

## **Hydrogen Europe's contribution to the European Commission consultation on the Draft Climate, Environmental Protection and Energy State Aid Guidelines<sup>1</sup> (CEEAG), presented on June 7, 2021**

***Hydrogen Europe is the leading European Hydrogen and Fuel Cell association which promotes clean and low carbon hydrogen as the enabler of a zero-emission society. It currently represents 285 industry companies, including 28 national Associations. Its member companies are of all sizes and represent the entire hydrogen value chain, from production to transport, distribution and final end-use of hydrogen. The association, together with Hydrogen Europe Research, partners with the European Commission in the innovation program Clean Hydrogen Partnership for Europe.***

Hydrogen Europe welcomes the European Commission's Draft Climate, Environmental Protection and Energy State Aid Guidelines, which place a key focus on enabling Member States to reach the ambitious climate and environmental goals of the European Union. Alongside the recently released *Fit for Fit 55* Package, the Draft is a very clear step in the right direction, providing a technology neutral pathway in towards achieving, all the while limiting the use of state aid measures to technologies that are most future proof, those based on renewables.

We are particularly pleased to see that alongside the *Fit for 55* Package, the Draft Guidelines support the uptake of renewable and low carbon hydrogen, in all types of activities covered by the guidelines. Europe is currently leading in hydrogen technology, and European companies and knowledge institutions can be instrumental in advancing technological developments and industrial scale-up. It is imperative that Europe maintains this leadership position and seizes the current momentum for hydrogen technologies.

Hydrogen Europe also particularly welcomes the recognition of the possibility for Member States to design measures that cover both Capex and Opex as eligible costs in several activities such as the aid for reduction and removal of GHG emission including through support for renewable energy, especially with mechanisms such as Carbon Contracts for Difference.

Despite the significant improvements made compared to the 2014 Energy and Environmental State Aid Guidelines (EEAG), Hydrogen Europe would like to take this opportunity to provide feedback on the current state of the Draft Guidelines. To ensure simplicity of our feedback, please find below our comments as they relate to the various sections.

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<sup>1</sup> *Draft Guidelines on State aid for climate, environmental protection and energy 2022:*  
[https://ec.europa.eu/competition-policy/system/files/2021-06/CEEAG\\_Draft\\_communication\\_EN.pdf](https://ec.europa.eu/competition-policy/system/files/2021-06/CEEAG_Draft_communication_EN.pdf)

## I. GENERAL COMMENTS

### Renewable electricity bidding competitive process with a hydrogen brick

- It would be of interest to support renewable electricity bidding competitive processes with a mandatory hydrogen brick, such as hydrogen production or hydrogen storage. This would incentivise the development of hydrogen capacity in line with the additionality principle, with new and dedicated renewable electricity capacity.

### Hydrogen cross-border support mechanism on the renewable electricity costs

- The European Commission should take the opportunity of the CEEAG to incentivise the application of the Renewable Energy Directive's cross-border mechanisms (including joint support scheme and joint project) to hydrogen projects, with the objective of subsidising the production of green hydrogen or needed renewable electricity in the country of origin by importing countries<sup>2</sup>.
- The renewable electricity cost of hydrogen production is one of its main costs. Cross-border mechanisms aiming at supporting the costs of renewable electricity inputs should be facilitated by the European Commission between Member States. An explicit mention of such scheme in the CEEAG would be beneficial to the EU hydrogen economy, in line with the Green Deal and the EU Hydrogen Strategy. The future state aid framework should facilitate such cross-border projects (which might also be developed under the new EU RES Financing Mechanism).

### Systemic hydrogen approach on aid intensity

- The state of hydrogen development being different from one country to another, we would advise to increase the percentages of aid intensities applicable outside bidding processes, to allow different situations to be taken into consideration (ex: difference of hydrogen infrastructure developments in Member States – Point 182).
- **Point 40:** Considering that ETS is about to be revised and extended to multiple sectors, this should not prevent Member States from implementing support schemes before the new and revised ETS system is proven to be an efficient benchmark. Therefore, we advise the European Commission to remove the reference to ETS from point 40.

