EUROPEAN UNION

THE EUROPEAN PARLIAMENT **THE COUNCIL**

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LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject:	REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the reduction of methane emissions in the energy sector and amending Regulation (EU) 2019/942

REGULATION (EU) 2024/…
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of …

on the reduction of methane emissions in the energy sector and amending Regulation (EU) 2019/942

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[1],

Having regard to the opinion of the Committee of the Regions[2],

Acting in accordance with the ordinary legislative procedure[3],

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1 OJ C 323, 26.8.2022, p. 101.
2 OJ C 498, 30.12.2022, p. 83.
3 Position of the European Parliament of 10 April 2024 (not yet published in the Official Journal) and decision of the Council of …

Whereas:

(1) Methane is second only to carbon dioxide (CO_2) in its overall contribution to climate change and is responsible for approximately a third of current warming. The amount of methane in the atmosphere globally has risen sharply over the last decade.

(2) The Intergovernmental Panel on Climate Change (IPCC), created within the framework of the United Nations (UN), published in its Sixth Assessment Report the finding that deep reductions in anthropogenic methane emissions are needed by 2030 to limit global warming to 1,5 °C. That report shows that, although methane has a shorter average atmospheric residence time than CO_2, 10 to 12 years compared to hundreds of years, its greenhouse effect over a 20-year period is over 80 times more significant than that of CO_2. In particular, according to the IPCC, while methane has 29,8 times greater global warming potential than CO_2 on a 100-year timescale, it is 82,5 times more potent on a 20-year timescale.

(3) It appears from the Air quality in Europe – 2020 report of the European Environment Agency that methane is a precursor gas for ground-level ozone and contributes to air pollution. Tackling methane emissions would address not only environment and climate but also improve protection of human health.

(4) According to recent estimates by the UN Environment Programme (UNEP) and the Climate and Clean Air Coalition (CCAC), methane emission reductions of 45 % by 2030, based on available targeted measures and additional measures in line with the UN Sustainable Development Goals, could avoid 0,3 °C of global warming by 2045.

(5) According to the International Energy Agency online data service World Energy Balances, the Union is the world's largest importer of fossil energy, and as such, an important driver of global methane emissions.

(6) The European Green Deal combines a comprehensive set of mutually reinforcing measures and initiatives aimed at achieving climate neutrality in the Union at the latest by 2050. In its communication of 11 December 2019 on the European Green Deal, the Commission indicated that the decarbonisation of the gas sector would be facilitated, including by addressing the issue of energy-related methane emissions. In October 2020, the Commission adopted an EU strategy to reduce methane emissions (the 'Methane Strategy') setting out measures to cut methane emissions in the Union, including in the energy sector, and at global level. Regulation (EU) 2021/1119 of the European Parliament and of the Council[4] sets out the target for economy-wide climate neutrality at the latest by 2050 and establishes a binding Union domestic reduction target for net greenhouse gas emissions (emissions after deduction of removals) of at least 55 % compared to 1990 levels by 2030. It follows from the impact assessment accompanying the proposal for this Regulation that, under the assumptions of the preferred policy option for the methane legislative proposal combined with the assumptions of the 'Fit for 55' legislative package, 77 % of all methane emissions associated with oil, gas and coal projected for 2030 can be reduced cost effectively from a social and environmental perspective. That would contribute to limiting global warming to 1,5 °C and would allow the Union to effectively take the lead in fighting methane emissions and to strengthen its energy security.

[4] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (OJ L 243, 9.7.2021, p. 1).

(7) Methane emissions are included in the scope of the Union greenhouse gas reduction targets for 2030, set out in Regulation (EU) 2021/1119, and the binding national emission reduction targets under Regulation (EU) 2018/842 of the European Parliament and of the Council[5]. However, there is currently no Union legal framework setting out specific measures for the reduction of anthropogenic methane emissions in the energy sector. In addition, whilst Directive 2010/75/EU of the European Parliament and of the Council[6] covers methane emissions from the refining of mineral oil and gas, it does not cover methane emissions from other activities in the energy sector.

(8) In this context, this Regulation should apply to the reduction of methane emissions in oil and fossil gas upstream exploration and production, in inactive wells, temporarily plugged wells and permanently plugged and abandoned wells, in fossil gas gathering and processing, in gas transmission, distribution and underground storage, as well as in liquefied natural gas (LNG) facilities. This Regulation should also apply to active underground coal mines and surface coal mines, and closed or abandoned underground coal mines.

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5 Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (OJ L 156, 19.6.2018, p. 26).

6 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

(9) Rules for accurate measurement, monitoring, reporting and verification of methane emissions in the oil, gas and coal sectors, as well as for the reduction of those emissions, including through leak detection and repair (LDAR) surveys and restrictions on venting and flaring, while ensuring the protection of workers from methane emissions, should be addressed by an appropriate Union legal framework. The rules laid down in this Regulation should enhance transparency with regard to imports of fossil energy into the Union and contribute towards the wider uptake of methane emission mitigation solutions across the globe. A 20-year and a 100-year time horizon for global warming potential should be used.

(10) Compliance with the obligations under this Regulation is likely to require investments by regulated entities, and the costs associated with such investments should be taken into account in tariff setting, subject to efficiency principles. The necessary costs should not result in a disproportionate financial burden on end users and consumers.

(11) Each Member State should appoint at least one competent authority to oversee the effective compliance by operators, undertakings, mine operators and importers with the obligations laid down in this Regulation and should notify the Commission about such appointment and any changes thereto. Those competent authorities should be provided with sufficient financial and human resources and should take all the necessary measures to ensure compliance with this Regulation in accordance with the tasks specifically attributed to them. The competent authorities should establish a contact point. Taking into account the cross-border character of energy sector operations and methane emissions, the competent authorities should cooperate with each other and with the Commission. In that context, the Commission and the competent authorities should form together a network of public authorities applying this Regulation to foster close cooperation, with the necessary arrangements for exchanging information and best practices, and to allow for consultations.

(12) In order to ensure a smooth and effective implementation of this Regulation, the Commission should support Member States through the Technical Support Instrument established by Regulation (EU) 2021/240 of the European Parliament and of the Council[7] providing tailor-made technical expertise to design and implement reforms, including reforms promoting the reduction of methane emissions in the energy sector. That technical support could, for example, involve strengthening administrative capacity, harmonising the legislative frameworks and sharing relevant best practices.

[7] Regulation (EU) 2021/240 of the European Parliament and of the Council of 10 February 2021 establishing a Technical Support Instrument (OJ L 57, 18.2.2021, p. 1).

(13) In order to ensure the performance of the tasks of the competent authorities, operators, undertakings, mine operators and importers should provide those authorities with all necessary assistance. In addition, operators, undertakings, mine operators and importers should take all the necessary actions identified by the competent authorities within the period determined by the competent authorities or any other period agreed with the competent authorities.

(14) One of the main mechanisms available to the competent authorities should be inspections, including examination of documentation and records, emissions measurements and site checks. Inspections should take place regularly, on the basis of an appraisal of the risks, such as environmental risks, associated with each site, carried out by the competent authorities. The competent authorities should take into account the established control mechanisms and the best practices available to them. In addition, inspections should be carried out to investigate substantiated complaints and occurrences of non-compliance and to ensure that repairs or replacements of components and mitigation measures are carried out in accordance with this Regulation, as well as to regularly check compliance of importers with this Regulation. Where the competent authorities identify a serious breach of this Regulation, they should issue a notice of remedial actions to be taken by the operator, undertaking, mine operator or importer. Alternatively, the competent authorities should be able to decide to instruct the operator, undertaking, mine operator or importer to submit for their approval a set of remedial actions to address the breach. Competent authorities should keep records of the inspections, and the relevant information should be made publicly available in accordance with Directive 2003/4/EC of the European Parliament and of the Council[8].

[8] Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC (OJ L 41, 14.2.2003, p. 26).

(15) In order to determine the seriousness of an infringement of this Regulation, the competent authorities should consider the environmental damage and the impact on human safety and health, as well as the likelihood of the infringement to affect, to a significant degree, data reliability and robustness in the monitoring and reporting obligations under this Regulation.

(16) In light of the proximity of some methane emission sources to urban or residential areas and their impact on health, environment and climate, natural or legal persons should be able to lodge duly substantiated complaints with the competent authorities on possible infringements of this Regulation. It should be possible in that context to use the European e-Justice Portal to host relevant information, as made available by Member States, in particular the contact details of the competent authorities, the most important steps of the complaint procedure, as well as the rights and basic rules to follow. The competent authorities should keep complainants informed of the procedure and decisions taken and complainants should receive a final decision within a reasonable time after lodging the complaint.

(17) A robust verification framework improves the credibility of reported data. In addition, the level of detail and technical complexity of methane emission measurements requires proper verification of methane emission data reported by operators, undertakings, mine operators and importers. While self-verification is possible, third party verification ensures greater independence and transparency. In addition, it allows for a harmonised set of competences and level of expertise that may not be available to all public entities. Verifiers should be accredited by accreditation bodies in accordance with Regulation (EC) No 765/2008 of the European Parliament and of the Council[9] or otherwise authorised in a manner comparable to Regulation (EC) No 765/2008. Independent verifiers should thus ensure that emissions reports prepared by operators, undertakings, mine operators and importers are accurate and in compliance with the requirements set out in this Regulation. The verification activities should be aligned with the relevant European or other international standards and methodologies for verifiers and should take due account of the nature of the verified activities. The verifiers should review the data in the emissions reports to assess the reliability, credibility and accuracy of the data. To ensure the accuracy of the data, verifiers should, where relevant, carry out announced and unannounced site checks. Verifiers should be separate from competent authorities and should be independent from the operators, undertakings, mine operators and importers, who should provide them with all assistance necessary to enable or facilitate the verification activities, in particular as regards access to the sites and the presentation of documentation or records.

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[9] Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and repealing Regulation (EEC) No 339/93 (OJ L 218, 13.8.2008, p. 30).

(18) In performing their tasks and exercising their powers under this Regulation, the Commission, competent authorities and verifiers should consider the information made available internationally, for example by the International Methane Emissions Observatory (IMEO), in particular with regard to methodologies for data aggregation and analysis and verification of methodologies and statistical processes employed by operators, undertakings, mine operators and importers to quantify data in their emissions reports. The reference criteria in that respect can include the Oil and Gas Methane Partnership (OGMP) reporting framework, technical guidance documents and reporting templates.

(19) The IMEO was set up in October 2020 by the Union in partnership with the UNEP, the CCAC and the International Energy Agency, and presented at the G20 Summit in October 2021. The IMEO has been tasked with collecting, reconciling, verifying and publishing data on anthropogenic methane emissions at a global level. The IMEO could play a role in identifying super-emitters through an early detection and warning system.

(20) As party to the United Nations Framework Convention on Climate Change (UNFCCC)[10] and the Paris Agreement adopted under the UNFCCC[11] (the 'Paris Agreement'), the Union is required to provide annually an inventory report of anthropogenic greenhouse gas emissions constituting an aggregate of the Member States national greenhouse gas inventories, prepared using good practice methodologies accepted by the IPCC.

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10 OJ L 33, 7.2.1994, p. 13.
11 OJ L 282, 19.10.2016, p. 4.

(21) Regulation (EU) 2018/1999 of the European Parliament and of the Council[12] requires Member States to report greenhouse gas inventory data and their national projections to the Commission. Pursuant to that Regulation, reporting is to be undertaken using UNFCCC reporting guidelines, and is often based on default emission factors rather than direct source-level measurements, implying uncertainties on the origin, frequency and magnitude of emissions.

(22) Country data reported pursuant to UNFCCC reporting provisions is submitted to the UNFCCC secretariat in accordance with different tiers of reporting, in line with IPCC guidelines. In that context, the IPCC generally suggests using higher tier methods for those emission sources which have a significant influence on a country's total greenhouse gas inventory in terms of absolute level, trend or uncertainty.

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[12] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1).

(23) A tier represents a level of methodological complexity. Three tiers are available. Tier 1 methods typically use IPCC default emission factors and require the most basic, and least disaggregated, activity data. Higher tiers usually utilise more elaborate methods and source-, technology-, region- or country-specific emission factors, which are often based on measurements, and normally require more highly disaggregated activity data. Specifically, tier 2 requires the use of country-specific, instead of default, emission factors, while tier 3 requires plant-by-plant data or measurements and comprises the application of a rigorous bottom-up assessment by source type at the individual facility level. The IPCC stated in its 2019 Refinement to the IPCC 2006 guidelines for national greenhouse gas inventories that progressing from tier 1 to tier 3 represents an increase in the certainty of measurements of methane-related emissions.

(24) Member States have different practices regarding the tier level at which they report their energy-related methane emissions to the UNFCCC secretariat. Reporting at tier 2 for large emission sources is in line with IPCC reporting guidelines, as tier 2 is considered a higher tier method. Reporting at tier 1, the lowest level, is still very common in several Member States for methane emissions from coal, gas and oil. As a result, estimation methodologies and reporting of energy-related methane emissions vary across Member States.

(25) Currently, voluntary industry-led initiatives remain the principal course of action for methane emission quantification and mitigation in many countries. A key industry-led initiative in the energy sector is the OGMP, a voluntary initiative on measuring and reporting methane emissions, created in 2014 by UNEP and CCAC, on whose board the Commission is represented. The OGMP focuses on establishing best practices to improve the availability of global information on methane emission quantification and management and to drive mitigation actions to reduce methane emissions. The OGMP's work on developing standards and methodologies involves governments, civil society and business. To date, over 115 companies, with assets in more than 60 countries on five continents, representing over 35 % of the world's oil and gas production and over 70 % of LNG flows have become members of UNEP's OGMP 2.0. The OGMP 2.0 framework is the latest iteration of a dynamic methane emissions standard and can provide a suitable basis for methane emissions standards, based on sound scientific standards.

(26) Against that background, it is necessary to improve the measurement of methane emissions and the quality of the reported data, including on the main sources of methane emissions associated with energy produced and consumed within the Union. Moreover, the availability of source-level data and the robust quantification of methane emissions should be ensured, thereby increasing the reliability of reporting as well as the scope for appropriate mitigation measures.

(27) For quantification and reporting to be effective, operators and undertakings should be required to quantify and report methane emissions by source, and to make aggregated data available to Member States in order for Member States to be able to improve the accuracy of their inventories and reports. In addition, effective verification of the reported data is necessary. In order to minimise the administrative burden for operators and undertakings, they should report on an annual basis.

(28) This Regulation, which builds on the relevant parts of the OGMP 2.0 framework, contributes towards the collection of reliable and robust data that would form a sufficient basis for monitoring methane emissions and, where necessary, provides for additional action to further curb methane emissions.

(29) The OGMP 2.0 framework has five levels of reporting. Source-level reporting begins at level 3, which is considered comparable with UNFCCC tier 3. It allows the use of generic emission factors. OGMP 2.0 level 4 reporting requires direct measurements of source-level methane emissions and allows the use of specific emission factors. OGMP 2.0 level 5 reporting requires complementary site-level measurements in addition to source-level quantification of methane emissions. In addition, the OGMP 2.0 framework requires companies to report direct measurements of methane emissions within 3 years of joining OGMP 2.0 for operated assets and within 5 years for non-operated assets. The deadlines within which operators and undertakings are to submit reports required under this Regulation should be set, building on the approach taken by OGMP 2.0 with regard to source-level reporting and taking into account that a large number of Union companies have already joined OGMP 2.0. In addition to source-level quantification, site-level quantification allows assessment, verification and reconciliation of source-level estimates aggregated by site, thereby providing improved confidence in reported emissions. Similar to the OGMP 2.0 framework, site-level measurements to reconcile source-level quantification should be required.

(30) According to data from the Union greenhouse gas inventory, which is based on national greenhouse gas inventories reported in accordance with Regulation (EU) 2018/1999, more than half of all direct methane emissions in the energy sector is due to unintentional release of methane into the atmosphere. In the case of oil and gas, such unintentional methane emissions represent the largest share of methane emissions.

(31) Unintentional leaks of methane into the atmosphere can occur during drilling and extraction, as well as during processing, storage, transmission and distribution to end-use consumers. Such leaks can also occur in inactive wells, temporarily plugged wells or permanently plugged and abandoned wells. Some methane emissions can result from imperfections in, or ordinary wear and tear of, technical components such as joints, flanges and valves, or from damaged components, for example in the case of accidents. Corrosion can also cause leaks from the walls of pressurised equipment.

(32) In order to reduce methane emissions, operators should take all appropriate mitigation measures to minimise methane emissions in their operations.

(33) More specifically, methane emissions from leaks are most commonly reduced by LDAR surveys, carried out first to identify leaks and then to repair leaks or replace leaking components. Operators should therefore carry out periodic LDAR surveys, including of components that vent methane, to check for malfunctioning equipment.

(34) For that purpose, a harmonised approach to ensure a level-playing field for all operators in the Union should be set up. That approach should include minimum requirements for LDAR surveys, while leaving an adequate degree of flexibility to Member States and operators. That flexibility is essential to allow innovation and the development of new components, new LDAR technologies and new detection methods, thus preventing, to the detriment of environmental protection, the lock-in of technology. New LDAR technologies and new detection methods continue to emerge and Member States should encourage innovation in this sector, so that the least emitting, and also accurate and cost-effective components, LDAR technologies and detection methods can be adopted.

(35) Obligations regarding LDAR surveys should reflect good practices. LDAR surveys should be primarily aimed at finding and eliminating as quickly as possible leaks by repair or replacement of the leaking component, rather than quantifying them, and those areas with a higher risk of leaks should be checked more frequently. The determination of the frequency of LDAR surveys and the decision to repair or replace a component should be guided not only by the need to repair or replace components from which methane is escaping above the methane emission threshold but also by operational considerations, taking into account risks to safety. Thus, where a higher risk to safety or higher risk of methane emissions is identified, the competent authorities should be allowed to recommend more frequent LDAR surveys for the relevant components or the replacement of components with technology that is less prone to leaks. All leaks, irrespective of their size, should be surveyed and checked, as small leaks can develop into larger ones. Leak repairs should be followed by confirmation that they have been effective. In order to allow for new or more advanced components or technologies for the detection of methane emissions to be used, the size of methane loss at or above which repair is required should be specified, while leaving to the operators the choice of detection device. Where appropriate, it should be possible to use detection technologies, such as continuous monitoring, as part of LDAR surveys as long as they fulfil the requirements for advanced detection technologies of this Regulation. Best performing operators producing or processing oil or natural gas should be able to apply different LDAR survey frequencies, subject to the fulfilment of the conditions in this Regulation and the approval of the competent authorities.

(36) LDAR surveys should be undertaken, using appropriate available technologies and detection techniques to identify leaks: as close as possible to each individual potential emission source for aboveground components and components above the sea level; at the interface between ground and atmosphere as a first step and, if a potential leak is detected, as close as possible to the emission source as a second step for underground components; and applying the best detection techniques that are commercially available for offshore components below the sea level or below the seabed.

