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European Commission

ROADMAP

Roadmaps aim to inform citizens and stakeholders about the Commission's work in order to allow them to provide feedback and to participate effectively in future consultation activities. Citizens and stakeholders are in particular invited to provide views on the Commission's understanding of the problem and possible solutions and to make available any relevant information that they may have.

TITLE OF THE INITIATIVE	EU Methane Strategy
LEAD DG – RESPONSIBLE UNIT	DG ENER, unit B4
LIKELY TYPE OF INITIATIVE	New major initiative
INDICATIVE PLANNING	*Q3 2020*
ADDITIONAL INFORMATION	https://ec.europa.eu/energy/topics/oil-gas-and-coal/methane-gas-emissions_en

This Roadmap is provided for information purposes only and its content might change. It does not prejudge the final decision of the Commission on whether this initiative will be pursued or on its final content. All elements of the initiative described by the Roadmap, including its timing, are subject to change.

Tip: The Roadmap will be published by the SG on the Commission's web site and citizens and stakeholders will be able to provide feedback for a period of 4 weeks. The Roadmap should be considered as an information tool addressed to the public and therefore it should be written in non-technical language, avoiding acronyms, jargon and detailed technical or legal analysis. It should be finalised at the earliest stages of the preparatory process so that best use can be made of feedback from stakeholders.

Please note that the length limits shown for the various sections are indicative but it is essential that the author DG keeps to an overall maximum of 3 to 4 pages in order to keep the text readable for the public.

A. Context, Problem definition and Subsidiarity Check

Context [max 10 lines]

Reducing methane emissions is important in order to slow global warming. Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action calls on the Commission to deliver a strategic plan to reduce methane emissions. In addition, the Commission declaration on methane attached to the National Emissions Reduction Directive (EU) 2016/2284 states that there is a strong air quality case to follow the development of methane emissions closely in order to reduce ozone concentrations in the EU and to promote methane reductions internationally. In the declaration, the Commission commits to further assess the impact of methane emissions.

The need to address energy-related methane emissions was indicated in the European Green Deal Communication. The Communication also stressed that the EU should engage with third countries on crosscutting climate and environmental issues, such as tackling methane emissions. In the EU, methane emissions from all sources are being reported under the Climate Monitoring Mechanism Regulation based on the UN Framework Convention on Climate Change rules and are taken into account under the emission reduction obligations for non-ETS sectors by 2020 and by 2030. However, there is no EU legislation aimed at oil and gas sector that addresses methane emissions with respect to their impact on the climate. Nor has there been any targeted action to tackle agricultural emissions of methane, including its increased capture.

To address this, the Commission is working on an integrated strategy covering the areas of energy, agriculture and waste, to tackle emissions of methane and exploiting synergies between sectors, such as biogas production. The strategy should contribute to cost effective greenhouse gas reduction across the EU in the context of increased climate ambition for 2030 and the target of climate-neutrality by 2050.

Problem the initiative aims to tackle [max 25 lines]

Methane is the second most relevant greenhouse gas following carbon dioxide (CO2). The main sources of manmade methane emissions are agriculture, fossil fuel production, transport and use, as well as waste treatment and disposal. Reducing methane emissions also contributes to improving air

quality. Reducing methane emissions is an effective way to slow down global warming.
The national greenhouse gas reduction targets cover all methane emissions in the EU.

At global level, at least half of the reduction in **energy-related** methane emissions is possible at no net cost to industry. Methane can leak from coal, oil and gas installations, or be vented into the atmosphere. On average, 5% of the sources contribute to 50% of emissions ("super-emitters"). A key challenge is also to improve actual measurement, reporting and verification at private entity level. Finally, the EU imports most of the gas it consumes and the majority of methane emissions associated with this gas are emitted before reaching the EU's borders.

The EU **agricultural** sector contributes to slightly more than half of the total EU methane emissions. The main source of methane emissions in agriculture is enteric fermentation, followed by manure management, and rice cultivation. Methane emissions from EU agriculture have decreased by about 21% from 1990 but emissions have seen limited increases again in the last 5 years.. Methane emissions in agriculture cannot be reduced to zero and are more challenging to monitor, verify and report accurately, requiring clear methodologies to capture any mitigation efforts correctly. To have more accurate reporting, and in particular to take account of the mitigation actions applied by individual farms, Member States need more detailed data on the sources of emissions.Methane from agriculture constitutes a business opportunity both for farmers and for rural areas and the potential needs to be fully explored to curb the emissions as well as to create jobs and diversify farmers' income.