### Continued role regarding the role of fossil fuels

Fossil energy and feedstocks still have a significant role in the CEEAG:

- For example, under **Point 162**, there's room for CNG- or LNG-vehicles to receive support if there's a 20% blending of biogas or RFNBOs, or if there aren't alternative vehicles on the market. We think that:
  - a. 20% should be increased to match the EU emission reduction target or at least supplemented by an additional requirement that there is a clear timeline involving firm

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<sup>2</sup> Cross-border schemes for hydrogen are already under discussion between Member States. I.e.: letter sent by Portugal to the European Commission on 09.12.2020 on the feasibility of a support mechanism for renewable hydrogen production: a cross-border CFD model (between Member States) for 2020-2030 considering CAPEX/OPEX "subsidizing 50% of the cost of electricity used to produce green hydrogen".

commitments for transitioning away from fossil fuels compatible with the Union's 2030 climate target and the 2050 climate neutrality target,

- b. the specific situations that the EC envisages in which there are not better alternatives should be clarified.
- Another example is **Point 339 (c)**, where natural gas infrastructure can be supported if it is “fit” to carry hydrogen or other RFNBOs. This is insufficient, as there is not an actual obligation for it to carry hydrogen, it just needs to be theoretically possible. The “fit” to carry hydrogen or other RFNBOs criteria should be **completed by a clear timeline on when this will happen**.

## II. DEFINITIONS

Regarding the definitions spelled out in in Section 2.4, Hydrogen Europe calls for two definitions to be expanded for the purposes of providing further clarity to Member States when designing support mechanisms (suggestions in bold and italics):

- **Section 2.4, Point 18 (35) (d)** concerning carbon dioxide:
  - (i) pipelines ***and all infrastructure and equipment including ships, railways and trucks***, used to transport carbon dioxide from more than one source, that is to say, industrial installations (including power plants) that produce carbon dioxide gas from combustion or other chemical reactions involving fossil or non-fossil carbon-containing compounds, for the purpose of permanent geological storage of carbon dioxide pursuant to Article 3 of Directive 2009/31/EC of the European Parliament and of the Council or for the purpose of using carbon dioxide as feedstock or to enhance the yields of biological processes;
- **Section 2.4, Point 18 (35) (b)**:
  - (v) smart gas grids, which means any of the following equipment or installation aiming at enabling and facilitating the integration of renewable and low-carbon gases (including biomethane or hydrogen) into the network: digital systems and components integrating information and communication technologies, control systems and sensor technologies to enable the interactive and intelligent monitoring, metering, quality control and management of gas production, transmission, distribution and consumption within a gas network. Furthermore, smart grids may also include equipment to enable reverse flows from the distribution to the transmission level and related necessary upgrades to the existing network, ***as well as connections of renewable and low carbon gases production facilities***;
- In addition to the above we would like to point out an editorial mistake in **Point 18 (9)** which says “‘bioliquids’ means biogas as defined in Article 2, point (32), of Directive 2018/2001/EU” but rather should say “‘bioliquids’ means ***bioliquids*** as defined in Article 2, point (32), of Directive 2018/2001/EU”.

## III. AID FOR GHG REMOVAL INCLUDING THROUGH SUPPORT OF RENEWABLE ENERGIES

### **Allowing small hydrogen players to benefit from exemption to competitive bidding process**

Under **Point 92**, measures aimed at benefiting small projects in electricity generation, storage, consumption, and for heat generation and gas production may benefit from an exemption from the

need to conduct a competitive bidding process. Unfortunately, it is unclear from the wording of the provision whether hydrogen production can benefit under “gas production technologies”. Furthermore, the EU and Member States have set ambitious targets (6 GW by 2024 and 40 GW by 2030 on EU level) and it is broadly recognized that renewable and low-carbon H2 will be a key solution in the future, notably to decarbonize hard-to-abate sectors where electrification is not cost-efficient or simply not feasible. The development of renewable and low-carbon H2 must be kickstarted now to gain experience and reach scale to bring down cost rapidly. To avoid any delays, we are convinced that facilitated conditions are required during an initial period (including on competitive bidding).

