

GRTgaz's contribution to the feedback on the delegated acts for taxonomy of sustainable investments

Introduction

GRTgaz is fully committed to the Paris Agreement and supports the European Commission's ambition to reach climate neutrality in 2050. As a leading gas infrastructure operator, we are ready to assume our responsibility and put our infrastructure to good use in service of the energy and ecological transition. We welcome the opportunity to provide feedback on the two first draft delegated acts on climate change mitigation and adaptation complementing the Taxonomy Regulation, which we believe is essential to deliver on the climate neutrality objective by 2050.

Whilst the draft proposal counts several positive improvements, attention should be paid to significant shortcomings that still need to be overcome for encouraging an inclusive investments approach in zero and low carbon activities that can contribute to climate neutrality. Therefore, we provide with general comments on the principles that should be respected and invite for certain clarifications directly in the text of the draft proposal.

Key principles

Technological neutrality

The Taxonomy Regulation sets out the principle of technological neutrality (Article 19.1) should be adopted to define the Technical Screening Criteria (TSC). However, the proposed delegated acts do not reflect this principle. We would like to recall the importance of **treating all technologies equally without any bias towards few technologies based on political choices rather than best available technologies**. This is fundamental to support the emergence of promising technologies with significant abatement potential and transitional technologies to allow for a system resilient, inclusive and cost-efficient transition.

We welcome the better integration of several activities related to renewable and low carbon gases, especially the new category on infrastructure for transmission and distribution of these gases. However, GRTgaz would like to draw attention on **several technologies, which contribution to climate change mitigation and adaptation is not yet well encompassed by the proposed TSC**. We support the consideration of electrolysis technology for renewable hydrogen production (3.2 and 3.9), but **call the Commission to include the technologies necessary for the production of hydrogen, notably SMR/ATR with CCUS and pyrolysis**.

Besides, **the TSC for bioenergy tend to fail in capturing the environmental benefits of bioenergy and reflect a biased approach on technology** for the energy transition. **The classification of bioenergy under a transition activity reflects this bias** that will deprive the EU of a significant low carbon energy sources for its transition. In this respect, **we also consider essential to base TSC in the transport section on life-cycle approach** rather than on tailpipe, which fails to entail the environmental benefits of renewable and low carbon gases and their decarbonisation potential for mobility.

Consistency with the EU energy and climate policies

GRTgaz also notes a lack of consistency between EU energy and climate regulations and the proposed TSC.

The TSC should respect relevant EU acquis, which was developed according to well-established and transparent legislative processes, including in-depth impact assessments and stakeholder consultations. **The delegated acts should not set forth new, revised methodologies and metrics, nor more restrictive GHG emissions savings and sustainability criteria other than those already applicable under existing, sector-specific EU regulation** (such as the Energy Efficiency Directive, the Renewable Energy Directive, the Clean Vehicles Directive, etc.). While many of these regulations will be revised next year in light of the EU Green Deal ambitions, the delegated acts should not anticipate nor forego the outcome of these revisions. **Otherwise they will create huge legal confusion, risk disrupting the proper market functioning due to changes to applicable regulatory frameworks, impact investors' trust and distort competition in the EU internal market.** More specifically, if the thresholds for economic activities depart from the requirements already set in the EU Acquis, it will create uncertainty for public and private investments. In these conditions, the taxonomy will not be able to meet its main goal, which is to incentivise sustainable investments.

Therefore, the TSC should reflect **and pursue a coherent approach to the energy transition by ensuring that both electrons and molecules can contribute to more sustainable and reliable models.** In practice, the retrofitting and repurposing of existing assets and investments in new assets should also be taxonomy eligible when a substantial improvement can be demonstrated (energy efficiency/environment and/or climate performance of the asset).

Focusing on bioenergy, **GRTgaz considers as fundamental to recognise activities complying with the Renewable Energy Directive as sustainable as set forth in article 10.1.** Several TSC going beyond existing regulations, especially in section related to bioenergy, bring **an undue and unjustified constraint** to the activities. Then, the **contribution of alternative fuels such as bioLNG and LNG** to climate change mitigation and adaptation should also be better considered within the Taxonomy. **Based on the Clean Vehicles Directives (CVD),** vehicles propelled by natural gas in all forms, renewable and fossil, gaseous and liquefied qualify as a clean vehicle. **The threshold proposed for mobility (50g CO₂e/pkm), based on a tailpipe approach, fails to capture the benefits provided by natural gas as fuel and to a greater extent by biomethane.** In comparison with petrol and diesel, natural gas generates already a GHG emission reduction of up to 23% from well-to-wheel. **The GHG emissions of NGVs even decrease by 80%, when considering biomethane.** Thus, the TSC should **rely on a life-cycle analysis focusing on a well-to-wheel approach** and be consistent with current legislation on mobility.

