

# Waste-to-Energy Incinerators: a waste of energy



- 1** “Waste to Energy” is an advertising term: this is **burning rubbish**.<sup>1</sup>
- 2** **Waste incinerators are not renewable energy.** The energy they produce is dirtier than coal because they burn a toxic mix of plastics and materials derived from fossil fuels. Burning rubbish is now the UK’s dirtiest form of power.<sup>2</sup>
- 3** **Waste-to-energy incinerators undermine our transition** to a low emissions economy. We already produce 80% of our electricity from renewable sources, and we have a plan to increase that to 100% by 2035.<sup>3</sup>
- 4** Incinerators must **use massive amounts of diesel and/or natural gas** to keep the fire hot. It isn’t just for ‘start up’ - it is for constant heat ‘top ups’ to maintain a consistent temperature.
- 5** The Te Awamutu proposal would have required **more than a million litres of diesel fuel per year** to produce the amount of energy claimed by the company.<sup>4</sup> It would be more efficient and less polluting just to burn fossil fuels to generate the power.
- 6** Incinerator companies like to talk about using the heat from the fire for adjacent industry, but **incinerator heat is not renewable.** NZ is rapidly decarbonising all industrial heat processes to reduce emissions: as examples, NZ Steel and Fonterra have moved to renewable electricity instead of coal.<sup>5</sup>
- 7** Incinerators are expensive to build and produce less electricity to other sources - making them an **extremely expensive energy generator.** The proposed Te Awamutu incinerator will cost \$250 million and only produce 10-15 MW of electricity (\$16.7 million per Megawatt). Compare this to the Kaiwana Downs windfarm in Gore that cost \$115 million and generates 43 MW (\$2.7 Million per MW).<sup>6</sup>

1] [Incinerators are NOT “waste-to-energy” facilities](#)

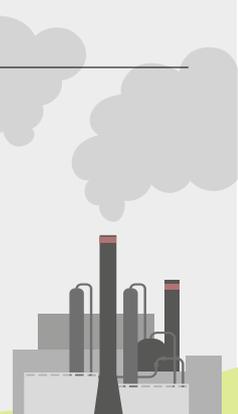
2] [BBC Burning household rubbish now UK’s dirtiest form of power](#)

3] [Switched on! Achieving a green, affordable and reliable energy future](#)

4] [Zero Waste Network submission to the Waikato Regional Council on the Te Awamutu incinerator. P18.](#)

5] [Government Investment in Decarbonising Industry \(GDI\) fund - Funding and support opportunities for large industry. Energy Efficiency & Conservation Authority](#)

6] [Mercury building \\$115m wind farm in Gore](#)



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- 8** So-called “advanced thermal treatments” for waste like **pyrolysis and gasification also require massive amounts of energy** because waste is a poor fuel. They use lower heat without oxygen to turn waste into “syn-gas” (synthetic gas) and oil that is subsequently burned as a fuel.
- 9** Household waste (MSW) is not a good quality fuel source. **MSW has high variability in terms of materials and moisture content**, greatly affecting efficiency and contributing to accelerated corrosion and ash buildup in plants.<sup>7</sup>
- 10** WtE plants that only produce electricity have a **low thermal efficiency** ranging from 18–22%.<sup>8</sup>
- 11** **Incineration will only convert a fraction of the waste’s chemical energy** into electricity (around 30% conversion for electricity only).
- 12** Incineration often **wastes more energy** than recycling and composting. Life cycle assessments can indicate worse outcomes for greenhouse gas emissions and health compared to landfills when all factors are considered.<sup>9</sup>
- 13** A mixed waste incinerator (burning MSW, tyres and plastics) is estimated to have a lower heating value of around 19-20 MJ/kg and generate approximately 1,380 kWh per tonne of waste.

7] Grabke, H. J., Spiegel, M., Grabner, M., Schrör, S., & Odenthal, H. J. (2007). The role of chlorine in high temperature corrosion in waste-to-energy plants. [Nickel Institute](#).

8] [https://www.wasteauthority.wa.gov.au/images/resources/files/2019/10/W2E\\_Technical\\_Report\\_Stage\\_One\\_2013.pdf](https://www.wasteauthority.wa.gov.au/images/resources/files/2019/10/W2E_Technical_Report_Stage_One_2013.pdf)

9] Dias, L. E. (2022, October 6). "Trash Incineration is Environmental Racism". [YouTube](#)



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**REGENERATION  
NOT INCINERATION**