

CEWEP Ireland response - European Commission Roadmap on the Amendment of the EU Emissions Trading System (ETS) (Directive 2003/87/EC)

Introduction to CEWEP Ireland

CEWEP is the umbrella association of the owners / operators of waste-to-energy (WtE) facilities, representing approximately 500 plants across Europe. Our members represent nearly 90% of European WtE capacity.

CEWEP Ireland is the Irish branch of CEWEP Europe and has two members. Indaver operates the Meath Waste-to-Energy facility and is proposing to develop similar facilities in Belfast and Cork. Covanta operates the Dublin Waste-to-Energy facility. Members currently have a total treatment capacity of over 835,000 tonnes per annum residual waste and export 80MW of electricity (the equivalent of 140,000 homes per annum).

The Waste to Energy (WtE) process (waste incineration with energy recovery) which falls within the recovery tier of the waste hierarchy, actively supports circular economy objectives including the Circular Economy Package (CEP) and recycling targets contained therein by diverting non-recyclable residual waste from landfill, recovering valuable energy from the same and by treating residual waste that remains from the separation of material for recycling.

Whilst CEWEP Ireland welcomes the new targets for greenhouse gas (GHG) emission reduction to at least 55% of 1990 levels and fully acknowledges that all sectors including WtE will need to contribute, there are a number of important factors that must be given due and proper consideration prior to inclusion of WtE in the ETS. These factors are outlined below.

Non-Recycled Plastic Waste is a Source of Fossil Emissions

Currently, producers and consumers are not obliged to take account of the environmental cost associated with non-recycled plastic waste. In the context of WtE, CO₂ emissions are partly of fossil origin (and arise from the plastic waste treated). The ratio between biogenic and fossil CO₂ depends on the composition of the waste input to a particular WtE facility.

Therefore, WtE operators cannot control the characteristics of the input and by implication have no flexibility to reduce the carbon footprint of the facility. It is also not possible to reduce CO₂ emissions by producing materials more efficiently or changing the fuel that is utilised as is the case for other waste treatment processes. Waste composition is ultimately determined by waste policy and consumer behaviour.

This is clearly demonstrated if regard is had to the experience of countries such as Sweden and Denmark which have included WtE in the ETS. Direct emissions of CO₂ from WtE

cannot decrease unless non-recyclable plastic waste is not treated thereby undermining the waste hierarchy and the fundamental role of energy recovery within it.

If non-recyclable plastic waste is not treated by the WtE process, it will ultimately be diverted to landfill, exported to other countries or treated in industrial plants that are not required to comply with the same stringent environmental requirements as WtE pursuant to the Industrial Emissions Directive (IED) and associated national Regulations. The composition of the input – and therefore the amount of plastics in it – is influenced more by the entire value chain of virgin plastics (eco-design, manufacturing) and quality of source or by any further separation than by WtE facilities.

Therefore, inclusion in the ETS would ultimately not give rise to an actual decrease in GHG emissions from WtE facilities as it applies too far from the source of plastic waste.

Regard to the above considerations can be clearly identified in Annex 1 to the ETS Directive which specifically exempts municipal and hazardous waste installations from the requirements of the Directive given difficulties associated with waste composition and the inability to substitute with an alternative fuel in WtE facilities.

WtE & the European Waste Hierarchy

The WtE process forms a key component of an integrated waste management system and falls within the recovery tier of the waste hierarchy as underpinned in the amended Directive on Waste. Landfill is regarded as the lowest and least desirable and most environmentally detrimental tier of this hierarchy. If applied correctly, the hierarchy discourages the use of landfill except where no alternative recovery option is available.

Moreover, the hierarchy must be treated “as a priority order” in waste prevention and management policy and legislation rather than as a “guiding principle”. The WtE process also fulfils a crucial sanitary function for society and the environment by treating contaminated and unavoidable residual waste that cannot be recycled in an environmentally sound manner, thus avoiding the need for landfill and detrimental impacts on land, air and groundwater quality.

The WtE process therefore fulfils a dual function that may be distinguished from other industrial / power installations by treating unrecyclable waste whilst producing local and secure energy.

It is also compatible with high levels of recycling and it is worth noting that even in Member State regions such as the Flemish region of Flanders which has been at the forefront of recycling and where circa 0% of its municipal solid waste (MSW) is recycled each year, there still remains circa 50% biodegradable municipal waste (BWM) and up to a 30% fraction still requiring treatment thereafter.

