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Waste-to-Energy is not Sustainable Business, the EU says

Policy Briefing

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The EU has excluded waste-to-energy incineration from a list of economic activities considered 'sustainable finance', those that can make a substantial contribution to climate change mitigation and which do no significant harm to other environmental objectives such as transition to a circular economy, waste prevention and recycling.

This list of sustainable finance activities is included in the report 'EU Taxonomy', which is a key part of the EU Action Plan on Sustainable Finance, and will become the basis for development of new regulatory frameworks for the financial sector. In this sense, the report EU Taxonomy determines the scope of what activities, investments and assets can and can't be considered to be supportive of a transition to a low emission, climate-resilient economy, in accordance to the Paris Agreement[1], the Sustainable Development Goals (SDGs), as well as the European Commission's long-term decarbonisation strategy which aims for carbon neutrality by 2050.

The EU Taxonomy has been **developed by a technical expert group composed of members and observers from banking, insurance, asset management, stock exchanges, financial industry associations, international institutions and civil society** which began work in January 2017 and delivered their final report in January 2018. Apart from the EU classification system – the so-called Taxonomy –, they have also worked on an EU Green Bond Standard; benchmarks for low-carbon investment strategies; and guidance to improve corporate disclosures of climate-related information.

The application of the EU Taxonomy follows emerging market practices by helping users to identify the sustainability of a financial product. The difference that the Taxonomy will make is that it **provides unified underlying definitions of what is 'green' across green financial products, leading to more accountability and transparency**. The proposed Taxonomy regulation would create obligations for equity and bond investment products marketed as being environmentally sustainable or having similar characteristics. Investments in private equity, real estate funds and private-securitised loans could also be subject to the regulation if the resulting funds are marketed as green[2].

Under the proposed Taxonomy regulation, **economic activities must also be assessed to ensure they do not cause significant harm to other environmental objectives**, such as transition to a circular economy, waste prevention and recycling, amongst others. This assessment ensures that progress against some objectives are not made at the expense of others and recognises the reinforcing relationships between different environmental objectives.

The Taxonomy acknowledges that the transition to a low carbon economy will involve the **phase-out of some economic activities,** such as unabated fossil fuel-based power generation and waste-to-energy incineration. While there may be some short-term advantages to reducing the environmental harm caused by these activities by improving their technology, the TEG considers that **these cannot be considered to make a 'substantial' contribution to climate change mitigation**.

The EU Taxonomy therefore excludes activities which would ultimately undermine climate change mitigation objectives and harm environmental objectives. In this sense, **waste-to-energy has been excluded** as it may harm one of the key environmental objectives, that is to ensure the **transition to**

[1] To avoid dangerous anthropogenic interference with the climate system, the Paris Agreement commits countries to limiting the global temperature increase to well below 2 degrees Celsius and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius.

[2] Also, it should be noted that a green bond standard is being developed at the EU level. Under the recommendations from the TEG in regard to the EU Green Bond Standard (EU GBS), to qualify, 100% of the bond will need to be Taxonomy-aligned. Verifiers will assure that the Green Bond Framework of the issuer takes necessary account of the conditions for the planned use of funds being Taxonomy-eligible and EU GBS aligned, and the allocation reports and impact reports will be issued annually until full allocation.

a circular economy, waste prevention and recycling, excluding any activity leading to significant inefficiencies in the use of materials in one or more stages of the life-cycle of products, including in terms of durability, reparability, upgradability, reusability or recyclability of products; or where that activity leads to a significant increase in the generation, incineration or disposal of waste.

One of the most common metrics used as technical criteria for the Taxonomy is carbon intensity: the amount of CO_2 emissions equivalent per unit of electricity generated or per unit of output. For each potentially eligible activity, it needs to verify whether the company or issuer meets the relevant screening criteria, e.g. electricity generation <100g CO_2/kWh. **Waste-to-energy incineration would also fail this test**, as the carbon intensity of energy produced through waste incineration is twice the EU28 average electricity grid intensity (which is 298 g CO_2eq per kWh) according to the latest analysis of European power sector by Agora Energiewende and Sandbag[3].

