

Marine Conservation Society position statement on:

Energy from waste/ incineration

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What is energy from waste?

Energy from waste is generated by three main different routes: direct combustion, pyrolysis and gasification. The heat generated is used to produce steam, similar to that of gas or nuclear plants, with around 14–28% energy efficiency,¹ with some plants also using the hot gas to heat local businesses. During the process gases are produced from burning the waste.

How much do and will we incinerate in the UK?

By the end of 2019, 53 energy recovery incinerator facilities were operational, with an additional 11 under construction.² In 2019, the tonnage of processed waste at energy recovery incinerator facilities increased by 9.9% compared to the previous year.³

14.6 million tonnes of UK municipal waste reached landfill in 2018, of which England accounted for 11.7 million tonnes. Overall, UK household waste generation in 2018 decreased by 1.8% from 2017, equating to 26.4 million tonnes.⁴ In 2018, UK recycling rates of household waste decreased by 0.5% compared to the previous year.⁵ Following the publication of the UK Government's Resources and Waste Strategy in 2018, England has committed to eliminating all avoidable waste by 2050.⁶ In July 2020, England committed to a recycling rate target of 65% of municipal waste and no more than 10% of municipal waste going to landfill by 2035.⁷ Wales has already achieved this, reaching a 65.14% recycling rate for 2019/20 with some local authorities exceeding 70%.⁸ Scotland has committed to a recycling rate target of 70% by 2025⁹ with recycling rates for household waste standing at 44.9% in 2019.¹⁰ It has been reported that "although Defra ministers have not been wholly enthusiastic about the Circular Economy Package, Defra has indicated that it is working on the assumption that the UK will adopt the Circular Economy Package, possibly including the more stretching municipal recycling targets proposed for 2030 (70%)." ¹¹ The Scottish Government has stated that "thermal treatment (including incineration) of non-recyclable waste is recognised as having a role limited to recovering energy only where materials cannot be retained in higher value use."¹²

What are the issues surrounding incineration?

Plastic has a high calorific value on burning, meaning that it represents a valuable feedstock for energy from waste plants. However, incineration of plastics is much less efficient than new gas-fired power stations (25% vs 55%) which has implications for climate change, and once "coal is phased out for generating electricity, incineration of unrecycled waste will be the most CO₂-intensive form of generation".¹³ Therese Coffey told the Commons: "In environmental terms, it is generally better to bury plastic than to burn it."¹⁴

In addition, burning plastic releases dioxins, which are harmful to human health. Though there is some controversy around the extent to which these dioxins are removed prior to the burnt gases being released into the atmosphere.

What is the position of the Marine Conservation Society on incineration?

We do not support the construction of new waste incinerators in the UK. Incineration does not support the circular economy, which is not only about recycling products at the end of life, but also about designing the products at the start of life for their end of life. By further increasing incineration capacity we actively discourage changes in behaviour, both on the part of the consumer and producer, to reduce resource usage (such as a reduction in single use plastic) and disincentivise a push for increased recycling rates. To encourage a circular economy, incentives on recycling should ensure that the cost of recycling is not higher than that of incineration (as is the case for a number of councils at present).¹⁵

It has been noted that neighbouring countries already have excess incineration capacity,¹⁶ meaning that there is a disincentive for these countries to increase recycling and work towards a circular economy.

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