Feasibility: Technical screening criteria should be ambitious but achievable for every sectors

While the TSC needs to be ambitious to be consistent with the EU decarbonisation pathways, they also have to be achievable for every economic activities. In this respect, the TSC need to be consistent with the Best Available Techniques.

In this respect, all economic activities meeting the TSC on GHG emission values for sustainable activities should be considered as significantly contributing to climate change

mitigation. This requires a **proper recognition of transitional activities, included those based on gas, with a dedicated and credible threshold to avoid excluding investments in the technologies required for the transition**. Such dedicated threshold should reflect a credible path towards climate neutrality, and be averaged over the economic lifespan of the asset (article 10.2 of Taxonomy Regulation and 2019 EIB revised energy lending policy). Hence, **the threshold defined for power generation from gaseous and liquid fuels (100gCO₂e/kWh) should better acknowledge its role in facilitating the energy transition**: affordable energy, decarbonisation of hard-to-abate sectors such as industry and mobility, coal-to-gas-switch, integration and management of intermittent renewable energy sources. **The transport of growing shares of renewable and low carbon gases will enable to decarbonise the gas grid preventing any lock-in risk**. Therefore, once gas assets are **100% greened through the replacement of natural gas by renewable, decarbonised and low carbon gases, such economic activity should no longer be considered as transitional activity but be fully recognised as sustainable activity**. This aspect is both fundamental to technological neutrality and to provide clarity and certainty to stakeholders of this value chain that will need to invest significant amount to reach the threshold.

Necessary clarifications in respect of the TSC for the qualification of activities as sustainable

4.14 Transmission and distribution networks for renewable and low-carbon gases

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p><i>4.14: Transmission and distribution networks for renewable and low-carbon gases</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>Repurposing of gas networks for the distribution of gaseous fuels through a system of mains.</p> <p>Repurposing of gas networks for long-distance transport of renewable and low-carbon gases by pipelines.</p> <p>Construction or operation of transmission and distribution pipelines dedicated to the transport of hydrogen or other low-carbon gases.</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>1. The activity consists in one of the following:</p>	<p><i>4.14: Transmission and distribution networks for gaseous fuels including renewable and low-carbon gases.</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>Repurposing and/ or operation of gas networks for the distribution of gaseous fuels through a system of mains and their connections.</p> <p>Repurposing and/or operation of gas networks for long-distance transport of renewable and low-carbon gases, including blended with natural gas, by pipelines.</p> <p>Construction or operation of transmission and distribution pipelines adapted to dedicated to the transport of hydrogen or other low-carbon gases.</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>1. The activity consists in one of the following:</p>

<p>(a) construction or operation of new transmission and distribution networks dedicated to hydrogen or other low-carbon gases;</p> <p>(b) conversion/repurposing of existing natural gas networks to 100 % hydrogen and retrofit of gas transmission and distribution networks, where the main purpose is the integration of hydrogen and other low-carbon gases, including any gas transmission or distribution network activity, which enables the network to increase the blend of hydrogen or other low carbon gasses in the gas system;</p> <p>2. The activity includes leak detection and repair of existing gas pipelines and other network elements to reduce methane leakage.</p>	<p>(a) construction or operation of new transmission and distribution networks adapted to dedicated to hydrogen, or other renewable and low-carbon gases, or a blend of those gases with natural gas;</p> <p>(b) conversion/repurposing of existing natural gas networks to up to 100 % hydrogen and retrofit of gas transmission and distribution networks, where the main purpose is the integration of hydrogen and other low-carbon gases, including any gas transmission or distribution network activity, which enables the network to increase the blend of hydrogen or other low carbon gasses in the gas system;</p> <p>2. The activity includes leak detection and repair or any adaptation of existing gas pipelines and other network elements to reduce methane leakage,</p>
<p>Adaptation objective - Annex 2</p> <p><i>Do no significant harm ('DNSH')</i></p> <p>(1) The repurposing does not increase gas transmission and distribution capacity. The repurposing does not extend the lifespan of the networks beyond their pre-retrofit projected lifespan, unless the network is dedicated to hydrogen or other low-carbon gases.</p>	<p>Adaptation objective - Annex 2</p> <p><i>Do no significant harm ('DNSH')</i></p> <p>(1) The repurposing does not increase gas transmission and distribution capacity The repurposing does not extend the lifespan of the networks beyond their pre-retrofit projected lifespan, unless the network is dedicated to hydrogen, or other low-carbon gases or blending thereof.</p>

Justification:

The proposed amendments intend to address three important issues

1. **The scenario of blending of gases when it comes to repurposing or construction of new infrastructure:** Indeed, the current wording is not clear when it comes to blends of different types of low carbon gases in the case of construction of new pipelines dedicated to renewable/low carbon gases or in the case of repurposing of the existing ones. The EU should **leverage existing assets and use existing gas infrastructure for renewable and low-carbon gases or blends thereof** to save time, possible environmental impact (DNSH), and costs compared to substantial power transmission expansion. To complement this, **the development of a dedicated hydrogen infrastructure and the ability to blend hydrogen with natural gas until full decarbonisation is key.** Blending should be allowed for existing and new infrastructure provided that they are compatible with an integrated energy system in order to address the security of supply and market integration needs still present in some regions of Europe and the need for a cost-efficient transition towards the full decarbonised energy system by 2050, respecting the Member States' freedom to decide their energy mix.