The Taxonomy includes activities in the waste sector such as:

- Separate collection and transport of non-hazardous waste in source segregated fractions in single or comingled fractions aimed at preparing for reuse and/or recycling, as a precondition for advanced recycling of materials[4].

- Anaerobic digestion of bio-waste: treatment of separately collected bio-waste through anaerobic digestion with the resulting production and energetic utilization of biogas and production of digestate for use as fertilizer/soil improver, possibly after composting or any other treatment.

- Composting of bio-waste: treatment of separately collected bio-waste through composting (aerobic digestion) with the resulting production of compost for use as fertilizer/soil improver. Net GHG emission reduction, through avoidance of GHG emissions compared to alternative options for bio-waste management and from the production of compost that can be used as fertiliser/soil improver displacing synthetic fertilisers and eventually peat (e.g. in horticulture).

- Material recovery from waste: sorting and processing of separately collected waste streams into secondary raw materials usually involving a mechanical transformation process. Net GHG emission reduction enabled through sorting and processing of separately collected waste streams for subsequent substitution of virgin materials thus avoiding higher emissions from the alternative use of virgin materials (energy consumption for extraction, transport and production).

[3] Sandbag: The European Power Sector in 2018 www.sandbag.org.uk/project/power-2018/

[4] The report notes that climate mitigation net benefits of material recovery are proven by pertinent studies:
- German Federal Environmental Agency (UBA), 2015: The Climate Change Mitigation Potential of Waste Management, sections 4.2.4 and 11.1 (Recovering dry recyclables, specific emission factors). www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/texte_56_2015_the_climate_change_mitigation_potential_of_the_waste_sector.pdf.
- Eunomia, 2015: The Potential Contribution of Waste Management to a Low Carbon Economy, section 3.2 (Quantifying the Impacts per Ton of Waste) www.eunomia.co.uk/reports-tools/the-potential-contribution-of-waste-management-to-alow-carbon-economy/.
- Joint Research Center, 2018: Best Environmental Management Practice for the Waste Management Sector, section 1.4.6 (Material recycling) www.susproc.jrc.ec.europa.eu/activities/emas/documents/WasteManagementBEMP.pdf.
- United Nations Environmental Programme / Division of Technology, Industry and Economics International Environmental Technology Centre: Waste and Climate Change: Global trends and strategy framework; Osaka/Shiga / Japan 2010; www.unep.or.jp/ietc/Publications/spc/Waste&ClimateChange.

- Landfill gas capture and energetic utilization: new installation and subsequent operation of a landfill gas capture and energetic utilization system (or extension and/ or retrofitting of an existing system) in permanently closed old landfills. Net GHG emission reduction through the capture and energetic utilization (for electricity/heat generation or biofuel production) of landfill gas. By 2025 the Sustainable Finance Platform should assess the feasibility of the principle, in particular with regard to the intended incentive to close landfills.

The background debate on the exclusion of **waste incineration with energy recovery (waste-to-energy, WtE) involved** experts' different opinions on whether this would be an appropriate environmentally sustainable activity offering a substantial contribution to climate mitigation.

On the one hand, there were arguments against the inclusion of WtE. These highlighted the large portion of waste currently incinerated that could be recycled, the reliance of some individual Member States on the incineration of municipal waste, and the risk that further increasing capacities risk overcapacity and could result in lock-in effects. This would in turn discourage more reuse and recycling, options higher in the waste hierarchy.

On the other hand, some argued that WtE has a role to play even in an increasingly circular economy as not all residual waste can be reused or recycled (e.g., the EC's Communication COM(2017)34 on 'the role of waste-to-energy in the 293 circular economy', Section 5).

Finally, the Commission interpreted the Taxonomy proposal in such a way that **WtE is outside its scope for climate change mitigation as it causes harm to the environmental objectives of a circular economy: waste prevention and recycling, as per Article 9(1)(i) and Article 12(d) of the EU draft Taxonomy regulation. Thus, WtE was not included in the Taxonomy for climate change mitigation**. However, it was noted that several experts wished to bring this matter for further discussion and consideration to the Commission.

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Zero Waste Europe is the European network of communities, local leaders, businesses, experts, and change agents working towards the same vision: phasing out waste from our society. We empower communities to redesign their relationship with resources, to adopt smarter lifestyles and sustainable consumption patterns, and to think circular.
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