(37) As regards underground components, LDAR surveys are generally undertaken using a two-step process. The first step consists in undertaking a first leak detection and determines whether to dig the ground or undertake bar-hole drilling if the pipeline is directly accessible. Operators dig or drill the ground if the leak is at or above the first leak detection threshold. The second step consists in undertaking a second leak detection and determines whether to repair the leak. Operators repair the leak if it is at or above the second leak detection threshold.

(38) Minimum detection limits serve to ensure that the detection devices are sensitive enough to detect leaks as required under this Regulation. Those minimum detection limits as well as detection techniques to be used should be determined by the Commission, taking into account the different types of components and LDAR surveys, for all categories of components, along with the thresholds applicable to the first step of the LDAR surveys for underground components.

(39) Repair or replacement should take place immediately after detection of a leak at or above the threshold, specified in this Regulation, or as soon as possible thereafter. While it could be necessary to consider exceptional safety, administrative and technical aspects, evidence should be provided to justify any delays in repair or replacement. Repairs or replacements should use the best technologies that are commercially available and that provide long-term protection against future leakage.

(40) Small connected systems as defined in Directive (EU) 2019/944 of the European Parliament and of the Council[13] can face security of supply and grid stability issues in the case of a system shutdown. Therefore, to avoid such risks for the security of supply, repair or replacement works should be carried out during scheduled system shutdowns.

(41) In light of its potent greenhouse gas emission effect, venting should be prohibited except in the case of emergencies or malfunction, or during certain specific events where some venting is unavoidable and strictly necessary. To ensure that operators do not use equipment designed to vent, technology standards should be adopted that allow for the use of lower emitting alternatives.

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[13] Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

(42) Flaring is considered as routine flaring when it is carried out during the normal production of oil, gas and coal, in the absence of adequate facilities or amenable geology to re-inject the gas produced, utilise it on-site or dispatch it to a market. Routine flaring should be prohibited. Flaring should be allowed when it is the only alternative to venting and where venting is not prohibited. The elimination of routine flaring would also increase the availability of natural gas for gas markets. Venting is more harmful to the environment than flaring as the gas released typically contains high levels of methane, whereas flaring oxidises methane into CO_2 which has a lower global warming potential. Therefore, where no other choice is available, flaring should be preferred to venting.

(43) Using flaring as an alternative to venting requires that flaring devices are efficient at combusting methane. For that reason, a combustion efficiency requirement should also be included for the cases in which flaring is allowed and flaring devices with a destruction and removal efficiency by design level below 99 % should be phased out. The use of auto-igniters or continuous pilot burners, which give more reliable ignition as they are not affected by wind, should also be required.

(44) Re-injection or utilisation on-site of methane, or dispatch of methane to a market should always be preferable to venting or flaring. Operators that vent should provide proof to the competent authorities that re-injection, utilisation on-site, storage for later use, dispatch of methane to a market or flaring was not possible and operators that flare should provide proof to the competent authorities that re-injection, utilisation on-site, storage for later use or dispatch of the methane to a market was not possible.

(45) Operators should notify major venting events and flaring events without delay to the competent authorities and submit to those authorities annually more comprehensive reports on all venting events and flaring events. They should also ensure that venting and flaring equipment and devices comply with the standards laid down in Union law.

(46) Methane emissions from inactive wells, temporarily plugged wells and permanently plugged and abandoned wells pose health, safety and environmental risks. Therefore, monitoring, including quantification and, where pressure monitoring equipment exists, pressure monitoring, and reporting obligations should still apply and those wells and well sites should be permanently plugged, reclaimed and remediated, as applicable. In such cases, Member States should have a predominant role, in particular to establish inventories and, where no party responsible can be identified, to report methane emissions and establish mitigation plans within clear deadlines.

(47) In the case of permanently plugged and abandoned wells, adequate documentation demonstrating that there are no methane emissions should be provided for all wells that have been permanently plugged and abandoned in the 30 years preceding and on or after the date of entry into force of this Regulation and, where such documentation is available, for wells permanently plugged and abandoned more than 30 years preceding the date of entry into force of this Regulation. Such documentation should include at least emission factor based or sample-based quantification or reliable evidence of permanent subsurface isolation in accordance with ISO 16530-1:2017, the applicable international standard on well integrity for petroleum and natural gas industries.

(48) Where the competent authorities are provided with reliable evidence of material amounts of methane emissions in an offshore inactive well, in a temporarily plugged well or in a permanently plugged and abandoned well, as the case may be, that has been confirmed by an independent third party, the competent authorities should decide on the application of the obligations for temporarily plugged wells with respect to that well.

(49) The number of inactive wells, temporarily plugged wells and permanently plugged and abandoned wells on the territory of the Member States varies significantly and some Member States have a very high number of such wells on their territories. Such Member States should be allowed to apply a more gradual approach to fulfilling obligations regarding the establishment of an inventory of those wells to ensure the proportionality of the costs and administrative burden associated with that inventory.

(50) Since the likelihood of methane leakage from offshore wells to reach the surface depends on several factors and tends to decrease with water depth and that the resources necessary to survey and intervene in offshore wells increase as water depth and distance from shore increase, exemptions from certain obligations under this Regulation should be considered for offshore wells located at greater water depth, if robust evidence can be provided that the impact on the climate of potential methane emissions from those wells is highly likely to be negligible.

(51) Union greenhouse gas inventory data show that methane emissions from coal mines are the biggest single source of methane emissions in the Union's energy sector. In 2019, direct emissions from the coal sector represented 31 % of all methane emissions, almost equal to the percentage of direct methane emissions from oil and fossil gas combined, namely 33%.

(52) Currently, there is no Union-wide specific legislation limiting methane emissions from the coal sector, despite the availability of a wide array of mitigation technologies. There is no Union or international coal-specific monitoring, reporting and verification standard. In the Union, reporting of methane emissions from the coal industry is part of the greenhouse gas emission reporting by Member States. Data from underground coal mines is also included in the European Pollutant Release and Transfer Register established by Regulation (EC) No 166/2006 of the European Parliament and of the Council[14].

(53) Recent studies show that methane emissions are primarily linked to underground mining activities, in active, closed and abandoned coal mines. In active underground coal mines, methane concentration in the air is continuously controlled as it constitutes a health and safety hazard. In the case of underground coal mines, the vast majority of methane emissions occur through ventilation and drainage or degasification systems, which represent the two main ways of lowering methane concentrations in a coal mine's airways.

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[14] Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC (OJ L 33, 4.2.2006, p. 1).

(54) Once production has ceased and a coal mine is closed or abandoned, it continues to release methane, referred to as ‘abandoned mine methane’ (AMM). Such methane emissions typically occur at well defined source points, such as ventilation shafts or pressure-relief vents. With increased climate ambition and shifting energy production to less carbon-intensive energy sources, AMM emissions are likely to increase in the Union. It is estimated that even 10 years after mining has ceased, methane from non-flooded coal mines continues to be emitted at levels attaining approximately 40 % of those recorded at the time of closure. Moreover, treatment of AMM remains fragmented due to different ownership and exploitation rights and obligations across the Union. Member States should therefore establish inventories of closed underground coal mines and abandoned underground coal mines where operations have ceased after … [70 years before the date of entry into force of this Regulation] and the identified party responsible should be required to install devices for the measurement of methane emissions.

(55) Active surface coal mines in the Union produce lignite and emit less methane than underground coal mines. Lignite coal mines in the Union are predominantly opencast surface coal mines, with the exception of one lignite underground coal mine in one Member State. According to the Union greenhouse gas inventory, in 2019, active surface coal mines emitted 166 kilotonnes of methane compared to 828 kilotonnes of methane from underground coal mines. Measurement of methane emissions from surface coal mines is challenging due to the tendency of methane to diffuse over a wide area. Therefore, and despite the availability of adequate technology, methane emissions from surface coal mines are rarely measured. Methane emissions from surface coal mines can be derived using basin-specific coal emission factors and, with greater precision, using mine- or deposit-specific emission factors, since coal basins have deposits with different methane-bearing capacity. Emission factors can be derived from measuring gas content of the seams sampled from exploration borehole cores. Mine operators should therefore quantify methane emissions in surface coal mines using such emission factors.

(56) Methane emissions from fully flooded underground coal mines tend to decrease significantly over time as the hydrogeological conditions stabilise following the closure of the coal mine and the completion of the flooding process. It should therefore be possible to exempt such coal mines from quantification obligations, where duly justified.

(57) Mine operators should perform continuous measurement and quantification of methane emissions from ventilation shafts in underground coal mines and continuous measurement of vented and flared methane in drainage stations. They should use specific emission factors as regards surface coal mines. They should report that data to the competent authorities.

(58) Mitigation of methane emissions can be best achieved in active and closed underground coal mines or abandoned underground coal mines. Effective mitigation of methane emissions from active surface coal mines and closed or abandoned surface coal mines is currently limited by technology. However, in order to support research and development in mitigation technologies for such methane emissions in the future, there should be effective and detailed monitoring, reporting and verification of the scale of those methane emissions.

(59) Active underground coal mines are either thermal or coking coal mines. Thermal coal is used primarily as an energy source and coking coal is used as a fuel and as a reactant in the process of steelmaking. Both thermal and coking coal mines should be subject to measuring, reporting and verification and mitigation measures with respect to methane emissions. Mitigation measures should be implemented through a phase-out of venting and flaring. Mitigation measures should not lead to the deterioration of the safety of workers.

(60) For active underground coal mines, mitigation measures should be implemented through a phase-out of flaring devices with a destruction and removal efficiency by design level below 99%. While the flooding of closed or abandoned underground coal mines can prevent methane emissions, it is not systematically done and poses environmental risks. In those coal mines, flaring devices with a destruction and removal efficiency by design level below 99% should also be phased out. As geological constraints and environmental considerations prevent a one-size-fits-all approach with respect to abandoned underground coal mines, Member States should establish their own mitigation plan, taking into consideration those constraints and the technical feasibility of AMM mitigation.

(61) In order to reduce methane emissions from active coal mines, Member States should be allowed to introduce systems of incentives for the reduction of methane emissions, subject to applicable State aid rules. Those systems could in particular incentivise investments into methane capture and injection to the grid and the reduction of methane emissions from ventilation shafts and from flaring. Member States should be allowed to introduce dedicated systems of fees and charges to facilitate investments into the reduction of methane emissions, inter alia, as part of State aid programmes aimed at the decommissioning of coal production capacities, subject to applicable State aid rules.

(62) Existing best mitigation practices to reduce methane emissions should be allowed in closed or abandoned coal mines, such as development of geothermal and heat storage projects in flooded coal mines, hydropower applications in non-flooded coal mines, capturing methane emissions by degassing, use of safety-relevant degassing devices, use of mine gas for energy production or impoundment of mine water and other possible uses.

(63) The Union is dependent on imports for 70 % of its hard coal consumption, 97 % of its oil consumption and 90 % of its fossil gas consumption. While the share of global anthropogenic methane emissions emitted in Europe is estimated to be only around 6 %, the consumption of, and import dependency on, fossil fuels contribute significantly to methane emissions of the Union.

(64) Global warming effects caused by methane emissions are cross-border. Although some fossil energy producing third countries are beginning to act domestically to reduce methane emissions in their energy sector, many third-country producers and exporters are not subject to any regulations in their respective domestic market. They need clear incentives to reduce their methane emissions. Transparent information on methane emissions associated with the production of crude oil, natural gas and coal placed on the Union market should, therefore, be made available to the markets and the wider public.

(65) Currently, there is limited accurate data, reported at UNFCCC tier 3 or using equivalent methods, on international methane emissions. Many fossil energy exporting third countries have not yet submitted full inventory data to the UNFCCC secretariat. In addition, there is evidence of a large increase of methane emissions from oil and gas production activities globally, namely from 65 to 80 Mt/year in the last 20 years.

(66) As announced in the Methane Strategy, the Union is committed to working in cooperation with its energy partners and other key fossil energy importing and exporting third countries to tackle methane emissions globally. Energy diplomacy on methane emissions has already yielded important outcomes. In September 2021, the Union and the United States announced the Global Methane Pledge, launched at the UN Climate Change Conference (COP 26) in November 2021. The Global Methane Pledge represents a political commitment to work together in order to collectively reduce global methane emissions by 30 % compared to 2020 levels by 2030, and to take comprehensive domestic actions to achieve that target. It also includes a commitment to move towards using best available inventory methodologies to quantify methane emissions. More than 100 countries, accounting for nearly half of global anthropogenic methane emissions, have already joined the Global Methane Pledge.

(67) The IMEO plays an important role to increase transparency on global methane emissions in the energy sector and the Commission should continue cooperating with the IMEO.

(68) In parallel to continuing its diplomatic work to achieve global commitments for a significant reduction of methane emissions, the Union is further encouraging all efforts related to a significant reduction of those emissions globally, and in particular in the third countries supplying fossil energy to the Union.

(69) Therefore, importers of crude oil, natural gas and coal to the Union should be required to provide to the relevant competent authorities information on measures related to measurement, reporting, verification and mitigation of methane emissions undertaken by exporters to the Union and third-country producers, in particular on the application of regulatory or voluntary measures to control the methane emissions of the third-country producers supplying crude oil, natural gas or coal, such as LDAR surveys or measures to control and restrict venting events and flaring events. The levels of measurement and reporting set out in the information requirements applied to importers should correspond to the ones applied to Union operators. Furthermore, the obligation on importers to provide information on measures taken to control methane emissions should not be more burdensome than the corresponding obligation on Union operators. Member States should communicate the information on those measures to the Commission. On the basis of that information, the Union should set up and manage a methane transparency database, containing, inter alia, information reported by Union undertakings and by importers of crude oil, natural gas and coal. Such a database would serve as a source of information for the purchasing decisions of importers of crude oil, natural gas and coal, as well as for other stakeholders and the public. In addition to the methane transparency database, the Commission should develop methane performance profiles, containing the methane emissions data related to crude oil, natural gas and coal placed on the Union market. Those profiles should also include an assessment of the efforts undertaken by Union producers, importers and third-country producers and exporters of fossil energy to the Union to measure and report, as well as reduce, their methane emissions. Those profiles should further include information on the regulatory actions regarding the measurement, reporting, verification and mitigation taken by third countries where crude oil, natural gas and coal is produced.

(70) In addition, the Commission should set up a global methane monitoring tool which provides information on the occurrence, magnitude and location of high methane-emitting events from energy sources, as well as a rapid reaction mechanism to address super-emitting events occurring within or outside the Union. In that regard, the Commission should take into account any duly substantiated information received from Member States or third parties on super-emitting events. Member States should be encouraged to share with the Commission such information. Those tools should further encourage real and demonstrable results from the implementation of measures regulating methane emissions and from effective mitigation actions taken by undertakings in the Union and those supplying fossil energy to the Union. It should be possible for those tools to be based on existing international tools or frameworks. Those tools should pool data from several certified data providers and services, including the Copernicus component of the Union Space Programme established by Regulation (EU) 2021/696 of the European Parliament and of the Council[15] and the IMEO. They should provide information for the purposes of the Commission's bilateral dialogues with relevant third countries regarding methane emission policies and measures.

[15] Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU (OJ L 170, 12.5.2021, p. 69).

(71) Together, the methane transparency database, the methane performance profiles, the global methane monitoring tool and the rapid reaction mechanism should contribute to enhancing transparency for buyers in the Union, allowing them to make informed supply decisions, and improving the possibility of a wider uptake of methane emission mitigation solutions across the globe. In addition, those instruments should further incentivise third-country undertakings to apply international methane emission measurement and reporting standards, such as those adopted within the OGMP 2.0 framework, or to adopt effective measurement, and reporting and mitigation measures, and allow for verification.

(72) New contracts which Union importers conclude for the supply of crude oil, natural gas or coal should strengthen the uptake in third countries of rules to monitor, report and verify methane emissions equivalent to those set out in this Regulation. Rules should be put in place to enable third-country suppliers and Union importers to demonstrate the equivalence of such measures with the requirements of this Regulation, with regard to crude oil, natural gas or coal imported to the Union. While clauses to that effect cannot be imposed in the case of existing contracts, it is possible to include such clauses in new contracts or in existing contracts which are in the process of being renewed, even tacitly. In that context, model clauses recommended by the Commission would be useful for undertakings.

(73) It should be possible for equivalence of monitoring, reporting and verification of methane emissions to be achieved not only by measures applied by individual undertakings, but also at third-country level, through the legal frameworks in place governing such monitoring, reporting and verification. The Commission should therefore be empowered to establish the requirements concerning evidence to be provided by third countries in that regard, actively engaging with all exporting third countries and having due regard to any different circumstances present in those third countries and to the Union's obligations under international law. The Commission should also be empowered to establish and revoke equivalence for individual third countries, where appropriate.

(74) Instruments, including dialogues on super-emitting events, monitoring, reporting and verification equivalence decisions and the adoption of cooperation frameworks, should be envisaged to ensure the proper implementation of the obligations on importers, as well as on producers or exporters established in third countries that supply crude oil, natural gas or coal to the Union. The Commission should be able to propose instruments to cooperate with third countries. The adoption of those instruments should be subject to the relevant provisions of the Treaties, where applicable.

(75) The Commission should not enter into dialogue with third countries on super-emitting events, should refrain from adopting equivalence decisions and should not recommend the opening of negotiations for a cooperation framework where that would risk circumventing restrictive measures adopted under Article 29 of the Treaty on European Union (TEU) or Article 215 of the Treaty on the Functioning of the European Union (TFEU) on the import of crude oil, natural gas and coal.

(76) Once the methane transparency database, the methane performance profiles, the global methane monitoring tool and the rapid reaction mechanism are in place, the Commission should establish the methodology for calculating the methane intensity of the production of crude oil, natural gas and coal. That methodology should be made publicly available. The Commission should, on that basis, assess the potential impact of various levels of maximum methane intensity values on the security of energy supply, as well as on the competitiveness of the Union's economy.

(77) The Commission should be empowered to establish mandatory maximum methane intensity values and classes associated with the production of crude oil, natural gas and coal placed on the Union market, based on the methodology for calculating the methane intensity of the production of crude oil, natural gas and coal and the assessment of the potential impact of establishing maximum methane intensity values. Those values should be set at levels that promote the reduction of global methane emissions, while preserving the security of energy supply at Union and national level, ensuring non-discriminatory treatment and protecting the competitiveness of the Union's economy.

