

## ZERO WASTE EUROPE POSITION ON THE REVISED RENEWABLE ENERGY DIRECTIVE

### Summary

*To date, the Renewable Energy Directive (RED) has been one of the key obstacles to the achievement of progressive goals of EU waste legislation. This is due to the financial incentives provided to energy generated from waste which disincentives other more environmentally sound options which also save more energy.*

*The Commission's new proposal for a revised renewable energy directive (RED II) continues to consider the organic fraction of the municipal solid waste as a source of renewable energy. This is distorting the waste market by making it comparatively cheaper to recover energy from waste than to prevent or recycle it, effectively contradicting the waste hierarchy and hindering the transition towards more sustainable waste management systems and a circular economy.*

***Zero Waste Europe calls on the European Parliament and Council to improve the proposed legislation by explicitly excluding the biodegradable fraction of municipal waste as eligible for renewable energy primes.***

### The Renewable Energy Directive - a driver for generation of energy from waste

On 30 November 2016, the European Commission published a proposal for a revised Renewable Energy Directive (RED II) that establishes a common framework for the promotion of energy from renewable sources, including financial support for energy generated from renewable sources.

The Commission's proposal includes, as a source of renewable energy (RES), biomass, which is defined as: *"the biodegradable fraction of products, waste and residues from biological origin from agriculture including vegetal and animal substances, forestry and related industries including fisheries and aquaculture, as well as the **biodegradable fraction of waste, including industrial and municipal waste of biological origin.**"*

Because the part of biomass derived from waste is considered as renewable Member States would be able to support various forms of energy generation from waste, including landfill gas, incineration, and other thermal treatments, as well as anaerobic digestion, to meet targets set under the RED II.

Some of these supporting measures for the generation of energy from waste are inconsistent with EU waste policies and climate agenda for the reasons stated below:

## **1. Undermining the Waste Hierarchy and the Circular Economy policies**

Financial support for waste-to-energy subverts one of the cornerstones of the EU waste policy – the waste hierarchy. The primary purpose of the waste hierarchy is to establish an order of priority that minimises adverse environmental effects and optimises resource efficiency in waste prevention and management i.e. prevention, preparation for re-use, recycling, other recovery (energy recovery, and disposal)<sup>1</sup>.

Waste is therefore meant to be primarily prevented, then prepared for reuse and, finally, recycled. Conversely, the Renewable Energy Directive classifies it as a source of ‘renewable energy’ and allows renewable energy support schemes that conflict with the waste hierarchy by encouraging waste-to-energy processes, which is the second least desirable option of the waste hierarchy. This directly conflicts with options towards the top of the waste hierarchy that deliver better environmental results, such as prevention, preparation for reuse and recycling and which currently don’t receive any subsidy.

The effect so far has been a clear distortion of the market whereby investment in waste infrastructure and operation costs are organised on the basis of subsidies for the extraction of energy from waste instead of sound environmental and economic performance of the best waste management option. As a result, many European countries such as Denmark or Sweden have overinvested in energy-from-waste plants whilst underinvesting in recycling facilities.

## **2. Undermining the Communication on Waste-to-Energy in the Circular Economy**

The RED II also contradicts the Commission’s recent Communication on the Role of Waste-to-Energy in the Circular Economy<sup>2</sup> which states that public financing of waste management, whether national or at EU level, should be consistent with the waste hierarchy and Member States should phase-out public support for the recovery of energy from waste in line with the separate collection obligations and more ambitious EU recycling targets proposed in the legislative proposal on Circular Economy.

## **3. Undermining the EU’s Climate Policy Agenda**

The Commission’s proposal is also undermining the EU’s climate agenda by supporting energy generation from mixed waste, which is never composed solely of biogenic carbon, while the main climate benefits come from waste prevention, and from recycling<sup>3</sup> (Figure 1).

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<sup>1</sup> [http://ec.europa.eu/environment/waste/framework/pdf/guidance\\_doc.pdf](http://ec.europa.eu/environment/waste/framework/pdf/guidance_doc.pdf)

<sup>2</sup> <http://ec.europa.eu/environment/waste/waste-to-energy.pdf>

<sup>3</sup> <https://www.zerowasteurope.eu/downloads/the-potential-contribution-of-waste-management-to-a-low-carbon-economy/>

