

IOGP response to the roadmap on the modification of the General Block Exemption Regulation (GBER) for the Green Deal and the Industrial and Digital Strategies

The International Association of Oil & Gas Producers' (IOGP) member companies account for approximately 60-70% of oil and gas produced in Europe. IOGP supports the goals of the Paris Agreement and the EU's objective of climate neutrality by 2050, and will work with policymakers to help create the measures which can enable the energy transition. Many challenges must be overcome to meet this objective, and the energy transition will require significant investments in low-carbon technologies, including corresponding infrastructure for producing, transporting and storing renewable and low-carbon gases, and effective policies driving their uptake.

IOGP believes that the State aid framework, including the GBER, should facilitate investments in promising, innovative and scalable technologies that facilitate large-scale carbon emission reduction and management projects while maintaining the functioning of the internal energy market. Regulations and exemptions should be aimed at allowing for European industries to deliver the scale of projects required to meet the EU's climate objectives, while, as a priority, maintaining competitiveness and a level playing field, and at the same time retaining key skills within the employment pool and attracting new talent. The State aid framework should reflect the needs arising from the transition period and the technological gap between the present state of the energy sector and its target configuration required to achieve the EU's energy and climate objectives.

Summary of recommendations:

- **The GBER should reflect new developments in CCS business models and related technologies**, including by expanding its definition of infrastructure for CO₂ to allow support for each component of the CCS value chain and for CO₂ transport by all transport modalities.
- **Renewable and low-carbon gases, including hydrogen, should be incorporated in the GBER in a technology neutral manner** to ensure that all renewable and low-carbon gases are enabled to compete on a level playing field, based on a standardised life-cycle assessment of their GHG emission performance.
- **The role of natural gas to support the transition should be recognised** by maintaining scope in the GBER to support the use of natural gas to achieve emission reductions, e.g. as an alternative transport fuel, in displacing higher emitting coal plants, or in high-efficiency cogeneration.
- **Assess notification thresholds and aid intensities in consideration of the significant investments required, including research and innovation**: Considering the significant investments required to meet the EU's strengthened climate ambitions and the urgency with which action is required to transform into a climate neutral economy, the Commission should consider re-assessing notification thresholds and aid intensities in the areas of research and innovation and environmental protection to reflect new priorities.
- **Defining positive environmental benefits**: Due to the significant legal uncertainty which would arise, IOGP advises against linking the State aid framework to the EU Sustainable Finance Taxonomy.

- **Modification of the definition of “energy infrastructure” in relation to gaseous fuels:** A change in this definition is needed to enable the financing of infrastructure used for the transport of various types of gases and their blends. It is advisable to provide clarity in terms of gas installations and devices. They are crucial for the safe functioning of the system and results from the point of view of the end-users.
- **Modification of the Regulation as regards incentive effect:** The provisions on the incentive effect should be amended to better take into account the specificities of large, linear infrastructure projects.

IOGP believes that the revisions of the GBER’s Section 7 and the EEAG should be closely aligned to ensure consistency and complementarity. IOGP’s recommendations to the revision of the EEAG can be [accessed here](#).

IOGP’s preliminary proposals for specific text modifications of the GBER can be found in Annex.

1) Reflecting new developments in CCS business models and related technologies

A range of scenarios have shown that CCS is integral to meeting the targets set under the Paris Agreement, including the IPCC’s SR1.5¹ and the IEA’s 2020 World Energy Outlook.² The Commission’s 2030 Climate Target Plan impact assessment³ and 2050 long-term strategy⁴ equally show that CCS will be necessary to achieve the EU’s energy and climate objectives. In Europe, three large-scale projects are currently operating, capturing ca. 2.1 Mt CO₂ per year. A number of projects under development will capture and store between 30 and 60 Mt CO₂ by 2030.⁵ Still, this falls far short of the scale required to reach the Commission’s climate neutral scenarios for 2050, which rely on the amount of CO₂ captured and stored to increase by a factor of 40 to 140.⁶ State aid assistance alongside appropriate carbon pricing measures will facilitate widespread, rapid and cost-effective CCS investment and deployment. This will in turn facilitate e.g. the early and large-scale delivery of hydrogen projects, help deliver on energy and climate objectives, decarbonise industrial clusters in which industries release CO₂ emissions related to their processes, and facilitate the uptake of both renewable hydrogen and low-carbon hydrogen from natural gas with CCS. CCS will also enable negative emissions.