The main identified sources of methane stemming from the EU **waste** management sector are the uncontrolled emissions of landfill gas in landfill sites; the treatment of sewage sludge; and leaks from biogas plants due to poor design or maintenance. Recent changes to the EU waste legislation that will considerably limit the disposal of biodegradable waste in landfills and enforcement measures are expected to have a positive impact on the reduction of landfill gas. To fully address methane emissions from waste, further mitigation potential would need to be explored in areas such as landfill gas use, treatment and use of sewage sludge and treatment of waste water. In order to build an enabling framework for methane capture from agricultural waste (manure) synergies with waste legislation should be explored from the perspective of biogas production.

Basis for EU intervention (legal basis and subsidiarity check) [max 10 lines]

Legal bases: Articles 191, 194 TFEU
Methane is a greenhouse gas and an ozone-precursor that knows no borders and when emitted in one country will have a climate and air quality impact in others, therefore it can be best addressed at EU level. Climate-related legislation and energy policy is generally coordinated at EU level. In addition, the biggest part of energy-related methane emissions linked to fossil fuels consumed in the EU are emitted outside of EU borders for which international action is necessary. Such international action is best pursued at EU level. In the EU, the agricultural sector is the largest methane emitting sector and would therefore be best tackled at EU level, as is agricultural policy overall.

B. What does the initiative aim to achieve and how [max 25 lines]

The main objective of this initiative is to identify the main areas of action to significantly reduce manmade methane emissions in the sectors of energy, agriculture and waste, including through putting in place an enabling environment. The achievement of Member States' and EU's GHG reduction obligations, which are being reviewed in the context of the 2030 Climate Target Plan, can clearly benefit from effective and efficient sectoral policies that reduce methane emissions in these sectors. Such policies will focus on, but will not be limited to, better measurement and reporting at private and sectoral entity level in the EU before stricter policy responses can be designed. It will also identify sector-specific actions to reduce methane emissions to address climate change and contributing to cleaner air, as well as improving the collection of methane in agriculture and waste for potential use as a source of energy. This should reinforce the business case across sectors and constitute predictability for investors. The international dimension will also be addressed.

In the energy sector, leak detection and repair programs, as well as finding and addressing 'super-emitters' can be a very effective action. The EU imports most of the gas it consumes and the majority of methane emissions associated with this gas are emitted before reaching the EU's borders, making it important for the EU to tackle methane emissions throughout the energy supply chain.

In the agriculture sector, there is room for cooperation on developing and implementing mitigation technologies, among others. A range of mitigation technologies exists for tackling methane emission, related to diet, herd management, manure management (application as fertilizer and biogas generation), breeding and herd health, productivity and welfare. However, uptake across the EU is uneven and in some regions still rather low. Some of these technologies may be available at low cost and bring additional benefits for farms, but barriers such as insufficient knowledge and expertise need to be addressed. Anaerobic digestion (for biogas production) is also an example of how policy frameworks across the Union vary in encouraging uptake of a well-established and important measure to reduce emissions from manure and valorise waste streams, while producing biogas that contributes to decarbonising the energy system. Existing obstacles and possible incentives for stepping up methane capture from anaerobic digestion and production of biogas should be explored.

Reducing methane emissions also contributes to improving air quality and the Commission committed itself to further assess the impact of methane emissions in this regard. While the Commission estimates that existing measures regarding landfills and biodegradable waste are effectively reducing the methane emissions in the EU, data collection is needed to support future legislative action in this field. Further mitigation potential in sectors such as waste water treatment and sewage sludge treatment and use should be explored.

C. Better regulation

Consultation of citizens and stakeholders [max 10 lines]

This roadmap will be published for feedback for a period of four weeks. A public consultation in combination with a workshop has already taken place on energy-related elements of the strategy. A summary of the consultation has been published under the following link (https://ec.europa.eu/info/events/workshop-strategic-plan-reduce-methane-emissions-energy-sector-2020-mar-20_en). Further stakeholder workshops were held in June 2020, with focus on abatement practices covering all three sectors, as well as on policy recommendations in the energy sector. A dedicated stakeholder consultation event on biogas and biomethane will be held during the consultation process, covering all three sectors. Views and comments are taken into consideration when drafting the strategy. Major stakeholders include relevant industry, farmers, governments, NGOs and academia.

While there will be no impact assessment for this initiative, specific follow-up actions resulting from this strategy will follow their own approval process, including any requirements to conduct an impact assessment and an in-depth public consultation, under the lead of the DG in charge.

Evidence base and data collection [max 10 lines]

The methane strategy is based on significant literature review, workshops and discussions with scientists, academia and experts on methane emissions and regulation. A study focusing on energy-related methane emissions is an important input to the proposed actions in that sector. Intensive stakeholder consultation accompanied the preparation of the strategy, including dedicated workshops and a number of meetings with think tanks, industry associations, NGOs and international organizations (UNEP, IEA).

While the strategy will identify policy areas where action will be taken by the Commission, the specific follow-up actions will follow their own approval process, in line with better regulation requirements, including the requirement to conduct an impact assessment and an in-depth public consultation when applicable.