March 2021

Hydrogen and gas markets decarbonisation package

ClientEarth's detailed response to the Roadmap / Inception Impact Assessment

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Executive summary

The EU Commission's proposed 55% emissions reduction target for 2030 would require the bloc's consumption of methane (or so-called 'natural') gas to reduce 29-37% by 2030 (compared to 2015) and continue to decline to negligible levels by 2050.[1] Planning and regulation for gas and hydrogen must therefore take into account the declining role of methane gas overall. Clean alternatives to methane gas need to become commercially established rapidly, which means methane gas fuels must be exposed to competition from electricity and renewable gas. However, in order for these clean alternatives to become commercialised, specific regulation is required.

Given the significant economic and climate risks of overinvesting in methane gas, ClientEarth's response to the Roadmap/IIA consultation focuses on measures to avoid investment in methane gas and hydrogen projects at the cost of clean alternatives. It also outlines measures to appropriately allocate the risks of overinvestment in methane gas and non-delivery of speculative technologies to commercial entities instead of governments, taxpayers and consumers.

Our submission focuses on the following areas:

1. Parameters to ensure gas and hydrogen developments align with EU climate targets

If the EU is to meet its climate targets and avoid the financial risks associated with gas lock-in, the overriding consideration with respect to gas and hydrogen planning and regulation must be its alignment with the EU's climate targets. There is already substantial evidence of the EU's overinvestment in methane gas. To protect the EU's climate targets and budgets, regulation and planning decisions based in EU legislation relating to gas and gas-derived hydrogen must have strictly-defined legal parameters ensuring they comply with climate targets and do not foist the cost of failed investments onto consumers and taxpayers, as follows.

(a) Market access

In order to create a regulatory framework favourable for renewable gases, the climate costs of methane and carbon dioxide emissions should be integrated into the prices of all gases proposed to be used as energy sources. This should be done urgently, alongside the EU's proposed measures for addressing methane leaks in the energy sector.

Methane leakage: A methane product standard should apply to all gas and gas-derived hydrogen exported into and traded within the EU, along with the prescriptive regulatory measures for methane leakage that the Commission is currently considering separately.

Carbon dioxide emissions abatement: The Commission should consider making CCS equipment with at least 90% effectiveness a condition of market access for all gas energy generation facilities, with that standard improving over time.[2]

(b) System design and planning

Institutional reform: Wide-scale governance reform of gas markets is required, including through establishing independent oversight of energy system planning.

[1] 2030 Climate Target Plan Impact Assessment, Figures 6 and 37.
[2] IEA, 'Zero-emission carbon capture and storage in power plants using higher capture rates' (27 February 2021) https://www.iea.org/articles/zero-emission-carbon-capture-and-storage-in-power-plants-using-higher-capture-rates.

Climate target-compatibility should be the foundation of system planning: the Commission should consider introducing specific emissions reductions targets for methane in the energy sector, along with a legal basis for pricing methane.

Allocation of gas fuels: the climate constraints on methane gas and the availability constraints on clean and low-carbon gases mean that scarce gas fuels will need to be allocated to the hardest-to-abate applications. A clear evidence-based hierarchy of applications for limited gas supplies is needed, with energy efficiency and demand response solutions prioritised over new infrastructure development.

Integrate lifecycle emissions and economic assessments: all GHG, costs of association infrastructure, estimated cost of energy over time, and estimated costs of carbon dioxide disposal should be factored in.

(c) Public Finance

Any EU public financial support for methane gas or gas-derived hydrogen at this point in time would be a mistake, economically and climatically. There is evidence of the EU having overinvested in methane gas infrastructure, and there are clear advantages of bypassing methane gas-based hydrogen and moving straight to green hydrogen.[3] Where public support is nonetheless proposed for methane gas or hydrogen developments, it should be contingent on meeting specific conditions for reducing the risk of overinvestment.

2. Ensuring competition between energy solutions

We recommend that the Commission consider including an additional policy option to those outlined in the Roadmap/IIA, for 'supporting competition between gas and other energy solutions while integrating renewable gases based on climate targets'.

3. Product standard for gas and hydrogen

A product standard could incorporate limits on upstream, midstream and downstream methane emissions, and therefore would apply to emissions occurring overseas as well as within the EU. We urge the Commission to consider a phased approach to implementing a product standard on gas products by 2025.

4. Household consumer protection

Household consumers in some countries are incentivised to take up high-polluting heating solutions. As part of its review of gas market legislation, we urge the Commission to consider information campaigns to educate households of their expanding options (including electrified products) and to encourage greener choices, with protection from unjustified costs.

5. Transparency and terminology

The current gas package does not contain sufficiently clear standards for transparency. This should be addressed in the new legislation, along with a reconsideration of the framework permitting Member States to grant exemptions from EU gas markets legislation. The Commission should cease using the term 'natural gas' and should clearly delineate between regulation of renewable gases as opposed to low-carbon gases.

[3] Stefano Andreola, Andreola et al, 'No-regret hydrogen' (February 2021) *Agora Energiewende*: https://static.agora-energiewende.de/fileadmin2/Projekte/2021/2021_02_EU_H2Grid/A-EW_203_No-regret-hydrogen_WEB.pdf at pages 15-17.

Introduction

ClientEarth appreciates the opportunity to respond to the Commission's consultation on a hydrogen and gas market decarbonisation package. The EU's review of gas markets legislation is a once-in-ten-year opportunity to align regulation of gas with the EU's climate targets while preparing consumers for substantial change in the energy system.

The EU Commission's proposed 55% emissions reduction target for 2030 would require the bloc's consumption of methane (or so-called 'natural') gas to **reduce 29-37% by 2030** (compared to 2015) and continue to decline to **negligible levels by 2050**.[4] This means that planning for methane gas and hydrogen, and regulation of those gases, must take into account the **declining role of gas overall and the need to swiftly decarbonise it**. Clean alternatives to methane gas need to become commercially established, which means methane gas and gas-derived hydrogen must be **exposed to competition from electricity and renewable gas**. However, in order for these clean alternatives to become commercialised, specific regulation is required.

The gas industry is putting enormous resources into agitating for a supportive policy environment to further expand methane gas-based energy in the EU,[5] which is creating a serious problem of distorted decision-making, leading to **overinvestment in methane** gas. This risk is exacerbated through the following factors.

