BELLONA

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Brief: Methane leakage and an opportunity for effective regulation in the EU

Methane leakage, the forgotten climate hazard

Methane is not one of the primary gases in Earth's atmosphere. It is, however, the second biggest contributor to climate change right after carbon dioxide (CO2). It is a potent climate pollutant, which has more than 80 times the warming power of CO2 over the 20 years after it has been released to the atmosphere. This powerful effect also leads to ozone formation in the lower atmosphere, which causes health problems and damages plants. Carbon dioxide might have a more long-term effect, but methane plays a significant role in global warming and climate change in the short term. If we look away from this problem and don't try to control methane leakages, we risk heating the planet much faster than we otherwise thought. Further, a lack of systems to control and minimize leakages in production, transport and use, can make us take bad decisions when deciding the future for our energy system.

Today, 59% of the total methane found in the atmosphere is linked to human activity. The remnants are biogenic emissions, meaning they are produced naturally. The majority of the anthropogenic emissions come from the agriculture, waste and energy sectors[1], which are rising rapidly. However, the focus of this brief will be exclusively on the energy sector, the methane emissions during the production and transport of coal, natural gas and oil, as well as the methane leakage in the supply chain, and finally, the main features of the regulation

[1] Questions & Answers: An EU Methane Strategy: https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_1834

of the process in the European Union today.

Europe has set a goal to become the first climate neutral continent by 2050. In the process of pursuing this goal, as well as meeting the 2030 climate targets, the European Commission recently[2] developed and launched its new EU Methane Strategy. The new strategy aims to introduce a new legislative framework that will reduce methane emissions in the oil, coal, and natural gas sectors.

The status of methane regulation in the EU

As it is widely understandable, the issue of uncontrollable methane emissions and leakage knows no borders. It is not an issue that only concerns the European Union and can be confronted or solved exclusively by a new strategy and new legislation, but an issue that concerns the whole globe and requires immediate action. However, improved policy is an essential first step in the process of addressing and tackling the matter and creating actual and immediate change in the years to come.

That idea and the new framework, which will be introduced along with the new EU Methane Strategy, brings on the table a lot of questions and factors to be considered. How has the EU dealt with emissions for the past decades and what is the status today? Is the EU a big contributor to the global methane emissions? Will the new strategy design measures just for the European member states or also for the big exporting countries of fossil fuels outside of EU? And, finally, will there be an efficient monitoring process that will guarantee that the new laws that will be put in place will actually be followed and respected? The European Commission has made it clear that the goal of the new strategy is to correct the mistakes and fill in the gaps of the past, while aiming to reach the milestone of a climate neutral Europe by 2050.

The 1996 strategy

It is the first time that the European Commission is adopting a methane strategy since 1996. Understandably, dealing with the climate crisis has evolved into such an urgent issue today comparing to 25 years ago, that there is a need for strict procedures and tough legislation regarding accurate measurements and reporting of numbers from companies and countries.

The aim of the 1996 strategy was to address the concerns and explore the issues regarding the anthropogenic methane emissions, in order to point out the main emissions sources and propose some potential measures for a mitigation strategy of the EU. The Communication paper addressed by the European Commission investigated possible solutions regarding agriculture, waste, and energy sectors[3].

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[2] https://www.europarl.europa.eu/committees/en/methane-strategy/product-details/20210409CDT05021

[3] https://ec.europa.eu/energy/sites/ener/files/eu_methane_strategy.pdf

However, the proposed strategy was not binding for the EU member states. Instead, the strategy suggested some voluntary programmes promoting the application of the best available technologies (at that time) in coal mines and natural gas pipelines, in national level only. Unfortunately, the non-binding character of it resulted in difficulties in the process of application and reporting. It is understandable that this weak proposal did not benefit from modern monitoring and data processing technology. This created the current gaps, therefore rendering the implementation of a new, strict, and binding strategy vital.