2. **Inclusion of all possible investments for reduction of methane emissions:** We fully support that investments should be conditional to initiatives for reduction of methane leakage of the transmission and distribution infrastructure. **Actions are already being taken by TSOs and DSOs and need to be reflected by the wording of paragraph 2.** Such actions can include addition of equipment such as vapor-recovery systems. **We propose a wording of larger scope to include the addition of relevant asset elements in the existing infrastructure.**
3. **Definition of the term of low carbon gases:** There is currently no EU definition of 'low-carbon gases'. It is important to ensure consistency between the EU taxonomy and the upcoming terminology and certification system for renewable and low-carbon gases/fuels as announced by the EU Commission. Sustainable biomethane (compliant with REDII) should in any case be included in the definition of low carbon gases, as well as hydrogen and synthetic gases meeting the CertifHy threshold.

4. Activities related to gaseous and liquid fuels

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>4.7 – <i>Electricity generation from gaseous and liquid fuels</i></p> <p>4.19 – <i>Cogeneration of heat/cool and power from gaseous and liquid fuels</i></p> <p>4.23 – <i>Production of heat/cool from gaseous and liquid fuels</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity (4.7 - 4.19 - 4.23)</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p><i>Substantial contribution to climate change mitigation (4.7 – 4.23):</i></p> <ol style="list-style-type: none"> 1. Life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels are lower than 100gCO₂e/kWh. 2. Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064- 1:2018. <p>Quantified life-cycle GHG emissions are verified by an independent third party.</p>	<p>4.7 – <i>Electricity generation from gaseous and liquid fuels</i></p> <p>4.19 – <i>Cogeneration of heat/cool and power from gaseous and liquid fuels</i></p> <p>4.23 – <i>Production of heat/cool from gaseous and liquid fuels</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity (4.7 - 4.19 - 4.23)</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p><i>Substantial contribution to climate change mitigation (4.7 – 4.23):</i></p> <ol style="list-style-type: none"> 1. Life-cycle GHG emissions from the generation of electricity using gaseous and liquid fuels are lower than 100gCO₂e/kWh. 2. Life-cycle GHG emissions are calculated based on project-specific data, where available, using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064- 1:2018. <p>Quantified life-cycle GHG emissions are verified by an independent third party.</p> <p>4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where life-cycle GHG</p>

<p><i>Substantial contribution to climate change mitigation (4.19):</i></p> <p>See above</p>	<p>emissions from the generation of electricity using gaseous and liquid fuels averaged over the life-time of the asset are lower than 250gCO₂e/kWhe.</p> <p>To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.7 / 4.23 (1) by 2050.</p> <p>New power plants need to be</p> <ul style="list-style-type: none"> a) hydrogen-ready based on European technical specifications or norms, as soon as they are available, or b) ready for renewable, low carbon and/or decarbonised gases. <p>Operators need to have a credible plan about how to reach the emissions threshold in (4). The implementation of such plan being verified at regular intervals by an independent third party.</p> <p>Power plants reach the efficiency levels of best available technologies</p> <p><i>Substantial contribution to climate change mitigation (4.19):</i></p> <p>4. The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where life-cycle GHG emissions from the cogeneration of heat/cool and power using gaseous and liquid fuels averaged over the life-time of the asset are lower than 250gCO₂e/kWhe. GHG emissions are allocated between heat/cold and power using the heat bonus approach¹.</p> <p>To avoid carbon lock-in, direct emissions need to reach the emissions threshold outlined in 4.19 (1) by 2050.</p> <p>New power plants need to be</p> <ul style="list-style-type: none"> a) hydrogen-ready based on European technical specifications or norms, as soon as they are available, or b) ready for renewable, low carbon and/or decarbonised gases. <p>Operators need to have a credible plan about how to reach the emissions threshold in (4). The implementation of such plan being verified at regular intervals by an independent third party.</p>
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¹ Following the EIB energy lending criteria for high efficiency co/tri-generation: (https://www.eib.org/attachments/strategies/eib_energy_lending_policy_en.pdf)

	Cogeneration plants reach the efficiency levels of best available technologies.
Adaptation objective – Annex 2 The DNSH for climate change activities is set at having GHG emissions being lower than 270 gr CO2e/kWh direct emissions .	Adaptation objective – Annex 2 DNSH value should be direct GHG emissions below 270 grCO2e/kWh in average over the economic lifespan of the asset [OR DNHS TO BE in line with Best Available Technics (“BAT”)].