- Planning of gas and electricity infrastructure is **compartmentalised**, leading to a **lack of competition between gas and electricity** and **lock-in** of gas.
- The **gas industry has an unusually influential role** in determining the EU's energy planning and policy. For example, the umbrella group of gas network operators, ENTSOG, prepares the ten year network development plan which is used as the basis for gas infrastructure planning, and has significantly **overestimated methane gas demand**.[6]
- Gas companies present their business models to governments and consumers as climate-sound, and make **spurious claims about the future potential for gas emissions to be controlled and abated** through speculative technologies such as carbon capture and storage (**CCS**). A 2009 roadmap from the International Energy Agency projected that 22GW and 170 million tonnes of CCS would be installed by 2020, but only 13% of that was delivered.[7]
- Methane gas and gas-derived products are **not being properly priced to reflect their externalities**. There is **no EU framework for regulating methane leakage** in the gas supply chain or pricing emissions in the way the EU has addressed the other major greenhouse gas (**GHG**), carbon dioxide.

These factors all lead to **climate and economic risks for consumers and governments**, including:

[4] 2030 Climate Target Plan Impact Assessment, Figures 6 and 37.
[5] For example, EU logs were analysed by Reclaim Finance and shared with Reuters, showing that in the four months since the draft taxonomy rules were published, gas and nuclear industry representatives held 52 meetings with EU officials: https://www.reuters.com/article/us-europe-finance-lobbying-analysis/gas-and-nuclear-industries-fight-to-the-end-for-green-eu-investment-label-idUKKBN25L0GA?edition-redirect=uk.
[6] https://www.europeangashub.com/wp-content/uploads/attach_482.pdf page 6.
[7] IEA, 'CCUS in Clean Energy Transitions' (September 2020) https://www.iea.org/reports/ccus-in-clean-energy-transitions/a-new-era-for-ccus.

- **Public finance and infrastructure planning favouring methane gas** and gas-derived hydrogen over cleaner alternatives;
- **Overinvestment in methane gas**, with economic risks for governments, taxpayers and consumers;
- **Worse climate outcomes suffered by our children and their families**; and
- **Failure to prioritise investment in clean solutions** over methane gas.

Given the significance of these risks, ClientEarth's response to the Roadmap/IIA consultation focuses on measures to **avoid investment in methane gas and hydrogen** projects at the cost of clean alternatives and measures to **appropriately allocate the risk of overinvestment** in methane gas and non-delivery of speculative technology to commercial entities instead of governments, taxpayers and consumers.

Our response first outlines proposed parameters to ensure gas and hydrogen development align with EU climate and energy targets, including measures relating to market access, system design and planning and eligibility to public finance. Second, it describes the need to ensure competition between energy solutions. Third, it explains the importance of a product standard for gas and hydrogen as a means to encourage competition from clean alternatives to methane gas, and fourth it outlines considerations for consumer protection with respect to the changing gas market. Fifth, we identify areas for reform relating to transparency and use of terminology in official documents.

1. Parameters to ensure gas and hydrogen development align with EU climate and energy targets

If the EU is to meet its climate targets and avoid the financial risks associated with gas lock-in, the overriding consideration with respect to gas and hydrogen planning and regulation must be its alignment with the EU's climate targets.

The Commission's modelling on energy system requirements to meet a 55% reduction in emissions by 2030 shows that gas consumption in the EU must decline precipitously – by 29-37% by 2030. In light of those reductions, the EU should be extremely cautious in its regulation and planning around gas and hydrogen, and it should approach these tasks with a view to reducing gas dependence, while limiting the climate harm of gas locked into the energy system. There is evidence of the EU already having overinvested in gas infrastructure:

- A 2020 report by one of the Commission's own preferred consultancies, Artelys, concludes that 'the existing EU gas infrastructure is sufficiently capable of meeting a variety of future gas demand scenarios in the EU28, even in the event of extreme supply disruption cases.'[8]
- Global Energy Monitor's report in 2020 found that '[b]uilding all the gas infrastructure currently in preconstruction or construction would add more than 30% to the EU's current gas import capacity of 707 bcm per year. The EU already has large excess gas infrastructure.' It shows that the EU gas import capacity is nearly twice as high as EU gas consumption, and that EU gas-fired power plants generate only about one third the electricity that they could (see page 15).'[9]

As the Ombudsman's decision on a recent complaint about Projects of Common Interest showed, the Commission has a responsibility to properly integrate sustainability considerations into its decisions relating to gas development.[10] With respect to the gas package, this responsibility extends to avoiding gas lock-in.

Given the clear evidence of a substantial risk of overinvestment in gas, ClientEarth's view is that infrastructure planning and public investment should therefore not support expansion of gas supply or infrastructure in the EU, and that emissions from existing gas sources should be rapidly reduced. The evident need for rapid transformation in the energy sector is not reflected in the Commission's softly-worded Roadmap/IIA 'policy that facilitates a progressive phase out of unabated use of fossil gases via gradual replacement of natural gas and the uptake of renewable and low-carbon gases' – the gas industry and developers of renewable gases would benefit from more decisive indications and dates for the removal of unabated gas, and scientifically-grounded emissions reductions targets for all gas.

Further, a precautionary approach should be taken with respect to methane gas investment. While the carbon dioxide emissions associated with gas-fuelled energy are readily discernible, the EU itself

[8] Artelys, 'An updated analysis on gas supply security in the EU energy transition' (January 2020): https://www.artelys.com/wp-content/uploads/2020/01/Artelys-GasSecurityOfSupply-UpdatedAnalysis.pdf at page 3.
[9] Mason Inman, 'Gas at a Crossroads' (February 2020) *Global Energy Monitor*: https://globalenergymonitor.org/wp-content/uploads/2020/02/Gas_at_a_Crossroads_EU.pdf at pages 3, 9, 15.
[10] European Ombudsman, Decision in case 1991/2019/KR on the European Commission's action concerning sustainability assessment for gas projects on the current List of Projects of Common Interest.

acknowledges that it lacks reliable data on methane emissions, which occur throughout the methane gas supply chain. The most recent scientific studies are even finding that methane gas does not necessarily constitute a cleaner source of energy than coal due to its combined emissions of carbon dioxide and leaked methane.[11] A lack of data must not be used as a justification to expand the methane gas industry – this would constitute a fundamental failure to apply the precautionary principle set out in the Treaty on the Functioning of the European Union (**TFEU**),[12] on a mass scale.

To protect the EU's climate targets and budgets, regulation and planning decisions based in EU legislation relating to gas and gas-derived hydrogen must have strictly-defined legal parameters ensuring they comply with climate targets and do not foist the cost of failed investments onto consumers and taxpayers. In particular, we urge the Commission to have regard to the following proposed conditions for market access, system planning considerations, and decisions relating to public financial support.

Recommendation: To align with the EU's climate targets, infrastructure planning and public investment should not support expansion of gas supply or infrastructure in the EU, and emissions from existing gas sources should be rapidly reduced.