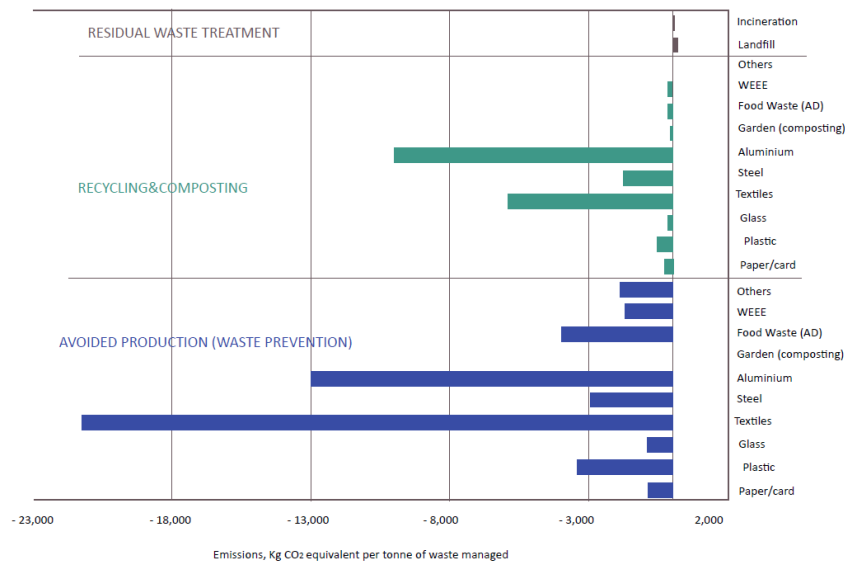


Figure 1 Indicative Climate Change Impacts of Key Waste Management Activities (excl. CO2 from biogenic sources). Source: Eunomia, The contribution of waste management to a low-carbon economy, 2015.

Much of the calorific value from the incineration of mixed waste comes from the burning of fossil carbon based materials such as plastics. A recent study by Eunomia<sup>4</sup> shows that a typical waste incineration facility has a carbon intensity of approximately 600 kg CO2 eq. per MWh of electricity. This compares with a figure of 380 kg CO2 per MWh of electricity at an efficient natural gas power station using Combined Cycle Gas Turbine (CCGT) technology (Figure 2). It is unsurprising that burning organic waste which represents between 30% and 40% of all municipal solid waste and is composed of 80% water will require more energy than it will generate to burn and therefore the incineration of mixed waste is not a source of low-carbon electricity.

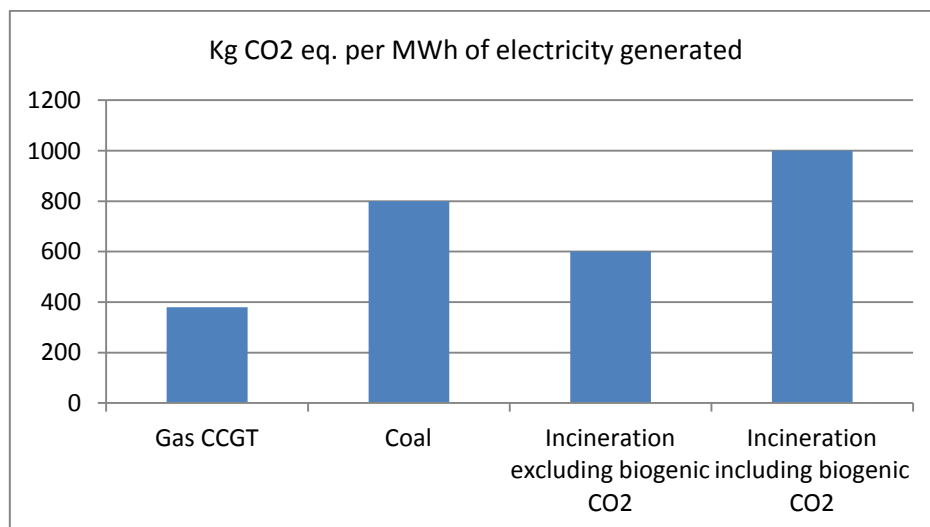


Figure 2 Indicative CO2 emissions associated to generation of 1MWh of electricity. Source: Eunomia, The contribution of waste management to a low-carbon economy, 2015.

<sup>4</sup> Idem

Moreover, the monitoring of the amount of organic waste versus the amount fossil-based waste is both logistically and technologically difficult. It's often assumed that the proportion is 50% - even if often industrial and commercial waste gets included in the mix of waste entering a waste-to-energy facility. Given the heterogeneity of waste and the great differences from plant to plant, this percentage is neither constant nor reliable, which supports the evidence that much of the so-called renewable energy from waste-to-energy comes in fact from incinerating fossil carbon based materials.

**Key Policy Demand:**

**The European Parliament and the Council should amend European Commission's proposal for a revised Renewable Energy Directive (RED II) to explicitly exclude the biodegradable fraction of municipal waste as eligible for renewable energy primes.**

The waste hierarchy is the cornerstone of EU policy and legislation on waste and a key to the transition to the circular and low-carbon economy. The RED II should be aligned with EU waste policies to ensure the priority for reduction, reuse or recycling, before energy recovery from waste.

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[Zero Waste Europe](#) is an umbrella organisation empowering communities to rethink their relationship with resources. It brings together local Zero Waste groups and municipalities present in 20 EU countries. Beyond recycling, the Zero Waste network aims at reducing waste generation, close the material loop whilst increasing employment and designing waste out of the system.

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