Justification:

Mitigation objective – Annex 1

The proposed value of LCA GHG emissions below 100grCO2e/kWh is unrealistic, foregoing current best available technologies, as well as the quick decarbonisation potential of natural gas in a transitional period (coal-to-gas switch reducing by 50% GHG emissions), until full greening of gas fired plants. Currently, **BAT-GHG emissions values** for a highly-efficient CCGT are around 350gr CO2e/kWh.

Once CCGTs are 100% greened, hence dropping below the 100grCO2e/kWh GHG emissions value, **electricity generation from gaseous and liquid fuels should no longer be a transitional activity but a “green” activity.**

For these reasons, we propose a dedicated threshold for power generation from gaseous and liquid fuels to be considered as a **transitional activity if LCA GHG emissions are lower than 250gr CO2e/kWh in average over the economic lifespan of the asset** (following especially the integration of an increased share of renewable, low-carbon and decarbonized gases, hence avoiding any lock-in or stranded assets). *[See also recital 41, articles 10.2. and 19.(h) Taxonomy Regulation].* **Such threshold should be distinct from the DNSH criteria under the climate change adaptation category.**

Adaptation objective – Annex 2

The DNSH criteria of 270 grCO2e/kWh should not be a static value to be considered at one specific moment in time (i.e. at investment decision), but averaged over the economic lifetime of the asset.

4. New category – liquefied renewable and low carbon gases import facilities

Description of the activity	Recommendations
Construction, repurposing and operation of facilities that receive cargoes of liquified renewable and low carbon gases, including associated storage facilities, either to regasify and inject the gases into gas network, or to distribute these gases by trucks, trains, or bunker vessels. The activity has no dedicated NACE code in accordance with the statistical classification of	These facilities are needed to ensure a secure and affordable supply of renewable and low carbon gases to Europe, thanks to their ability to deliver huge amount of energy at little notice, and their flexibility allowing to answer efficiently to changing supply conditions. Thus, they are efficiently complementing European domestic renewable production. They represent an efficient way to make the most of the most efficient sources of renewable energy

<p>economic activities established by Regulation (EC) No 1893/2006.</p> <p>The activity is an enabling activity in accordance with Article 10(1), point (i), of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this Section.</p> <p>The activity is one of the following:</p> <p>(a) Construction of liquified renewable and low carbon gases import facilities</p> <p>(b) Repurposing/conversion of existing LNG terminals to liquified renewable and low carbon gases.</p> <p>(c) Operation of these facilities related to the processing of renewable and low carbon gases</p>	<p>in the world, e.g. wind and PV energy transformed in and transported as synthetic methane.</p>
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4. Bioenergy for electricity/heat/cool production, cogeneration and use for transport

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>4.8 – <i>Electricity generation from bioenergy</i></p> <p>4.20 – <i>Cogeneration of heat/cool and power from bioenergy</i></p> <p>4.24 – <i>Production of heat/cool from bioenergy</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity (4.8 – 4.20 – 4.24)</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p><i>For electricity generation (4.8), the description of the activity mentions the following:</i></p> <p>Construction and operation of electricity generation installations that produce electricity from biomass, biogas and biofuels. In the sections 4.20 and 4.24, “biogas” is not mentioned.</p> <p><i>Substantial contribution to climate change mitigation (4.8 – 4.20 – 4.24)</i></p> <p>GHG emission savings from the use of biomass to be at least 80 % in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001 (REDII).</p>	<p>4.8 – <i>Electricity generation from bioenergy</i></p> <p>4.20 – <i>Cogeneration of heat/cool and power from bioenergy</i></p> <p>4.24 – <i>Production of heat/cool from bioenergy</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity (4.8 – 4.20 – 4.24)</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p>In addition, biogas should be added in the description of the activity in sections 4.20 and 4.24, exactly like in the electricity production (section 4.8).</p> <p><i>Substantial contribution to climate change mitigation (4.8 – 4.20 – 4.24)</i></p> <p>The delegated acts to respect and remain aligned with RED II requirements: GHG savings to be at least 70 % for electricity, heating and cooling production from biomass fuels used in installations starting operation from 1 January 2021 until 31 December 2025, and only 80 % for installations starting operation from 1 January 2026.</p>

