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The European Union's Methane Strategy

I. Introduction

On 11 December 2019, the European Commission presented the European Green Deal, a package of policy initiatives aimed at setting the EU on the path towards a green transition, with the ultimate goal of achieving climate neutrality by 2050.

Among these initiatives, it is possible to find various strategies aimed at mitigating greenhouse gas (GHG) emissions. Thus, the European Union's (EU) methane strategy responds both to the Energy Union and Climate Action Governance Regulation and to the objectives set out in the European Green Pact, which act as responses to combat climate change.

II. Why methane?

Methane (CH₄) is a potent greenhouse gas and second only to carbon dioxide (CO₂) in its overall contribution to climate change. At the molecular level, methane is more potent than carbon dioxide. Although it remains in the atmosphere for a shorter time, it has a significant effect on climate and contributes to the

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formation of tropospheric ozone, a potent local air pollutant that alone causes serious health problems.

According to data provided by the International Energy Agency, "approximately 41% of global methane emissions come from natural (biogenic) sources, such as wetlands or forest fires, while the remaining 59% come from anthropogenic emissions, the most important sources of which are agriculture (40-53%) - especially intensive production -, fossil fuel production and use (19-30%) and waste (20-26%)" (IEA, 2018).

It should be noted that, globally, the EU generates only 5% of global methane emissions.

III. Background on methane emission control

Among the antecedents of methane emission control, we see that the EU first addressed methane emissions through a strategy adopted in 1996.

Thus, the EU adopted regulatory initiatives that contributed to reducing methane emissions in key sectors, e.g., in the waste sector, to address landfill management and landfill gas management that also contributed to mitigating methane emissions. In addition, methane emissions are subject to binding national greenhouse gas targets set out in the effort-sharing legislation (Decision No 406/2009/EC).

IV. Key sectors linked to the release of methane emissions



Key sectors linked to the release of methane emissions include energy, waste and agriculture.

In the energy sector, methane comes from leaks from fossil fuel production sites, transmission systems, ships and distribution systems. In addition, methane is vented (released directly) into the atmosphere. Even when flared (simple combustion), carbon dioxide is released and, during this process, methane can leak as a result of incomplete combustion. According to current estimates, 54% of methane emissions in the energy sector are fugitive emissions from the oil and gas sectors, 34% are fugitive emissions from the coal sector and 11% are fugitive emissions from the household and other final sectors.

In the livestock and agriculture sector, methane emissions from livestock are mainly from ruminant species (enteric fermentation) (80.7%) and manure use (17.4%), followed by rice cultivation (1.2%). In the agricultural sector, sources of methane emissions are usually diffuse, which can make monitoring, reporting and verification difficult.

In the waste sector, the main sources of methane identified are uncontrolled emissions of landfill gas in landfills, sewage sludge treatment and leaks from biogas plants due to improper design or maintenance.

V. The cross-cutting measures of the EU Methane Strategy



The EU Methane Strategy specifically addresses measures for these sectors, but I will now take a look at those cross-sectoral measures. Among the cross-sectoral measures that will be proposed and discussed for adoption, in line with the EU Methane Strategy, we can find:

1. Mainstreaming methane emissions monitoring and reporting methodologies in the business sector. The Commission will support improvements in the monitoring and reporting of methane emissions by businesses in all relevant sectors, including through sector-specific initiatives.
2. The establishment of an independent international methane emissions observatory within the framework of the United Nations, in collaboration with international partners, which would be responsible for collecting, reconciling, verifying and publishing data on global anthropogenic methane emissions.
3. Strengthening satellite-based detection and monitoring of methane emissions through the EU's Copernicus programme, in order to contribute to the EU's coordinated capacity to detect and monitor global super emitters.

4. The revision of relevant EU climate and environmental legislation to address methane emissions more effectively, in particular the Industrial Emissions Directive and the European Pollutant Release and Transfer Register.

5. Specific support to accelerate the development of the biogas market from sustainable sources, such as manure or organic waste and residues, through forthcoming policy initiatives. These include the future regulatory framework for the gas market and the forthcoming revision of the Renewable Energy Directive.



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