(78) To ensure harmonised implementation of this Regulation and to create a common technical framework for all actors in the oil, gas and coal sectors, the Commission should consider, in accordance with Regulation (EU) No 1025/2012 of the European Parliament and of the Council[16], requesting the relevant European standardisation organisations to draft harmonised standards for the measurement and quantification of methane emissions in the oil, gas and coal sectors, for LDAR surveys and for venting and flaring equipment. Those standards should become mandatory for the purposes of the application of this Regulation, in order to ensure a harmonised approach amongst operators, undertakings and mine operators and those involved in ensuring compliance with this Regulation, in particular the Commission, competent authorities and verifiers. Where harmonised standards cannot be delivered or do not ensure compliance with the requirements of this Regulation, the Commission should be empowered to adopt technical prescriptions to cover the necessary requirements. Until the date of application of such standards or technical prescriptions, operators, undertakings and mine operators should follow state-of-the-art industry practices and the best available technologies.

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16 Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

(79) Member States should lay down rules on penalties applicable to infringements of this Regulation and take all measures necessary to ensure that they are implemented. Those penalties should be effective, proportionate and dissuasive. It should be possible for those penalties to include fines and periodic penalty payments. In order for those penalties to have a significant deterrent effect, they should be adequate to the type of infringement, to the economic benefit derived from the infringement and to the type and gravity of the environmental damage and impact on human safety and health. When imposing penalties, the relevant authorities should duly take into account the nature, gravity and duration of the infringement in question. Penalties should be imposed in a non-discriminatory way and in line with Union, international and national law. Applicable procedural safeguards and the principles of the Charter of Fundamental Rights of the European Union should be respected.

(80) For reasons of consistency, a list of the types of infringements that should be subject to penalties should be set out. In addition, to facilitate the consistent application of penalties across the Member States, common non-exhaustive and indicative criteria for the application of penalties should be set out. The deterrent effect of penalties should be reinforced by providing for the possibility of publishing the information related to the penalties imposed by Member States, subject to Regulations (EU) 2016/679[17] and (EU) 2018/1725[18] of the European Parliament and of the Council where the penalties are imposed on natural persons.

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[17] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

[18] Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

(81) As a result of the provisions requiring investments by regulated entities to be taken into account in tariff setting, Regulation (EU) 2019/942 of the European Parliament and of the Council[19] should be amended to entrust the European Union Agency for the Cooperation of Energy Regulators (ACER) with the task of making available a set of indicators and reference values for the comparison of unit investment costs linked to measurement, quantification, monitoring, reporting, verification and reduction of methane emissions for comparable projects.

[19] Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (OJ L 158, 14.6.2019, p. 22).

(82) In order to define the elements of the phase out of venting and flaring in coking coal mines, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to supplement this Regulation by setting out restrictions on venting methane from ventilation shafts for coking coal mines. In addition, in order to allow for further information to be required from importers, where necessary, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to supplement this Regulation by modifying or adding to the information to be provided by importers. Furthermore, in order to establish the methodology for calculating the methane intensity associated with crude oil, natural gas and coal placed on the Union market at the level of the producer, as well as to establish the relevant maximum methane intensity values and classes, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to supplement this Regulation. Finally, in order to ensure harmonised implementation of this Regulation, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to supplement this Regulation by adopting harmonised standards and technical prescriptions. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making[20]. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.

[20] OJ L 123, 12.5.2016, p. 1.

(83) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission to adopt detailed rules with regard to templates for reporting methane emissions, minimum detection limits and detection techniques for detection devices and thresholds applying to the first step of LDAR surveys, as well as the procedure and requirements and individual decisions in relation to the equivalence of monitoring, reporting and verification measures in third countries, in accordance with Article 291 TFEU. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council[21].

(84) The Commission should monitor and review the application of this Regulation and submit a report to the European Parliament and to the Council. That report should assess in particular the effectiveness and efficiency of this Regulation, the level of reduction of methane emissions achieved and whether additional or alternative measures are necessary. That report should take into account the relevant Union legislation in related fields. Depending on the conclusions in that report and as part of the review of this Regulation, the Commission may consider submitting legislative proposals, where appropriate.

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[21] Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

(85) Since the objectives of this Regulation, namely laying down rules for the accurate measurement, quantification, monitoring, reporting and verification, as well as for the reduction of methane emissions in the energy sector in the Union, cannot be sufficiently achieved by the Member States but can rather, by reason of the scale and effects of the action, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 TEU. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS REGULATION:

Chapter 1
General provisions

Article 1

Subject matter and scope

1. This Regulation lays down rules for the accurate measurement, quantification, monitoring, reporting and verification of methane emissions in the energy sector in the Union, as well as the reduction of those emissions, including through leak detection and repair surveys, repair obligations and restrictions on venting and flaring. This Regulation also lays down rules on tools ensuring transparency as regards methane emissions.

2. This Regulation applies to:

   (a) oil and fossil gas exploration and production, and fossil gas gathering and processing;

   (b) inactive wells, temporarily plugged wells and permanently plugged and abandoned wells;

   (c) natural gas transmission and distribution, excluding metering systems at final consumption points and the parts of service lines between the distribution network and the metering system located on the property of final customers, as well as underground storage and operations in LNG facilities; and

(d) active underground coal mines and surface coal mines, closed underground coal mines and abandoned underground coal mines.

3. This Regulation applies also to methane emissions occurring outside the Union, with respect to crude oil, natural gas and coal placed on the Union market, as referred to in Chapter 5.

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

(1) ‘methane emissions’ means all direct emissions from any component, whether they result from venting, incomplete combustion from flaring, or from leaks;

(2) ‘component’ means any part or element of equipment used in oil, natural gas or coal installations or infrastructure, that has the potential to emit methane;

(3) ‘operator’ means any natural or legal person who operates or controls an asset, or, where provided for under national law, to whom decisive economic power over the technical functioning of an asset has been delegated;

(4) ‘asset’ means a business or operating unit, which can be composed of several facilities or sites, including operated assets and non-operated assets;

(5) ‘operated assets’ means assets which are under the operational control of the operator;

(6) ‘non-operated assets’ means assets which are not under the operational control of the operator;

(7) ‘site’ means a collection of components with some relation to one another as a subdivision of an asset;

(8) ‘transmission’ means transmission as defined in Article 2, point (17), of Directive (EU) …/…of the European Parliament and of the Council[22+];

(9) ‘transmission system operator’ means transmission system operator as defined in Article 2, point (18), of Directive (EU) …/…[++];

(10) ‘distribution’ means distribution as defined in Article 2, point (19), of Directive (EU) …/…[++];

(11) ‘distribution system operator’ means distribution system operator as defined in Article 2, point (20), of Directive (EU) …/…[++];

(12) ‘mine operator’ means any natural or legal person who operates or controls a coal mine or, where provided for under national law, to whom decisive economic power over the technical functioning of a coal mine has been delegated;

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22 Directive (EU) …/… of the European Parliament and of the Council of … on common rules for the internal markets for renewable gas and natural gas and for hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC (OJ L, …, ELI: …).

\+ OJ: please insert the number in the text and complete the corresponding footnote for PE-CONS 104/23 (2021/0425(COD)).

++ OJ: please insert the number for PE-CONS 104/23 (2021/0425(COD)).

(13) ‘verification’ means the activities carried out by a verifier to assess the conformity with this Regulation of the reports transmitted by the operators, undertakings and mine operators pursuant to this Regulation;

(14) ‘verifier’ means a legal person who carries out verification activities and who is, at the time a verification statement is issued, accredited by a national accreditation body pursuant to Regulation (EC) No 765/2008, or, without prejudice to Article 5(2) of that Regulation, a natural person otherwise authorised to carry out verification activities;

(15) ‘source’ means a component or a geological structure that releases methane into the atmosphere whether intentionally or unintentionally, intermittently or persistently;

(16) ‘emission factor’ means a coefficient that quantifies the emissions of a gas per unit of activity, which is based either on a sample of measurement data or other quantification methods, averaged to develop a representative rate of emission for a given activity level under a given set of operating conditions;

(17) ‘generic emission factor’ means a standardised emission factor for each type of emission source which is derived from inventories or databases, but in any case not verified by means of direct measurements;

(18) ‘specific emission factor’ means an emission factor for a type of emission source which is derived from direct measurements;

(19) ‘direct measurement’ means measurement of the methane emissions at source-level with a measuring device which allows such a measurement;

(20) ‘quantification’ means activities to determine the quantity of methane emissions by means of direct measurements or, where direct measurements are not feasible, based on other methods such as simulation tools, and other detailed engineering calculations or a combination of such methods;

(21) ‘site-level methane emissions’ means all sources of methane emissions within a site;

(22) ‘site-level measurement’ means a measurement which captures a complete overview of all site-level methane emissions, including, for a pipeline network, emissions from segments of such a network, and typically involves the use of sensors mounted on a mobile platform, such as a vehicle, a drone, an aircraft, a boat or a satellite, or the use of other means, such as fixed sensors or continuous point sensor networks;

(23) ‘undertaking’ means a natural or legal person who carries out at least one of the following activities: oil or fossil gas exploration and production, fossil gas gathering and processing, or gas transmission, distribution and underground storage, including with regard to LNG;

(24) ‘LNG facility’ means an LNG facility as defined in Article 2, point (33), of Directive (EU) …/…[+];

(25) ‘leak detection and repair survey’ or ‘LDAR survey’ means a survey to identify and detect sources of methane leaks and other unintentional methane emissions, and to repair or replace the relevant components;

(26) ‘type 1 leak detection and repair survey’ or ‘type 1 LDAR survey’ means a leak detection and repair survey carried out in accordance with the requirements set out under Article 14(2), (7) and (8) and Part 1 of Annex I for type 1 LDAR surveys;

[+] OJ: please insert the number for PE-CONS 104/23 (2021/0425 (COD)).

(27) ‘type 2 leak detection and repair survey’ or ‘type 2 LDAR survey’ means a leak detection and repair survey carried out in accordance with the requirements set out under Article 14(2), (7) and (8) and Part 1 of Annex I for type 2 LDAR surveys;

(28) ‘production location’ means a location where oil or natural gas is extracted from the ground and where no processing takes place;

(29) ‘processing location’ means a location where processes, such as the separation of oil and natural gas from water, are used to treat oil and natural gas;

(30) ‘shutdown’ means a situation where a site or part of its components no longer operates under normal operating conditions and is shut down, and where complete or partial pressure reduction is required before repair or maintenance works can be initiated;

(31) ‘venting’ means the direct release of uncombusted methane into the atmosphere;

(32) ‘flaring’ means the disposal of methane by controlled combustion, in a device designed for that purpose;

(33) ‘routine flaring’ means flaring during the normal production of oil or fossil gas, in the absence of adequate facilities or amenable geology to re-inject methane, utilise it on-site or dispatch it to a market, and excludes flaring caused by an emergency or a malfunction;

(34) ‘flare stack’ means a device equipped with a pilot burner used for flaring;

(35) ‘emergency’ means a temporary, unexpected, infrequent situation in which methane emissions are unavoidable and necessary to prevent an imminent and substantial adverse impact on human safety, health or the environment, and excludes situations arising from or related to the following events:

(a) failure by the operator to install appropriate equipment of sufficient capacity for the expected or actual rate and pressure of production;

(b) failure of the operator to limit production where the production rate exceeds the capacity of the related equipment or gathering system, except where the excess production is due to a downstream emergency, malfunction or unscheduled repair, and lasts for no longer than 8 hours from the time of notification of the downstream capacity issue;

(c) scheduled maintenance;

(d) operator negligence;

(e) repeated failures, namely four or more failures within the preceding 30 days, of the same piece of equipment;

(36) ‘malfunction’ means a sudden, unavoidable failure or breakdown of equipment beyond the reasonable control of the operator which substantially disrupts operations but does not constitute an equipment failure or breakdown caused entirely or in part by poor maintenance or negligent operation, or by another preventable cause;

(37) ‘destruction and removal efficiency’ means the mass percentage of methane that is destroyed or removed after combustion has ceased relative to the quantity of methane entering the flare stack;

(38) ‘inactive well’ means an exploration or production oil or gas well or well site, onshore or offshore, in which, for at least 1 year, no operations for exploration or production have taken place, with the exception of temporarily plugged wells and permanently plugged and abandoned wells;

(39) ‘temporarily plugged well’ means an exploration or production oil or gas well or well site, onshore or offshore, where well barriers have been installed to temporarily isolate the producing reservoir and where access to the well is still provided for;

(40) ‘permanently plugged and abandoned well’ means an exploration or production oil or gas well or well site, onshore or offshore, which has been plugged and will not be re-entered, in which all operations have been terminated and in which all installations associated with the well have been removed in accordance with the applicable regulatory requirements, and where documentation can be provided as established in Part 1, point 3, of Annex V;

(41) ‘remediating’ means the process of cleaning up contaminated water and soil;

(42) ‘reclaiming’ means the process of returning an oil or gas well or well site to having soil and vegetation conditions similar to those that existed before it was disturbed;

(43) ‘coal mine’ means a site where coal mining occurs or has occurred, including lands, excavations, underground passageways, shafts, slopes, tunnels and workings, structures, facilities, equipment, machines and tools situated on the surface or underground and used in, or resulting from the work of extracting lignite, subbituminous coal, bituminous coal or anthracite from its natural deposits in the earth by any means and by any method, and includes the work of preparing the coal for extraction;

(44) ‘active coal mine’ means a coal mine, the majority of the revenue of which comes from extracting lignite, subbituminous coal, bituminous coal or anthracites, and where at least one of the following conditions apply:

(a) mine development is underway;

(b) coal has been produced within the last 90 days;

(c) mine ventilation fans are in operation;

(45) ‘underground coal mine’ means a coal mine where coal is produced by tunnelling into the earth to the coalbed, where the coal is then mined with underground coal mining equipment such as cutting machines and continuous, longwall and shortwall mining machines and transported to the surface;

(46) ‘surface coal mine’ means a coal mine where coal lies near the surface and can be extracted by removing the covering layers of rock and soil;

(47) ‘ventilation shaft’ means a vertical passage used to move fresh air underground or to remove methane and other gases from an underground coal mine;

(48) ‘drainage station’ means a station which collects methane from a coal mine gas drainage system;

(49) ‘drainage system’ means a system which may comprise multiple methane sources and which drains methane-rich gas from coal seams or surrounding rock strata and transports it to a drainage station;

(50) ‘post-mining activities’ means activities carried out after coal has been mined and transported to the surface, including coal handling, processing, storage and transport;

(51) ‘continuous measurement’ means a measurement where the reading is taken at least every minute;

(52) ‘coal deposit’ means an area containing significant concentrations and minable quantities of coal, defined according to the Member State’s methodology on documenting geological mineral deposits;

(53) ‘closed coal mine’ means a coal mine where coal production has ceased, which is closed in accordance with the applicable licensing requirements or other arrangements, and for which an operator, owner or licensee has still a valid permit, licence or other legal document conferring responsibility for the coal mine;

(54) ‘abandoned coal mine’ means a coal mine where coal production has ceased but for which no operator, owner or licensee can be identified as being subject to the obligations under a valid permit, licence or any other legal document conferring responsibility for the coal mine, or that has not been closed in a regulated manner;

(55) ‘alternative use of an abandoned underground coal mine’ means the use of the subsurface mine infrastructure and coal mining equipment for purposes other than coal production;

(56) ‘coal mining equipment’ means any equipment that remains linked to the methane-bearing strata, such as gob vents and drainage pipes;

(57) ‘coking coal mine’ means a coal mine where at least 50% of the production output averaged over the last 3 available years is coking coal, as defined in Annex B to Regulation (EC) No 1099/2008 of the European Parliament and of the Council[23];

(58) ‘producer’ means an undertaking which, in the course of a commercial activity, produces crude oil, natural gas or coal, by extracting it from the ground in a licensed area, processing it or conveying it through connected infrastructure within that licensed area;

(59) ‘importer’ means a natural or legal person who, in the course of a commercial activity, places crude oil, natural gas or coal originating from a third country on the Union market, including any natural or legal person established in the Union appointed to carry out acts and formalities required under Chapter 5;

(60) ‘exporter’ means the contractual counterparty to the importer in each contract concluded for the supply of crude oil, natural gas or coal into the Union;

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[23] Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics (OJ L 304, 14.11.2008, p. 1).

(61) ‘methane performance profile’ means the individual information and datasheets for Member States, third countries and, as applicable, Union producers or importers, as well as third-country producers or exporters supplying crude oil, natural gas or coal to the Union or placing crude oil, natural gas or coal on the Union market, as applicable, which are published in the methane transparency database;

(62) ‘super-emitting event’ means an event occurring within or outside the Union where a source or a set of closely connected sources in a site emits above 100 kg of methane per hour;

(63) ‘reconciliation process’ means the investigation and explanation of the reasons for any statistically significant discrepancies between source-level quantification and site-level measurement of methane emissions.

Article 3

Costs incurred by operators

1. When fixing or approving tariffs or the methodologies to be used by transmission system operators, distribution system operators, LNG facility operators or other regulated entities, including, where applicable, underground gas storage operators, regulatory authorities under Article 57 of Directive (EU) 2019/944 and Chapter X of Directive (EU) …/…[+] shall take into account the costs incurred and investments made to comply with the obligations under this Regulation, insofar as they correspond to those of an efficient and structurally comparable regulated entity and are transparent.

   The unit investment costs referred to in paragraph 2 may be used by the regulatory authorities to benchmark the costs incurred by operators.

2. Every 3 years, the European Union Agency for the Cooperation of Energy Regulators (ACER) shall establish and make publicly available a set of indicators and corresponding reference values for the comparison of unit investment costs linked to measurement, quantification, monitoring, reporting, verification and reduction of methane emissions, including from leaks, venting or flaring, for comparable projects.

   The relevant regulatory authorities referred to in paragraph 1 and the relevant regulated entities shall provide ACER with all the data necessary for the comparison referred to in the first subparagraph of this paragraph.

[+] OJ: please insert the number in the text for PE-CONS 104/23 (2021/0425 (COD)).

Chapter 2
Competent authorities and independent verification

Article 4

Competent authorities

1. Each Member State shall designate one or more competent authorities responsible for monitoring and enforcing the application of this Regulation.

   Member States shall notify the Commission of the names and contact details of their competent authorities by … [6 months from the date of entry into force of this Regulation]. Member States shall notify the Commission without delay of any changes to the names or contact details of their competent authorities.

2. The Commission shall make the list of the competent authorities publicly available and shall regularly update that list upon receipt of a notification of any change from a Member State.

3. Member States shall ensure that the competent authorities establish a contact point and have adequate powers and resources to perform the tasks set out in this Regulation.

Article 5

Tasks of the competent authorities

1. The competent authorities shall take, in performing their tasks, the necessary measures to ensure compliance with this Regulation.

2. Operators, undertakings, mine operators and importers shall provide the competent authorities with all assistance necessary to enable or facilitate the performance of the tasks of the competent authorities under this Regulation, in particular as regards presentation of documentation or records, access to the site and, where the site is located offshore, transport to or from the site.

3. The competent authorities shall cooperate with each other and with the Commission and may cooperate with authorities of third countries, in order to ensure compliance with this Regulation. The Commission shall set up a network of competent authorities to foster cooperation, with the necessary arrangements for exchanging information, in particular, on monitoring, regulating and compliance, and best practices and to allow for consultations. The contact points established within the competent authorities shall support those activities.