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p><i>4.13– Manufacture of biogas and biofuels for use in transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p><i>Substantial Contribution to Climate Change Mitigation</i></p> <p>1. Agricultural biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.</p> <p>Food-and feed crops are not used in the activity for the manufacture of biofuels for use in transport.</p> <p>2. The GHG emission savings from the manufacture of biofuels and biogas for use in transport are at least 65 % in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex V to Directive (EU) 2018/2001.</p> <p>(...)</p>	<p><i>4.13– Manufacture of biogas and biofuels for use in transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>The activity is a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 where it complies with the technical screening criteria set out in this section.</p> <p><i>Substantial Contribution to Climate Change Mitigation</i></p> <p>1. Agricultural biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity for the manufacture of biogas or biofuels for use in transport complies with the criteria laid down in Article 29, paragraphs 6 and 7, of that Directive.</p> <p>Food-and feed crops are not used in the activity for the manufacture of biofuels, as defined under Directive (EU) 2018/2001, for use in transport.</p> <p>2. The GHG emission savings from the manufacture of biofuels and biogas for use in transport are at least 65 % in relation to the GHG saving methodology and the relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001.</p> <p>(...)</p>
<p>Adaptation objective – Annex 1 & 2</p> <p>The DNSH for pollution prevention and control still mentions an obligation to apply a gas-tight cover on the digestate storage for biogas production.</p>	<p>Adaptation objective – Annex 1 & 2</p> <p>With a view of harmonization across all sections (section 4.8, 4.13, 4.20 and 4.24 related to use and/or production of bioenergy) and non-discrimination based on the use of biogas, this constraint should be removed.</p>

Justification:

Article 10.1. Taxonomy Regulation clearly mentions the **generation, transmission, storage and distribution or use of renewable energy in line with Directive (EU) 2018/2001 (RED II)** as environmental sustainable activity, contributing to climate change mitigation. **The article 29 of REDII already defines sustainability criteria in terms of GHG emissions savings** for bioenergy to be considered as sustainable, including for its use in transport. In

this respect, activities related to bioenergy that meet the criteria set forth under REDII should be considered as sustainable activities contributing to climate change mitigation, and not as transition activities. The delegated acts should **not set stricter GHG emission saving requirements** than those currently applying in recently revised sector specific legislation (RED II).

The requirements on anaerobic digestion have been harmonized across all sections regarding bioenergy (which is an improvement and enhances readability of the delegated act) and it **is incoherent to impose an additional constraint on the manufacture of biogas and biofuels for transport**. In a spirit of harmonization, we propose that biogas is explicitly included for the cogeneration and production of heat and cool from bioenergy. Currently developed technology allows for this.

3. Manufacture of hydrogen, equipment and storage of hydrogen

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>3.9 - <i>Manufacture of hydrogen</i> 3.2 – <i>Manufacture of equipment for the production of hydrogen</i> 4.12 - <i>Storage of hydrogen</i></p> <p>3.9 - <i>Manufacture of hydrogen</i></p> <p>Mitigation Objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The activity complies with the life cycle GHG emissions savings requirement of 80% relative to a fossil fuel comparator of 94g CO2e/MJ [resulting in 2.256 tCO2eq/tH2] in analogy to the approach set out in Article 25(2) of and Annex V to Directive (EU) 2018/2001 of the European Parliament and of the Council</p> <p>3.2 - <i>Manufacture of equipment for the production of hydrogen</i></p> <p>Mitigation Objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>The economic activity manufactures hydrogen electrolysis technologies.</p>	<p>3.9 - <i>Manufacture of hydrogen</i> 3.2 – <i>Manufacture of equipment for the production of hydrogen</i> 4.12 - <i>Storage of hydrogen</i></p> <p>3.9 - <i>Manufacture of hydrogen</i></p> <p>Mitigation Objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The activity complies with the life cycle GHG emissions savings requirement of 80 60 % relative to a fossil fuel comparator of 91–94 g CO2e/MJ [resulting in 2.256 4.365 tCO2eq/tH2] in analogy to the approach set out in Article 25(2) of and Annex V to Directive (EU) 2018/2001 of the European Parliament and of the Council.</p> <p>3.2 - <i>Manufacture of equipment for the production of hydrogen</i></p> <p>Mitigation Objective – Annex 1</p> <p><i>Description of the activity</i></p> <p>The economic activity manufactures renewable and low-carbon conversion/production hydrogen electrolysis technologies.</p>