1.1 Market Access

The Roadmap/IIA provides that one of the specific objectives of the initiative is '[f]acilitating local and decentralised production of renewable and low carbon gases e.g. through facilitating access of bio- and synthetic-methane to the infrastructure (pipelines, storages and LNG terminals) and the market'. It also notes that the current regulatory 'focus on natural gas may lead to a situation in which it is more difficult to switch consumption from natural gas to renewable and low-carbon gases leading to lock-in effects or delays in a more significant deployment of renewable and low-carbon gases.'

[11] International Energy Agency, The Role of Gas in Today's Energy Transitions (2019) available at https://webstore.iea.org/download/direct/2819?filename=theroleofgas.pdf at page 41; Oil Change International, Burning the Gas 'Bridge Fuel' Myth: Why Gas is not Clean, Cheap or Necessary (2019): http://priceofoil.org/2019/05/30/gas-is-not-a-bridge-fuel/ at page 4; Ramon Alvarez et al, 'Greater focus needed on methane leakage from natural gas infrastructure', (2012)109(17) PNAS 6435, 6437: https://www.pnas.org/content/pnas/109/17/6435.full.pdf. In relation to LNG, see for example, NRDC's synthesis of LNG emissions studies from Carnegie Mellon University and the National Energy Technology Laboratory (**NETL**) at Christina Swanson and Amanda Levin, 'Sailing to Nowhere' (December 2020) NRDC: https://www.nrdc.org/sites/default/files/sailing-nowhere-liquefied-natural-gas-report.pdf at page 14. Studies available at Leslie Abrahams et al, 'Life Cycle Greenhouse Gas Emissions From U.S. Liquefied Natural Gas Exports: Implications for End Uses' (February 2015) *Environmental Science & Technology*: https://pubs.acs.org/doi/full/10.1021/es505617p; Timothy Skone et al, 'Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States' (May 2014) *NETL*: https://www.energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf; Selina Roman-White et al, 'Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update' (September 2019) *NETL*: https://www.energy.gov/sites/prod/files/2019/09/f66/2019%20NETL%20LCA-GHG%20Report.pdf. Note that the 2019 NETL found that life-cycle emissions for LNG exports from Algeria to Europe and from Australia to Asia were slightly higher than US LNG exports, but this study used different assumptions for both methane leakage rates and shipping distances.

[12] Article 191(2).

In order to create a regulatory framework favourable for renewable gases, the climate costs of methane and carbon dioxide emissions should be integrated into gas prices. This should be done urgently, alongside the EU's proposed measures for addressing methane leaks in the energy sector. The following specific requirements should therefore be conditions of market access for all gases.

1.1.1 Methane leakage regulation and sanctions

(a) **A methane product standard** should apply to all gas and gas-derived hydrogen exported into and traded within the EU. A product standard would provide a legal basis for Member States to integrate the climate cost of methane leaks into the price of methane-based gases. A product standard could also apply to the leaked methane that occurs outside the EU's borders in the upstream and midstream parts of the gas supply chain, thereby using the EU's status as the world's largest gas importer to incentivise reduced emissions beyond its borders. Further details on the mechanics of a product standards are included in section 4 and Annex A.
(b) **Mandatory methane leakage detection and repair**, as outlined in the joint response from ClientEarth and others on the consultation for an instrument to address methane leakage (**Joint Response**).[13]
(c) **Banning of venting and flaring**, as outlined in the Joint Response.[14]
(d) **Measurement, reporting and verification**, as outlined in the Joint Response.[15]
(e) **The current review of the Industrial Emissions Directive** (**IED**) also presents the opportunity for it to be updated to cover all GHGs, including upstream emissions in the energy sector. This would provide a mechanism for limiting methane (and other GHGs emissions) from the gas sector commensurate with climate targets.

1.1.2 Carbon dioxide emissions abatement

The Commission should consider making CCS equipment with at least 90% effectiveness a condition of market access for all gas energy generation facilities, with that standard improving over time.[16] The Roadmap/IIA acknowledged that unabated gas has a diminishing role in the EU's energy system, and indeed, based on the EU's climate targets, it could only have a very negligible role in 2030 and beyond. Gas companies are also demonstrating their confidence in the viability of CCS, by including it in their climate planning and their pitches for continued relevance in decarbonised energy systems. The use of carbon capture and storage on gas energy generation facilities should therefore be made a condition of market access.

Recommendation: In order to create a regulatory framework favourable for renewable gases and electrification, the climate costs of methane and carbon dioxide emissions should be integrated into gas prices. This should be done alongside the EU's proposed measures for addressing methane leaks in the energy sector. In particular, a **product standard for gas** would allow the EU to set limits on methane leaks associated with gas used in the energy system.

[13] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12581-Proposal-for-a-legislative-act-on-methane-leakage-in-the-energy-sector/F1465042at pages 4-7.
[14] Ibid pages 7-8.
[15] Ibid pages 3-4.
[16] IEA, 'Zero-emission carbon capture and storage in power plants using higher capture rates' (27 February 2021) https://www.iea.org/articles/zero-emission-carbon-capture-and-storage-in-power-plants-using-higher-capture-rates.

1.2 System design and planning

1.2.1 Institutional reform

In order to achieve the transformational energy system change needed to reach net zero emissions by 2050, the EU must take decisive and bold steps to improve energy system planning, including for gas. ClientEarth shares the view expressed by think tank E3G that '[t]here is little evidence that [gas, power and heating] infrastructure planning is co-ordinated or based on a rigorous interrogation of future risks and opportunities.'[17] We therefore urge the EU to consider governance reform, including through establishing independent oversight of energy system needs assessment and planning.

Recommendation: There is a strong need for reform of governance arrangements around gas infrastructure planning. This should allow for independent evidence-gathering and decision-making (separate from gas sector interests).

1.2.2 Climate targets are the foundation

The starting point for such planning should be how the energy system can be decarbonised in line with climate targets, and with the least cost to consumers and taxpayers. Such planning should take into account all GHGs caused by the use of gas, and assess at what rate those emissions need to decline. We therefore urge the Commission to consider whether existing emissions reductions measures such as the ETS and effort sharing legislation are sufficient to reduce energy system emissions, and if they are not, address this policy gap. As part of this assessment, the Commission should consider introducing specific emissions reductions targets for methane in the energy sector, along with a legal basis for pricing methane as outlined in sections 1.1.1(a), 3 and Annex A.

Recommendation: The Commission should consider whether existing emissions reductions measures such as the ETS and effort sharing legislation are sufficient to reduce energy system emissions, and if they are not, address this policy gap. As part of this assessment, the Commission should consider introducing specific emissions reductions targets for methane in the energy sector, along with a legal basis for pricing methane.

