GasNaturally recommendations to the EU Methane Regulation ahead of trilogues
(Annex to 5th September 2023 letter)

Ahead of the trilogues, the industry along the full natural gas value chain puts forward the recommendations below (listed in the order of related articles):

I. Scope of the regulation (Article 1)

In regard to the **scope of the Regulation**, we support the Council's General Approach, however we seek two clarifications:

- **Exclusion of permanently plugged and abandoned wells** to the extent they are not subject to the proposed Article 18(4), i.e. exclusion of plugged & abandoned wells for which no evidence of emissions exists and which have been permanently plugged & abandoned under comprehensive member state regulations to prevent any leakage.
- **Exclusion of metering systems at final consumption points and components located inside buildings and in non-public open areas,** as operators cannot access these components without explicit consent and appointment scheduling, as they are located on private properties. Also, strict security obligations exist across Europe for gas installations and the odorization of gas already provides effective continuous monitoring.

II. Costs of regulated operators (Article 3)

In regard to **costs incurred and investments made by regulated operators**, we support the Council's General Approach with the following considerations:

- Transportation, distribution and storage operators do not own the natural gas. Therefore, they have no direct financial benefit from avoided emissions, hence the **principle of "above zero net cost"** as stated in Recital 9 of the EP's proposal **does not apply**.
- All efficiently and transparently incurred cost to comply with the Regulation should be considered when calculating regulated tariffs. **Relevant cost should not be limited to 'additional' cost only, as taken investments could be penalised**.
- It is important that efficiently and transparently incurred costs are included in regulated tariffs **without delay**. Delaying the inclusion of these relevant costs in tariffs could impede the implementation of methane emission reduction measures outlined in this regulation.

III. Monitoring and reporting (Article 12)

- Regarding **reporting implementation timelines**, we support the Council's General Approach, which seeks alignment with OGMP 2.0 Level 4 and 5 timelines. Companies which have not yet subscribed to OGMP 2.0 need sufficient lead-in time to comply with the reporting obligations.
- Concerning **site-level quantification technologies**, we support the EP's proposal to use technical guidance documents of OGMP 2.0 and follow industry best practices and use best available technologies until a European or international standard is established.
- Regarding **reconciliation of site-level measurements**, we support the Council's General Approach which recognises uncertainties (inaccuracies) associated with emerging site-level measurement technologies.

IV. General mitigation obligation (Article 13)

- In regard to **general mitigation obligations**, we commend the EP for partially acknowledging, in their amendment to Recital 9, the need for proportionality. **The appropriateness of measures should be defined as those where the societal impact of the emission is larger than the societal impact of the mitigation measure**. We encourage co-legislators to incorporate this perspective into the final text of the Regulation (Art. 13.2) to ensure that costs are commensurate with the emission savings of the associated measure.
- In regard to a **performance standard for methane emissions intensity**, we consider its establishment premature. We support, in principle, such standard subject to further assessment once a consistent and verifiable MRV framework is established.
  - Today, methane emissions cannot accurately and repeatedly be measured, are not reported consistently, and verification processes have a low technology readiness level. The near-term focus should be on encouraging development of a global MRV framework to make the performance standard meaningful and implementable.
  - While a performance standard for methane emission intensity and prescriptive mitigation obligations share the goal of reducing methane emissions, their focuses, measurement methods, and approaches to mitigation differ. Therefore, it is challenging for operators to implement at the same time prescriptive mitigation obligations as well as performance standards (which typically provides some flexibility to operators 'how' the standard is achieved).

V. <u>Leak Detection and Repair (LDAR) (Article 14)</u>

- In regard to **LDAR obligations for 'subsea' and 'sub seabed' components**, we support the EP's approach of excluding such components from the quantification obligations set by Article 14. Such obligations are technically not implementable as no technology exists, which can quantify leaks in the subsea environment.
- In regard to the **use of advanced technologies**, we support Council's General Approach **introducing 'continuous monitoring systems' in principle** (because no other proposal introduces such concept). Advanced technologies should be allowed to be used *in combination with* leak detection and repair surveys (not 'in lieu of') and where operators can demonstrate that the combined use has a greater emissions abatement potential, frequencies shall be reviewed and adjusted. The Regulation should be technology open and the term 'advanced technologies' should be used rather than 'continuous monitoring' because it provides for a wider range of new technologies, including site-level continuous monitoring systems and aerial monitoring systems such as drones, etc. In combination with periodic surveys with handheld detection devices, advanced technologies can have a significant role in detecting leaks. For example, continuous monitoring systems – while equipped with lower detection capabilities – have the benefit of detecting leaks immediately instead only after X months.
- In regard to **LDAR survey frequencies, we support Council's General approach. However, different considerations apply for the upstream, transmission and distribution segments:**
  - **For upstream**, we support Council's General approach, i.e. surveys of all (onshore) aboveground components with handheld Type 1 (OGI) or Type 2 (FID) devices every 6 months and 12 months, respectively; and surveys of all (offshore) above sea-level components with handheld Type 1 or Type 2 devices every 12 months and 24 months, respectively. The Council's General Approach appropriately reflects the proportionality between leak detection potential and the effort, cost, and possible net-environmental impact of (flying in by helicopter onto platforms) specialized leak survey teams surveying in detail all components of entire facilities.
  - **For transmission** underground components, we propose to replace the existing two types of surveys (LDAR type 1 and 2) with a single survey conducted in two steps. Due to accessibility