<p>4.12 – Storage of <i>hydrogen</i></p> <p><i>Description of the activity</i></p> <p>Construction and operation of facilities that store hydrogen and return it at a later time.</p> <p>Mitigation Objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The activity is one of the following:</p> <ul style="list-style-type: none"> (a) Construction of hydrogen storage facilities. (b) Operation of hydrogen storage facilities where the hydrogen stored in the facility meets the criteria for manufacture of hydrogen set out in section 3.9. of this Annex. 	<p>4.12 – Storage of hydrogen of renewable and low carbon gases</p> <p><i>Description of the activity</i></p> <p>Construction and operation of facilities that store hydrogen, or other renewable and low carbon gases, and return it at a later time.</p> <p>Mitigation Objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The activity is one of the following:</p> <ul style="list-style-type: none"> (a) Construction of renewable and low carbon gas (e.g. hydrogen, biomethane) storage facilities, including underground storage. (b) Repurposing or operation of renewable and low carbon gas (e.g. hydrogen, biomethane) storage facilities, including underground storage. where the hydrogen stored in the facility meets the criteria for manufacture of hydrogen set out in section 3.9. of this Annex.
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Justification:

3.9 Manufacture of hydrogen

Based on a LCA approach, the proposed threshold **rules out certain production methods and energy sources used for the production of clean hydrogen, such as production of H2 produced by electrolysis from solar electricity**². Such restrictive criteria risks undermining the EU hydrogen strategy, disincentivizing investments even in some green H2 production technologies.

3.2 Manufacture of equipment for the production of hydrogen

Both renewable and low-carbon hydrogen are needed to realise the EU's energy and climate ambitions. The impact assessment accompanying the 2030 Climate Target Plan³ states that a decarbonised energy system will require going beyond electrification, and that further deployment of both renewable and low-carbon fuels will be needed to meet increased climate ambitions. **The EU Hydrogen Strategy itself also recognises the need for low-carbon hydrogen produced from natural gas with CCS over the short to medium term in order to rapidly reduce emissions from existing hydrogen production and support the future uptake of renewable hydrogen.** We therefore strongly recommend to reflect this in the upcoming Delegated Act. This will ensure that all types of hydrogen technologies will be able to contribute to significant GHG emission reductions.

² With a carbon balance of solar electricity assessed in France at 55 gCO₂/kWh ([ADEME's carbon base](#)), the carbon intensity of hydrogen produced by photovoltaic sources is around 3 kgCO₂/kgH₂. Similarly, hydrogen produced by electrolysis from grid electricity in France has a carbon intensity of around 3.4 kgCO₂/kgH₂ ([Clean Hydrogen Monitor 2020, pp. 28-29](#)).

³ SWD(2020) 176 final: [Impact assessment accompanying the 2030 Climate Target Plan](#) (p.12).

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4.12 Storage of hydrogen

In addition to the construction and operation of hydrogen storage facilities, **we propose to extend this category to all renewable and low carbon gases** (such as biomethane, biogas, synthetic methane) to ensure **equal treatment and alignment with the category described in 4.14**. The **repurposing/conversion of existing underground natural gas storages to store pure hydrogen and the retrofitting of existing underground natural gas storages** to increase the blend of hydrogen into these infrastructures **should be added** as an activity substantially contributing to climate change mitigation. In this context, **extensions of the transmission and distribution networks to connect storage facilities should be part of this activity**.

We also consider the **use of salt caverns as hydrogen storage facilities should be better considered in the taxonomy**. We would like to underline the **feasibility, flexibility and efficiency of this solution**. Salt caverns are suited for pure hydrogen and the current assessment on the potential of depleted fields and aquifers is showing significant potential. Investments need to be guided towards these technologies that constitute the only way to store hydrogen in large quantities and on a seasonal timescale. “Underground” storage should be explicitly referred to.

Restrictions of the TSC with regard to “fossil fuels”

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>Mitigation objective – Annex 1 :</p> <p>For transport activities (6), under Annex 1 (climate change mitigation) for a “substantial contribution to climate change mitigation” the following criterion is set: that the infrastructure is “not dedicated to the transport of fossil fuels”. This criterion applies to several activities such as:</p> <ul style="list-style-type: none"> - 6.2. Freight rail transport - 6.6. Freight transport services by road, - 6.8. Inland freight water transport, - 6.9. Retrofitting of inland water passenger and freight transport, - 6.10. Sea and coastal freight water transport, - 6.12. Retrofitting of sea and coastal freight and passenger water transport, - 6.14. Infrastructure for rail transport, - 6.15. Infrastructure enabling low-carbon road transport, - 6.16. Infrastructure for water transport, 	<p>To add in all those points next to “fossil fuels” the word “unabated” as follows</p> <p>Mitigation Objective – Annex 1:</p> <p>Sections 6.2, 6.6, 6.8, 6.9, 6.10, 6.12, 6.14, 6.15, 6.16 that the infrastructure is “not dedicated to the transport of unabated fossil fuels”</p>
<p>Adaptation objective – Annex 2:</p> <p>Under Annex 2, for activities to comply with climate change adaptation, this criterion is</p>	<p>Adaptation objective – Annex 2:</p>