Enduring Use of Landfill in the EU & Unsuitability of Inclusion of WtE in the ETS

CEWEP Ireland is of the view that the inclusion of WtE in the ETS could in fact have the perverse and unintended effect of moving waste down the waste hierarchy and encouraging the use of landfill given the already significant reliance on landfill in numerous Member States.

The Landfill Directive (1999/31/EC as amended by Directive 2018/850 (EU) as a constituent part of the Circular Economy Package) seeks to ensure that Member States move towards a more circular economy and is intended to prevent or reduce the adverse effects of the landfill of waste on the environment, soil, air, surface and groundwater.

Presently, it is envisaged that recent amendments to EU waste legislation will limit the disposal of biodegradable waste to landfill. A number of factors must be borne in mind in this regard. Whilst the amended Landfill Directive sets binding municipal waste landfill reduction targets (by 2035, municipal waste that is landfilled must only account for 10% that is generated by weight) derogations from this reduction target may be availed of by a Member State to postpone this target by up to five years¹.

The landfilling of waste is thus far from being phased out and eliminated in Europe. Moreover, approximately 56 million tonnes of municipal waste is currently being landfilled in Europe² and approximately 175 million tonnes considering all the waste streams (excluding mineral waste).

Related to this continuing use of landfill throughout Europe, is the fact that large quantities of commercial and industrial waste (C&I) are also still being diverted to landfill. In this regard, no landfill reduction targets for this waste stream have been enacted to date.

Whilst the review at hand aims to assist in the achievement of significant emissions reductions and climate neutrality in the EU, inclusion of WtE in the ETS may in fact encourage the landfilling of waste. As methane is 28 times more potent than CO₂ this would clearly be a retrograde step.

If only WtE is included in the ETS, the landfilling of waste will be indirectly incentivised. From a policy perspective, this would also undermine the transition to a more circular and climate resilient Europe and would similarly be incompatible with the overarching EU waste management framework as underpinned by the amended Directives on Waste and Landfill (as detailed below).

Carbon Emission Reduction Potential from Landfill Diversion

From a climate perspective, reducing and ultimately eliminating the landfilling of waste is particularly urgent in order to reduce methane emissions as indicated by the Intergovernmental Panel on Climate Change.

The primary identified sources of methane originating from the European waste management sector are the uncontrolled emissions of landfill gas in landfill sites and the treatment of sewage sludge.

The recently adopted Methane Strategy includes a commitment to review the Landfill Directive in 2024. The Strategy also provides that several actions related to landfill gas management will be considered as well as new techniques to reduce methane emissions. It also states that Member States should more strictly enforce existing legal requirements such as

¹ A derogation by a Member State to postpone the above targets by up to 5 years may only be granted if landfilled more than 60% of its municipal waste generated in 2013 as reported to the OECD and Eurostat

² Eurostat 2020, data of 2018.

the landfill diversion targets for biodegradable waste and the treatment of biodegradable waste prior to disposal to neutralise its degradability³.

Notwithstanding such commitments, no reference to the inclusion of landfill gas in the ETS is included in the Strategy. This effectively means that the proposal to include WtE in the ETS whilst excluding other waste producing treatment methods such as landfill gas circumvent the proper application of the waste hierarchy which has led to significant environmental improvements through the ongoing diversion of waste from landfill through the recovery of municipal waste.

As referred to above, landfills remain responsible for the vast majority of carbon emissions in the waste management sector and diversion to recovery would result in the avoidance of significant GHG emissions. Approximately 58 million tonnes of municipal waste is landfilled in Europe⁴ and almost 175 million tonnes considering all the waste streams (except mineral waste). Diversion of this waste from landfills would prevent around 875 kg of CO₂eq/tonne⁵. Considering that a significant part of it could be also recycled, a total saving of more than 154 million tonnes of CO₂eq could also be achieved annually by diverting it to a higher tier of the waste hierarchy.

In addition, in the context of the WtE process, regard should not only be had to direct CO₂ fossil emissions, but the overall net CO₂eq emissions should also be taken into account. The WtE process gives rise to a number of additional positive impacts including the replacement of fossil fuels in energy generation, landfill diversion and material recovery from bottom ash (and which may now be included by Member States when calculating their preparing for re-use and recycling targets as per the amended Directive on Waste).