The State aid framework needs to be updated to reflect the changes in the design and focus of CCS projects currently promoted in Europe, compared to earlier projects promoted in 2009-2015. In earlier development phases, CCS projects were linked to one single emitter, whereas today we see the development of CCS hubs linked with industrial clusters where emissions are captured from different installations which can benefit from a shared infrastructure. This allows for economies of scale through a cross-sectoral and cross-border industrial system. Captured CO₂ will be transported between European countries by various transport modalities, including ships in addition to pipelines. In addition, other emerging technologies based on carbon capture such as carbon capture and utilisation (CCU), bioenergy with CCS (BECCS) and direct air capture (DAC) should be addressed in the State aid framework.

In order to reflect new developments in CCS business models and related technologies, IOGP recommends modifying the GBER to:

- **Support the development of CCS hubs:** The GBER (Art. 2 (130)d) should be modified to better support the development of CCS hubs by allowing for aid for each of the separate parts of the CCS value chain (capture, transportation and utilisation or storage), as opposed to support for one integrated CCS project only.
- **Support all CO₂ transport modalities:** A number of planned CCS projects in Europe aim to transport CO₂ by other modes of transport than pipeline (e.g. shipping). The GBER (Art. 2 (130)d) should reflect this development by adopting a wide definition of CO₂ infrastructure.
- **Address emerging technologies based on carbon capture:** CCU, BECCS and DAC can make important contributions to emission reductions and enable negative emissions. These technologies should therefore not be excluded from the GBER (Art. 2 (130)d).

¹ IPCC (2018): *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, p. 135. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*.

² IEA (2020): [World Energy Outlook 2020](#).

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

⁴ COM(2018) 773 final: [A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy](#).

⁵ See IOGP’s [Map of European CCS projects](#).

⁶ European Commission (2018): *Figure 89: CO₂ capture and storage or reuse (2050)*. In: [Supplementary information IN-DEPTH ANALYSIS IN SUPPORT OF THE COMMISSION COMMUNICATION COM\(2018\) 773](#) (p. 73).

- **Establish a separate Article on aid for carbon capture and utilisation or storage:** To allow for a wide range of circumstances and business models, the GBER could be modified to include a separate category on aid for CCS and CCU under Section 7 on aid for environmental protection. This inclusion would ensure alignment and consistency with the EEAG, which already include a set of dedicated provisions on aid granted to CCS under Section 3.6. A flexible approach to providing *both* investment *and* operation aid should be considered, in particular to allow for Contracts for Difference (CfDs) and tax incentives for CO₂ storage.

2) Incorporating renewable and low-carbon gases, including hydrogen, in a technology neutral manner

As recognised in the EU Hydrogen Strategy, hydrogen will be key to reduce emissions in hard-to-abate sectors. It is in this perspective that nearly all EU Member States have planned for hydrogen in their National Energy and Climate Plans, and several also plan for hydrogen from natural gas with CCS or CCU.⁷ Technology neutrality on the EU level is crucial to successfully support the Member States' national hydrogen strategies, as they vary in their approaches to hydrogen production and scale-up. The importance of both hydrogen and CCS is furthermore confirmed by the impact assessment accompanying the 2030 Climate Target Plan, which shows that a decarbonised energy system will require going beyond electrification and that further deployment of both renewable and low-carbon fuels will be needed in order to meet the EU's increased climate ambitions.⁸