1.2.3 Allocation of gas fuels

If the EU successfully establishes governance structures and system planning mechanisms to align with net zero while protecting consumers and taxpayers, there will be a very limited role for methane gas and methane-derived hydrogen in 2030 and beyond. At the same time, there will also be constraints on the supply of clean and low-carbon gases. The limited amount of gas fuel should therefore be allocated to

[17] Simon Skillings, Felix Heilmann, Lisa Fischer 'Institutions fit for delivering climate neutrality' (25 February 2021): https://www.e3g.org/news/institutions-fit-for-delivering-climate-neutrality/.

those applications that are most difficult to abate, including industrial applications requiring high-temperature heat.[18]

System design and planning should use a clear evidence-based hierarchy of applications for these limited gas supplies. Planning decisions should also integrate a requirement that energy efficiency and demand response solutions are prioritised over new infrastructure development. This would help reduce the risk of significant stranded assets, and consequent financial risks. Pre-emptive and coordinated planning is particularly important in light of evidence that the EU's existing gas infrastructure is already adequate for what would be required to supply green gases to the bloc.[19]

Recommendation: System design and planning should use a clear evidence-based hierarchy of applications for limited gas supplies. Planning decisions should also integrate a requirement that energy efficiency and demand response solutions are prioritised over new infrastructure development.

1.2.4 Integrate lifecycle emissions and economic assessments

System design and planning decisions relating to gas should be based on assessment of the lifecycle climate impact and economic cost of all available energy solutions. This should include assessment of the:

(a) **lifecycle climate impacts of the energy solutions**, including all GHGs. For methane and other short-lived gases, the Commission should ensure the global warming potential conversions used are reflective of the short- and long-term climate implications of each energy solution;
(b) **economic cost of associated infrastructure** to deliver the energy solution. For example, the cost of pipeline and other infrastructure construction, maintenance or conversions that might be required for the energy to be delivered to end users;
(c) **estimated economic cost of the relevant energy over time**, using realistic forecasts of their likely cost curves. For example, the International Energy Agency has consistently underestimated the falling costs of renewable energies, while overestimating the role of CCS.[20]
(d) **estimated economic cost of any waste disposal** required for the energy solution – specifically, for CCS, the cost of storing carbon dioxide safely forever, or until it can be utilised.

1.3 Eligibility for public financial support

The Roadmap/IIA refers to the potential 'creation of a regulatory framework favourable for renewable and low carbon gases.' It also points out that in a baseline/no policy change scenario, '[i]nvestments in hydrogen infrastructure would be only privately financed and owned'. It is not clear whether any reforms of the Gas Directive or Gas Regulation would include new provisions for public financing of gas or hydrogen projects, but in case the Commission is considering this, we offer the following comments.

[18] See, for example, Stefano Andreola et al, 'No-regret hydrogen' (February 2021) *Agora Energiewende*: https://static.agora-energiewende.de/fileadmin2/Projekte/2021/2021_02_EU_H2Grid/A-EW_203_No-regret-hydrogen_WEB.pdf.
[19] Lisa Fischer, 'Renewable and decarbonised gas: options for a zero-emissions society' (12 June 2018) *E3G*: https://www.e3g.org/publications/renewable-and-decarbonised-gas-options-for-a-zero-emissions-society.
[20] By Zachary Shahan, 'IEA gets hilariously slammed for obsessively inaccurate renewable energy forecasts' (6 September 2017): https://cleantechnica.com/2017/09/06/iea-gets-hilariously-slammed-continuously-pessimistic-renewable-energy-forecasts/.

ClientEarth's firm view is that any EU public financial support for methane gas or gas-derived hydrogen at this point in time would be a mistake, economically and climatically. This is based on the EU's proven pattern of overinvesting in methane gas, the advantages of bypassing methane gas-based hydrogen and moving straight to green hydrogen,[21] and the adverse consequences further gas investment would have on future budgets, consumer costs and the climate. A recent report from NGO Global Witness found that in less than a decade, the EU has wasted nearly EUR440 million of taxpayers' money on gas projects that have either failed or are likely to fail.[22]

Where public support is proposed for methane gas or hydrogen developments, despite the clear arguments militating against it, such support should be contingent on:

(a) CCS technologies being mandatory for all generation facilities associated with the project (including where gas-derived hydrogen is imported for use in a project receiving EU public funding), to ensure overall CO2 emissions are limited in accordance with the EU's and relevant country's emissions reductions targets.
(b) An independently assessed plan should be provided detailing how captured carbon dioxide waste from the generation facility will be stored or utilised, and the estimated costs.
(c) Lifecycle methane leakage for the gas or hydrogen used in the relevant plant or infrastructure should be capped and reduced over time, based on the product standard proposed in section 4.
(d) For gas-derived hydrogen plants and infrastructure, a binding date should be set for the project to fully transition to renewable gas or hydrogen, based on the EU's and relevant country's emissions reductions targets.
(e) An independent assessment of the viability of conversion to renewable gas or hydrogen within the required timeframe should be provided, including details of the renewable fuel source and its proven additionality to the energy system.

Recommendation: To the extent the gas package reform deals with public finance, the Commission should preclude the possibility of EU public finance supporting methane gas or gas-derived hydrogen. Where public support is proposed for methane gas or hydrogen developments, despite the clear arguments militating against it, such support should be contingent on specific conditions for reducing the risk of overinvestment.

2. Ensuring competition between energy solutions

The current gas framework focuses on competition exclusively among methane gas undertakings. However, the foundational law underpinning the internal energy market does not provide for special treatment of gas. Article 194 of TFEU, the main provision on energy matters in the Treaties, refers to the establishment and functioning of an internal energy market. It does not distinguish between electricity, methane gas and other carriers.

The Gas Directive relies on a concept of energy security that is exclusive for gas ('security of supply of natural gas')[23] which disregards the contribution that electricity and other carriers can make to energy

[21] Stefano Andreola, 'No-regret hydrogen' at pages 15-17.
[22] Global Witness, 'EU companies burn fossil gas and taxpayer cash' (22 February 2021): https://www.globalwitness.org/en/campaigns/fossil-gas/eu-companies-burn-fossil-gas-and-taxpayer-cash/.
[23] Gas Directive, Article 2(32).

security. Again, this is not based on the Treaties. Article 194 of TFEU refers to 'security of energy supply' as one of the aims of the energy union, without providing for a specific concept of gas security of supply.