constraints of TSO pipelines, LDAR has to be done with airborne technology in many cases. We suggest amending the frequency to 48 months (instead of the 36 months as per Council's General Approach). This lower frequency is justified as leak prevention is done by strict rules and proven technologies which are applied according to ISO 19345-1 and CEN EN 1594 as minimum, such as cathodic pipeline protection, regular scanning and pigging of the pipeline.

- **For distribution networks**, we propose to replace the existing two types of surveys (LDAR type 1 and 2) with a **single survey conducted in two steps with frequencies of 6 to 36 months depending on material and operational characteristics** (referred to below as two-step approach). Additionally, the distinction between underground and aboveground components and the requirements for a systematic contact detection are not appropriate for widely spread distribution grids with millions of components in urban areas. Also, the type of material highly determines the probability of leaks. Available data confirms this. For instance, PVC, protected steel, and polyethylene - the latter representing close to 100% of the assets in some Member States - are very performing materials and are associated with a very low probability of leakage. Resources should be concentrated on components with a higher risk of leakage, such as grey cast iron pipelines.

- In regard to **LDAR Minimum Detection Limits (MDL), different considerations apply for the upstream, transmission and distribution segments:**
  - **For upstream**, we support Council's General Approach of maintaining MDL for Type 1 devices at 17g/h, and EP's proposal to maintain MDL for Type 2 devices at 1g/h **We strongly oppose an MDL of 0.15g/h, which is not proportionate for** the reasons below:
    - such emission levels are negligible even if multiple of such leaks are considered;
    - an MDL of 1g/h detects typically more than 99% of total leak volumes (as confirmed in a recent comprehensive survey of a major upstream facility);
    - an MDL of 1g/h threshold is already 100 times smaller than current practices.
  - **For transmission pipelines,** we propose to use for their underground components Type 2 LDAR MDLs with a MDL of **[100] grams per hour** (which corresponds to about 5ppm x m). This MDL reflects capabilities of aerial detection technology (equipped with lasers and a detection threshold of about 120 l/h [5ppm x m] which would correspond to around 100 g/h). The widely spread transmission underground pipelines are often situated in areas that are not easily accessible. For instance, they run below fields, across mountains and rivers and within woods without access roads. Therefore, an additional technology has to be used, which would be a helicopter. As soon as a leak is detected, the operator locates the leak as close as possible to the source. For TSO grids, the cathodic protection and the pipeline integrity management ensures effective and preventive monitoring.
  - **For distribution,** we propose a MDL of **50 parts per million or 10 grams/hour**. LDAR surveys are carried out in a two-step approach. First, along the pipe routes either by car or by foot, through instruments that are characterized by a low detection threshold applicable to all components, which enables a detection at a distance. As soon as a leak is detected, the operator locates the leak as close as possible to the source in a second step. In addition to the LDAR surveys, the odorization of the gas ensures effective and continuous monitoring. A detection at contact level would therefore not improve leak detection, while significantly increasing the complexity, time and costs of the surveys.

- In regard to **repairs**, we support the Council's General approach in Article 14(4) of introducing repair thresholds, as it enables an effective deployment of resources. A small number of large leaks are

responsible for the main share of emissions. It is therefore important to prioritise the repair of significant leaks for the maximum impact in terms of emission abatement.