Across Europe, a number of large-scale projects for low-carbon hydrogen production from natural gas with CCS are planned. For example, the Magnum project⁹ in the Netherlands will convert a natural gas-based power plant to combust hydrogen, and the H2morrow project¹⁰ in Germany will provide low-carbon hydrogen for industrial uses. In terms of industrial clusters, the CCS projects in Rotterdam (Porthos) and Antwerpen (Antwerpen@C)¹¹ include the capture of CO₂ from existing natural gas reformers to produce low-carbon hydrogen. Likewise, the Preem refinery in Sweden will apply CCS to its existing natural gas reforming unit to produce low-carbon hydrogen.¹²

Low-carbon hydrogen has advantages relative to other hydrogen technologies in that it is based on proven technologies that are commercially available now at industrial scale, and could be brought to bear at an impactful scale in the near-term in a supportive policy environment. Even when combined with CCS, investment costs for producing hydrogen from natural gas are significantly lower than those for renewable electricity-based electrolysis. Low-carbon hydrogen has the potential to develop commercial hydrogen markets and necessary infrastructure, and with markets and infrastructure in place, the integration of renewable hydrogen will be increasingly easier and faster as costs fall.¹³

Therefore, a technology neutral approach which includes low-carbon hydrogen production is the most resilient approach to delivering a successful implementation of the EU Hydrogen Strategy. The inclusion of hydrogen in the GBER should be carefully designed so that renewable and low-carbon hydrogen are enabled to compete on a level playing field. It is essential that the State aid framework is based on a technology neutral approach which enables the scale-up of the most promising technologies while allowing for a balanced and cost-efficient approach to decarbonisation. This objective can be supported through introducing technology neutral assessment criteria based on a standardised life-cycle assessment of GHG emission performance for renewable and low-carbon gases.

⁷ IOGP (2020): [Assessment of National Energy and Climate Plans](#).

⁸ SWD(2020) 176 final: [Impact assessment accompanying the 2030 Climate Target Plan](#) (p.12).

⁹ Magnum project information [available here](#).

¹⁰ H2morrow project information [available here](#).

¹¹ Porthos project information [available here](#) and Antwerpen@C [here](#).

¹² Preem CCS project information [available here](#).

¹³ See IOGP (2020): [Scaling up hydrogen in Europe](#).

In order to incorporate renewable and low-carbon gases, including hydrogen, in a technology neutral manner, IOGP recommends modifying the GBER to:

- **Incorporate infrastructure for the transport of renewable and low-carbon gases:** The GBER's definition of energy infrastructure (Art. 2 (130)) should be expanded to cover renewable and low-carbon gases, including hydrogen, with assessment criteria based on a standardised life-cycle assessment of GHG emission performance.
- **Allow for the reuse, retrofitting and repurposing of existing infrastructure for renewable and low-carbon gases or blends:** The new definition of infrastructure for renewable and low-carbon gases should include the reuse, retrofitting or repurposing of existing infrastructure for the purpose of producing, transporting or storing renewable and low-carbon gases or blends.
- **Establish a separate Article on aid for renewable and low-carbon gases:** The GBER could be modified to include a separate Article on aid for renewable and low-carbon gases under Section 7 on aid for environmental protection. Similarly as with CCS and CCU, a flexible approach to providing *both* investment *and* operation aid should be considered.

3) Recognising the role of natural gas to support the transition

The role of natural gas should be recognised in the GBER, as natural gas will continue to support Member States and regions on their individual pathways to decarbonisation through a phased and affordable transition. In their National Energy and Climate Plans (NECPs), a number of Member States have announced the phase-out of coal from their energy mix, referring to a shift from coal to gas as part of the solution to reach their 2030 GHG emission reduction targets.¹⁴ The European Council Conclusions of 10 and 11 December clearly confirm the need to respect the right of the Member States to decide on their energy mix and to choose the most appropriate technologies to achieve collectively the 2030 climate target, including transitional technologies such as gas.¹⁵ The transitional role of gas should in particular be recognised in the context of efficient electricity and heat/cool generation, including through cogeneration and district heating and cooling systems.