The recently approved Energy System Integration Strategy[24] calls for further integration of the energy system, defined as 'the coordinated planning and operation of the energy system "as a whole", across multiple energy carriers, infrastructures, and consumption sectors'.

The new framework should ensure that methane gas competes with other energy carriers such as electricity and heat, and other clean alternatives, such as energy efficiency and demand side response measures, while taking into account the corresponding climate and environmental impacts. It should also avoid using a definition of energy security restricted to gas, as this could encourage overestimating demand and infrastructure needs.

Recommendation: The Commission should consider including an additional policy option to those outlined in the Roadmap/IIA, for '**supporting competition between gas and other energy solutions while integrating renewable gases based on climate targets'**.

3. Product standard for gas and hydrogen

ClientEarth is concerned that there is currently no EU legislative foundation for Member States to price, tax or set a cap on methane emissions from gas, in line with the EU's principle that the polluter should pay.[25] The significance of methane leakage throughout the gas supply chain should not be underestimated – we are seeing more and more evidence that the scale of methane leakage could well make gas as climate damaging or more climate damaging than coal.[26]

The lack of rigorous methane regulation means that gas appears to be a more economically attractive energy source than it would if its climate impacts were integrated into its price in some way. Without a mechanism for pricing or taxing methane, it is unlikely that cleaner, lower- or no-methane gas products will have the incentives required to compete in the gas market – that is, without some emissions standard, it is difficult to see how a market for bio-methane, biogas and green hydrogen will develop.[27]

Regulation of methane emissions presents a different problem to that of carbon dioxide, in part because a substantial proportion of the emissions from gas consumed within the EU are known to occur outside the EU's borders. A product standard could incorporate limits on upstream, midstream and downstream methane emissions, and therefore would apply to emissions occurring overseas as well as within the EU.

[24] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Powering a climate-neutral economy: An EU strategy for energy system integration, COM/2020/299 final.
[25] TFEU Article 191(2).
[26] IEA, The Role of Gas in Today's Energy Transitions (2019) at page 41; Oil Change International, 'Burning the Gas "Bridge Fuel" Myth' at page 4; Ramon Alvarez et al, 'Greater focus needed on methane leakage from natural gas infrastructure' at page 6437.
[27] Voluntary schemes for certifying low emissions methane are being developed, but without a legislative foundation for pricing carbon, such schemes depend on consumers being willing to pay likely higher prices for cleaner gas. The EU recognised that consumer goodwill alone was not enough to achieve carbon dioxide emissions, and it should do the same with respect to carbon dioxide.

As such, we urge the Commission to adopt a product standard for methane throughout the gas sector as a condition of market access under the gas package. This would signal to the gas industry in EU trade partner countries that stringent emissions control is required in order to trade in EU gas markets. A product standard would also provide the legislative foundation for EU Member States to price methane (or apply a pollution tax) so as to make high methane-intensive gas products more expensive, which would in turn encourage competition from cleaner alternatives.

We urge the Commission to consider a phased approach to implementing a product standard on gas products by 2025, as follows:

(a) a methane product standard based on the gas industry's representations of what emissions intensity it can achieve - that is, by the start of 2025, 0.2% for upstream emissions,[28] and 0.12% for distribution-level emissions[29] with commensurate standards for midstream emissions; and

(b) if the Oil and Gas Methane Partnership and the EU's potential measurement, reporting and verification regime deliver accurate data over all gas and hydrogen sold in the EU, the methane product standard can be made more rigorous by requiring uniform compliance with the top 10% of gas market participants. This would apply alongside an absolute emissions 'ceiling' (based on the standards outlined in (a) or stricter requirements) to ensure emissions do not exceed a given limit.

A product standard should apply to all molecules sold within the EU, with all commercial entities required to show compliance with the standard at specified points in the supply chain. For example, from 1 January 2025, all EU entities buying gas products would be responsible for demonstrating the compliance of the purchased product with the relevant product standard.

Fatih Birol, the head of the IEA, has noted that ambitious policies for addressing methane leakage ahead of COP26 would bolster chances of improved global action.[30] The EU's development of a methane product standard as a condition of market access for gas would be an important signal of ambition. Further detail on the proposed implementation of a product standard is included at Annex A.

[28] As committed by the Oil and Gas Climate Initiative in 'Methodological note for OGCI methane intensity target and ambition': http://oilandgasclimateinitiative.com/wp-content/uploads/2018/10/OGCI-methane-target-Methodological-note-for-go-target.pdf.

[29] GIE and Marcogaz, 'Potential ways the gas industry can contribute to the reduction of methane emissions' (5-6 June 2019): https://ec.europa.eu/info/sites/info/files/gie-marcogaz_-_report_-_reduction_of_methane_emissions.pdf.

[30] https://www.bloomberg.com/news/articles/2021-01-18/global-methane-emissions-equaled-europe-s-carbon-footprint-in-2020?sref=tghVnhKl&srnd=premium&utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_content=20210118&utm_medium=email&utm_source=Revue%20Daily.

Recommendation: The Commission should consider a product standard for methane throughout the gas sector as a condition of market access under the gas package. A phased approach to implementing a product standard on gas products by 2025, could be as follows:

(a) a methane product standard based on the gas industry's representations of what emissions intensity it can achieve - that is, by the start of 2025, 0.2% for upstream emissions,[1] and 0.12% for distribution-level emissions[1] with commensurate standards for midstream emissions; and

(b) if the Oil and Gas Methane Partnership and the EU's potential measurement, reporting and verification regime deliver accurate data over all gas and hydrogen sold in the EU, the methane product standard can be made more rigorous by requiring uniform compliance with the top 10% of gas market participants. This would apply alongside an absolute emissions 'ceiling' (based on the standards outlined in (a) or stricter requirements) to ensure emissions do not exceed a given limit.

4. Household consumer protection

The Roadmap/IIA notes that '[i]n comparison to the electricity sector, the gas market framework lags behind on consumer protection.' A large portion of the reduced gas consumption by 2030 comes from decreasing gas use in buildings, which means that household consumer buy-in for a shift away from gas is essential. For household consumers to support this transition, it is crucial that they are well-informed of their consumer choices, encouraged to make greener choices, and protected from unjustified costs.

Recent publications from BEUC and the Regulatory Assistance Project highlight the economic risks of continued reliance on gas as a home heating fuel in the EU.[31] At the same time, ClientEarth is aware of consumer surveys being conducted by the gas and hydrogen industries which indicate that household consumers believe heat pumps are an inadequate form of heating for European homes generally. It is unclear whether such surveys are part of a concerted campaign to mislead consumers about the suitability of heat pumps, or to convince decision-makers that consumers would prefer gas over clean energy. Decision-makers seem to be supporting this intransigence: the European Environmental Bureau has shown that a plethora of subsidy schemes to increase home heating energy efficiency are promoting the use of gas boilers rather than a move away from gas, particularly in less wealthy EU countries.[32]

As part of its review of consumer protection under the gas package legislation, we urge the Commission to consider requirements for information campaigns to educate household consumers of their expanding choices, including electrified alternatives to gas products.