Incompatibility with the Better Regulation Package

It is also important to note that waste incineration taxes are currently in place in the majority of EU countries which have WtE facilities⁶. In the Irish context, a waste recovery levy has been signaled for introduction in 2021 notwithstanding the fact that such a levy is unlikely to encourage positive environmental behavior⁷. A new draft Climate Amendment law currently being debated in Parliament also proposes to introduce new sectoral reduction targets for both ETS and non-ETS sectors in Ireland from 2021⁸.

As such, inclusion in the ETS would constitute in some cases a form of double burden (and triple in some instances). Moreover, this appears to be incompatible with the Better Regulation Package (aimed at reducing regulatory burdens and red-tape). As per Article 191 of the Treaty on the Functioning of the European Union (TFEU), economic operators must be provided with a level playing field whilst ensuring a high level of environmental protection. Should only WtE be included in the ETS, it is evident that a level playing field will not exist between different

³ As interpreted by the EUCJ ruling Case C-323/13, European Commission v. Italian Republic. <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-323/13>.

⁴ Eurostat 2018 (data of 2017)

⁵ Estimation made on the assumption of the study of German UBA: [The Climate Change Mitigation potential of the waste sector](#) – 2015

⁶ 10 EU member states have incineration taxes (out of 19 that use WtE): AT, BE, DK, EE, SE, FR, LV, NL, PT, ES, Tax rates vary from 5-35€/t

⁷ European Commission Guidelines on Environmental and Energy State Aid for 2014-2020

⁸ Climate Action and Low Carbon Development (Amendment) Bill 2020: <https://www.gov.ie/en/publication/984d2-climate-action-and-low-carbon-development-amendment-bill-2020/>

pillars of the hierarchy and this in turn is irreconcilable with Article 191 as landfill would effectively be incentivised in such an instance.

This would also appear to be incompatible with the EU principle of “equality of treatment” or “non-discrimination” principle where operators in different legal or factual circumstances are treated differently with no objective justification.

The inclusion of only WtE in the ETS would also be contrary to the proper application of the waste hierarchy which underpins integrated waste management systems in EU Member States and would also negatively impact the economic efficiency of the hierarchy in real terms.

Such a change would furthermore give rise to significant cost implications and burdensome monitoring and testing requirements for WtE facilities (due to the heterogeneity of waste composition and which is not the case for traditional power plants). For example, the measurement of fossil CO₂ as currently implemented in the ETS (as per the monitoring and reporting of GHG emissions pursuant to Regulation 2018/2066) would result in onerous testing methodologies for every 5,000 tonnes of waste with significant cost implications for WtE operators.

Notwithstanding the costs associated with the monitoring, verification and reporting of emissions, the costs of purchasing allowances would ultimately have to be passed on to the consumer.

Thus, any amendment to the current structure of the ETS must be cognisant of such significant concerns and given careful consideration before any such amendments are introduced as all tiers of the hierarchy will not be subject to an equivalent and level playing field with WtE facilities unduly burdened in contravention of the above principle of equality of treatment.

Conclusion

With the foregoing considerations in mind, CEWEP Ireland takes the view that any decision taken to extend the ETS to include WtE requires a holistic and all-encompassing approach and must necessarily consider the whole sector and in particular landfills as the lowest tier in the EU waste hierarchy and as a significant contributor of carbon emissions.

It is our view that the Effort Sharing Regulation (ETS) remains the most appropriate instrument to provide Member States with the flexibility needed to manage distinct waste management systems and unique local circumstances. The composition of waste is heterogeneous and varies from one country to another and is impacted by seasonal differences and a multitude of other factors.

Likewise, the enactment of measures which may in fact give rise to greater levels of landfilling is irreconcilable with the envisaged transition to a circular economy given the significant volumes of waste currently being landfilled in Europe. It would equally undermine the overarching European waste management framework as laid down in the amended Directives on Waste and Landfill.

Finally, the adoption of climate policy which cannot effectively bring about intended outcomes for the reasons outlined above and which may in fact give rise to the perverse and

unintended effect of moving waste down the waste hierarchy must be avoided as this is likely to disadvantage the energy recovery tier of the waste hierarchy whilst incentivising the landfilling of waste.

This clearly contravenes the overarching EU waste policy framework including the waste hierarchy. Thus, CEWEP Ireland submits that any changes to EU climate mitigation policy must ensure policy co-ordination and coherence with this overarching framework in the first instance.