The proposed 2021 strategy, an opportunity to mend the gaps

Today, there is no specific EU legislation regarding methane emissions from agriculture, oil and gas production or coal-mining exploration, as it is an issue that is usually addressed in national legislation[4]. Therefore, in October 2020, the European Commission introduced the new strategy for methane emissions mitigation and is set to deliver the new Community legislation proposals within 2021.

The new legislation will again include actions for all important sectors; agriculture, waste and energy. Specifically, in the energy sector, the new framework will introduce compulsory measurement, reporting and verification and an obligation to improve leak detection and repair of leaks on all fossil gas infrastructure[5][3]. The European Commission will also examine the possibility of adopting legislation on the elimination of routine venting and flaring. Additionally, it will consider the probability of setting emission reduction targets and standards for fossil energy which is being imported and consumed in the EU, in the absence of similar binding international commitments. On a relevant note, the European Union will commence diplomatic relations with its partner countries, the biggest exporting countries of natural gas and oil to the EU, in order to develop and adopt corresponding legislation in national level, which will result in the promotion of global coordination of reducing methane emissions.

The strengths and weaknesses of the current regulation

There is now a better understanding and more concrete information on how the European Union has been dealing with the issue of methane emissions in the energy sector through the past decades, as well as on the ambition for the next decade, through the new strategy. Therefore, it is essential to take a deeper look into the strengths and the weaknesses that the new strategy holds, as well as the opportunities it offers and the threats it reserves.

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4 https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/649400/EPRS_BRI(2020)649400_EN.pdf, page 5

5 https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_1834

Strengths

Regarding the strengths, the European Commission is finally taking important action to design and adopt a new framework for the measurement and the reporting of the methane emissions. The EU currently has no community policy dedicated to reducing emissions and also does not require companies to gather and report data. Therefore, enforcing new, compulsory legislation for companies and member states might finally create mechanisms that can lead to actual change in the emissions cutting process – if executed properly.

Furthermore, the establishment of an international independent observatory, with the main goal of collecting, verifying and publishing methane data at a global level, will be an essential tool for the monitoring and the implementation process of the new legislation. It is also important to mention the use of new technology, such as satellites used in the Copernicus CO2 monitoring mission[6], to ensure more accurate results in the work of the observatory, like the detection of leaks on the ground and the monitoring of aerial emissions, and therefore contribute towards a common benefit.

Finally, the new strategy of the Commission is the first concrete action plan globally, when it comes to the reduction of methane emissions, and it can become an important point of reference when it comes to shaping and adopting similar legislation in other parts of the world as well.

Weaknesses

On the other side, the new strategy also holds several weaknesses and raises some important questions. First of all, the process has been slow. We have known that the climate crisis has been an emergency for a long time now and the European Union is already late in adopting legislation on the matter. Nevertheless, it is high time for procedures to move forward more quickly, in order to have the desired results as soon as possible. In the short time, until the new strategy takes place, the European Union encourages voluntary and business-led initiatives to achieve the improvement of the reporting process. However, it is feared that this alone is not enough and we cannot depend on them doing it by choice.

An equally important concern and potential weakness is the fact that it seems that the strategy focuses a lot on the data, instead of the action. The strategy emphasizes in the collection of data, meaning the reporting and the publishing of the methane emissions, which reserves a great risk of postponing the implementation of actual measures to limit methane emissions in the energy sector. It is undeniable that data collection is key to provide background information for any future legislation and adjustments, however, taking immediate action and start limiting emissions is urgent and cannot be postponed anymore. It would be significantly useful to set strict emission limits on the energy sector today and not rely on the companies to improve their

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[6] https://ec.europa.eu/energy/sites/ener/files/eu_methane_strategy.pdf page 7

emissions on their free will, if we are to meet the 2030 climate goals

Yet another serious concern that arises with the new strategy, is the fact that the main focus of the action plan is the energy sector, which is responsible for 19% of the anthropogenic methane emissions, although agriculture and waste sectors are responsible for 53% and 26% respectively. The strategy does indeed focus on developing practices to mitigate emissions from these two sectors as well, however binding legislation will be adopted only for the energy sector, a concerning issue for the anticipated goal of the methane emission mitigation in Europe.