The State aid framework should furthermore reflect the prominent role of liquefied natural gas (LNG) to reduce CO₂, SO_x, NO_x, and particulate matter emissions from maritime transport as well as the role of LNG and CNG in the overall decarbonisation of the transport sector. In maritime transport, LNG offers a solution for short and long-distance large vessels. This quality has to be recognised when LNG is compared with other technologies, such as batteries, which constitute a supplement to traditional ship engines rather than an alternative. Based on current technology, large vessels cannot sail across oceans running on electric engines alone. It is also evident that, due to the ambitious IMO strategy aiming to decrease GHG by at least 50% by 2050 in comparison to 2008, the shipping industry will need to be ready to build lower-carbon vessels in the next 10-15 years. The use of LNG offers an immediate answer to the IMO ambition, whereas in the long-term the use of liquefied biomethane (LBM), liquefied synthetic methane (LSM), hydrogen, ammonia, methanol and other options can achieve net-zero and contribute to further lowering emissions.¹⁶

IOGP therefore recommends maintaining scope in the GBER to support the use of natural gas to achieve emission reductions. For example, the definition of alternative fuel infrastructure for ports (Art. 2 (161)) which includes natural gas, CNG and LNG should be maintained. Likewise, the scope to support high-efficiency cogeneration based on natural gas should be maintained under Section 7 Art. 40.

¹⁴ See: [IOGP Assessment of NECPs](#).

¹⁵ European Council meeting (10 and 11 December 2020) – [Conclusions](#)

¹⁶ IOGP (2020): [IOGP input to the inception impact assessment on the FuelEU Maritime initiative](#).

4) Assessing notification thresholds and aid intensities for environmental protection and research and innovation

Art. 4 sets out notification thresholds for aid for research and development (Art. 4 (i)) and environmental protection (Art. 4 (s)). It is stated that the GBER should not apply to aid for environmental protection which exceeds € 15 million per undertaking per investment project, nor to R&D projects exceeding € 20 million per undertaking per project if the project is predominantly industrial research. Furthermore, eligible costs for industrial research and feasibility studies set out in Art. 25 (4 b & d) are limited to 50%.

However, the investments required to meet the EU's strengthened climate ambitions and transform into a climate neutral economy by 2050 are significant. The Commission's Impact Assessment accompanying the 2030 Climate Target Plan estimates that in order to reach a 55% GHG emission reduction target by 2030, € 350 billion more investment will be needed in the EU annually in the period 2021-2030 than it did in the period 2011-2020. This is an increase of around € 90 billion per annum compared to the investments needed to achieve the previous 40% GHG emission reduction target. The deployment of industrial breakthrough technologies may be one example of projects which will require greater support.

In light of the investments required to meet the EU's strengthened climate ambitions, the Commission should consider:

- **Amending the notification threshold for investment aid for environmental protection (Art. 4 (s))**, as well as to apply the notification threshold *per investment project* only instead of *per undertaking per investment project* (as is e.g. already the case for aid for maritime and inland ports under Art. 4. (ee)).
- **Amending the notification threshold for R&D projects (Art. 4 (i))**, as well as aid intensities for industrial research and feasibility studies (Art. 25 (b & d)).

5) Defining positive environmental benefits

IOGP notes the Commission's consideration of linking the State aid framework with the EU Sustainable Finance Taxonomy in the context of defining positive environmental benefits. However, the Taxonomy Regulation in itself does not exclude any particular activity. A list of "environmentally sustainable economic activities" will only be laid out in Delegated Regulations which are not yet finalised and which will be subject to periodical amendments. Delegated Acts are also adopted directly by the Commission, with limited options for participation by the Council and the European Parliament compared to the ordinary legislative procedure. In this regard, the Commission is vested with the possibility to significantly change the scope of the activities deemed as "environmentally sustainable". It is therefore highly uncertain which economic activities will be considered "taxonomy compliant" both in the short and long term. Likewise, the "Do No Significant Harm" principle will only be defined in the context of the same Delegated Regulations. **Considering the legal uncertainty stemming from this, IOGP advises against linking the State aid framework to the Taxonomy.**

