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Inclusion of Waste-to-Energy (WtE) in the EU ETS and the role of carbon removals and CCU

NG Nordic's key messages

- NG Nordic supports the full inclusion of municipal waste incineration installations in the EU ETS. The inclusion would both incentive decarbonizing Waste-to-Energy (WtE) sector and boost recycling.
- Hazardous waste incineration should remain out of scope of the ETS Directive, as its primary function is not energy production but safe destruction of harmful substances.
- Landfilling of municipal waste and other energy recovery technologies such as gasification should also be included in the ETS together with WtE.
- The ETS revision must ensure fair competition in carbon-based product manufacturing. Non-permanent CCU, such as storing the CO2 to chemicals and plastics, should move to a downstream surrender obligation.
- Carbon removals should be integrated into the ETS.

Waste incineration

NG Nordic strongly supports the full inclusion of municipal waste incineration installations (Waste-to-Energy, WtE) in the EU ETS.
This inclusion would create a financial incentive to decarbonize residual waste treatment. At the same time, it is essential to include dedicated incentives for the WtE sector to invest in CCUS (Carbon Capture, Utilization, and Storage), as the sector has limited ability to reduce emissions by changing its "fuel source" (i.e. the waste it receives). Revenues from ETS allowances should be earmarked to support the transition of hard-to-abate sectors such as WtE.

Inclusion of WtE in the ETS would also boost recycling.
As WtE operational costs increase, recycling becomes more economically competitive. This supports recyclers, often direct competitors to WtE facilities in the waste market, and aligns with the EU waste hierarchy, which prioritizes recycling over energy recovery. Only truly non-recyclable waste should be incinerated.

Other energy recovery technologies should also be included.
Technologies such as pyrolysis or gasification, which convert waste to energy or synthetic fuels, must be subject to ETS obligations to ensure a level playing field.

Landfilling of municipal waste should be included in the ETS together with WtE.
A comprehensive impact assessment is critical.
When including WtE into the ETS, the impact assessment must consider the entire waste management chain, including the significant methane emissions from landfills. WtE inclusion must not inadvertently drive more municipal waste to landfills due to cost shifts. Methane reduction from landfilling is a relatively easy win, as shown by Nordic precedents. Still, many Member States are struggling to meet landfill reduction targets. Therefore, inclusion of landfilling into the EU ETS should be pursued in parallel, or alternative policy measures must be considered to prevent backsliding.

Hazardous waste incineration should remain out of scope.
Plants primarily treating hazardous waste should not be included in the ETS, as their primary function is not energy production but safe destruction of harmful substances. This treatment is often the only available method and is vital for EU industrial competitiveness.

The EU Taxonomy Regulation specifically lists “incineration of non-recyclable hazardous waste” as an activity, which is considered not to do significant harm to the circular economy objectives. In the Environmental Delegated Regulation under the Taxonomy, incineration of non-recyclable hazardous waste is considered substantially contributing to pollution prevention and control and complying with the “do no significant harm” criteria regarding the Climate change adaptation objectives. This further supports the exclusion of hazardous waste incineration from the EU ETS Directive.

Carbon Removals

Integrating carbon removals into the ETS would be a win-win situation. It ensures continuity of the ETS, while creating incentives for carbon removal technologies. This is particularly relevant for WtE, where emissions include both fossil and biogenic CO_2 due to mixed waste streams. A unified system for crediting CCUS of both emission types would enhance legal clarity and reduce administrative complexity.

A direct incentive mechanism is needed.
One tonne of certified carbon dioxide removal (CDR) should equal one exempted ETS allowance. Removals must supplement, not replace emission reductions to meet net-zero targets.

Both permanent and temporary CDRs should be eligible.
All removals certified under the CRCF should be allowed for ETS compliance.

Non-permanent carbon capture and usage (CCU)

The ETS revision must ensure fair competition in carbon-based product manufacturing.
Currently, fossil-based plastic production is advantaged. Plastics made from virgin fossil carbon do not carry ETS costs, while the same plastic made from captured carbon does. This discrepancy hinders CCU investments.

The climate benefits of binding the emissions to products with shorter lifespan should be acknowledged in the legislation, as these applications reduce the need to produce virgin fossil hydrocarbons. The final emitter (downstream) should bear the cost of allowances to be surrendered.

NG Nordic propose that once the WtE sector has been included in the ETS, a plant capturing fossil CO_2 and using it to produce plastics should not be required to surrender ETS allowances for the captured carbon.

Once the CCU plastic product becomes waste again and is incinerated, the WtE plant would surrender allowances (unless captured again), resulting in closing the carbon loop.

The inclusion of WtE to the ETS removes the need to assess product lifetime, as waste incineration is in practice the only way the carbon stored to products may be re-emitted to the atmosphere.

An alternative approach may be sector-specific.
E-fuels could retain the current upstream surrender system, given their short life cycle. Other non-permanent CCU products, such as chemicals and plastics, should move to a downstream surrender obligation. The Waste Framework Directive supports differentiated treatment: converting waste into materials/products is considered recycling, while converting into fuel is not.

CCU products and waste policy

Scaling CCU requires increasing both supply and demand.
To support demand, CO_2-based production (e.g. plastics made from waste-derived CO_2) should be recognized as "recycling" under the Waste Framework Directive.

NG Nordic propose:

- CCU processes using waste-derived carbon to make materials should qualify as recycling.
- This classification enables higher recycling rates, especially for waste streams otherwise non-recyclable.

Significant carbon recovery is possible.
Via CCU, up to 25% of WtE plant input (by mass) or 65% of its carbon content could be recycled into new products. Establishing EU-wide rules to calculate recycling rates for CCU is key to unlocking investments.

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About NG Nordic:

NG Nordic is a leading provider of circular solutions and environmental services, tackling the urgent challenges of climate change and resource scarcity. Through reuse, collection, recycling, and depollution NG Nordic transforms waste into valuable resources and removes hazardous substances from circulation – scaling access to circular raw materials, decarbonize society and help protect natural ecosystems. With strong presence across the Nordics, and in Poland and the UK, NG Nordic is a vital part of the Nordic industrial infrastructure handling 4.4 million of waste annually through 90 facilities and sites.

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