4. Where reports are to be made public in accordance with this Regulation, the competent authorities shall make them publicly available free of charge, on a designated website and in a freely accessible, downloadable and machine readable format.

Where information is withheld on one or more of the grounds referred to in Article 4 of Directive 2003/4/EC or, where applicable, under Union law on the protection of personal data, the competent authorities shall indicate the type of information that is withheld and the reasons therefor.

Article 6

Inspections

1. Inspections shall include routine inspections for operators and mine operators and non-routine inspections for operators, undertakings, mine operators and importers, as set out in this Article.

2. Inspections shall include, where relevant, site checks or field audits, examination of documentation and records that demonstrate compliance with the requirements of this Regulation, detection and measurement of methane emissions and any follow-up action undertaken by or on behalf of the competent authorities to check and promote compliance with the requirements of this Regulation.

   Where an inspection has identified a serious breach of this Regulation, the competent authorities shall issue, as part of the report referred to in paragraph 5, a notice of remedial actions to be undertaken by the operator, undertaking, mine operator or importer, setting out clear deadlines for those actions.

Alternatively, the competent authorities may decide to instruct the operator, undertaking, mine operator or importer to submit to the relevant competent authority for approval a set of remedial actions to address the serious breaches which they have identified within 1 month from the date of conclusion of the inspection. Those actions shall be included in the report referred to in paragraph 5.

3. The first routine inspection shall be completed by … [21 months from the date of entry into force of this Regulation]. After the first routine inspection, the competent authorities shall draw up programmes for routine inspections based on a risk assessment. The competent authority may decide on the scope and frequency of routine inspections, based on an appraisal of the risks associated with each site, such as environmental risk, including the cumulative impact of all methane emissions as a pollutant, human safety and health risks, as well as any identified breaches of this Regulation.

The period between inspections shall not exceed 3 years. Where an inspection has identified a serious breach of this Regulation, the subsequent inspection shall take place within 10 months.

4. Without prejudice to paragraph 3 of this Article, the competent authorities shall carry out non-routine inspections to:

(a) investigate substantiated complaints referred to in Article 7 and occurrences of non-compliance as soon as possible after the date on which the competent authorities have become aware of such complaints or non-compliance and no later than 10 months after that date;

(b) ensure, where deemed relevant by the competent authorities, that leak repairs or replacements of components were carried out in accordance with Article 14 and that mitigation measures were implemented in accordance with Articles 18, 22 and 26;

(c) ensure compliance where a derogation has been granted under Article 14(5);

(d) verify, where deemed relevant by the competent authorities, compliance by undertakings and importers with this Regulation.

5. Following each inspection, the competent authorities shall prepare a report stating the legal basis for the inspection, the procedural steps followed, the relevant findings and recommendations for further actions by the operator, undertaking, mine operator or importer, including the deadlines for their implementation.

Where appropriate, the competent authorities may prepare one report covering multiple inspections of assets, sites or components of the same operator, undertaking, mine operator or importer provided that such inspections are carried out before the next routine inspection.

The report shall be notified to the operator, undertaking, mine operator or importer concerned and made publicly available within 2 months of the date of the inspection. Where the inspection was triggered by a complaint made in accordance with Article 7, the competent authorities shall notify the complainant once the report is publicly available.

The report shall be made publicly available by the competent authorities in accordance with Directive 2003/4/EC. Where information is withheld on one or more of the grounds referred to in Article 4 of that Directive, the competent authorities shall indicate in the report the type of information that is withheld and the reasons therefor.

6. Where the report referred to in paragraph 5 concludes that an operator, undertaking, mine operator or importer does not comply with the requirements of this Regulation, it shall take all the necessary actions to bring its operations into compliance with this Regulation. The actions shall be taken without delay within the period set out by the competent authorities.

7. Member States may enter into formal agreements with relevant institutions, bodies, agencies or services of the Union or with other Member States or other appropriate intergovernmental organisations or public bodies, where available, for the provision of specialised expertise to support their competent authorities in carrying out the tasks attributed to them by this Article.

For the purposes of this paragraph, an intergovernmental organisation or public body shall not be deemed appropriate where its objectivity may be compromised by a conflict of interest.

Article 7

Complaints

1. Any natural or legal person may lodge a written complaint with the competent authorities concerning a potential infringement of this Regulation by an operator, undertaking, mine operator or importer.

2. The complaint shall be duly substantiated and contain sufficient evidence of the alleged infringement.

3. Where it becomes apparent that the complaint does not provide sufficient evidence to justify an investigation, the competent authorities shall inform the complainant within a reasonable time but not later than 2 months from receipt of the complaint, of the reasons for their decision not to open an investigation.

This paragraph shall not apply where complaints that are not sufficiently substantiated are repeatedly lodged and for that reason deemed abusive by the competent authorities.

4. Without prejudice to paragraph 3 and the applicable national law, the competent authorities shall keep the complainant informed of the steps taken in the procedure and, where applicable, inform the complainant of appropriate alternative forms of redress, such as recourse to national courts or any other national or international complaints procedure.

5. Without prejudice to the applicable national law and on the basis of comparable procedures, the competent authorities shall establish and make publicly available indicative periods to take a decision on complaints.

Article 8

Verification activities and verification statement

1. Verifiers shall carry out verification activities to assess the conformity of the emissions reports submitted to them by operators, undertakings, mine operators or importers, with the requirements of this Regulation. Those verification activities shall include the review of all data sources and methodologies used in order to assess the reliability, credibility and accuracy of the emissions reports, in particular the following:

   (a) the choice and employment of emission factors;

   (b) the methodologies, calculations, samplings or statistical distributions leading to the determination of methane emissions;

   (c) any risk of inappropriate measuring or reporting;

   (d) any quality control or quality assurance systems applied by the operators, undertakings, mine operators or importers.

2. In carrying out the verification activities referred to in paragraph 1 of this Article, verifiers shall use the standards and technical prescriptions, as applicable, for methane emissions measurement and quantification, and mitigation established in accordance with Article 32.

Until the application date of those standards and technical prescriptions as applicable, operators, undertakings, mine operators and importers, as applicable, shall provide information to the verifiers on the relevant standards, including European or other international standards, or methodologies used by them, for the purpose of verification activities.

Verification activities shall also include, where relevant, announced and unannounced site checks to assess the reliability, credibility and accuracy of the data sources and methodologies used.

3. The verification activities referred to in this Article shall be aligned with European or other international standards and methodologies for verifiers in order to limit the burden on operators, undertakings, mine operators or importers, and on competent authorities and shall take due account of the nature of the verified activities and guidance issued by the Commission in that respect.

4. If, following the verifier's assessment, the verifier concludes with reasonable assurance that the emissions report complies with the requirements of this Regulation, the verifier shall issue a verification statement attesting the conformity of the emissions report and specifying the verification activities carried out.

The verifier shall issue a verification statement only where reliable, credible and accurate data and information allow for methane emissions to be determined with a reasonable degree of certainty and provided that the reported data is coherent with the estimated data, complete and consistent.

If, following the verifier's assessment, the verifier concludes that the emissions report does not comply with the requirements of this Regulation, the verifier shall inform the operator, the undertaking, the mine operator or the importer of that conclusion and provide reasoned feedback to the operator, the undertaking, the mine operator or the importer in light of recognised standards. The operator, the undertaking, the mine operator or the importer shall submit a revised emissions report to the verifier without delay and within the deadline set by the verifier.

5. Operators, undertakings, mine operators and importers shall provide verifiers with all the assistance necessary to enable or facilitate the performance of the verification activities, in particular as regards access to the site and the presentation of documentation or records.

Article 9

Independence and accreditation or authorisation of verifiers

1. Verifiers shall be independent from the operators, undertakings, mine operators and importers and shall carry out verification activities under this Regulation in the public interest. For that purpose, neither the verifier nor any part of the same legal entity shall be an operator, undertaking, mine operator or importer, or own an operator, undertaking, mine operator or importer, or be owned by an operator, undertaking, mine operator or importer.

Verifiers shall not have relations with operators, undertakings, mine operators or importers that could affect their independence and impartiality.

2. Verifiers that are legal persons shall be accredited by a national accreditation body pursuant to Regulation (EC) No 765/2008.

Where no specific provisions concerning the accreditation of verifiers are laid down in this Regulation, Regulation (EC) No 765/2008 shall apply.

3. Member States may decide to authorise natural persons to be verifiers for the purposes of this Regulation. Those verifiers shall be authorised by a national authority that is different from the national accreditation body appointed pursuant to Article 4(1) of Regulation (EC) No 765/2008.

4. Where a Member State decides to apply paragraph 3, it shall ensure that the relevant national authority complies with this Regulation and provides the Commission and the other Member States with all the documentary evidence necessary for the verification of the competence of the verifiers authorised under that paragraph.

Article 10

Use and sharing of information

1. In performing their tasks and exercising their powers under this Regulation, the Commission, competent authorities and verifiers shall consider the information made publicly available by the International Methane Emissions Observatory (IMEO) or the Oil and Gas Methane Partnership (OGMP), or other relevant internationally available information, in particular information on:

   (a) aggregation of methane emissions data in accordance with appropriate statistical methods;

   (b) verification and validation of methodologies and statistical processes used by the industry to quantify methane emissions data;

   (c) development of data aggregation and analysis methodologies in accordance with scientific and statistical good practice to ensure a higher level of accuracy of methane emission estimates, with appropriate characterisation of the uncertainty;

   (d) publication of aggregated reported data by core source and by level of reporting, classified by, where available, operated and non-operated assets, in compliance with competition and confidentiality requirements;

   (e) reporting of findings on major discrepancies between data sources contributing to build more robust scientific methodologies;

(f) reporting of super-emitting events identified by way of an early detection and warning system.

2. The Commission shall submit to the IMEO publicly available methane emissions data that it deems relevant, as made available to the Commission by the competent authorities in accordance with this Regulation.

Chapter 3

Methane emissions in the oil and gas sectors

Article 11

Scope

This Chapter applies to the activities referred to in Article 1(2), points (a), (b) and (c).

Article 12

Monitoring and reporting

1. By … [12 months from the date of entry into force of this Regulation], operators shall submit a report to the competent authorities containing the quantification of source-level methane emissions estimated using at least generic emission factors for all sources. That report may contain quantification of source-level methane emissions in accordance with the requirements set out in paragraph 2 for some or all sources.

2. Operators and undertakings established in the Union shall submit a report to the competent authorities of the Member State where the asset is located containing quantification of source-level methane emissions:

(a) for operated assets, by … [18 months from the date of entry into force of this Regulation]; and

(b) for non-operated assets, by … [30 months from the date of entry into force of this Regulation], where those assets have not been reported under point (a).

Where direct measurement is not possible, reporting shall involve the use of specific emission factors based on source-level quantification or sampling.

3. Operators and undertakings established in the Union shall submit a report to the competent authorities of the Member State where the asset is located containing quantification of source-level methane emissions, complemented by measurements of site-level methane emissions, thereby allowing assessment of and comparison with the source-level estimates aggregated by site:

(a) for operated assets, by … [30 months from the date of entry into force of this Regulation] and by 31 May every year thereafter; and

(b) for non-operated assets, by … [48 months from the date of entry into force of this Regulation] and by 31 May every year thereafter, where those assets have not been reported under point (a).

Before submitting the report to the competent authorities, operators and undertakings shall ensure that the report is assessed by a verifier and includes a verification statement issued in accordance with Article 8.

4. The reports provided for in this Article shall cover the last available calendar year period and include at least the following information:

(a) type and location of the emission sources;

(b) detailed data for each type of emission source, reported in tonnes of methane and in tonnes of CO_2 equivalent, using global warming potentials as defined in the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC);

(c) detailed information on the quantification methodologies;

(d) all methane emissions for operated assets;

(e) share of ownership and methane emissions from non-operated assets multiplied by the share of ownership;

(f) a list of the entities with operational control of the non-operated assets.

The Commission shall, by means of implementing acts, lay down a reporting template for the reports provided for in this Article, taking into account the national inventory reports already in place and the latest technical guidance documents and reporting templates of the OGMP. Those implementing acts shall be adopted in accordance with the advisory procedure referred to in Article 35(2).

Until the adoption of the relevant implementing acts, operators and undertakings shall use the technical guidance documents and reporting templates for upstream and mid- and downstream operations, as applicable, of the OGMP 2.0.

5. The measurements and quantifications referred to in this Article shall be carried out in accordance with the standards and technical prescriptions, as applicable, established under Article 32. Until the date of application of those standards or technical prescriptions, operators and undertakings shall follow state-of-the-art industry practices and use the best technologies available for the measurement and quantification of methane emissions. In that context, operators and undertakings established in the Union may use the latest OGMP 2.0 technical guidance documents approved by … [the date of entry into force of this Regulation] for such purposes.

Operators and undertakings shall provide competent authorities and verifiers with information on the standards, including European or other international standards, or methodologies used.

6. Operators and undertakings established in the Union shall compare source-level quantification of methane emissions and site-level measurement of methane emissions. If there are statistically significant discrepancies between the source-level quantification and the site-level measurement of methane emissions, operators and undertakings shall:

(a) notify without delay the competent authorities before the end of the reporting period;

(b) carry out a reconciliation process as soon as possible and inform the competent authority about the results of the reconciliation process, including any evidence and supporting documents as necessary, no later than the next reporting period.

The reconciliation process shall address possible reasons for the discrepancies, including at least the accuracy and appropriateness of the technologies and the methods used for source-level quantification and site-level measurement of methane emissions, or any data uncertainties in the results due to the selected methods, technologies or extrapolation of results.

For the purposes of the reconciliation process, the operators and undertakings shall consider additional source-level quantification or site-level measurements in order to provide the necessary evidence to explain the reasons for the discrepancies. Based on the results of the reconciliation process, operators and undertakings shall implement subsequent adjustments in numerical terms in source-level quantification or site-level measurements, where appropriate.

If the competent authorities consider that the information provided by the operator or undertaking pursuant to point (b) of the first subparagraph does not adequately explain the reasons for the discrepancies, the competent authorities may request the operator or undertaking to provide additional information or to take additional action.

7. Where information is confidential in accordance with Directive (EU) 2016/943 of the European Parliament and of the Council[24], the operators or undertakings concerned shall indicate in the report the type of information that is withheld and the reasons therefor.

8. The competent authorities shall make the reports referred to in this Article available to the public and the Commission in accordance with Article 5(4), within 3 months from their submission by the relevant operators or undertakings.

Article 13

General mitigation obligation

Operators shall take all appropriate mitigation measures to prevent and minimise methane emissions in their operations.

Article 14

Leak detection and repair

1. By … [9 months from the date of entry into force of this Regulation] for existing sites and within 6 months from the date of start of operations for new sites, operators shall submit a leak detection and repair programme (‘LDAR programme’) to the competent authorities.

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[24] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (OJ L 157, 15.6.2016, p. 1).

The LDAR programme shall include a detailed description of the LDAR surveys and activities, including specific timelines, to be carried out in accordance with this Article, Parts 1 and 2 of Annex I and the relevant standards and technical prescriptions, as applicable, established under Article 32. If any changes to the LDAR programme are made, operators shall submit an updated LDAR programme to the competent authorities as soon as possible.

Until the date of application of the standards or technical prescriptions established under Article 32, operators shall follow state-of-the-art industry practices and the best technologies that are commercially available for LDAR surveys. Operators shall provide competent authorities and verifiers with information on the standards, including international standards, or methodologies used.

The competent authorities may require the operator to amend the LDAR programme taking into account the requirements of this Regulation.

2. Operators shall initiate the first type 2 LDAR survey of all components under their responsibility in accordance with the LDAR programme as soon as possible from … [the date of entry into force of this Regulation].

In any event, operators shall carry out the first type 2 LDAR survey by … [12 months from the date of entry into force of this Regulation] for existing sites. Without prejudice to the frequencies established in Part 1 of Annex I, type 2 LDAR surveys carried out between … [24 months before the date of entry into force of this Regulation] and … [date of entry into force of this Regulation] may be considered by operators as the first type 2 LDAR survey.

Within 9 months from the date of start of operations of new sites, operators shall carry out the first type 2 LDAR survey of all components under their responsibility in accordance with the LDAR programme.

After carrying out the first type 2 LDAR survey, operators shall carry out type 1 and type 2 LDAR surveys with the following frequencies:

(a) for aboveground and underground components, excluding distribution and transmission networks, in accordance with the minimum frequencies set out in Part 1, point 1, of Annex I;

(b) for components of distribution and transmission networks, in accordance with the minimum frequencies set out in Part 1, point 2, of Annex I;

(c) for all offshore components, in accordance with the minimum frequencies set out in Part 1, point 3, of Annex I;

(d) for all other components, in accordance with the minimum frequencies set out in Part 1, point 4, of Annex I.

3. Without prejudice to the obligation to carry out type 2 LDAR surveys in accordance with this Article, when a type 1 LDAR survey is required, operators may choose to carry out a type 2 LDAR survey instead of a type 1 LDAR survey.

4. As part of the LDAR surveys, operators may use advanced detection technologies, provided that:

(a) the competent authorities approve their use in the context of the LDAR programme;

(b) the measurement is undertaken at the level of each individual potential emission source; and

(c) the advanced detection technologies comply with the requirements set out in paragraphs 7 and 8 and are in accordance with the requirements set out in Part 2 of Annex I.

5. By way of derogation from the fourth subparagraph of paragraph 2 of this Article, where operators that produce or process oil or natural gas provide evidence, on the basis of measurements from the 5 preceding years which have been reported by the operators in accordance with Article 12 and assessed by a verifier, that less than 1 % of all their components and subcomponents in each site are leaking and that the aggregated methane emissions associated with those leaks represent less than 0,08% of the total volume of gas or 0,015 % of the total mass of oil processed or extracted, different LDAR survey frequencies for components at sites where no leaks were identified may be applied, subject to the approval of the competent authorities and provided that:

(a) for all components at processing locations, type 1 LDAR surveys are carried out at least every 12 months;

(b) for at least 25 % of all components at processing locations, type 2 LDAR surveys are carried out every 12 months, with all components being checked at least every 48 months;

(c) for all components at production locations, type 1 LDAR surveys are carried out at least every 36 months;

(d) for all components at production locations, type 2 LDAR surveys are carried out at least every 60 months.

If, following the LDAR surveys carried out in accordance with the first subparagraph of this paragraph, 1 % or more of all the components and subcomponents in each site are leaking or the aggregated methane emissions associated with those leaks represent more than 0,08 % of the total volume of gas or 0,015 % of the total mass of crude oil processed or extracted, the operator concerned shall be subject to the obligations under paragraph 2 in that site.

The competent authority shall notify to the Commission the derogations granted pursuant to this paragraph and shall carry out non-routine inspections as referred to in Article 6 (4).