However, electrification will likely lead to a rise in the price of energy for the final household consumers. The Commission should therefore consider measures to avoid placing excessive burdens of the energy

[31] BEUC, 'How to make the home heating and cooling revolution consumer-friendly: Position paper' (22 February 2020): https://www.beuc.eu/publications/beux-x-2021-017_heat_decarbonisation.pdf; Louise Sunderland, "Blog: Getting off gas: Future risks for energy poor households" (July 16, 2020) Regulatory Assistance Project (RAP): https://www.raponline.org/blog/getting-off-gas-future-risks-for-energy-poor-households/; Louise Sunderland,. et al, 'Equity in the energy transition: Who pays and who benefits?' (May 2020) Regulatory Assistance Project: https://www.raponline.org/wp-content/uploads/2020/05/rap-sunderland-etal-equity-in-energy-transition-May-2020-final.pdf.

[32] Maruo Anastasio, 'Stop funding new gas boilers – NGO and industry letter' (3 August 2020) *European Environmental Bureau:* https://eeb.org/stop-funding-new-gas-boilers-ngo-and-industry-letter/.

transition on household consumers, including by combining regulation with fiscal incentives, as outlined by E3G in their response to the Roadmap/IIA.

Recommendation: The Commission should consider requirements for information campaigns to educate household consumers of their expanding choices (including electrified products) and to encourage greener choices, with protection from unjustified costs.

5. Transparency and terminology

5.1 Transparency

Transparency is an essential requirement for the effective and efficient functioning of energy systems. Access to market information allows operators to understand markets and read their signals, and enhances competition by compensating for the more limited access to information that smaller operators obtain directly through their business activities.[33] Transparency also helps detect and prevent market abuse, and will be essential for ensuring that the reform of the methane gas framework truly leads to further energy system integration and to rapid decarbonisation.

While transparency is mentioned in the current framework for methane gas with respect to many important areas, often it is not translated into clear, detailed obligations. Some of the areas that need improved transparency provisions include the granting of exemptions,[34] methane gas transmission tariffs,[35] and processes of decision making, such as the preparation and implementation of ten year network development plans for gas.[36]

Recommendation: The Commission should ensure improved transparency by establishing concrete, detailed transparency obligations for market operators, regulators, Member States and EU bodies in connection to the gas market.

5.2 Legislative exemptions for gas infrastructure

Article 36 of the Gas Directive allows for exemptions from the general regulatory framework to be granted to major new methane gas infrastructure, namely interconnectors, LNG terminals and storage facilities. The exact nature and conditions of the exemptions granted, as well as their duration, are determined by the national regulator with some oversight by the EU Commission. This system has led to methane gas facilities often benefitting from tailored regimes that stymie competition and market transparency.

[33] E. Michetti, 'Transparency in the European Wholesale Energy Markets: Filling the Regulatory Gaps', *Florence School of Regulation* (June 2011).
[34] Gas Directive, Article 36.
[35] Agency for the Cooperation of Energy Regulators, 'The Internal Gas Market in Europe: The Role of Transmission Tariffs' (April 2020): https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/The%20internal%20gas%20market%20in%20Europe_The%20role%20of%20transmission%20tariffs.pdf.
[36] Gas Directive, Article 22.

Both ACER and CEER have raised concerns about the lack of transparency around the availability and use of exemptions from the general framework of the Third Gas Directive. In its 2019 Market Monitoring Report, ACER noted that certain access provisions are perceived as not being sufficiently transparent.[37] In addition, it cautioned that a level playing field for competition between exempted and non-exempted LNG terminals is difficult to establish, given that many obligations on transparency only apply to non-exempted terminals.[38]

CEER has also acknowledged this transparency issue around exempted LNG terminals. CEER noted that exempted terminals are not obliged to, and do not, publish some commercial information (e.g. tariffs or contracts) where they consider it commercially sensitive. CEER notes that this prevents a true level playing field being established between LNG terminals. This is particularly the case when in a given area non-exempted LNG terminals offer similar services to those of nearby exempted LNG terminals.[39]

We recommend that the Commission reconsider the conditions under which exemptions from market rules are granted, the obligations that can be exempted, and whether there is any reasonable justification for exemptions to be made available to methane gas or other non-renewable gases, in light of the need to swiftly decarbonise the energy system and avoid methane gas infrastructure lock-in.

Transparency and openness around the procedure for granting exemptions should also be substantially improved. Currently there are no public consultation requirements relating to the review undertaken by the Commission of the exemption decisions received from national regulatory authorities. Furthermore, exemption decisions are reviewed based on Guidelines that were approved when the Second Gas Directive was still in force,[40] where the provision regulating exemptions used slightly different language.[41] Lastly, these Guidelines do not set out the procedure to be followed for the application of paragraphs 3, 6, 8 and 9 of Article 36 as laid down in Article 36(10).

Recommendation: The Commission should reconsider the conditions under which exemptions from market rules are granted for gas projects, the obligations that can be exempted, and whether there is any reasonable justification for exemptions to be made available to methane gas or other non-renewable gases, in light of the need to swiftly decarbonise the energy system and avoid methane gas infrastructure lock-in.

[37] Also referencing a study on gas market upgrading and modernisation recently prepared for the European Commission. Cf: https://op.europa.eu/en/publication-detail/-/publication/efa4d335-a155-11ea-9d2d-01aa75ed71a1/language-en.
[38] ACER, Market Monitoring Report 2019 – Gas Wholesale Market Volume, September 2002. https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Monitoring_Report_2019-Gas_Wholesale_Markets_Volume.pdf.
[39] CEER, 'How to Foster LNG Markets in Europe' (July 2019) at page 19: https://www.ceer.eu/documents/104400/-/-/57d62db2-db0a-e611-2a49-85703d1d54d6.
[40] Commission staff working document on Article 22 of Directive 2003/55/EC concerning common rules for the internal market in natural gas and Article 7 of Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity, SEC(2009)642 final.
[41] Art. 22, Directive 2003/55/EC concerning common rules for the internal market in natural gas.

