METHANE STRATEGY

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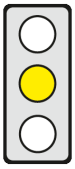
KEY ISSUES

Context: The climate policy emissions reduction target for 2030 is to be made stricter. To achieve it, emissions of methane must also be significantly reduced.

Objective of the Communication: The quality of the different methods of recording methane emissions in the agriculture, waste and energy sectors should be improved. The Commission wants to use various measures, including mandatory requirements, to reduce methane emissions in the agriculture, waste and energy sectors.

Affected parties: Companies in the agriculture, waste and energy sectors.



Pro: In order to achieve the EU climate targets, a cross-sectoral and long-term strategy for recording and reducing methane emissions is essential.

Contra: The EU should introduce reliable, standard EU methods for recording methane emissions as only then can they be reduced in a cost-efficient manner.

Alternative Approach: Methane emissions should be incorporated into an emissions trading system. This would do away with any need for piecemeal individual regulatory measures and subsidies.

The most important passages in the text are indicated by a line in the margin.

CONTENT

Title

Communication COM(2020) 663 of 14 October 2020 on an **EU strategy to reduce methane emissions**

Brief Summary

- **Context and objectives**
  - The EU wants to reduce greenhouse gas emissions (GHG) to net zero by 2050 ("climate neutrality") as a way of making its contribution to achieving the targets of the Paris Climate Agreement [see cep**PolicyBrief** 2016-13] [Commission Proposal COM(2020) 80; see cep**PolicyBrief** 2020-03]. For this purpose, the GHG reduction target of 40% by 2030 as compared with 1990 levels (EU-2030 climate target) will be increased to 55% [Commission Proposal COM(2020) 562].
  - Methane (CH_4) [p. 1]
    - has a more powerful impact on GHG than the corresponding amount of CO_2;
    - contributes to ozone formation which, as an air pollutant, causes environmental and health problems.
  - The EU-wide anthropogenic methane emissions come from the following sectors [p. 1–2]:
    - 53% from agriculture;
    - 26% from waste;
    - 19% from energy.
  - The EU has established binding national targets for the reduction of GHG emissions by 2030, including methane, insofar as these emissions are not covered by EU emissions trading (national 2030 climate targets) [Effort Sharing Regulation (EU) 2018/842; see cep**Input** 04/2018].
    - EU emissions trading does not cover the agriculture, waste or energy sectors with regard to certain GHGs including methane.
    - The national 2030 climate targets have not yet been brought into line with the stricter EU-2030 climate target [p. 1].
  - Under current national reduction measures up to 2030, EU-wide methane emissions are likely to fall by 29% by 2030, as compared with 2005.
  - In order to achieve the stricter EU-2030 climate target, EU-wide methane emissions must be reduced by 35–37%, as compared with 2005 [p. 1]. In parallel therefore, from 2021, the Commission wants to
    - propose binding cross-sectoral reduction requirements especially for methane emissions [p. 1–2];
    - make it a "priority" to improve the recording of methane emissions by way of monitoring, reporting and verification in the agriculture, waste and energy sectors ("MRV methods") [p. 4];
    - review the Effort Sharing Regulation as to whether the binding national 2030 climate targets should also be generally revised upwards [p. 6–7].

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- **"MRV methods" for recording methane emissions**
  - The type and quality of MRV methods varies considerably between sectors and Member States. A "considerably more accurate" recording of methane emissions will contribute to a "better understanding of the problem" and facilitate targeted measures for reducing methane emissions [p. 4–5].
  - The UN Climate Convention (UNFCCC) specifies three standards for MRV methods which increase in level of complexity (UNFCCC-MRV standards). These range from simple estimations (Tier 1) to estimations and modelling (Tier 2) up to modelling based on multiple data sources and individual measurements (Tier 3) [p. 4].
    - The Commission's "key objective" is for the Member States and sectors to apply the most demanding UNFCCC-MRV standard (Tier 3) as widely as possible.
    - Due to the specific challenges in the individual sectors, however, "a certain level of flexibility" is required [p. 4].
  - The Commission envisages – in cooperation with the UN Climate and Clean Air Coalition (CCAC) and the International Energy Agency – the establishment of an "independent international methane emissions observatory". This will "collect, reconcile, verify and publish" data on methane emissions at a global level – initially in the oil and gas sectors and later in the coal, agriculture and waste sectors [p. 5, 8–9].