6. The LDAR surveys shall be carried out with detection devices that allow to identify leaks as follows, for each type of component:

(a) at a level as close as possible to each individual potential emission source for aboveground components and components above the sea level;

(b) at the interface between ground and atmosphere for underground components as a first step and, where a leak is detected as specified in the implementing act adopted in accordance with paragraph 7, as close as possible to the emission source as a second step;

(c) applying the best detection techniques that are commercially available for offshore components below the sea level or below the seabed.

7. By … [12 months from the date of entry into force of this Regulation], the Commission shall, by means of an implementing act, specify:

(a) the minimum detection limits and detection techniques to be employed for the different detection devices used for meeting the requirements for all components in paragraph 8;

(b) the thresholds applicable to the first step of the LDAR surveys to be used for meeting the requirements for underground components in paragraph 8.

Those minimum detection limits, techniques and thresholds shall be based on the best available technologies and the best available detection techniques, taking into account the different types of components and LDAR surveys. That implementing act shall be adopted in accordance with the examination procedure referred to in Article 35(3).

Until the adoption of that implementing act, in order to meet the requirements of paragraph 8, operators shall use the best available technologies and the best available detection techniques, in compliance with the manufacturer specifications for operation and maintenance.

8. Operators shall repair or replace all components found to be emitting methane at or above the following levels at standard temperature and pressure and using detection devices in accordance with the manufacturer specifications for operation and maintenance:

(a) for type 1 LDAR surveys: 7 000 parts per million in volume of methane or 17 grams per hour of methane;

(b) for type 2 LDAR surveys:

(i) 500 parts per million in volume of methane or 1 gram per hour of methane for aboveground components and for offshore components above the sea level;

(ii) 1 000 parts per million in volume of methane or 5 grams per hour of methane for the second step of LDAR surveys of underground components;

(iii) 7 000 parts per million in volume of methane or 17 grams per hour for offshore components below the sea level or below the seabed.

9. The repair or replacement of the components referred to in paragraph 8 shall take place immediately after detection. If the repair cannot be carried out immediately after detection, it shall be attempted as soon as possible and no later than 5 days after detection and shall be completed within 30 days after detection.

Where an operator can demonstrate that the repair or replacement would not be successful or possible within 5 days for a first attempt or where the operator expects that a complete repair would not be possible within 30 days due to safety, administrative or technical considerations, the operator shall notify the competent authorities and provide them with evidence thereof together with the repair and monitoring schedules containing at least the elements set out in Annex II no later than 12 days from the date of detection.

Those repair and monitoring schedules shall include all the necessary evidence justifying any delay. They shall ensure that the environmental impact is minimised, while respecting the relevant safety, administrative and technical considerations. The competent authorities may require the operator to amend the repair and monitoring schedules taking into account the requirements of this Regulation. In any event, the repair or replacement shall be carried out as soon as possible.

The operators shall prioritise repairs of larger leaks.

Repairs or replacements referred to in this paragraph shall use the best technologies that are commercially available and that provide long-term protection against future leaks.

Safety, administrative and technical considerations, as referred to in this paragraph, shall be limited to:

(a) the safety of personnel and other persons in proximity to the detected leak;

(b) any adverse environmental impact if the operator can demonstrate that that impact would be greater than the environmental benefits, for example where a repair could lead to a higher overall level of methane emissions than would be the case in the absence of the repair;

(c) accessibility of a component, including scheduled maintenance, permitting process requirements or required administrative authorisation;

(d) unavailability of replacement parts necessary for the repair of the component or of replacement components; and

(e) significant deterioration of the gas supply situation likely to lead to a crisis level as referred to in Article 11(1) of Regulation (EU) 2017/1938 of the European Parliament and of the Council[25].

10. Where one or more of the conditions set out in paragraph 9, sixth subparagraph, points (a) to (e), apply and a shutdown is required before the repair or replacement can be undertaken, operators shall minimise the leak within 24 hours of detection and shall repair the leak by the end of the next scheduled shutdown or within a year, whichever is sooner, unless carrying out an earlier repair could reasonably be expected to lead to a situation whereby the amount of methane vented during repair operations would very likely be significantly higher than the amount of methane that would leak in the absence of a repair, or unless carrying out an earlier repair could reasonably be expected to lead to security of supply issues in small connected systems as defined in Directive (EU) 2019/944.

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[25] Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 (OJ L 280, 28.10.2017, p. 1).

An operator shall, without delay, provide all the necessary evidence justifying its decision to delay repair to the competent authorities.

A decision to delay repair due to safety, administrative and technical considerations shall be subject to approval by the competent authorities and shall be included in the repair and monitoring schedules. The competent authorities may require the operator concerned to amend the repair and monitoring schedules taking into account the requirements of this Regulation.

11. Operators shall establish without delay, keep updated and make fully available to the competent authorities a record of all decisions to delay repair pursuant to this Article, including all necessary evidence justifying each decision and the corresponding repair and monitoring schedules.

12. Notwithstanding paragraph 2, operators shall survey components that were found to be emitting:

(a) at levels of methane equal to or higher than the thresholds set out in paragraph 8 at standard temperature and pressure during a previous LDAR survey, immediately after the repair carried out pursuant to paragraph 9 and no later than 45 days thereafter, to ensure that the repair was successful; and

(b) at levels of methane lower than the thresholds set out in paragraph 8 at standard temperature and pressure, no later than 3 months from the date on which the emissions were detected, to check at least once whether the size of methane loss has changed and whether a repair is necessary.

Where a higher safety risk or a higher risk of methane leaks is identified, the competent authorities may recommend that LDAR surveys of the relevant components take place more frequently.

13. Without prejudice to the reporting obligations pursuant to paragraph 14, operators shall record all identified leaks, irrespective of their size, and shall regularly survey them and ensure that they are repaired in accordance with paragraph 9.

Operators shall keep the record for at least 10 years and shall provide that information to competent authorities upon their request.

14. Every year, operators shall submit all repair and monitoring schedules and a report summarising the results of all LDAR surveys completed during the previous year to the competent authorities of the Member State where the relevant assets are located.

The competent authorities may require operators to amend the report or the repair and monitoring schedules taking into account the requirements of this Regulation.

15. Operators may delegate any of the tasks set out in this Article. Delegated tasks shall not affect the responsibility of operators and shall not impact the effectiveness of supervision by the competent authorities.

16. Member States shall ensure that certification, accreditation schemes or equivalent qualification schemes, including suitable training programmes, are available to LDAR service providers and to operators with respect to the LDAR surveys.

17. Without prejudice to Directives 2008/56/EC[26] and 2013/30/EU[27] of the European Parliament and of the Council, the competent authorities may decide to exempt offshore oil and gas components located in their territory at a water depth greater than 700 metres from the requirements under this Article if the operator concerned can provide robust evidence that the impact on the climate of potential methane emissions from those components is highly likely to be negligible.

Article 15

Restrictions on venting and flaring

1. Venting shall be prohibited except in the circumstances provided for in this Article. Routine flaring shall be prohibited.

2. Venting or flaring shall be allowed only in case of an emergency or malfunction.

3. Notwithstanding paragraph 2, venting or flaring shall be allowed where unavoidable and strictly necessary and subject to the reporting obligations set out in Article 16.

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[26] Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

[27] Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC (OJ L 178, 28.6.2013, p. 66).

Venting and flaring shall be deemed to be unavoidable and strictly necessary in the following specific situations where venting or flaring, as applicable, cannot be completely eliminated or is necessary for safety reasons:

(a) during normal operations of pneumatic devices, compressors, atmospheric pressure storage tanks, sampling and measuring devices and dry gas seals, or other components designed to vent, provided that such equipment meets the standards or technical prescriptions established under Article 32 and is properly maintained to minimise methane losses;

(b) to unload or clean-up liquid holdup in a well to atmospheric pressure;

(c) during gauging or sampling a storage tank or other low-pressure vessel, provided that the tank or vessel meets the standards or technical prescriptions established under Article 32;

(d) during transferring liquids from a storage tank or other low-pressure vessel to a transport vehicle provided that the tank or vessel meets the standards or technical prescriptions established under Article 32;

(e) during repair, maintenance, test procedures and decommissioning, including blowing down and depressurising equipment to carry out repair and maintenance;

(f) during a bradenhead test;

(g) during a packer leakage test;

(h) during a production test lasting less than 24 hours;

(i) where methane does not meet the gathering pipeline specifications, provided that the operator analyses methane samples twice per week to determine whether the specifications have been achieved and routes the methane into a gathering pipeline as soon as the pipeline specifications are met;

(j) during commissioning of pipelines, equipment or facilities, only for as long as necessary to purge introduced impurities from the pipeline or equipment;

(k) during pigging, blow-down to repair, decommissioning or purging a pipeline for repair or maintenance, and only where the gas cannot be contained or redirected into an unaffected portion of the pipeline.

4. Where venting is allowed pursuant to paragraphs 2 and 3, operators shall vent only where flaring is not technically feasible due to lack of flammability or inability to sustain a flame, risks endangering safety of operations or personnel or where it would have a worse environmental impact in terms of emissions. In such a situation, as part of the reporting obligations set out in Article 16, operators shall notify and provide evidence to the competent authorities of the necessity to use venting instead of flaring.

5. Equipment that vents shall be replaced by non-emitting alternatives where those are commercially available and if they meet the standards or technical prescriptions for components designed to vent established under Article 32.

6. In addition to the conditions set out in paragraphs 2 and 3, flaring shall be allowed only where either re-injection, utilisation on-site, storage for later use or dispatch of methane to a market are not feasible for reasons other than economic considerations. In such a situation, as part of the reporting obligations set out in Article 16, operators shall demonstrate to the competent authorities the necessity to use flaring instead of either re-injection, utilisation on-site, storage for later use or dispatch of methane to a market.

7. Where a site is built, replaced or refurbished in whole, operators shall install and use only commercially available zero-emitting pneumatic devices, compressors, atmospheric pressure storage tanks, sampling and measuring devices and dry gas seals. Where a site is replaced or refurbished in part, operators shall install and use in that part only commercially available zero-emitting pneumatic devices, compressors, atmospheric pressure storage tanks, sampling and measuring devices and dry gas seals.

8. Operators shall comply with this Article without delay and, in any case, not later than … [18 months from the date of entry into force of this Regulation] for existing sites and not later than 12 months from the date of start of operations for new sites. Where operators are unable to comply with this Article due to exceptional delay caused by the need to obtain a permit or any other administrative authorisation from the relevant authorities or the unavailability of venting or flaring equipment, they shall provide the competent authorities with a detailed implementation schedule. That schedule shall include sufficient evidence of the fulfilment of the conditions laid down in this paragraph. The competent authorities may require modifications to that schedule.

Article 16

Reporting of venting events and flaring events

1. Operators shall notify the competent authorities of venting events and flaring events:

   (a) caused by an emergency or a malfunction; or

   (b) lasting a total of 8 hours or more within a 24-hour period from a single event.

   The notification referred to in the first subparagraph shall be made without delay after the event and at the latest within 48 hours from the start of the event or the moment the operator became aware of it, in accordance with the elements set out in Annex III.

   By derogation from the first subparagraph, controlled flaring that occurs during shutdowns, shall be reported in the annual report.

2. Operators shall submit to the competent authorities annual reports on all venting events and flaring events, referred to in paragraph 1 of this Article and in Article 15, in accordance with the elements set out in Annex III and as part of the relevant report referred to in Article 12.

Article 17

Flaring efficiency requirements

1. Where a site is built, replaced or refurbished in whole or in part, or where new flare stacks or other combustion devices are installed, operators shall install only flare stacks or combustion devices with an auto-igniter or continuous pilot burner and with a destruction and removal efficiency by design level of at least 99 %.

2. Operators shall ensure that all flare stacks or other combustion devices comply with the requirements of paragraph 1 by … [18 months from the date of entry into force of this Regulation].

3. Operators shall inspect flare stacks or other combustion devices every 15 days in accordance with Annex IV, except where they are not used on a regular basis. Where flare stacks or other combustion devices are not used on a regular basis, operators shall inspect them before each use.

   As an alternative to regular inspections, subject to the approval of the competent authorities, operators may use remote or automated monitoring systems, as specified in accordance with points (1) and (2) of Annex IV.

   Where irregularities are detected, operators shall investigate the cause of the irregularity and remedy it within 6 hours or, in the case of severe weather events or other extreme conditions, within 6 hours after the conditions return to normal.

4. Where auto-igniters or continuous pilot burners are used, operators shall use flame supervision equipment to constantly monitor the main flare flame or the pilot flame to ensure that venting does not occur due to a flame-out condition.

Article 18

Inactive wells, temporarily plugged wells and permanently plugged and abandoned wells

1. By … [12 months from the date of entry into force of this Regulation], Member States shall establish and make publicly available an inventory of all inactive wells, temporarily plugged wells and permanently plugged and abandoned wells on their territory or under their jurisdiction that are recorded or where information or evidence on their location is available or where their location can be identified with all reasonable efforts. That inventory shall include at least the elements set out in Part 1 of Annex V.

Member States shall maintain and keep up to date that inventory, including by taking all reasonable efforts to locate and document all identified inactive wells, temporarily plugged wells and permanently plugged and abandoned wells located on their territory or under their jurisdiction, based on a robust assessment taking into account the most up-to-date scientific findings and best available techniques.

2. By way of derogation from paragraph 1, Member States that notify to the Commission evidence of the existence on their territory or under their jurisdiction of 40 000 or more recorded inactive wells, temporarily plugged wells and permanently plugged and abandoned wells combined may adopt a plan for completing the inventory referred to in paragraph 1 and the quantification of methane emissions or the demonstration that there are no methane emissions, as applicable, in relation to those wells, including at least the elements set out in Part 1 of Annex V, and make it publicly available, provided that:

(a) by … [12 months from the date of entry into force of this Regulation], at least 20 % of those wells are included in the inventory with priority being given to inactive wells and temporary plugged wells;

(b) by … [24 months from the date of entry into force of this Regulation], at least 40 % of those wells are included in the inventory;

(c) every 12 months after … [24 months from the date of entry into force of this Regulation] at least an additional 15 % of those wells are included in the inventory;

(d) all wells are included into the inventory by … [72 months from the date of entry into force of this Regulation].

That plan shall be subject to approval of the competent authorities.

3. Without prejudice to paragraph 4, reports containing information on quantification of methane emissions and, where pressure monitoring equipment exists, information on pressure monitoring from all inactive wells and temporarily plugged wells shall be submitted to the competent authorities by … [21 months from the date of entry into force of this Regulation] and by 31 May every year thereafter.

Those reports shall include quantification of methane emissions to air and to water and information on pressure monitoring, where applicable, using the standards or technical prescriptions established under Article 32. Until the date of application of those standards or technical prescriptions, operators and Member States, as applicable, shall follow state-of-the-art industry practices and use the best available technologies for the measurement and quantification of methane emissions.

Where operators or Member States report methane emissions within the framework of international or regional agreements to which the Union or the relevant Member State is a party, the reports referred to in this paragraph may include information reported within the framework of such agreements.

Reports concerning inactive wells and temporarily plugged wells located in Member States with 40 000 or more inactive wells, temporarily plugged wells and permanently plugged and abandoned wells combined shall be submitted by 12 months from the inclusion of each of the wells in the inventory and by 31 May every year thereafter.

4. Where the competent authorities are provided with quantification of methane emissions and, where pressure monitoring equipment exists, pressure monitoring data that prove that there have been no methane emissions from an onshore temporarily plugged well during the last 5 years, paragraph 3 shall cease to apply to that well.

Where the competent authorities are provided with quantification of methane emissions and, where pressure monitoring equipment exists, pressure monitoring data that prove that there have been no methane emissions from an offshore inactive well or offshore temporarily plugged well during the last 3 years, paragraph 3 shall cease to apply to that well.

5. Where the competent authorities are provided with reliable evidence of material amounts of methane emissions in an offshore inactive well or in a temporarily plugged well after the period referred to in paragraph 4, or in a permanently plugged and abandoned well and where that evidence has been confirmed by an independent third party, the competent authorities shall decide on the application to that well of the obligations set out in this Article in relation to temporarily plugged wells.

6. Where methane emissions are detected in inactive wells, temporarily plugged wells or permanently plugged and abandoned wells, Member States or the party responsible pursuant to paragraph 8 shall take all the necessary measures available to them for remediating, reclaiming and permanently plugging that well, as applicable, where technically feasible and taking into account the environmental impact of the necessary works in view of the associated reduction of the methane emissions.

7. Before submission to the competent authorities, the reports referred to in paragraph 3 of this Article shall be assessed by a verifier and shall include a verification statement issued in accordance with Article 8.

8. Member States shall ensure that operators fulfil the obligations laid down in paragraphs 3 to 7 and paragraph 9. Where an operator, owner, licensee or a party otherwise responsible for the well under national law provides to the competent authority adequate and reliable evidence to demonstrate that it does not have the adequate financial means to fulfil those obligations or where the party responsible cannot be identified, the Member State shall bear responsibility for those obligations.

9. By … [24 months from the date of entry into force of this Regulation], Member States or the party responsible pursuant to paragraph 8, shall prepare a mitigation plan to remediate, reclaim and permanently plug inactive wells and temporarily plugged wells including at least the elements set out in Part 2 of Annex V, and implement it within 12 months from the submission of the first report referred to in paragraph 3.

By way of derogation from the first subparagraph, where a Member State or the party responsible pursuant to paragraph 8 can demonstrate that the implementation of that mitigation plan is not possible within that deadline due to safety, administrative or technical considerations, they may delay its implementation. The mitigation plan shall include all the necessary evidence justifying such a decision. In such cases, the implementation shall be carried out as soon as possible ensuring that the end date for the mitigation actions for each well does not exceed 3 years from the submission of the first report referred to in paragraph 3.

The competent authorities may require the party responsible to amend the mitigation plan taking into account the requirements of this Regulation.

Member States or the party responsible pursuant to paragraph 8 shall regularly update the mitigation plan, in line with the inventory referred to in paragraph 1 and the reports referred to in paragraph 3 and any changes or new information derived therefrom, and based on a robust assessment taking into account the most up-to-date scientific findings and best available techniques.

Mitigation plans shall use the inventory referred to in paragraph 1 and the reports referred to in paragraph 3 to determine priority for activities, including:

(a) remediating, reclaiming and permanently plugging wells;

(b) reclaiming related access roads or the surrounding soil under water, as applicable;

(c) restoring land, water, seabed and habitat impacted by wells and the prior operations;

(d) monitoring to ensure plugged wells are not a source of methane emissions in accordance with this Article.

10. The competent authorities shall review and make the reports and mitigation plans referred to in this Article available to the public and the Commission in accordance with Article 5(4), within 3 months from their submission by an operator or the completion of a mitigation plan by a Member State.