<p>even more largely used especially under the DNSH principle for “climate change mitigation”.</p> <p><i>For transport activities (6.6, 6.8, 6.9, 6.10, 6.12, 6.14, 6.15, 6.16) it foresees that:</i> “The vessels/vehicles are not dedicated to the transport of fossil fuels”.</p> <p><i>For activities related to buildings (7.2, 7.3, 7.5, 7.6, 7.7):</i> “The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels”</p> <p><i>For other activities such as research or professional services (e.g. insurance) – 9.1, 9.2, 10.1, 10.2:</i> “The activity is not undertaken for the purposes of fossil fuel extraction or fossil fuel transport or does not include insurance of activities related to fossil fuels”</p>	<p><i>Sections 6.6, 6.8, 6.9, 6.10, 6.12, 6.14, 6.15, 6.16</i></p> <p>That “The vessels/vehicles are not dedicated to the transport of unabated fossil fuels”.</p> <p><i>Sections 7.2, 7.3, 7.5, 7.6, 7.7</i> “The building is not dedicated to extraction, storage, transport or manufacture of unabated fossil fuels”</p> <p><i>For sections 9.1, 9.2, 10.1, 10.2</i> “The activity is not undertaken for the purposes of fossil fuel extraction or fossil fuel transport or does not include insurance of activities related to unabated fossil fuels”</p>
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Justification:

The term **unabated** aims at clarifying that when we talk about fossil fuels, we refer to **fossil fuel activities that do not apply abatement solutions** for reducing their environmental impacts. Thus, **emphasis is not given to the origin of the energy source but to the carbon footprint of such source**. The use of this term would also be in line with the TEG, which precisely use it in its recommendations⁴. Otherwise, investments and development of commercial relations with activities related to transport of low carbon gases would be totally discouraged. The same goes to business development of services related to buildings or other professional services related to low carbon gases (with application for eg. of use of CCUS technology).

The term unabated is not defined but reference is made to the lending policy of the European Investment Bank, published in 2019.

6. Transport

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>6.3 – <i>Urban, suburban and road passenger transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation:</i></p>	<p>6.3 – <i>Urban, suburban and road passenger transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation:</i></p>

⁴ Final TEG report on sustainable finance, March 2020, p. 21.

The direct (tailpipe) CO2 emissions of the vehicles are zero.	<p>The activity complies with one or more of the following criteria:</p> <p>(a) The direct (tailpipe) CO2 emissions of the vehicles are zero.</p> <p>(b) It can be demonstrated that use of an alternative fuel (as defined in Article 2(1) of Directive 2014/94/EU) and contributes to significant reductions of CO2 in accordance with the meaning of a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852, and in compliance with the Directive (EU) 2018/2001 where applicable.</p>
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European Commission – Delegated Acts	GRTgaz proposition of amendments
<p>3.3 – <i>Manufacture of low carbon technologies for transport</i></p> <p>6.15 – <i>Infrastructure enabling low-carbon transport</i></p> <p>3.3 – <i>Manufacture of low carbon technologies for transport</i></p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The economic activity manufactures:</p> <p>(a) trains, passenger coaches and wagons that have zero direct (tailpipe) CO2 emissions;</p> <p>(b) (...)</p> <p>6.15 – <i>Infrastructure enabling low-carbon transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation:</i></p> <p>1. The activity complies with one or more of the following criteria:</p>	<p>3.3 – <i>Manufacture of low carbon technologies for transport</i></p> <p>6.15 <i>Infrastructure enabling low-carbon transport</i></p> <p>3.3 – <i>Manufacture of low carbon technologies for transport</i></p> <p><i>Substantial contribution to climate change mitigation</i></p> <p>The economic activity manufactures:</p> <p>(a) trains, passenger coaches and wagons that have zero direct (tailpipe) CO2 emissions or where it can be demonstrated that use of an alternative fuel (as defined in Article 2(1) of Directive 2014/94/EU) contributes to significant reductions of CO2 ;</p> <p>(b) (...)</p> <p>This principle should apply to all categories related to transport where tailpipe approach are considered. This would ensure equal treatment of alternative fuels.</p> <p>6.15 – <i>Infrastructure enabling low-carbon transport</i></p> <p>Mitigation objective – Annex 1</p> <p><i>Substantial contribution to climate change mitigation:</i></p> <p>1. The activity complies with one or more of the following criteria:</p>