- **Agriculture sector**
  - In the agriculture sector, methane emissions originate as follows [p. 3]:
    - 80.7% from the digestive process of ruminants such as cows and sheep ("enteric fermentation"),
    - 17.4% from fertilisers, e.g. manure and slurry, and
    - 1.2% from rice cultivation.
  - The sources of methane emissions in the agriculture sector are many and varied ("diffuse") which makes the use of MRV methods more difficult [p. 3].
  - The agriculture sector has "the highest potential" for reducing methane emissions [p. 3] by [p. 11–13]
    - changing the diet of ruminants,
    - changing the use of manure and slurry ("manure management") and
    - the rewetting and drying of rice fields.
  - The Commission wants to
    - set up an expert group in 2021 to analyse the entire "life-cycle methane emissions" in livestock farming based on metrics such as grazing or confinement, feed characteristics and manure management [p. 13];
    - "temporarily" limit MRV methods to Tier 2 of the UNFCCC-MRV standard due to the large number of farming businesses [p. 4];
    - develop guidelines by 2022 for calculating the emissions from and removal of methane [p. 14].

- **Waste sector**
  - In the waste sector, methane emissions arise from [p. 3]:
    - the degradation of organic waste in landfill sites ("landfill gas");
    - the use of sewage sludge.
  - Compared to other methods of waste disposal, disposing of organic waste in landfill produces the most methane emissions and should therefore be "minimised" [p. 14].
  - By 2024, the Commission therefore wants to review the Landfill Directive [1999/31/EC] as to whether [p. 4, 15]
    - measures should be brought in to reduce methane emissions in landfill sites;
    - more precise MRV requirements should be introduced.

- **Energy sector**
  - In the energy sector, methane emissions arise from the production and transport of fossil fuels (oil, gas, coal).
    - Unintentionally released "fugitive" methane emissions arise from leaks in pipes as follows [p. 2–3]
      - 54% in the oil and gas sector,
      - 11% in the coal sector, and
      - 35% in private households and other end-users.
    - Intentionally released methane emissions arise [p. 2–3]
      - from the controlled burning of gas ("flaring") and
      - from the controlled release of unburned gas ("venting").
  - Energy is the sector in which methane emissions can be most "cost-effectively" reduced [p. 2–3].
  - The Commission wants
    - to bring in compulsory measures on leak detection and repair [p. 9–10];
    - in 2021, to bring in – especially for the energy sector – compulsory standard EU MRV methods that are "more precise"
      - initially, in line with the "OGMP standard" developed voluntarily by the oil and gas sector and
      - in the long term, in line with Tier 3 of the UNFCCC-MRV standard [p. 4, 10];
    - examine whether the intentional flaring and venting of gases should be banned in principle, and only permitted in exceptional cases – e.g. for safety reasons [p. 10].

- **Production and use of biogas**
  - The production and use of biogas from organic agricultural waste – e.g. manure and slurry – and household waste – e.g. compost, human waste – may reduce methane emissions in the agriculture, waste and energy sectors [p. 7–9].
    - In the agriculture sector, the material left behind after the production of biogas can be used as fertiliser instead of manure and slurry.
    - In the waste sector, the recycling of organic waste in biogas plants may reduce the amount of residual waste and thus also the methane emissions from landfill gas.
    - In the energy sector, biogas can be used as "highly sustainable" renewable energy with "multiple applications".
  - The Commission wants to assess whether the Renewable Energy Directive [2018/2001/EU; see cep**Input** 01/2019] and the EU gas supply rules [see cep**Input** 06/2019] should be modified in order to support the production and use of biogas in the agriculture, waste and energy sectors [p. 8].

Policy Context

The Commission, which published the first Methane Strategy in 1996 [COM(96) 557], will submit a new long-term methane strategy and examine "policy options" for reducing methane emissions [Governance Regulation (EU) 2018/1999, Art. 16; see cep**Input** 02/2019]. It announced in its "European Green Deal" [COM(2019) 640, p. 6; see cep**Adhoc**] that it would address "the issue of energy-related methane emissions".