11. Without prejudice to Directives 2008/56/EC and 2013/30/EU, the competent authorities may decide to exempt offshore oil and gas wells located at a water depth greater than 700 metres from the requirements under paragraph 3 or 9 of this Article, if robust evidence can be provided that the impact on the climate of potential methane emissions from those wells is highly likely to be negligible.

12. Without prejudice to Directives 2008/56/EC and 2013/30/EU, and subject to the approval of the competent authorities, offshore temporarily plugged wells and permanently plugged and abandoned wells located at water depth between 200 and 700 metres may be exempted from the requirements under paragraph 3 or 9 of this Article, where the operator can demonstrate that the impact on the climate of potential methane emissions from those wells is highly likely to be negligible by a reference to an environmental impact assessment conducted before drilling or after accidents during operations.

Chapter 4

Methane emissions in the coal sector

SECTION I

MONITORING AND REPORTING IN ACTIVE COAL MINES

Article 19

Scope

1. This Section applies to active underground and surface coal mines.

2. Methane emissions resulting from active underground coal mines include the following emissions:

   (a) methane emissions from all ventilation shafts in use by the mine operator;

   (b) methane emissions from drainage stations and from the methane drainage system, whether occurring as a result of intentional or unintentional venting, or incomplete combustion from flaring;

   (c) methane emissions occurring during post-mining activities and within the area of the coal mine.

3. Methane emissions resulting from active surface coal mines include the following emissions:

(a) methane emissions occurring at the coal mine during the mining process;

(b) methane emissions occurring during post-mining activities and within the area of the coal mine.

Article 20

Monitoring and reporting

1. For underground coal mines, mine operators shall take continuous source-level direct measurements and quantification on all exhaust ventilation shafts. Mine operators shall report to the competent authorities methane emissions per ventilation shaft per year in kilotonne of methane, using equipment and methodologies resulting in a measurement accuracy with a tolerance of 0,5 kilotonne of methane per year or of 5 % of the reported amount, whichever value is lower.

2. Drainage station operators shall take continuous source-level direct measurements and quantification of total releases of vented and flared methane, regardless of the reasons for such venting and flaring.

3. For surface coal mines, mine operators shall use deposit-specific coal mine methane emission factors to quantify methane emissions resulting from mining operations. Mine operators shall establish those emission factors on a quarterly basis, in accordance with appropriate scientific standards and taking into account methane emissions from surrounding strata.

4. The measurements and quantification referred to in paragraphs 1, 2 and 3 shall be undertaken in accordance with the applicable standards or technical prescriptions established pursuant to Article 32. Until the date of application of those standards or technical prescriptions, mine operators shall follow state-of-the-art industry practices and use the best available technologies for the measurement and quantification of methane emissions. Mine operators shall provide competent authorities and verifiers with information on the standards, including international standards, or methodologies used.

As regards continuous source-level direct measurements and quantification referred to in paragraphs 1 and 2, where part of the measuring equipment is not operating for a certain period, readings taken during periods when the equipment was operating may be used to estimate data on a pro rata basis for the period that the equipment was not operating.

The equipment used for continuous source-level direct measurements and quantification referred to in paragraphs 1 and 2 shall operate for more than 90 % of the period for which it is used to monitor methane emissions, excluding downtime taken for re-calibration and repairs.

5. Where relevant, mine operators shall estimate coal post-mining methane emissions using coal post-mining emission factors, updated annually, based on deposit-specific coal samples and in accordance with appropriate scientific standards.

6. By … [12 months from the date of entry into force of this Regulation] and by 31 May every year thereafter, mine operators and drainage station operators shall submit a report to the competent authorities containing data on yearly source-level methane emissions in accordance with this Article.

That report shall cover the last available calendar year period and include the elements set out in Part 1 of Annex VI for active underground coal mines, Part 2 of Annex VI for active surface coal mines and Part 3 of Annex VI for drainage stations.

Before submission to the competent authorities, mine operators and drainage station operators shall ensure that the reports referred to in this paragraph are assessed by a verifier and include a verification statement issued in accordance with Article 8.

7. The competent authorities shall make the reports referred to in this Article available to the public and the Commission in accordance with Article 5(4), within 3 months from submission by mine operators.

SECTION II

MITIGATION OF METHANE EMISSIONS

RESULTING FROM ACTIVE UNDERGROUND COAL MINES

Article 21

Scope

This Section applies to methane emissions from underground coal mines referred to in Article 19(2).

Article 22

Mitigation measures

1. Flaring with a destruction and removal efficiency by design level below 99 % and venting of methane from drainage systems shall be prohibited from 1 January 2025, except in the case of an emergency or a malfunction, or where unavoidable and strictly necessary for maintenance and except venting in accordance with paragraph 2. In such cases, drainage station operators shall vent only if flaring is not technically feasible or risks endangering safety of operations or personnel. In such a situation, as part of the reporting obligations set out in Article 23, drainage station operators shall demonstrate to the competent authorities the necessity of venting instead of flaring.

2. Venting of methane through ventilation shafts in coal mines emitting more than 5 tonnes of methane per kilotonne of coal mined, other than coking coal mines, shall be prohibited from 1 January 2027, except in the case of an emergency.

Venting of methane through ventilation shafts in coal mines emitting more than 3 tonnes of methane per kilotonne of coal mined, other than coking coal mines, shall be prohibited from 1 January 2031, except in the case of an emergency.

Those thresholds shall apply per year, per mine and per operator, if one entity operates several coal mines.

Measures taken in accordance with this paragraph shall not lead to the deterioration of the safety of workers.

3. By … [3 years from the date of entry into force of this Regulation] the Commission shall adopt a delegated act in accordance with Article 34 to supplement this Regulation by setting out restrictions on venting methane from ventilation shafts for coking coal mines.

4. Without prejudice to Articles 107 and 108 of the Treaty on the Functioning of the European Union (TFEU), Member States may use a system of incentives to reduce methane emissions based on fees, charges or penalties, as referred to in Article 33, in order to ensure that operators of existing coal mines comply with the obligations, set out in paragraphs 1 and 2 of this Article.

Article 23

Reporting of venting events and flaring events

1. From 1 January 2025, drainage station operators shall notify the competent authorities of all venting events and all flaring events with a destruction and removal efficiency by design level below 99%:

   (a) caused by an emergency or a malfunction,

   (b) occurring unavoidably, due to maintenance of the drainage system.

   That notification shall be made in accordance with Annex VII, without delay after the event and at the latest within 48 hours from the start of the event or the moment the operator became aware of it.

2. The competent authorities shall make the information submitted to them pursuant to this Article available to the public and the Commission on an annual basis in accordance with Article 5(4).

SECTION III

METHANE EMISSIONS FROM CLOSED UNDERGROUND COAL MINES AND ABANDONED UNDERGROUND COAL MINES

Article 24

Scope

This Section applies to the following methane emissions from closed underground coal mines and abandoned underground coal mines where coal production ceased after … [70 years before the date of entry into force of this Regulation]:

(a) methane emissions from all ventilation shafts which continue to emit methane;

(b) methane emissions from coal mining equipment the use of which has been discontinued;

(c) methane emissions from other well defined point emission sources as specified in Part 1 of Annex VIII.

Article 25

Monitoring and reporting

1. By … [12 months from the date of entry into force of this Regulation] Member States shall set up and make publicly available an inventory of all closed underground coal mines and abandoned underground coal mines in their territory or under their jurisdiction where operations ceased after … [70 years before the date of entry into force of this Regulation], in accordance with the methodology and including at least the elements set out in Part 1 of Annex VIII.

2. From … [21 months from the date of entry into force of this Regulation], methane emissions shall be measured in all closed underground coal mines and abandoned underground coal mines where operations ceased after … [70 years before the date of entry into force of this Regulation].

Measurement equipment shall be installed on all elements listed in Part 1, point 1.5, of Annex VIII which were found to emit above 0,5 tonnes of methane per year based on the inventory in paragraph 1 of this Article. That measurement equipment shall take source-level direct measurements or perform source-level quantification in accordance with the applicable standards or technical prescriptions established under Article 32, at least on an hourly basis and of sufficient quality to allow for a representative estimation of annual methane emissions from all elements listed in Part 1, point 1.5, of Annex VIII which were found to emit methane. Until the date of application of those standards or technical prescriptions, mine operators shall follow state-of-the-art industry practices and use the best available technologies for the measurement and quantification of methane emissions. Mine operators shall provide competent authorities and verifiers with information on the standards, including European or other international standards, technical prescriptions or methodologies used.

The measurement equipment shall operate for more than 90% of the period for which it is used to monitor methane emissions, excluding downtime taken for re-calibration and repair.

3. If the observed annual methane emissions from an element listed in Part 1, point 1.5, of Annex VIII is below 1 tonne of methane for 6 consecutive years in the case of flooded underground coal mines or 12 consecutive years in the case of non-flooded underground coal mines, no further monitoring and reporting shall be taken for that specific element.

4. Upon request from the responsible party, competent authorities may exempt closed underground coal mines and abandoned underground coal mines from the requirements of paragraphs 2 and 3 of this Article and Part 1, point 1.5, of Annex VIII where the responsible party demonstrates that those mines have been fully flooded for at least 10 years prior to the date of the request.

That request shall be accompanied by a report from the responsible party. That report shall demonstrate the stabilisation of the hydrogeological conditions as well as the absence of material amounts of methane emissions from the relevant coal mine. The competent authorities shall make that report publicly available in accordance with national law.

5. Where the competent authorities receive reliable evidence of material amounts of methane emissions from a closed underground coal mine or abandoned underground coal mine as referred to in paragraph 4, the obligations set out in paragraphs 2 and 3 shall apply to that coal mine.

6. Reports containing estimates of yearly source-level methane emissions data shall be submitted to the competent authorities by … [24 months from the date of entry into force of this Regulation] and by 31 May every year thereafter.

Those reports shall cover the last available calendar year and include the elements set out in Part 2 of Annex VIII.

Before submission to the competent authorities, the reports referred to in this paragraph shall be assessed by a verifier. They shall include a verification statement issued in accordance with Article 8.

7. Mine operators or Member States shall be responsible for the compliance with the requirements referred to in paragraphs 2 to 6 of this Article as regards closed underground coal mines. Member States shall be responsible for the compliance with the requirements referred to in paragraphs 2 to 6 of this Article as regards abandoned underground coal mines. In the case of alternative uses of abandoned underground coal mines, the permit holder referred to in Article 26(3) shall be responsible for the compliance with the requirements referred to in paragraphs 2, 3 and 6 of this Article.

8. The competent authorities shall make the reports referred to in this Article available to the public and the Commission, in accordance with Article 5(4), within 3 months from submission by the party responsible.

Article 26

Mitigation measures

1. On the basis of the inventory referred to in Article 25, Member States shall develop and implement a mitigation plan to address methane emissions from closed underground coal mines and abandoned underground coal mines where operations ceased after … [70 years prior to the date of entry into force of this Regulation].

That mitigation plan shall be submitted to the competent authorities by … [30 months from the date of entry into force of this Regulation]. It shall include key milestones for its implementation and at least the elements set out in Part 3 of Annex VIII.

2. Venting and flaring from equipment referred to in Article 25(2) shall be prohibited from 1 January 2030, unless utilisation of methane or reduction of methane emissions is not technically feasible or risks endangering environmental safety, human safety, including that of the personnel, or health. In such a situation, as part of the reporting obligations set out in Article 25, mine operators or Member States shall demonstrate the necessity of venting or flaring instead of utilisation of methane or reduction of methane emissions.

3. Alternative use of abandoned underground coal mines shall be allowed following a permitting procedure adapted to the specific type of alternative use of the abandoned underground coal mine. The applicant shall provide to the competent authorities a detailed plan of measures to avoid methane emissions. The permit holder shall comply with the monitoring, reporting and mitigation obligations under Article 25 and this Article.

4. Without prejudice to the applicable sector-specific Union law, for closed underground coal mines, existing best mitigation practices to reduce methane emissions shall be allowed.

Chapter 5
Methane emissions of crude oil, natural gas and coal placed on the Union market

Article 27

Requirements applying to importers

1. By … [9 months from the date of entry into force of this Regulation] and by 31 May every year thereafter, importers shall provide the information set out in Annex IX to the competent authorities of the Member State in which they are established. Where importers fail to provide that information, in whole or in part, they shall provide sound justification to those competent authorities for such failure and set out the actions that they have undertaken to obtain that information.

   The Commission is empowered to adopt delegated acts in accordance with Article 34 to amend this Regulation by modifying the information required to be provided by importers.

2. By … [12 months from the date of entry into force of the Regulation] and by 31 August every year thereafter, Member States shall submit to the Commission the information provided by importers.

   The Commission shall make that information available in accordance with Article 30.

Article 28

Equivalence of monitoring, reporting and verification measures

1. From 1 January 2027, importers shall demonstrate, and report in accordance with Article 27(1), to the competent authorities of the Member State in which they are established that the contracts concluded or renewed on or after … [the date of entry into force of this Regulation] for the supply of crude oil, natural gas or coal produced outside the Union cover only crude oil, natural gas or coal that is subject to monitoring, reporting and verification measures applied at the level of the producer that are equivalent to those set out in this Regulation.

2. For contracts concluded before … [the date of entry into force of this Regulation] for the supply of crude oil, natural gas or coal produced outside the Union, importers shall undertake all reasonable efforts to require that crude oil, natural gas or coal is subject to monitoring, reporting and verification measures applied at the level of the producer that are equivalent to those set out in this Regulation. Those efforts may include the amendment of those contracts.

   From 1 January 2027, importers shall annually inform the competent authorities of the Member State in which they are established of the results of such efforts, as part of the information to be provided pursuant to in Article 27(1) and, in case of failure, provide sound justification to those competent authorities for such failure and set out the actions that they have undertaken as part of those efforts.

3. The Commission shall issue recommendations containing optional model clauses related to the information to be provided for the purposes of paragraphs 1 and 2, to be used by importers placing crude oil, natural gas and coal on the Union market in the process of modifying or renewing existing contracts or signing new contracts for the supply of crude oil, natural gas and coal.

4. The competent authorities of the Member States shall protect the confidentiality of the information received from importers under this Article, in accordance with Union law. The competent authorities shall provide that information to the Commission which shall protect the confidentiality of such information, in accordance with Union law.

5. For the purposes of this Article, monitoring, reporting and verification measures shall be considered to be equivalent to those set out in this Regulation in the following cases:

(a) crude oil, natural gas and coal are subject to independent third party verification equivalent to that set out in Articles 8 and 9 and the producer established in a third country applies:

(i) for crude oil and natural gas, monitoring and reporting measures ensuring quantification of methane emissions equivalent to those set out in Article 12 or monitoring and reporting at OGMP 2.0 level 5;

(ii) for coal, monitoring and reporting measures equivalent to those set out in Article 20; or

(b) the third country has in place and applies to producers and exporters established in that third country and supplying crude oil, natural gas or coal to the Union market a regulatory framework on monitoring, reporting and verification that is at least equivalent to that applied in the Union; in particular, the third country has demonstrated that those monitoring and reporting requirements ensure at least source- and site-level quantification and regular reporting equivalent to those set out in Article 12, for crude oil and natural gas, and in Article 20, for coal, and that effective verification by an independent third party, equivalent to that set out in Articles 8 and 9, as well as effective supervision and enforcement are in place.

6. For the purposes of paragraph 5, point (b), the Commission shall set out, by means of an implementing act, the procedure and requirements concerning evidence to be provided by a third country for establishing equivalence. That implementing act shall be adopted in accordance with the examination procedure referred to in Article 35(3).

The procedure of establishing equivalence may be initiated on the request of a third country or by the Commission.

The Commission shall actively engage with all third countries exporting crude oil, natural gas or coal to the Union market to obtain their agreement to initiate such a procedure, taking into account the quantity imported from those third countries and their potential for reducing their methane emissions.

Equivalence shall be established by the Commission, by means of implementing acts for each relevant third country, only where the third country fulfils all the conditions set out in paragraph 5, point (b), of this Article and all required evidence is provided. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 35(3) of this Regulation. The Commission shall refrain from adopting such implementing acts where their adoption would circumvent restrictive measures adopted under Article 215 TFEU restricting the import of crude oil, natural gas or coal.

Equivalence may be revoked at any time by the Commission, by means of an implementing act, where the third country no longer complies, in law or in practice, with the conditions set out in paragraph 5, point (b), of this Article during a period of at least 12 months. That implementing act shall be adopted in accordance with the examination procedure referred to in Article 35(3). Prior to adopting that implementing act, the Commission shall notify the third country of its concerns and give it an opportunity to state its views.

When preparing the implementing acts referred to in this paragraph, the Commission shall inform the Coordination Group for oil and petroleum products, established by Council Directive 2009/119/EC[28], the Gas Coordination Group, established by Regulation (EU) 2017/1938 of the European Parliament and of the Council[29], and the Electricity Coordination Group, established by the Commission, as well as other relevant stakeholders. Those implementing acts shall enter into force not earlier than 30 calendar days following the date of their adoption.

7. Importers shall be exempt from the reporting obligations set out in paragraphs 1 and 2 where they import crude oil, natural gas or coal from a third country for which equivalence has been established in accordance with paragraph 6.

8. From … [the date of entry into force of this Regulation], where appropriate and subject to the applicable procedures, the Commission shall propose and aim for the Union to enter into cooperation frameworks with third countries from which the Union imports crude oil, natural gas or coal to support them in establishing a monitoring, reporting and verification system equivalent to that established in this Regulation. The Commission shall not recommend entering into such cooperation frameworks where those frameworks would circumvent restrictive measures adopted under Article 215 TFEU on the import of crude oil, natural gas or coal.

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28 Council Directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (OJ L 265, 9.10.2009, p. 9).

29 Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 (OJ L 280, 28.10.2017, p. 1).

Article 29

Methane intensity of the production of crude oil, natural gas and coal

1. By … [4 years from the date of entry into force of this Regulation] and every year thereafter, for the supply contracts concluded or renewed on or after … [the date of entry into force of this Regulation], Union producers and, pursuant to Article 27(1), importers shall report to the competent authorities of the Member State in which they are established the methane intensity of the production of crude oil, natural gas and coal placed by them on the Union market calculated in accordance with the methodology set out pursuant to paragraph 4 of this Article.

For supply contracts concluded before … [the date of entry into force of this Regulation}, Union producers and, pursuant to Article 27(1), importers shall undertake all reasonable efforts to report to the competent authorities of the Member State in which they are established the methane intensity of the production of crude oil, natural gas and coal placed by them on the Union market calculated in accordance with the methodology set out pursuant to paragraph 4 of this Article. From … [4 years from the date of entry into force of this Regulation], Union producers and importers placing crude oil, natural gas or coal on the Union market shall report annually to the competent authorities of the Member State in which they are established of the results of such efforts.