<p>(a) the infrastructure is dedicated to the operation of vehicles with zero tailpipe CO2 emissions: electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS);</p> <p>(b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods;</p> <p>(c) the infrastructure and installations that are dedicated to public passenger transport.</p>	<p>(a) the infrastructure is dedicated to the operation of vehicles with zero tailpipe CO2 emissions: electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS);</p> <p>(b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods;</p> <p>(c) the infrastructure and installations that are dedicated to public passenger transport.</p> <p>(d) the infrastructure is dedicated to the operation of vehicles that use alternative fuels (as defined in Article 2(1) of Directive 2014/94/EU) in accordance with the meaning of a transitional activity as referred to in Article 10(2) of Regulation (EU) 2020/852 .</p>
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Justification:

In general, **the proposed tailpipe emission approach** in order to assess the vehicle emissions, without taking into account upstream (“well to wheel”) or LCA emissions **distorts the measurement of the actual carbon footprint. LCA-based criteria should be consistently applied to technologies across sectors, because it weighs the carbon intensity of the energy used** (whether it is electricity, hydrogen and methane), not only the end-use emissions. For instance electric vehicles in France, which have a low-carbon electricity mix (54 gCO2/kWh on average), do not have the same climate impact as electric vehicles in Poland where the electricity mix is carbon intensive (773 gCO2/kWh in 2016), or compared to Germany (440,8 gCO2/kWh), Bulgaria (470,2 gCO2/kWh) or Estonia (818 gCO2/kWh).

On a LCA-basis, bio-CNG and bio-LNG can reduce emissions by more than 100% (JEC 2020). As for biomethane, tailpipe emissions are offset by the capture of CO2 during the growth process of biomass (waste/agriculture), thus being carbon-neutral. *[See also recital 49 and articles 19.1(g) and 19.4 Taxonomy Regulation]*

Taxonomy should remain aligned with existing sector-specific EU Acquis such as the Clean Vehicles Directive and the Alternative Fuel Infrastructure Directive, which include in the definition of clean buses and trucks, **next to electric and hydrogen vehicles, also gas vehicles in all forms (compressed or liquified), whether it is natural gas (CNG/LNG) or renewable gases (bioCNG, bioLNG)** as well as liquid alternative fuels.

The vehicle emission threshold proposed by the TEG (50g CO2e/pkm) for passenger cars, buses and coaches de facto prohibits the use of gas vehicles and therefore also the potential for the use of significant shares of green gas (BioCNG) or synthetic gas, disregarding their decarbonisation potential by replacing diesel and petrol. Since the manufacture of biogas and biofuels for transport is considered in the taxonomy (at least as a transition activity, whereas it should be considered as sustainable – see previous comments), the exclusion of the manufacture and operation of vehicles/fleets using biogas/biofuels as well as the corresponding refueling infrastructure, is highly inconsistent and should be revised.

Again, as the tailpipe methodology is applied, the emission reduction through the use of biomethane/biofuels are not taken into account. Biomethane (gaseous or liquified) is the main existing sustainable solution to decarbonize long-haul road transport, while other solutions are not mature yet. For the same reasons of consistency, the manufacture of CNG and LNG vehicles should have the same status as electric or fuel cell vehicles.

3.4 Manufacture of energy efficiency appliances for buildings

European Commission – Delegated Acts	GRTgaz proposition of amendments
<p><i>3.4 Manufacture of energy efficiency equipment for buildings</i></p> <p>Mitigation Objective – Annex 1</p> <p>The economic activity manufactures the following products and their key components:</p> <p>(...)</p> <p>g) space heating and domestic hot water systems rated in the top energy labelling class in accordance with Regulation (EU) 2017/1369;</p> <p>h) cooling and ventilation systems rated in the top 2 energy labelling class in accordance with Regulation (EU) 2017/1369;</p> <p>(j) heat pumps compliant with the technical screening criteria set out in Section 4.16 of this Annex;</p>	<p><i>3.4 Manufacture of energy efficiency equipment for buildings</i></p> <p>Mitigation Objective – Annex 1</p> <p>The economic activity manufactures the following products and their key components:</p> <p>(...)</p> <p>g) space heating and domestic hot water systems rated in the top energy labelling classes in accordance with Regulation (EU) 2017/1369 and in compliance with the Ecodesign directive;</p> <p>h) cooling and ventilation systems rated in the top 2 energy labelling classes in accordance with Regulation (EU) 2017/1369 and in compliance with the Ecodesign directive;</p> <p>(j) heat pumps, compliant with the technical screening criteria set out in Section 4.16 of this Annex and gas and hybrid heat pumps compliant with the Ecodesign Directive ;</p>

Justification:

In line with the objectives of the taxonomy, and the section on renovation of buildings, technologies which can help deliver a 30% reduction in primary energy demand for buildings should be readily available. Limitations of the appliances which can be considered sustainable may limit this, particularly in case appliances such as highly efficient boilers, which can run on renewable gas, cannot be considered due to existing labelling rules. Flexibility in this approach would be required to ensure quick wins and GHG emission reduction.