5.3 Terminology

There is a pervasive problem of greenwashing by the gas industry – many of the world's largest gas companies are engaged in a systematic and egregious campaign to deceive decision-makers and consumers that their products are clean and their business models are fit for a net zero world in 2050. ClientEarth is concerned that decision-makers' tacit adoption of the preferred nomenclature of the gas industry perpetuates the problem of greenwashing. We draw the Commission's attention to the term 'natural gas'. Both the Gas Directive and Gas Regulation (including their full titles) refer to methane-derived gas as 'natural gas'. The Roadmap/IIA also uses this language, except for a clarification in Section A, where it concedes that natural gas is indeed "fossil methane". In light of the severe climate impacts of methane, we urge the Commission to cease use of this terminology in all future communications and legislation. Yale University has conducted studies on the misleading nature of the term 'natural gas' and has suggested alternatives such as 'fossil gas' or 'methane gas'.[42] The Commission's communications and legislative proposals should set the appropriate standard in avoiding terms that unconsciously create a false impression of environmental safety.

ClientEarth also seeks to emphasise that in order to establish markets for clean gases, they will require different regulatory treatment to low-carbon gases – each has different fuel sources, emissions profiles, technology requirements and timeframes of use in EU's decarbonising energy system. As such, EU policy and legal documents should not conflate the terms 'renewable' and 'low-carbon'. As clean fuels become more important to the EU's decarbonisation agenda, decision-makers and consumers will need clear language to delineate between them and fossil fuels, and this effort should start with official documentation.

Recommendations: In light of the severe climate impacts of methane gas, the Commission should cease use of the innocuous-sounding term 'natural gas' in all future communications and legislation.

The Commission should also be avoid conflating the terms 'low carbon gases' with 'renewable gases', as this distinction will be increasingly important in achieving EU climate targets.

[42] Karine Lacroix, 'Should it be called "natural gas" or "methane"?' (1 December 2020) *Yale Program on Climate Change Communication*: https://climatecommunication.yale.edu/publications/should-it-be-called-natural-gas-or-methane/.

Annex A

Introduction

This Annex focuses on the need for swift regulation to introduce a methane product standard on gas (including methane/natural gas, biomethane and biogas) and gas-derived hydrogen (collectively referred to as **gas products**) as a measure for limiting methane emissions. A methane product standard is a regulatory measure that sets a limit on the lifecycle methane emissions of a given molecule of methane. It is an environmental measure within the EU's competence, and can be used as the basis for Member States to appropriately price methane emissions. A methane product standard for gas products is analogous to standards that apply to carbon dioxide emissions in a number of EU instruments governing the internal energy market. It would therefore be logical and administratively efficient for parallel standards to be introduced for methane emissions in gas markets legislation. Further details of how such a measure could work are set out below.

This response first explains the importance of developing and introducing a methane product standard alongside comprehensive measurement reporting and verification (**MRV**), leakage detection and repair (**LDAR**) and banning routine venting and flaring requirements (referred to collectively as **prescriptive measures**). Second, it discusses design of such a product standard, and third, an implementation methodology. Fourth, it examines how regulatory equivalence between jurisdictions could improve methane emissions reductions.

1. The need for product standards

1.1 Product standards allow methane regulation to align with the EU's climate targets

Prescriptive measures to address methane leakage are an important component of effective methane regulation, but on their own are insufficient to address the methane leakage problem at the scale and pace needed to align EU emissions with climate targets. This is because prescriptive measures do not define a limit on overall emissions. Considering most of the EU's gas supply is imported,[43] and that some methane leaks throughout the whole gas lifecycle from extraction to combustion, design of a methane product standard will need to take into account emissions from the whole supply chain of gas products.

By introducing a measure limiting methane emissions in addition to prescriptive methane regulations, the EU could significantly strengthen the incentives for methane emissions reductions throughout the EU fossil energy supply chain. Such a measure should be set to ensure methane emissions reductions align with the EU's climate targets.

1.2 Any new gas and hydrogen projects in the EU should have full visibility of the EU's expectations on methane emissions reduction

The EU has failed to effectively regulate methane emissions, to the point where methane now presents a serious risk to the bloc overshooting its climate targets. Unlike measures regulating carbon dioxide in the EU, methane is not effectively covered by an emission trading scheme, and the negative externalities related to methane emissions are not included in the price of methane-derived products.

[43] In 2018, the EU's dependency rate on energy imports was 55%: https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2a.html.

Other jurisdictions with far less ambitious climate rhetoric than the EU have already taken measures to cap emissions of methane. The IEA identifies Mexico, Nigeria, Canada and the US as having national or sectoral methane reduction targets and plans, while each of those countries except Nigeria has facility/company and process equipment emissions standards.[44]

At the same time, gas and hydrogen companies are seeking special legislative treatment and increased investment under the guise of helping the EU reach its climate targets. However, system planning and public and private investments in gas products should be considered in light of transparent expectations of the emissions reductions required of those energy sources. An EU product standard would provide regulatory and legal certainty across the supply chain and create consistency of approach and outcomes across all relevant national and regional methane policy frameworks.

The EU can, and should, build on the initiative of the above-mentioned countries by mandating product standards for gas products, alongside prescriptive regulatory measures such as banning routine venting and flaring. A comprehensive and independent MRV framework will help to increase understanding of the key processes contributing to methane emissions but is not necessary for a methane product standard to be introduced. Furthermore, our proposed phased approach for a product standard (set out below) is based on the gas industry's own estimates of the methane emissions reductions which it considers achievable by 2025. The EU has an important opportunity to ensure these claims have legal substance by signalling that planning for compliance with the product standard should begin now so that compliance is achieved by 2025.

1.3 The EU can influence global action on methane leakage

The EU's opportunity to influence methane emissions from fossil energy should not be underestimated. While LDAR, MRV and bans on methane venting and flaring are all necessary responses to the problem of methane leakage, on their own they are unlikely to deliver the most effective and economically efficient methane reductions. A methane product standard, in contrast, would allow the EU to establish clear benchmarks for reducing methane leakage throughout the fossil energy supply chain, thereby ensuring compliance with the EU's climate targets, including from entities wishing to sell into the EU's internal market, while creating strong signals and incentives for industry to achieve rapid methane emissions reductions.

1.4 Performance standards provide clear signals to innovate

By introducing an ambitious methane emissions limit measure, the EU is also likely to encourage technological innovation and commercialisation to stop methane leakage. Experience with the EU's gas market liberalisation shows that third country suppliers to the EU respond more effectively to simple, clear requirements which, if not complied with, can result in material commercial losses. We believe that the low risk of material commercial risk relating to methane emissions is the main reason oil and gas producers opt for inaction on methane despite the fact that almost 75% of current methane leakage can be avoided using existing technologies.[45]

The IEA has admitted that these solutions are not being widely taken up voluntarily.[46] If methane limits are imposed and enforced through clear, dissuasive penalties, these technologies are more likely to be adopted, which will likely in turn bring down their costs and encourage further innovation to improve emissions abatement and climate outcomes. Beyond reductions in the gas industry, such technological innovation could also improve emissions reductions from the oil and coal industries.