At last, the biggest question is raised with the aftermath of the adoption of the new legislation; will there be consequences for the countries and the companies that will not obey the new framework? Adopting strict laws is necessary in order to achieve change, however it is important to ensure the compliance with the new legal requirements, the implementation of the practices and the imposition of fines, in cases of violations.

Opportunities to harness

According to the EU's 2030 Climate Target Plan's Impact Assessment, the new strategy is increasing the ambition for decreasing the methane emissions up to 35-37% by 2030, comparing to the anticipated 29%. This means that the accurate implementation of the new strategy would be a significant contribution to the European Union's goal of meeting the 2030 targets of cutting all greenhouse emissions to at least 55%, on the way to achieving climate neutrality by 2050.

Moreover, as mentioned earlier in the strengths, this strategy will be a great motive and example for the adoption of similar legislation in other parts of the globe, especially in countries that play an important role in the energy sector, either as exporters of coal and gas or as importers. Europe is a major consumer of natural gas and therefore plays a significant role in leading the urgent climate crisis and designing the future national and international policies aiming towards climate neutrality.

Finally, it is understandable that climate change as an issue, but also achieving the temperature goal of the Paris Agreement, is a complex issue that requires a lot of effort and coordination in all levels by all important key players. However, reforming the EU legislation and the conditions under which the EU is producing and importing gas, creates the next important opportunity for policy makers to display that climate will be a priority and a keystone of EU's energy policy from now on.

Threats to be wary of

At long last, it is important to examine the potential threats that the new strategy reserves. Firstly, in the process of developing and designing the new legislation, it is possible for the European Commission to receive pressure from strong member states, companies or lobbies. We, therefore, need to ensure the reliability of the process in order to guarantee that the updated legislation will aim towards the climate goals and not in favor of the interests of few. On the same note, there is a threat that the monitoring process of the reporting and publishing of

the methane emissions will not be transparent and efficient enough.

Most significantly, however, the most alarming possibility that comes with the new strategy is for it to not be followed and implemented by the member states or for the process to take much longer than anticipated. As mentioned earlier, there has not been a concrete plan yet about those who will not implement the new policies, so it makes sense to wonder what will happen if a company or a country chooses not to oblige to the European law, or chooses to adjust it to the national law instead.

Recommendations for decision makers

At this point, the needs of the new strategy have been rendered clear. There are significant problems regarding the issue of methane emissions in the European Union today and the alarming risks reserved by that and the continuing climate crisis in general, are becoming more apparent and evident day by day. Nevertheless, the important thing is that we know by now what kind of actions we need to take in order to confront them and bridge the gaps of the past. It is essential to accelerate the process of the implementation of the new legislation, as the timeframe and the deadlines of the climate emergency have been comprehensible for a long time and demand that no time is wasted.

Finally, an equally important need is to ensure that the process will be transparent and efficient. There needs to be an independent body for the monitoring process of the new legislation that will be responsible for the implementation of the practices, as well as for the condemnation of the violations. This will be a crucial tool to guarantee that Europe is moving towards the right direction, according to its climate ambitions, in action and not just in theory.

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About Bellona

The Bellona Foundation is an independent non-profit organisation that aims to meet and fight the climate challenges, by identifying and implementing sustainable environmental solutions. We work towards reaching a greater ecological understanding, protection of nature, the environment and health. Bellona is engaged in a broad range of current national and international environmental questions and issues around the world.

The Bellona Foundation was founded in 1986. We are currently 57 employees, working at the main office in Oslo and our three international offices in Brussels (Belgium / EU) Murmansk (Russia) and St. Petersburg (Russia). We have websites in Norwegian, English and Russian..

This brief can be referred to as Bellona (2021): "Methane leakage and an opportunity for effective regulation in the EU".

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