6) Modification of the Regulation in terms of incentive effect

The GBER only applies to aid which has an "incentive effect" (Art. 6). A key condition for creating an incentive effect is the submission of a written aid application to the Member State concerned, prior to the commencement of work in the project or operation. According to the definition in the GBER, "start of works" means "the earlier of either the start of construction works relating to the investment, or the first legally binding commitment to order equipment or any other commitment that makes the investment irreversible [...]" (Art. 2 (23)).

Bearing in mind the above, the provisions on the incentive effects in the GBER (and the definition of "start of works") should be changed in such a way that **construction works activities** are indicated. They correspond to the actual commencement of construction work, and thus constitute the actual start of works of the project. Such a solution would make the definition used in the GBER more precise, and would avoid differences in interpretation between Member States.

Finally, this change would reflect the specificities of large infrastructure projects, including linear ones, in the GBER, as well as significantly facilitate their implementation and contribute to removing a barrier which may for purely formal reasons prevent the implementation of projects which may significantly contribute to the achievement of the EU's energy and climate objectives.

Annex – IOGP’s preliminary proposals for modifications of the GBER

IOGP preliminary proposal for modifications of the definition of infrastructure for CO₂ (Art. 2 (130)d):

GBER Art. 2 – Definitions (130)d	Preliminary proposal for modifications
(d) concerning CO₂-networks of pipelines , including associated booster stations, for the transport of CO ₂ to storage sites, with the aim to inject the CO ₂ in suitable underground geological formations for permanent storage;	(d) concerning carbon dioxide capture, transport and utilisation or storage infrastructure : i) facilities for the capture of carbon dioxide from fossil, biogenic or industrial sources or from the air ; ii) infrastructure for carbon dioxide transport by any modality , including associated booster stations and facilities for liquefaction and buffer storage , for the transport of CO ₂ to utilisation or storage sites, with the aim to utilise the CO₂ or inject the CO ₂ in suitable underground geological formations for permanent storage; iii) facilities for the storage of carbon dioxide for the purpose of permanent geological storage of carbon dioxide pursuant to Directive 2009/31/EC of the European Parliament and of the Council ; iv) any equipment or installation essential for the system in question to operate properly, securely and efficiently, including protection, monitoring and control systems ;

IOGP preliminary proposal for modification of the definition of infrastructure for gas (Art. 2 (130)b) to accommodate renewable and low-carbon gases:

GBER Art. 2 – Definition (130)b	Preliminary proposal for modifications
i) transmission and distribution pipelines for the transport of natural gas and bio-gas that form part of a network, excluding high-pressure pipelines used for upstream distribution of natural gas;	i) transmission and distribution pipelines for the transport of natural gas and renewable and low-carbon gases which are part of a network, excluding high-pressure pipelines used for upstream distribution of natural gas;
iv) any equipment or installation essential for the system to operate safely, securely and efficiently or to enable bi-directional capacity, including compressor stations;	iv) any equipment or installation essential for the system to operate safely, securely and efficiently or to enable bi-directional capacity or to enable the uptake of renewable and low-carbon gases , including compressor stations;

It should be noted that the term “biogas” is a narrower definition than “renewable and low-carbon gases”. Leaving this wording unchanged could lead to the exclusion of infrastructure for other renewable and low-carbon gases, including hydrogen, from the GBER.

The definition of “energy infrastructure” could also be modified in such a way that it directly indicates the devices and installations which are necessary for the system to function in a safe, secure and effective manner. This would be useful for Member States in the stage of preparing aid programs based on the GBER as well as for beneficiaries of aid, minimizing the risk of making mistakes.