[44] IEA, 'Driving Down Methane Leaks from the Oil and Gas Industry' https://www.iea.org/reports/driving-down-methane-leaks-from-the-oil-and-gas-industry.
[45] https://www.iea.org/reports/driving-down-methane-leaks-from-the-oil-and-gas-industry/regulatory-toolkit.
[46] International Energy Agency World Energy Outlook 2017 available at https://www.iea.org/reports/world-energy-outlook-2017.

2. Design of product standard

2.1 Setting of product standard

We urge the Commission to consider a phased approach to implementing a product standard on gas products by 2025, as follows:

(a) a methane product standard based on the gas industry's representations of what emissions intensity it can achieve - that is, by the start of 2025, 0.2% for upstream emissions,[47] and 0.12% for distribution-level emissions, and commensurate levels of midstream emissions;[48] and
(b) if the Oil and Gas Methane Partnership and the EU's new MRV regime deliver accurate data over all gas and hydrogen sold in the EU, the methane product standard can be made more rigorous by requiring uniform compliance with the top 10% of gas market participants. This would apply alongside an absolute 'ceiling' (based on the standards outlined in (a) or stricter requirements) to ensure emissions do not exceed a given limit.

A product standard should apply to all molecules sold within the EU, with all commercial entities required to show compliance with the standard at specified points in the supply chain. For example, from 1 January 2025, all EU entities buying gas products would be responsible for demonstrating the compliance of the purchased product with the relevant product standard.

2.2 Standards to be updated through dynamic regulation

Technology and operational and organisational procedures for methane emissions measurement are evolving quickly, and so legislation for a product standard should take into account the need for dynamic regulation both in terms of the capabilities for monitoring and enforcement and what the gas sector can achieve.

Verifying compliance with a product standard will become easier by 2025. The lead time for further development of space technology for methane measurements is 2-5 years.[49] Environmental Defense Fund and Copernicus expect the global earth observation capability for methane to evolve to the point where it will be able to detect and accurately measure emissions at least at the basin level, and some technology developers expect to be able to measure at the facility level.[50] There are ongoing public and private global efforts to reconcile bottom-up estimates with top-down measurements and this means that some regions e.g. emissions from the Permian Basin in the U.S. will likely be understood before that. This improved ability to monitor emissions, along with strong regulatory incentives (such as holding companies to the standard of the best 10% of operators), will also facilitate stronger action within the gas sector.

To ensure relevance with the 2030 and 2050 climate target and the necessary agility required to take into account progress in science and technology, legislation for a methane product standard should also include an annual review clause to consider more accurate data delivered through the International Methane Emissions Observatory (**IMEO**), industry, and other public and private information service providers.

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[47] As committed by the Oil and Gas Climate Initiative in 'Methodological note for OGCI methane intensity target and ambition': http://oilandgasclimateinitiative.com/wp-content/uploads/2018/10/OGCI-methane-target-Methodological-note-for-go-target.pdf.

[48] GIE and Marcogaz, 'Potential ways the gas industry can contribute to the reduction of methane emissions' (5-6 June 2019): https://ec.europa.eu/info/sites/info/files/gie-marcogaz_-_report_-_reduction_of_methane_emissions.pdf.

[49] https://www.esa.int/Applications/Observing_the_Earth/Copernicus/Sentinel-5P/Mapping_high-resolution_methane_emissions_from_space.

[50] https://www.esa.int/Applications/Observing_the_Earth/Copernicus/Sentinel-5P/New_Space_satellite_pinpoints_industrial_methane_emissions.

3. Implementation methodology

3.1 Compliance requirements

Based on the above design elements, purchasers of gas products within the EU could be required to demonstrate that they buy a given proportion (say at least 40% and scaling up by 10% to reach 100% over six years) of their gas products from supply chains with verified compliance with the product standard. For imports, this could be achieved through a procurement standard included as a condition in EU import purchasing contracts, linked to volume and/or price, and also through mandatory conditions for exporters to bid for EU tenders.

Such an approach is analogous to FLEGT, which prohibits the import of illegal timber to the EU and provides for the licensing of suppliers who have demonstrated appropriate due diligence of their supply chains. Illegally-logged timber is a useful analogue for gas products with high methane leaks, given that the EU is seeking to reduce trade in both of those commodity sub-groups, and create a more appealing market for their greener alternatives.

3.2 Certification and sanctions for non-compliance

Successful implementation of a product standard will require parties involved in trade of gas products to meet clear certification obligations. This would involve an obligation for companies throughout the supply chain to disclose emissions, supported by a certification system administered by either a public or private entity checking compliance with EU standards.[51] This system could be run by an EU-administered body working in coordination with the Agency for the Cooperation of Energy Regulators (**ACER**) and the national energy regulators (**NRAs**) and acting as a 'European Methane Emissions Observatory'. This entity would preferably be integrated into the existing EU Energy Markets Observatory administered by DG ENER and mandated to collect, audit and make public measurement data available through IMEO and other public and private methane emissions data providers. Such a measure would require that both ACER and the NRAs have a clear mandate, and adequate resources, for monitoring compliance and certification procedures.

Non-compliance with the EU standards would result in financial sanctions (to be determined at national level), including methane taxes, prices, tradeable permits or levies. This will require the EU to provide a legal basis enabling NRAs and national and regional governments to administer proportional and dissuasive sanctions on all non-compliant gas product transactions, including through pipeline, LNG, long-term contract or spot market transactions.

Although the sanctions for non-compliance would be applied to responsible entities within the EU, such costs could be transferred through commercial arrangements to the upstream (and, where relevant, overseas) parties through contractual price adjustments. Once the certification system is developed, a market would be established for lower emission fossil energy, with prices reflecting the emissions-compliance of the cleaner fossil energy compared to higher emissions fossil energy (to which levies/taxes have been applied).

For foreign parties involved in trade of gas products with Europe which fail to demonstrate compliance, the Commission apply an emissions factor based on the best available data relating to the region in which those parties operate. We therefore support the Commission's intention to provide incentives for assessment of reasonable emission factors which would more accurately represent different regions from where it imports gas products. We see that this can be an incentive to trigger both public and private-sector action, which would place the burden of proof on those regions and producers to demonstrate better actual performance.

[51] Such a certification system could take a similar form to the EU's Trade Control and Expert System (which applies in the context of certifying organic produce imports).