹ Increasing reliance on dirtier, more polluting forms of energy is going in the wrong direction.

It is undisputed that diverting waste by increasing efforts to reduce, recycle and compost resources conserves more energy and prevents more greenhouse gas emissions than any form of disposal, even with energy recovery.

3. Energy from waste and incineration creates extremely toxic air emissions and residual ash.

The combustion of mixed garbage creates a mix of toxic air pollutants. This includes pollutants such as particulate matter, sulphur dioxide and nitrogen oxides, and the burning of plastics and other combustible materials also creates very toxic dioxins and furans. These are extremely toxic substances that accumulate in the soil and in our bodies. **Even the most sophisticated filtration systems cannot remove all of these substances.**

- Emissions levels from incinerators are based on ideal computer modelling. Real world emissions testing is very limited and in many cases, happens only a few times per year. This is concerning and shows that theoretical modelling may not be giving us the full picture of actual emissions.
- For example, one of two incinerators near Toronto is the Durham York Energy Centre, which was built in the last decade. However, since the incinerator began operation, dioxins have been released by the facility and there have been a number of events when dioxin limits were exceeded, including one with dioxin levels at nearly 14 times the allowable limit.

4. Energy from waste emissions and ash burdens other communities.

The two main energy-from-waste facilities near Toronto are in Durham and in Peel. The Durham York Energy Centre was built in the last ten years. However, despite the pollution controls, the community surrounding this facility is still subjected to a steady flow of nitrogen oxide, sulphur dioxide, particulate

¹ EU statistics show EfW releases an average of 580 g CO₂e per kWh, natural gas releases 340g CO₂e/kWh ([Zero Waste Europe Policy-briefing The-impact-of-Waste-to-Energy-incineration-on-Climate](#), 2019); Ontario's grid released an average of 34g CO₂e kWh (Online [Canada Energy Regulator - Provincial and Territorial Energy Market Profiles](#))

matter, dioxins and a host of other toxic substances that are all known to cause significant health and environmental harm.

The second facility is the privately owned Emerald Energy From Waste incinerator in Brampton. This facility is more than 20 years old and it takes waste from anywhere in Ontario including commercial and industrial waste. Air monitoring at this site for the most toxic substances including dioxins and furans happens only once per year.

After the incineration process, approximately **one third** of the weight of waste remains as bottom ash and fly ash, which contain toxic substances. From Durham in 2022, over 41,000 tonnes of this ash was trucked to a landfill in Niagara Falls, and some went across the border to New York. This effectively spreads the waste and the potential toxic ash to even more communities.

5. Lack of public consultation and accountability

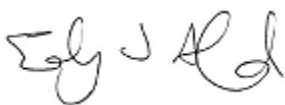
Considering the cost and scale of this decision, and the environmental and health impacts for Toronto and our neighbours, there should be more consultation on this issue, and past consultation and direction should be followed. Delegating the authority to staff to make these major decisions without reporting of impacts, council input and public involvement is very concerning.

The City of Toronto previously did an extensive, multi-year public consultation on a Long Term Waste Management Strategy (LTWMS) on how to reduce and manage our city's waste. With dozens of meetings, stakeholder advisory groups and expert input, that strategy included a discussion on what criteria and information should be used when making long term decisions about how the city manages waste, such as environmental, climate, health and social impacts. Those detailed criteria should be included here, however there is no mention of them, and the staff recommendation includes no public consultation or input.

Similarly, two years ago, facing a similar request to send Toronto's garbage to incinerators (IE 21.5), Council directed staff to report back with more detail and information about the environmental and health impacts of incineration. This staff recommendation does not include providing that information requested by Council and would give authority directly to staff without any further reports.

We urge you to ensure that Toronto residents and stakeholders are engaged in this very critical conversation: to reject disposal by incineration for Toronto's waste, and to follow through on Council's commitments to create a circular economy and to take action on the climate crisis.

Sincerely,



Emily J. Alfred
Waste Campaigner, Toronto Environmental Alliance

Additional information:

1. City of Toronto, 2020 - **Mixed Waste Processing Study Update**
<https://www.toronto.ca/legdocs/mmis/2020/ie/bgrd/backgroundfile-146477.pdf>
2. ZWE - Zero Waste Europe, 2019 - **Policy Briefing: The Impact of Waste-to-Energy Incineration on Climate**
https://zerowasteurope.eu/wp-content/uploads/edd/2019/09/ZWE_Policy-briefing_The-impact-of-Waste-to-Energy-incineration-on-Climate.pdf
3. CER - Canada Energy Regulator, 2022 - **Provincial and Territorial Energy Market Profiles** -
<https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-canada.html>
4. GAIA - Global Alliance for Incinerator Alternatives, 2019 - **Fact Sheet: Pollution and Health Impacts of Waste-to-Energy Incineration**
https://www.no-burn.org/wp-content/uploads/Pollution-Health_final-Nov-14-2019.pdf
5. DYEC - Durham York Energy Centre, 2022 - **ECA Annual Facility Operations Report**
https://www.durhamyorkwaste.ca/en/operations-documents/resources/2020/20210330_RPT_2020_DYEC_ECA_Annual_ACC.pdf
6. City of Toronto, 2021 - **IE21.5 - Authority to Negotiate and Enter into Regional Waste Management Co-operation and Contingency Agreements**
<https://secure.toronto.ca/council/agenda-item.do?item=2021.IE21.5>