VI. Limits to venting and flaring (Article 15)

- In regard to **exemptions for non-routine venting and flaring**, we support Council's General Approach, with the addition of flaring for 'safety reasons' as proposed by the EP. Safety flaring (e.g. of purge gas or for pilot flames) must be recognized to enable imperatively needed safe operations of facilities, and to avoid otherwise resulting frequent production shut-ins (and possible related security of supply issues).
- In regard to **implementation schedule**, we support European Parliament's proposal, which allows for a flexible implementation schedule approved by the competent authority without being subject to corresponding penalties set by Article 30(3a).
- **Venting & Flaring provisions should better address proportionality and technical feasibility criteria** to ensure that the emission savings are implemented most efficiently. The most significant sources should be prioritized. The requirements in Article 15(4)(5) prove to be a cascading effect as they restrict the exceptions where Venting & Flaring cannot be completely eliminated in Article 15(3). There are specific cases where the emissions due to venting or flaring are small and equipment replacement or alternative methods like reinjection, on-site utilization, gas processing, or market dispatch are technically highly complex or unreasonably expensive. To address this cascading effect, we propose incorporating references to standards in Article 15(5b) and appropriate mitigation measures in Article 13(2) while removing the phrase "for reasons other than economic considerations" from Article 15(5). This ensures an efficient operation and prioritises significant emissions reduction by evaluating emission savings against technical feasibility and associated costs.
- **Deployment of non-emitting alternative venting equipment** should be subject to European standards, and to a minimum implementation time of 5 years. The unconditional obligation to replace equipment, in Article 15(4a), is not technically relevant or proportional. It requires a thorough impact assessment regarding its potential impacts on the European gas system, safety, and supply chain. A careful evaluation of the efficiency is necessary to ensure that the replacement is proportionate in terms of additional emission mitigations, technical feasibility and investment costs**.**

VII. Requirements for flaring standards (Article 17)

- In regard to **flare stack inspections**, we support EP proposal introducing remote or automated continuous monitoring devices as an alternative to weekly Audio, Visual and Olfactory (AVO) inspections. This avoids otherwise needed frequent production shut-ins which impacts security of supply, and in addition creates significant emissions from associated vented gas.
- In regard to **destruction and removal efficiency (RDE) of flare stacks**, we support Council's General Approach prescribing at least 98% RDE. However, we strongly encourage that 98% refers to the capability (design specifications) in a defined static environmental condition.

VIII. Inactive wells, temporarily plugged and abandoned wells (Article 18)

- In regard to **quantification of methane emissions for subsea wells**, we neither support Council's General Approach nor EP's proposal because:

- technologies to quantify methane emissions from subsea wells do not exist.[1] Hence it is not possible to *quantify* methane emissions from subsea wells.
- as of water depths of 200-300M, close to all methane possibly released from the seabed will be dissolved in the seawater and not reach the atmosphere.[2]

- In regard to **pressure monitoring of methane emissions from inactive wells and temporarily plugged wells for reporting purposes**, we support Council's General Approach. In the absence of appropriate quantification technologies in subsea environment, the regulation should focus on the finding and fixing of possible leaks and not on the quantification of emissions from leaks which need to be fixed anyway:
  - pressure monitoring is one of the established industry practices to detect leaks which serves this purpose;
  - pressure monitoring should be allowed as an *alternative* to quantification and not as an additional requirement.
- In regard to **definitions**, we support Council's General Approach to differentiate between 'inactive wells', 'temporarily plugged wells' and 'permanently plugged and abandoned wells'. However, definition on 'permanently plugged and abandoned wells' should be amended to:
  - ensure that it does not contradict existing OSPAR Convention rules, which enables the potential leaving-in-situ of installations/parts thereof;
  - recognise national regulations, which may not require well-head removals for plugged & abandoned wells.

  Further, definition for 'source' should exclude 'geological structure' as it includes natural occurring emissions, which is not in the scope of this regulation.

IX. <u>Importer requirements (Article 27)</u>

In regard to **import reporting requirements**, we support Council's General Approach ensuring that importers are not held liable – and therefore cannot be subject to penalties and sanctions – where all reasonable endeavours have been undertaken to acquire the information requested:

- importers have almost no contractual or legal leverage (and/or no control over quality of data provided) over the chain of operators involved in producing natural gas somewhere in the world and shipping it to Europe;
- even if implemented, reported data will likely not be comparable as no globally consistent and verifiable methane emissions reporting standard exists;
- finally and more importantly, prohibiting natural gas supplies to Europe because of possible non-compliance with the reporting obligations that in many cases cannot be complied with may put at risk Europe's security of supply in a time when Europe competes with Asia for remaining affordable supplies.

[1] Carbon Limits, "Overview of Subsea Methane Emissions Detection and Quantification Technologies", April 2023, https://www.carbonlimits.no/wp-content/uploads/2023/05/Overview-of-subsea-methane-emissions-detection-and-quantification-technologies.pdf

[2] SINTEF, "Oxidation of methane in seawater - Laboratory experiments and the use of models - OC2022 A-114", December 2022, https://sintef.brage.unit.no/sintef-xmlui/handle/11250/3038685