2. By … [6 years from the date of entry into force of this Regulation] and every year thereafter, Union producers and importers placing crude oil, natural gas and coal on the Union market under supply contracts concluded or renewed after … [6 years from the date of entry into force of this Regulation] shall demonstrate to the competent authorities of the Member State in which they are established that the methane intensity of the production of crude oil, natural gas and coal placed by them on the Union market, calculated in accordance with the methodology set out pursuant to paragraph 4, is below the maximum methane intensity values established in accordance with paragraph 6 to promote the global methane emissions reductions for those products.

3. The competent authorities of the Member States shall protect the confidentiality of the information received from Union producers and importers under this Article, in accordance with Union law. The competent authorities shall provide that information to the Commission, which shall protect the confidentiality of such information, in accordance with Union law.

4. By … [3 years from the date of entry into force of this Regulation], the Commission shall adopt a delegated act in accordance with Article 34 to supplement this Regulation by setting out the methodology for calculating, at the level of the producer, the methane intensity of the production of crude oil, natural gas and coal placed on the Union market. That methodology shall take into account different production processes and site conditions, as well as existing international methodologies and best practice for calculating methane intensity. That methodology shall be non-discriminatory and based on transparent and objective criteria. When preparing such delegated acts, the Commission shall inform the Coordination Group for oil and petroleum products, the Gas Coordination Group, the Electricity Coordination Group and other relevant stakeholders.

5. By … [5 years from the date of entry into force of this Regulation], the Commission shall assess the potential impact of various levels of maximum methane intensity values associated with crude oil, natural gas and coal placed on the Union market at the level of the producer, and present a report to the European Parliament and to the Council. That report shall include an assessment of the potential reduction of global methane emissions, of the impact on the security of energy supply at Union and national level and on the competitiveness of the Union's economy, and of the potential global and regional market distortions. That report shall also include a market assessment with regard to the methane intensity of current and future supplies to the Union until 2049 through both long-term contracts and spot purchases. That assessment shall analyse the situation per Member State, taking into account contractual commitments entered into before … [the date of entry into force of this Regulation], energy infrastructure capacities and potential constraints.

6. On the basis of the assessment referred to in paragraph 5 and on objective criteria, the Commission shall adopt delegated acts in accordance with Article 34 to supplement this Regulation by setting out the maximum methane intensity values associated with crude oil, natural gas and coal placed on the Union market at the level of the producer. Those delegated acts shall be consistent with the methodology for calculating the methane intensity of the production of crude oil, natural gas and coal placed on the Union market set out in accordance with this Article. Those delegated acts shall also specify different methane intensity classes for crude oil, natural gas and coal. Those maximum methane intensity values shall be determined separately for crude oil, natural gas and coal, covering the best performing class or classes. Those maximum methane intensity values and methane intensity classes shall take into account the different sources, production processes and site conditions and shall be set at levels that promote reductions of the global methane emissions in relation to the crude oil, natural gas and coal placed on the Union market, while preserving the security of energy supply at Union and national level, ensuring a balanced distribution of the volumes of crude oil, natural gas and coal placed on the Union market as well as non-discriminatory treatment, and protecting the competitiveness of the Union's economy.

Article 30

Methane transparency database and methane performance profiles

1. By … [18 months from the date of entry into force of this Regulation], the Commission shall establish and maintain a methane transparency database, including relevant information on Member States and third countries, undertakings, importers and volumes of crude oil, natural gas and coal placed on the Union market, in particular the information submitted to it pursuant to Article 12(8), Article 18(10), Article 20(7), Article 23(2), Article 25(8), Article 27(2), Article 28(4) and Article 29(3).

2. In addition to the information referred to in paragraph 1, the database shall include at least the following information:

   (a) a list of third countries where crude oil, natural gas or coal is produced and from which it is exported to the Union;

   (b) for each Member State or third country referred in point (a) the following information:

      (i) whether it has mandatory regulatory measures in place on energy sector methane emissions, covering the measures set out in this Regulation regarding measurement, reporting, verification and mitigation of methane emissions in the energy sector, in particular restrictions on venting and flaring;

(ii) whether it has signed the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (UNFCCC) and whether it has joined the Global Methane Pledge;

(iii) whether it submits national inventory reports in accordance with the requirements of the UNFCCC, where applicable;

(iv) whether the national inventory reports submitted pursuant to the UNFCCC include tier 3 reporting of methane emissions in the energy sector, where applicable, and specifying the categories of methane emissions reported at tier 3;

(v) the amount of methane emissions in the energy sector specified in the national inventory reports submitted pursuant to the UNFCCC, where applicable, and whether that data was subject to independent verification;

(vi) where available, electronic links to national data sources with information on methane emissions in the energy sector;

(c) for each Member State, a list of importers placing crude oil, natural gas or coal on the Union market;

(d) for each third country referred to in point (a) the following information:

(i) a list of producers or exporters of crude oil, natural gas or coal into the Union, as applicable, and whether they are part of any global initiatives for the reduction of methane emissions, such as the OGMP and the Zero Routine Flaring Initiative;

(ii) indicative values estimating the methane emissions related to the transport of crude oil, natural gas and coal.

The methane transparency database shall serve as an information tool that is to be publicly available free of charge.

The methane transparency database shall indicate where the quality and reliability of the submitted information have been verified by independent third parties.

3. By … [24 months from the date of entry into force of this Regulation], on the basis of the information available in the methane transparency database, the Commission shall publish the methane performance profiles of Member States and of Union producers or importers, as applicable, which place crude oil, natural gas or coal on the Union market, as well as of third countries from which the Union imports crude oil, natural gas or coal and of third-country producers or exporters which supply them to the Union.

4. The methane performance profiles published in accordance with paragraph 3 shall be updated annually and shall contain, at least and as applicable:

(a) methane emissions related to crude oil, natural gas and coal placed on the Union market and a data quality assessment for reported methane emissions, including the level of OGMP 2.0 reporting, where relevant;

(b) an assessment of the efforts undertaken to monitor, report and reduce methane emissions by Union producers or importers, as well as by third-country producers or exporters, placing crude oil, natural gas or coal on the Union market, including by region where relevant;

(c) analysis of super-emitting events that occurred in Member States or in third countries from which the Union imports crude oil, natural gas or coal and how those events were addressed.

5. The methane performance profiles published in accordance with paragraph 3 shall be made publicly available online free of charge.

6. This Article shall apply without prejudice to Directive (EU) 2016/943.

Article 31

Global methane monitoring tool and rapid reaction mechanism

1. By … [2 years from the date of entry into force of this Regulation], the Commission shall establish a global methane monitoring tool based on satellite data and input from several certified data providers and services, including the Copernicus component of the Union Space Programme established by Regulation (EU) 2021/696. To that end, the Commission may use existing international tools or frameworks, where available.

   The global methane monitoring tool shall be made publicly available and shall provide regular updates at least on the occurrence, magnitude and location of high methane-emitting events from energy sources within or outside the Union.

2. By … [18 months from the date of entry into force of this Regulation], the Commission shall establish a rapid reaction mechanism to address super-emitting events.

The Commission shall promptly notify any detected super-emitting event to the Member State or third country under whose jurisdiction the event has taken place, as appropriate. Where feasible, the Commission shall also notify the producer related to the source or set of connected sources emitting methane. That notification shall include a request to promptly provide additional information on the super-emitting event and the remedial measures taken or planned to be taken to mitigate the impact or stop the event, including the timeframe within which those measures are to take place. The Commission shall undertake all necessary contacts in order to obtain and verify the information received in connection with the event, including, where applicable, in cooperation with competent international organisations. To that end, the Commission may use existing international tools or frameworks, where available.

3. The Commission shall propose to establish on the Union's behalf bilateral dialogues with third countries from which the Union imports crude oil, natural gas or coal with the aim to set up a framework for an information exchange and an early detection and warning system to detect and alert each other of the occurrence of super-emitting events and remedial measures taken or to be taken in order to prevent or stop such events. Those dialogues shall also aim to identify ways to accelerate the reduction of methane emissions in the energy sector and, if necessary, may offer an exchange of best practices and advice to set up monitoring, reporting, verification and reduction measures equivalent to those established in this Regulation.

The Commission shall not propose to establish bilateral dialogues with third countries where that would circumvent restrictive measures adopted under Article 215 TFEU on the import of crude oil, natural gas and coal.

4. Based on the monitoring carried out in the context of the dialogues referred to in paragraphs 2 and 3, the Commission shall keep the European Parliament and the Council informed about the notifications of super-emitting events and the implementation of remedial measures in the Union and in third countries from which the Union imports crude oil, natural gas or coal and any potential impact on the security of energy supply at Union and national level.

5. This Article shall apply without prejudice to Directive (EU) 2016/943.

Chapter 6
Final provisions

Article 32

Standards and technical prescriptions

1. The Commission shall, in accordance with Article 10(1) to (5) of Regulation (EU) No 1025/2012, request one or more European standardisation organisations to draft harmonised standards for:

   (a) measurement and quantification of methane emissions as referred to in Article 12(5);

   (b) LDAR surveys as referred to in Article 14(1);

   (c) equipment as referred to in Article 15(3) and (5);

   (d) quantification of methane emissions as referred to in Article 18(3); and

   (e) measurement and quantification of methane emissions as referred to in Article 20(4) and Article 25(2).

   Upon reception of a draft standard by a European standardisation organisation, the Commission shall assess its conformity with the relevant standardisation request, with this Regulation and with other applicable Union law.

The Commission is empowered to adopt delegated acts in accordance with Article 34 to supplement this Regulation by establishing mandatory standards, or parts thereof, as referred to in this paragraph.

2. Where no delegated act has been adopted in accordance with paragraph 1 of this Article, the Commission is empowered to adopt delegated acts in accordance with Article 34 to supplement this Regulation by establishing mandatory technical prescriptions, or parts thereof, for the purposes of:

(a) measurement and quantification of methane emissions as referred to in Article 12(5);

(b) LDAR surveys as referred to in Article 14(1);

(c) equipment as referred to in Article 15(3) and (5);

(d) quantification of methane emissions as referred to in Article 18(3); and

(e) measurement and quantification of methane emissions as referred to in Article 20(4) and Article 25(2).

The Commission may adopt those delegated acts only where it has issued a standardisation request to one or more European standardisation organisations and one of the following conditions is fulfilled:

(a) the request has not been accepted;

(b) the requested standards have not been delivered within the set deadline;

(c) the standards developed by the European standardisation organisations do not comply with the request; or

(d) the standards developed by the European standardisation organisation are considered to be insufficient to cover the requirements of this Regulation, in full or in part.

Article 33

Penalties

1. Member States shall lay down the rules on penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented.

The penalties provided for shall be effective, proportionate and dissuasive and shall include at least:

(a) fines proportionate to the environmental damage and impact on human safety and health, set at a level which:

(i) at least deprives those responsible of the economic benefits derived from the infringement in an effective way; and

(ii) gradually increases for repeated serious infringements;

(b) periodic penalty payments to compel operators, undertakings, mine operators or importers to put an end to an infringement, comply with a decision ordering remedial actions or corrective measures, provide information or submit to an inspection, as applicable.

By … [12 months from the date of entry into force of this Regulation] Member States shall notify the Commission of those rules and those measures and shall notify it without delay of any subsequent amendment affecting them.

2. Member States shall, in accordance with national law, ensure that the competent authorities have the power to impose at least the following administrative penalties and administrative measures for infringements of Article 12, Article 14(14), Article 16(2), Article 20, Article 23(1), Article 27(1), Article 28(1) and (2) and Article 29(1) and (2), provided that they do not endanger the security of energy supply:

(a) adopt a decision requiring the person to bring the infringement to an end;

(b) order the confiscation of the profits gained or losses avoided due to the infringements insofar as they can be determined;

(c) issue public warnings or notices;

(d) adopt a decision imposing periodic penalty payments;

(e) adopt a decision imposing administrative fines.

In the case of legal persons, the amount of the administrative fines referred to in point (e) shall not exceed 20 % of the annual turnover in the preceding business year. In the case of natural persons, the amount of those fines shall not exceed 20 % of the annual income in the preceding calendar year.

3. Where the legal system of the Member State does not provide for administrative fines, fines may be imposed by the competent national courts at the request of the competent authorities. Those fines shall be effective and their effect shall be equivalent to that of the administrative fines imposed by administrative authorities.

4. In the exercise of their powers under this Article, competent authorities shall cooperate closely to ensure that their powers are exercised, and that the administrative penalties and administrative measures they impose are designed and applied, in an effective and consistent way across the Union.

5. At least the following infringements shall be subject to penalties:

(a) failure of operators, undertakings, mine operators or importers to provide the competent authorities or the verifiers with the assistance necessary for the performance of their tasks in accordance with this Regulation;

(b) failure of operators or mine operators to carry out the actions set out in the inspection reports referred to in Article 6(5) and (6);

(c) failure of operators or mine operators to submit the methane emissions reports as required by Article 12, Article 18(3), Article 20 and Article 25(6), including the verification statement issued by an independent verifier in accordance with Article 8(4);

(d) failure of operators to submit a LDAR programme in accordance with Article 14(1) or carry out a LDAR survey in accordance with Article 14(2), (5) and (6);

(e) failure of operators to repair or replace components, to continuously survey components and to record leaks in accordance with Article 14(8) to (13);

(f) failure of operators to submit a report in accordance with Article 14(14);

(g) venting or flaring, including routine flaring, by operators or mine operators, except in the situations provided for in Article 15(2) and (3), Article 22(1) and (2), and Article 26(2);

(h) failure of operators or mine operators to demonstrate the necessity to use venting instead of flaring and to demonstrate the necessity to use flaring instead of re-injection, utilisation on-site, storage for later use or dispatch of methane to a market, in the case of operators, or utilisation or mitigation, in the case of mine operators, in accordance with Article 15(4) and (6), Article 22(1) and (2), and Article 26(2);

(i) failure of operators to replace or use venting equipment in accordance with Article 15(5) and (7);

(j) failure of operators or mine operators to notify or report on venting events and flaring events in accordance with Article 16, Article 23(1) or Article 26, as applicable;

(k) use of flare stacks or combustion devices in breach of the requirements laid down in Articles 17, 22 and 23;

(l) failure of the responsible party to apply mitigation measures in accordance with Article 18(6) and (9);

(m) failure of importers to provide the information required in accordance with Article 27(1) and Annex IX;

(n) failure of importers to provide the information required in accordance with Article 28(1) and (2);

(o) failure of Union producers or importers to provide the information required in accordance with Article 29(1) and (2);

(p) failure of Union producers or importers to comply with the maximum methane intensity values set out in the delegated acts adopted in accordance with Article 29(6).

6. Where the conditions set out in Article 15(8) are fulfilled, Member States shall consider reducing or not imposing penalties on operators for the implementation period deemed necessary by the national authorities.

7. Member States shall take into account at least the following indicative criteria for the imposition of penalties, as appropriate:

(a) the duration or temporal effects, the nature and the gravity of the infringement;

(b) any action taken by the operator, undertaking, mine operator or importer to timely mitigate or remedy the damage;

(c) the intentional or negligent character of the infringement;

(d) any previous or repeated infringements by the operator, undertaking, mine operator or importer;

(e) the economic benefits gained or losses avoided, directly or indirectly, by the operator, undertaking, mine operator or importer due to the infringement, if the relevant data are available;

(f) the size of the operator, undertaking, mine operator or importer;

(g) the degree of cooperation with the authorities;

(h) the manner in which the infringement became known to the authorities, in particular whether, and if so to what extent, the operator, undertaking, mine operator or importer timely notified the infringement;

(i) any other aggravating or mitigating factor applicable to the circumstances of the case, including third party actions.

8. Member States shall publish annually information on the type and size of the penalties imposed under this Regulation, the infringements and the operators, undertakings, mine operators or importers upon which penalties have been imposed.

Where applicable, such information shall be reported in accordance with Article 22 of Directive (EU) …/… of the European Parliament and of the Council[30+].

Article 34

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 22(3), Article 27(1), Article 29(4) and (6), and Article 32 shall be conferred on the Commission for a period of 5 years from … [the date of entry into force of this Regulation] to be tacitly extended for periods of an identical duration.

3. The delegation of power referred to in Article 22(3), Article 27(1), Article 29(4) and (6), and Article 32 may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

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30 Directive (EU) …/… of the European Parliament and of the Council of … on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC (OJ L, …, ELI: …).

\+ OJ: please insert the number in the text and complete the corresponding footnote for PE-CONS 82/23 (2021/0422(COD)).

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted pursuant to Article 22(3), Article 27(1), Article 29(4) and (6), or Article 32 shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of 2 months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by 2 months at the initiative of the European Parliament or of the Council.

Article 35

Committee procedure

1. The Commission shall be assisted by the Energy Union Committee established by Article 44 of Regulation (EU) 2018/1999. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this paragraph, Article 4 of Regulation (EU) No 182/2011 shall apply.

3. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Article 36

Commission monitoring, review and reports

1. The Commission shall monitor and review the application of this Regulation and submit, by 1 January 2028 and every 5 years thereafter, a report to the European Parliament and to the Council.

2. The first report referred to in paragraph 1 shall in particular review the following:

   (a) the effectiveness and efficiency of this Regulation in establishing transparent and accurate measurement, reporting and verification rules and in reducing methane emissions associated with the production of crude oil, natural gas and coal placed on the Union market;

   (b) if feasible, the achieved level of reduction of methane emissions associated with the production of crude oil, natural gas and coal placed on the Union market as a result of this Regulation;

   (c) whether additional or alternative measures are necessary to foster and accelerate the reduction of methane emissions in the value chain of crude oil, natural gas and coal placed on the Union market to support the Union's target of net-zero greenhouse gas emissions by 2050 and its commitments under the Paris Agreement.

That review shall take into account the relevant Union legislation in related fields. The Commission, where appropriate, shall submit to the European Parliament and to the Council a legislative proposal together with its report, taking into account the relevant Union legislation in related fields.

3. For the purpose of this Article, the Commission may request information from Member States and competent authorities and shall take into account in particular the information provided by Member States in their integrated National Energy and Climate Plans and the updates thereto and in their National Energy and Climate progress reports pursuant to Regulation (EU) 2018/1999.

Article 37

Amendment to Regulation (EU) 2019/942

In Article 15 of Regulation (EU) 2019/942 the following paragraph is added:

‘8. Every 3 years, ACER, after consulting Member States, shall establish and make publicly available a set of indicators and corresponding reference values for the comparison of unit investment costs linked to measurement, quantification, monitoring, reporting, verification and reduction, including venting and flaring, of methane emissions for comparable projects. It shall issue recommendations on indicators and reference values for unit investment costs for the purposes of complying with the obligations under Regulation (EU) …/… of the European Parliament and of the Council[*] as provided in Article 3 of that Regulation.

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[*] Regulation (EU) …/… of the European Parliament and of the Council of … on methane emissions reduction in the energy sector and amending Regulation (EU) 2019/942 (OJ L, …, ELI: …)[+].’