Options for Influencing the Political Process

Directorates General:	DG Environment (leading)
Committees of the European Parliament:	Environment (leading)

ASSESSMENT

Economic Impact Assessment

In order to achieve the stricter **EU climate targets** for 2030, **a cross-sectoral and long-term strategy for the** comprehensive **recording and** targeted **reduction of methane emissions is required**.

The proposed **increase in the national 2030 climate targets should take account of the efforts already made by Member States** to reduce methane emissions, so as to avoid generating unnecessary costs; the more that methane emissions in a Member State have already been reduced, the higher the cost of saving additional tonnes of methane ("increasing marginal costs"). **To that end, the data situation first needs to be improved** and only then should an increase in the targets be proposed – rather than both at the same time as currently planned. **Essential to this is the comprehensive and accurate recording of methane emissions** in the various sectors because that is the only way to find out which specific reduction measures are appropriate in which sectors.

Uniform and transparent EU MRV methods facilitate the comparison of recorded emissions data EU-wide. It is inappropriate, therefore, that the Commission currently intends to impose uniform and accurate MRV methods only in the energy sector. As a result of the increase in the EU-2030 climate target, **the EU** will also be forced to increase the reduction of methane emissions. It **should** therefore **introduce reliable, standard EU methods for recording methane emissions in all sectors as only then can they be reduced in a cost-efficient** and effective **manner.**

As methane is emitted worldwide, reducing it is a global problem. The international observatory, envisaged by the Commission, may contribute to the collection and reduction of methane emissions at global level.

Since methane emissions in the agriculture sector come from diffuse sources, a comprehensive picture of the main sources and likely volume of emissions is necessary to facilitate effective and cost-efficient reduction measures. Recording life-cycle methane emissions in livestock farming supports the long-term targeted reduction of methane emissions in the agriculture sector.

As most methane emissions arise from the landfilling of organic waste, the plan to replace this as far as possible with other methods of disposal – such as biogas production – is appropriate. Member States should, however, have the ability in individual cases to explain why it would be disproportionately costly to give up landfilling.

The quantity of fugitive methane emissions from gas systems varies greatly among the Member States. The Commission's blanket claim that methane emissions can be most cost effectively reduced in the energy sector, is not true for every Member State. Although repairing leaks may reduce methane emissions, the amount of methane discharged from individual leaks may be small and the cost of repairing them relatively high. In such cases, companies should be obliged to compensate for the discharge of methane emissions by way of other measures to reduce GHG.

EU requirements for the production of biogas, which reduces emissions, – e.g. as part of the proposed change to the Renewable Energy Directive and the EU gas supply rules – **should be designed to avoid bureaucratic hurdles and cost burdens wherever possible** because such hurdles may restrict the use of organic agricultural waste such as slurry in

the production of biogas thus giving rise to more emission-intensive use of manure. In addition, the re-use of organic agricultural waste for biogas production should be made easier in future by categorising it simply as a "by-product" so that it would no longer be subject to the strict and cost-intensive EU law on waste [Waste Framework Directive 2008/98/EC, Art. 5 (1)].

Legal Assessment

Legislative Competency

Unproblematic. The EU is empowered to issue measures to protect the climate [Art. 191 et seq. TFEU].

Subsidiarity

Unproblematic. Climate change is not only a cross-border problem but a global one which cannot be solved by individual countries. EU action is therefore justified.

Alternative Approach

Methane emissions in the energy and waste sectors **should be included into an emissions trading system** – equivalent to the EU Emissions Trading System (EU ETS; see cep**Input** 03/2018)**.** The envisaged emissions reduction would then – by means of a limited number of tradeable emissions allowances for the right to emit methane – be achieved reliably and at minimal cost. **This would do away with any need for piecemeal individual regulatory measures and subsidies.**

Conclusion

In order to achieve the EU climate targets, a cross-sectoral and long-term strategy is essential for recording and reducing methane emissions. Increasing the national 2030 climate targets should take account of the efforts already made by Member States. To that end, the data situation first needs to be improved. Key to this is the comprehensive and accurate recording of methane emissions. The EU should introduce reliable, standard EU methods for recording methane emissions in all sectors as only then can the emissions be reduced in a cost effective manner. EU requirements for the production of biogas, which reduces emissions, should be designed to avoid bureaucratic hurdles and cost burdens wherever possible. Methane emissions should be incorporated into an emissions trading system. This would do away with any need for piecemeal individual regulatory measures and subsidies.