29 April 2021, Brussels

FEAD position on the EU Methane Strategy

FEAD, the European Waste Management Association, representing the private waste and resource management industry across Europe, **supports the EU Methane Strategy**, as one of the instruments of the European Green Deal.

The EU Methane Strategy should work together with other legislative tools, notably the Circular Economy Action Plan (CEAP), to yield higher decrease of GHG emissions, in particular methane emissions, while improving the circular economy in the Union. This should also result in making waste management sector a key one in the path to EU economy decarbonisation, in promoting synergies between sectors, in enabling new investments and creating economic growth and jobs. Waste management activities have a key role to play to meet challenges that must be overcome regarding methane emissions.

FEAD suggests that the EU Methane Strategy should:

1) Ensure **better data collection**, according to a robust methodology shared by stakeholders, to accurately identify the main opportunities and targets for methane emissions reduction;

2) **Strengthen synergies** between sectors, including **biogas production and recovery**, which can reduce methane emissions from manure; **valorise waste streams** that would decarbonise the energy system through the production of biogas;

3) Guarantee the **implementation of existing rules on landfilling and separate collection of biowaste**, rendering it fully effective by 2023 in all EU Member States;

4) Introduce **high composting targets** to boost resource efficiency and biowaste recovery;

5) Propose **further ambitious measures** to significantly reduce methane leakages and increase biogas recovery from existing landfilling, treatment/use of sewage sludge, and treatment of wastewater;

6) Set up measures to ensure the economic visibility and competitiveness of biogas/heat/electricity from biowaste, facilitate the use of quality composts and other waste derived fertilisers, guarantee the efficient selective collection of biowaste, and enable public support to investment in biowaste selective collection and related treatment facilities.

Analysis of FEAD proposals:

According to the European Commission's impact assessment, the main identified sources of methane stemming from the EU waste management sector are (1) the uncontrolled emissions of landfill gas in landfill sites; (2) the treatment of sewage sludge; and (3) leaks from biogas plants due to poor design or maintenance. At the same time however, **the waste management sector contributes largely to limiting GHG emissions.**

This crucial role of the waste management sector in tackling methane emissions, allows us to elaborate our proposals as follows:

(1) FEAD recognises that **better data collection** is required for future legislative action in the field. It constitutes a necessary step in order identify the main areas of action to significantly reduce manmade methane emissions. A reliable and unique methodology, approved by all stakeholders, would be a useful tool for measurement.

(2) FEAD strongly supports **synergies** between the agricultural, energy and waste sectors. Anaerobic digestion for biogas production is for instance an excellent measure to reduce methane emissions, valorise waste streams and contribute to decarbonize the energy system in producing biogas. Methane from agriculture is also a great opportunity to create jobs while curbing emissions and should be further encouraged. In this regard, FEAD encourages the exploration of existing obstacles and possible incentives for stepping up methane capture from anaerobic digestion and production of biogas. FEAD welcomes the creation of an enabling framework for methane capture from agricultural waste (manure) with the perspective of synergies with the waste management sector. **Harmonised policy frameworks across the Union for anaerobic digestion** (for biogas production) should be pursued to achieve the desired results.

Another important measure with synergetic effect is the recovery of landfill biogas that allows to **capture** methane emissions from landfilling and **produce heat, electricity, or biomethane**. Landfill gas (LFG) is a natural by-product of the anaerobic decomposition or thermochemical conversion of organic material, i.e., biomass, in landfills. LFG is composed of approximately 40 to 50% methane, which is the primary component of natural gas, 50% CO_2, and a small amount of non-methane organic compounds. Biogas can be burned directly as a fuel or treated to remove the CO_2 and other gases for use just like natural gas. Treated biogas may be called **renewable natural gas or biomethane**.[1]

Biomass is defined in the Renewable Energy Directive 2018/2001 as "the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste". "The key benefit of fuels produced using regenerative energy is clearly a small carbon footprint. Among these fuels, first-generation biodiesel has a relatively low CO_2 reduction potential. However, liquefied methane produced from

[1] https://www.eia.gov/energyexplained/biomass/landfill-gas-and-biogas.php

biomass (biogas) has extremely high CO_2 reduction potential."[2] Besides, "local biomass residues and wastes can also be processed into marine liquid biomethane to make a closed loop system for remote applications in island communities."[3]

(3) FEAD welcomes the recent changes in EU legislation that **limit the disposal of biodegradable waste in landfills** and ought to have positive impact on the reduction of landfill gas. Every Member state is due to make sure that, by 2035, the amount of municipal waste landfilled is reduced to 10% or less of the total amount of municipal waste generated. Since disposal is at the bottom of the waste treatment hierarchy, investments made in higher steps of the ranking need to be done, to reduce both landfilling of waste and associated methane emissions, especially regarding collection, composting and anaerobic digestion of biowaste. However, most Member States are far from being "on track". Implementing existing rules of the newly revised Circular Economy Action Plan is a priority, and key step for significantly improving the situation, in combination with the obligation of selective collection of biowaste in 2023 that also needs to be properly implemented.

(4) Regarding GHG emissions reduction, composting and other waste derived fertilisers (e.g., correctives with the use of CO_2 as reagent) play an important role. According to an LCA study conducted by the University of Perugia, Italy, carbon sequestration for composting is calculated as 3,67 kg CO_2 avoided for each kg of stable organic carbon contained in the fertilizer.[4] **In line with the principle of resource efficiency, FEAD calls for the introduction of high composting targets to ensure that biodegradable waste can be recovered in line with the principle of resource efficiency.**

(5) In order to effectively tackle methane emissions from waste, further **ambitious measures need to be taken to significantly reduce methane emissions from landfills**, the treatment and use of sewage sludge, and the treatment of wastewater.

(6) Finally, significant EU funds must be redirected to boost investments in selective collection schemes and facilities higher up in the waste hierarchy, i.e., recycling and recovery facilities, in line with the principles of circular economy. As far as methane emissions are concerned, composting and energy recovery need support, in particular biogas/electricity from waste. It is crucial that alternative treatment options and infrastructures be readily funded and built to avoid unintended disruptions of local waste management plans.

FEAD is committed to the objectives of the Green Deal and considers the above-mentioned measures apt for providing the adequate stimuli both for addressing GHG and particularly

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[2] DNV-GL. (June 2019). ASSESSMENT OF SELECTED ALTERNATIVE FUELS AND TECHNOLOGIES. p. 9. Available at: https://www.dnvgl.com/publications/assessment-of-selected-alternative-fuels-and-technologies-rev-june-2019--116334.

[3] IRENA - International Renewable Energy Agency. (2015). RENEWABLE ENERGY OPTIONS FOR SHIPPING - TECHNOLOGY BRIEF. p. 42. Available at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/IRENA_Tech_Brief_RE_for-Shipping_2015.pdf.

[4] Francesco Di Maria and Federico Sisani - Greenhouse Gas Emissions and Environmental Impact from Recycling the Organic Fraction of Solid Waste: Comparison of Different Treatment Schemes from a Life Cycle Perspective.

methane emissions in the Union activities, and for the enhancement of the circular economy in Europe.

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