

INFORMATION NOTE – ENERGY FROM WASTE EMISSIONS

Media coverage¹ has recently compared the emissions from energy from waste with coal-fired power plants, but unhelpfully ignored their primary purpose of treating waste. This briefing note seeks to address the key issues raised.

1 – The role of EfW

The primary purpose of energy from waste facilities, is to treat waste left over after recycling. They take the non-recyclable waste that residents and businesses put in their general waste bins. Councils have a legal duty to collect and dispose of this waste, to protect public health. Where councils dispose of waste through incineration rather than landfill, energy can be recovered. It is a well-established and robustly regulated technology, with professional operators responsibly treating over 14 million tonnes of society's residual waste every year in the UK.

To compare energy from waste with other energy generation sectors such as coal is misleading. Energy generators can choose to shift from fossil fuels to renewables to reduce carbon emissions, but waste disposal authorities are still required to dispose of the waste we all generate as a society.

2 – Reducing emissions from waste

The article addresses only one aspect of the management of resources without considering key issues such as design, production and consumption of fossil-derived materials including plastics and textiles, which make up a significant proportion of the unrecycled waste in the UK. Change needs to happen at the start – at the design and manufacture stages of a product. Drive out fossil-derived material at the front-end of production and the carbon emissions at the end of use (i.e. disposal) will reduce significantly. Incoming policy and legislation such as Extended Producer Responsibility (EPR) for packaging and Simpler Recycling are due to begin in the coming months. Local authorities need these policies implemented as a matter of urgency, along with EPR being widened to other material streams such as textiles and electricals.

Consumption is at the heart of the significant issue of the 66 million tonnes of waste produced in the UK, as well as the climate emergency. Reducing our consumption, and moving to a circular economy, where resources are designed to be re-used and recycled will eliminate waste and the need for waste disposal facilities and their emissions.

3 – Is EfW preventing recycling?

There is no evidence that using EfW for disposing of non-recyclable waste discourages recycling. The majority of high recycling councils and nations also use EfW disposal.

Recycling performance in the UK has stalled in recent years (44%), but Government's long-awaited package of waste policy reforms, including Extended Producer Responsibility (EPR) for

¹ [Burning household rubbish now UK's dirtiest form of power, BBC finds - BBC News](#)

packaging, a Deposit Return Scheme (DRS) for drinks containers, and collection of a consistent set of materials for recycling from all households and businesses ('Simpler Recycling') aim to deliver a step change in recycling (to 65%) over the next 2-3 years, as well as influencing product design.

The UK still landfills over 6 million tonnes of municipal waste per year and exports millions more as refuse derived fuel (RDF).

4 – EfW vs landfill

Councils need solutions to deal with the waste that cannot be recycled. A modern, efficient energy from waste facility involves the lower greenhouse gas emissions of the primary disposal options available currently. These facilities are transparently regulated, deploy extensive pollution prevention and control equipment and are consistent with resource management by recovering energy in the form of heat and electricity, which displaces virgin fossil fuels used for this purpose.

The alternative is landfill, the worst option overall for the management of household waste as well as being far worse than energy recovery in terms of greenhouse gas emissions. It is estimated that EfW saves approximately 200kg CO₂e for every tonne of waste treated compared with landfill².

² [Fichtner Technical Report | Brandfolder](#)