[+] OJ: please insert the number in the text and the number, date of adoption and OJ reference to this Regulation (2021/0423 (COD)) in the footnote.

Article 38

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at …,

For the European Parliament	*For the Council*
The President	*The President*

ANNEX I

Leak detection and repair surveys as referred to in Article 14

Part 1

Frequency of LDAR surveys

1. For all aboveground and underground components, excluding distribution and transmission networks LDAR surveys shall be carried out at the following minimum frequency:

Type of LDAR survey	Type of component	Frequency
Type 1 LDAR survey	Compressor station Underground storage LNG facility Regulating and metering station	4 months
	Valve station	9 months
Type 2 LDAR survey	Compressor station Underground storage LNG facility Regulating and metering station	8 months
	Valve station	18 months

Type of LDAR survey	Type of material	Frequency
Type 1 LDAR survey	Bitumen sheet Grey cast iron	3 months
	Asbestos Ductile cast iron	6 months
	Non-protected steel Copper	9 months
	Polyethylene PVC Protected steel	15 months
Type 2 LDAR survey	Bitumen sheet Grey cast iron	6 months
	Asbestos Ductile cast iron	12 months
	Non-protected steel Polyethylene PVC Copper	18 months
	Protected steel	30 months

Where the type of material cannot be determined, the highest frequency for the respective type of LDAR survey shall be used.

2. For all components of distribution and transmission networks, LDAR surveys shall be carried out at the following minimum frequency:

Type of LDAR survey	Type of component	Frequency
Type 1 LDAR survey (design pressure > 16 bar)	Compressor station Regulating and metering station	4 months
	Valve station	9 months
Type 2 LDAR survey (design pressure > 16 bar)	Compressor station Regulating and metering station	8 months
	Valve station	18 months
Type 2 LDAR survey (design pressure ≤ 16 bar)	Regulating and metering station	9 months
	Valve station	21 months

Type of LDAR survey	Type of material	Frequency of survey
Type 1 LDAR survey (design pressure > 16 bar)	Grey cast iron Bitumen sheet	3 months
	Asbestos Ductile cast iron	6 months
	Non-protected steel Copper	12 months
	Polyethylene PVC Protected steel	24 months
Type 2 LDAR survey (design pressure > 16 bar)	Grey cast iron Bitumen sheet	6 months
	Asbestos Ductile cast iron	12 months
	Non-protected steel Copper	24 months
	Polyethylene PVC Protected steel	36 months
Type 2 LDAR survey (design pressure ≤ 16 bar)	Grey cast iron Bitumen sheet	6 months
	Asbestos Ductile cast iron	12 months
	Non-protected steel Copper	24 months
	Polyethylene PVC Protected steel	36 months

Where the type of material cannot be determined, the highest frequency for the respective type of LDAR survey shall be used.

LDAR surveys may be carried out using a two-step approach: first from a distance and, only where a leak is detected, via a second detection as close as possible to the source.

For underground and below-the-sea-level protected steel pipelines with design pressure above 16 bar, operators shall also perform risk-based preventive pipeline integrity management to prevent any leakage in accordance with relevant European standards or national pipeline integrity management legislation. Preventive pipeline integrity management shall include constant monitoring of flow, fluid composition, pressure and temperature of the gas transported in the system to ensure that those parameters correspond to the applicable pipeline integrity specifications, as well as to locate the source of potential methane emissions and to estimate them. Taking into account the results of that preventive pipeline integrity management, the competent authority may approve a different frequency of up to 36 months for a type 1 LDAR survey and up to 48 months for a type 2 LDAR survey.

3. For all offshore components, LDAR surveys shall be carried out at the following minimum frequency:

Type of LDAR survey	Type of component	Frequency
Type 1 LDAR survey	Offshore components above the sea level	12 months
	Offshore components below the sea level	24 months
	Offshore components below the seabed	36 months
Type 2 LDAR survey	Offshore components above the sea level	24 months

4. For all other components, type 1 LDAR surveys shall be carried-out every 6 months and type 2 LDAR surveys shall be carried out every 12 months.

Part 2

Information requirements on devices used in LDAR surveys

As part of the LDAR programme referred to in Article 14 (1), operators must provide the following:

1. manufacturer information about the device;

2. information about the leak detection capabilities, reliability and limitations of the device, including, but not limited to, the ability to identify specific leaks or locations, detection limits and any restrictions on use, as well as supporting data;

3. a description of where, when and how the device will be used.

ANNEX II

Leak detection repair and monitoring schedules as referred to in Article 14

Repair schedule

The repair schedule shall include at least the following elements:

(1) inventory and identification of all components that have been checked;

(2) results of the inspection in terms of whether a methane loss has been detected and, if so, the size of the loss;

(3) for components found in a LDAR survey to be emitting at or above the thresholds set out in Article 14(8), an indication of whether repair or replacement was undertaken during the LDAR survey and if not why, taking into account the elements that can justify a delayed repair or replacement, as referred to in Article 14(9), and repair schedule indicating the date of repair or replacement;

(4) for components found to be emitting below the thresholds set out in Article 14(8) in a previous LDAR survey, but found to be emitting at or above such thresholds during post-LDAR monitoring, to check whether the size of loss of methane has changed, an indication whether repair or replacement was undertaken immediately and if not, why not, taking into account the elements that can justify a delayed repair or replacement, as referred to in Article 14(9), and the repair schedule indicating the date of repair or replacement.

That repair schedule shall be followed by a post-repair monitoring schedule to indicate when repairs or replacements were effectively carried out.

Monitoring schedule

The monitoring schedule shall include at least the following elements:

(1) inventory and identification of all components that have been checked;

(2) results of the inspection in terms of whether a methane loss has been detected and, if so, the size of the loss;

(3) for components found to be emitting at or above the thresholds set out in Article 14(8) in a previous LDAR survey, information about the repair or replacement undertaken and results of post-repair monitoring to check if the repair or replacement was successful;

(4) for components found to be emitting below the thresholds set out in Article 14(8) in a previous LDAR survey, results of post-LDAR monitoring to check whether the size of loss of methane has evolved and recommendations on the basis of those results.

ANNEX III

Reporting of venting events and flaring events as referred to in Article 16

Operators shall notify to the competent authorities at least the following information regarding venting events and flaring events:

(1) name of the operator;

(2) location, name and type of asset;

(3) equipment involved;

(4) date(s) and time(s) when the event was discovered or started and terminated;

(5) quantification of the volume of vented or flared methane;

(6) destruction and removal efficiency by design level and type of flare stack or other combustion device used;

(7) cause and nature of the event;

(8) measures taken to limit the duration and magnitude of the event;

(9) corrective actions taken to eliminate the cause and recurrence of such events;

(10) results of inspections to take place once every 2 weeks of flare stacks or other combustion devices and of the remote or automated monitoring systems, as applicable, carried out in accordance with Article 17, in particular, where an irregularity has been identified;

(11) decision to replace venting equipment and replacement schedule, where applicable.

ANNEX IV

Inspections of flare stacks and other combustion devices

Inspections of flare stacks or other combustion devices shall include a comprehensive Audio, Visual and Olfactory inspection, including external visual inspection of flare stacks or other combustion devices, listening for pressure and liquid leaks and smelling for unusual and strong odours.

The following observations shall be included in the report:

(1) in the case of lit flare stacks or other combustion devices: whether combustion is considered adequate or inadequate;

(2) in the case of unlit flare stacks or other combustion devices: whether the unlit flare has a gas vent or not; where the flare stack or other combustion device is equipped with a remote or automated monitoring system, methane emissions shall be calculated on the basis of the flow rate and uncombusted methane in case there is a gas vent.

For the purposes of point (1), inadequate combustion means combustion with visible emissions that exceed a total of 5 minutes during any 2 consecutive hours or, in the case of a flare stack or other combustion device equipped with a remote or automated monitoring system, combustion with visible emissions that exceed a total of 5 minutes during any 2 consecutive hours recorded on a live basis.

ANNEX V

Inventories of and mitigation plans for inactive wells, temporarily plugged wells and permanently plugged and abandoned wells as referred to in Article 18.

Part 1

1. Inventories of inactive wells, temporarily plugged wells, and permanently plugged and abandoned wells shall include at least the following elements:

   (a) name and address of the operator, owner or licensee, as applicable;

   (b) name, type and location of the well or well site, specifying whether it is an inactive well, temporarily plugged well or permanently plugged and abandoned well;

   (c) where feasible, map showing the borders of the well or well site;

   (d) results of quantification of methane emissions to air and to water carried out.

2. Inventories of inactive wells, temporarily plugged wells and permanently plugged and abandoned wells may include the following elements:

   (a) dates for initial drilling and last operation;

   (b) orientation (vertical, horizontal and slant);

   (c) overall depth of the well;

   (d) whether any notable events have occurred during the drilling process, such as ‘kicks’;

(e) whether the well has contacted gas containing significant amounts of sulphur compounds (sour gas), or trace amounts of sulphur compounds (sweet gas);

(f) seismic data available for the well in the upper 1 000 m of its trajectory with a radius of 1 000 metres;

(g) the most recent well integrity assessment report;

(h) whether the well is an exploration or production well;

(i) whether the well has contacted any shallow gas pockets, shallow gas zones or loss circulation zones;

(j) whether the well is located onshore (indicate urban, rural or other) or offshore (indicate water depth);

(k) in the case of offshore wells, information regarding any conditions at the seabed which could assist methane migration up through the water column;

(l) information on the well's lifecycle status (active, inactive, downhole plugged, surface decommissioned etc.);

(m) whether the well cap associated with a decommissioned well is vented.

3. With respect to permanently plugged and abandoned wells, inventories shall also include:

(a) the last known measurements or quantification of methane emissions to air and to water, if any;

(b) information showing that the relevant competent authority has attested that the well or well site in question meets the criteria set out in Article 2, point (40);

(c) documentation that is adequate to demonstrate that there are no methane emissions from the well or well site, including emission factor based or sample-based quantification or reliable evidence of permanent subsurface isolation in accordance with ISO 16530-1:2017 standard:

(i) for all wells permanently plugged and abandoned on or after … [30 years before the date of entry into force of this Regulation];

(ii) where available, for all wells permanently plugged and abandoned before … [30 years before the date of entry into force of this Regulation].

Part 2

Mitigation plans for inactive wells and temporarily plugged wells shall include at least the following elements:

(1) the schedule of addressing each inactive well and temporarily plugged well, including the actions to be carried out;

(2) name and address of the operator, owner or licensee of the inactive well or temporarily plugged well, as applicable;

(3) projected end date of remediation, reclamation or plugging of inactive wells and temporarily plugged wells.

ANNEX VI

Reports for active coal mines as referred to in Article 20

Part 1

The reports for active underground coal mines shall include at least the following elements:

(1) name and address of the mine operator;

(2) address of the coal mine;

(3) tonnage of each coal type produced by the coal mine;

(4) for all ventilation shafts utilised by the coal mine:

(a) name (if any);

(b) period of use, if different from the reporting period;

(c) coordinates;

(d) purpose (intake, exhaust);

(e) technical specifications of the measurement equipment used for the measurement and quantification of methane emissions and optimum operating conditions specified by the manufacturer;

(f) proportion of time when continuous measurement equipment was operating;

(g) reference to the applicable standards or technical prescriptions for:

– methane measurement equipment sampling position;

– measurement of flow rates;

– measurement of methane concentrations;

(h) methane emissions registered by the continuous measurement equipment (in tonnes);

(i) methane emissions registered through monthly sampling (in tonnes/hour), including information on:

– sampling date;

– sampling technique;

– readings of atmospheric conditions (pressure, temperature, humidity), taken at an appropriate distance to reflect the conditions in which continuous measurement equipment is operating;

(j) where the coal mine is joined to another coal mine by any means allowing for a flux of air between the coal mines, name of that coal mine;

(5) post-mining emission factors and description of the method used for their calculation;

(6) post-mining emissions (in tonnes).

Part 2

The reports for active surface coal mines shall include at least the following elements:

(1) name and address of the mine operator;

(2) address of the coal mine;

(3) tonnage of each coal type produced by the coal mine;

(4) map of all deposits used by the coal mine, outlining the borders of those deposits;

(5) for each coal deposit:

  (a) name (if any);

  (b) period of use, if different from the reporting period;

  (c) outline of the experimental method used to determine methane emissions due to mining activities, including the choice of methodology to account for methane emissions from surrounding strata;

(6) post-mining emission factors and description of the method used for their calculation;

(7) post-mining emissions.

Part 3

The reports for drainage stations shall include at least the following elements:

(1) name and address of the mine operator;

(2) tonnage of methane transported by a mine or mines drainage system, per mine;

(3) tonnage of vented methane;

(4) tonnage of flared methane;

(5) destruction and removal efficiency by design level of the flare stack or other combustion device;

(6) use of captured methane.

ANNEX VII

Reporting of venting events and flaring events in drainage stations as referred to in Article 23

Drainage station operators shall report to the competent authorities at least the following elements regarding venting events and flaring events:

(1) name and address of the drainage station operator;

(2) time when the event was detected;

(3) cause of the event;

(4) justification for using venting instead of flaring, if applicable;

(5) tonnage of vented or flared methane, or an estimate if quantification is not possible.

ANNEX VIII

Inventories, reports and mitigations plans for closed underground coal mines and abandoned underground coal mines as referred to in Articles 24, 25 and 26

Part 1

1. For each site, the inventory of closed underground coal mines and abandoned underground coal mines referred to in Articles 24 and 25 shall include at least the following elements:

1.1. name and address of the operator, owner or licensee, as applicable;

1.2. address of the site;

1.3. map showing the borders of the coal mine;

1.4. schemes of the coal mine workings and their status;

1.5. results of source-level direct methane measurement or quantification at the following point emission sources:

(a) all shafts used by the coal mine when active, accompanied by:

(i) shaft coordinates;

(ii) shaft name (if any);

(iii) sealing status and sealing method, if known;

(b) unused vent pipes;

(c) unused gas drainage wells;

(d) other recorded potential point emission sources.

2. The measurements referred to in point 1.5 shall be taken in accordance with the following principles:

2.1. measurements shall be taken at atmospheric pressure allowing for potential methane leaks to be detected, and in accordance with the appropriate scientific standards;

2.2. measurements shall be taken using equipment with an accuracy of at least 0,5 tonnes per year;

2.3. measurements shall be accompanied by information on:

(a) date of the measurement;

(b) atmospheric pressure;

(c) technical details of the equipment used for the measurement;

2.4. ventilation shafts historically used by two or more coal mines shall be assigned to just one coal mine in order to avoid double-counting.

Part 2

The report referred to in Article 25(6) shall include the following elements:

1. name and address of the operator, owner or licensee, as applicable;

2. address of the site;

3. methane emissions from all point emission sources outlined in Part 1, including:

   (a) type of point emission source;

   (b) technical details of the measurement equipment and method used to estimate methane emissions, including sensitivity;

   (c) proportion of time when the measurement equipment was operating;

   (d) methane concentration registered by the measurement equipment;

   (e) estimates of methane emissions from the point emission source.

Part 3

1. The mitigation plan referred to in Article 26(1) shall include at least the following elements:

1.1. a list of all point emission sources referred to in Part 1;

1.2. technical feasibility of mitigation of methane emissions at site level, based on point emission sources;

1.3. timeline of mitigation of methane emissions from each site;

1.4. assessment of the efficiency of projects for collection of methane from an abandoned coal mine, where implemented.

2. The mitigation plan may include an overview of the mitigation practices used to reduce methane emissions, such as the development of geothermal and heat storage projects in flooded coal mines, hydropower applications in non-flooded coal mines, capturing methane by degassing, use of safety-relevant degassing devices, use of mine gas as an energy resource or impoundment of mine water and other possible uses.

ANNEX IX

Information to be provided by importers
in accordance with Article 27(1), Article 28(1), (2) and (3), and Article 29(1)

Importers shall provide the following information:

(1) name and address of the exporter and, if different from the exporter, name and address of the producer;

(2) exporting third countries and regions, as classified in the Union nomenclature of territorial units for statistics (NUTS) level 1, where the products were produced, and countries and regions, as classified in the NUTS level 1, through which the products were transported before they were placed on the Union market;

(3) as regards crude oil and natural gas, information whether the producer or the exporter, as applicable, is carrying out source- and site-level measurement and quantification, whether that data are subject to independent third-party verification, whether its methane emissions are reported, either independently or as part of commitments to report national greenhouse gas inventories in line with UNFCCC requirements, and whether they are in compliance with UNFCCC reporting requirements or with OGMP 2.0 standards; a copy of the latest report on methane emissions, including, where available, the information referred to in Article 12(4), where provided in such report; and the method of quantification (such as UNFCCC tiers or OGMP 2.0 levels) used in the report for each type of methane emission;

(4) as regards crude oil and natural gas, information whether the producer or the exporter, as applicable, applies regulatory or voluntary measures to control its methane emissions, including measures such as LDAR surveys or measures to control and restrict venting events and flaring events, including a description of those measures, together with, where available, relevant reports from LDAR surveys and from venting events and flaring events with respect to the last available calendar year;

(5) as regards coal, information whether the producer or the exporter, as applicable, carries out source-level methane emissions measurement and quantification, whether those methane emissions are calculated and quantified in accordance with Annex VI, whether that data are subject to independent third-party verification, whether its methane emissions are reported, either independently or as part of commitments to report national greenhouse gas inventories in line with UNFCCC requirements, and whether they are in compliance with UNFCCC reporting requirements or in compliance with a European or other international standard for monitoring, reporting and verification of methane emissions; a copy of the latest report on methane emissions, including, where available the information referred to in Article 20(6); and the method of quantification (such as UNFCCC tiers) used in the report for each type of methane emission;

(6) as regards coal, whether the producer or the exporter applies regulatory or voluntary measures to control its methane emissions, including measures to control and restrict venting events and flaring events; and, where available, the volumes of vented and flared methane calculated for each coal mine at least during the last calendar year and the existing mitigation plans for each coal mine, together with a description of those measures, including, where available, reports from venting events and flaring events with respect to the last available calendar year;

(7) name of the entity that carried out the independent third-party verification of the reports referred to in points (3) and (5), if any;

(8) information under Article 28(1) or (2), as applicable, showing that the crude oil, natural gas or coal is subject to monitoring, reporting and verification measures at producer level that are equivalent to those set out in this Regulation for contracts concluded or renewed on or after … [the date of entry into force of this Regulation] and information on the efforts undertaken to ensure that crude oil, natural gas or coal supplied under contracts concluded before … [the date of entry into force of this Regulation] is subject to monitoring, reporting and verification measures at producer level that are equivalent to those set out in this Regulation;

(9) information whether the model clauses referred to in Article 28(3) are used in the supply contracts, specifying which model clauses;

(10) information under Article 29(1) on the methane intensity of the production of crude oil, natural gas and coal placed on the Union market under the relevant supply contracts.