Based on this, we would advise to add two exemptions in **Point 92, as new paragraphs (c) and (d)**, to give the option to Member States (i.e., not to implement a competitive process):

- when **“beneficiaries are industrial processes projects with full project costs of below EUR 15”**;
- **“For technologies at the beginning of their commercial deployment and that are necessary to achieve the medium-term and long-term climate targets enshrined under the European Climate Law, exemptions from competitive bidding can be justified during a transition period until 2028.”**.

#### **General issues regarding paragraph 98, 99 and 100**

Hydrogen Europe has identified several points of concern, primarily with the Draft Guidelines requiring an immediate CO2 reduction for supported activities. This however may have the unintended effect of not allowing to fully capitalise on support for further renewable electrification (including hydrogen electrolysis) and therefore additional electricity demand while the national electricity-mix is not yet fully sustainable.

The expected development (including the development result from additional demand for electricity) of the mix should be used to estimate the CO2 savings over the lifetime of the project.

Specific points of concern:

- **Point 98** notes that life-cycle emissions need to be accounted for, however the draft Communication doesn’t provide a definition of *life-cycle emissions*. We suggest therefore the European Commission to add such a definition and ensure that scope 1, 2 and 3 emissions are included.
- **Point 99** establishes that *“the aid must not merely displace the emissions from one sector to another and must deliver overall greenhouse gas emissions reductions.”*. Hydrogen Europe agrees that carbon leakage should be avoided, and legislative provisions should ensure that no emissions are displaced. At the same time, we note the wording of this provision is rather broad and as such we invite you to consider Hydrogen Europe’s recent policy paper ‘A workable approach to additionality’<sup>3</sup> to provide granularity on one potential interpretation.
- **Point 100**. While Hydrogen Europe understands the concern for over subsidisation or double subsidisation, we raise concern on this point’s reference to requiring reduction of *“emissions*

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<sup>3</sup> *A workable approach to additionality, geographic and temporal correlation is key to the achievement of the EU Hydrogen Strategy, Hydrogen Europe, June 2021: [https://www.hydrogeneurope.eu/wp-content/uploads/2021/06/2021.06-Hydrogen-Europe\\_Additionality-Position-Paper.pdf](https://www.hydrogeneurope.eu/wp-content/uploads/2021/06/2021.06-Hydrogen-Europe_Additionality-Position-Paper.pdf)*

*directly resulting from that industrial activity*". This might create confusion that only direct (scope 1) emissions should be considered.

To ensure that full life cycle emissions are considered we propose to change the wording of Point 100 to the following: *"To avoid the risk of double subsidies and ensure the verification of the greenhouse gas emissions reductions, aid for the decarbonisation of industrial activities must reduce the life cycle GHG emissions directly resulting from that industrial activity. **Aid for improvements of the energy efficiency of industrial activities must improve energy efficiency of the beneficiaries' activities** „*

#### Regarding support appropriate to the cost structure of PtX

- **OPEX support: Point 103** says that Member States must demonstrate that support that is mostly in the form of OPEX support, results in more environmental-friendly operation. We would like to point out that for some types of investments, like the production of renewable hydrogen, levelised costs of hydrogen can be as high as 80-90% OPEX-related, which makes OPEX support essential. Therefore, we suggest to slightly modify the wording of Point 103 to:  
*"Aid for decarbonisation can take a variety of forms including up front grants and contracts for ongoing aid payments such as contracts for difference<sup>61</sup>. Aid which covers costs mostly linked to operation rather than investment should only be used where the Member State clearly demonstrates that this results in more environmentally friendly operating decisions **or is necessary for the proposed aid to provide sufficient investment incentive.**"*
- **Overcompensation:** It is important that the guidelines are more explicit about how combining support from different sources for different parts of the PtX value chain does not constitute overcompensation (i.e., support for hydrogen production from one source, and additional support for methanol synthesis). Of course, the sum of combined subsidies cannot be higher than the total cost gap, but Member States must be given flexibility to support the PtX value chain in various ways, and this includes breaking it down into different support mechanisms for each part. Specifically, we want to make sure that the same MWh of energy can be supported multiple times, as long as it has changed form from one support to the next. For example, that MWh can be supported once as electricity, then again as hydrogen, then again as methanol, and again as e-kerosene... if the subsequent support mechanisms are only covering additional costs of conversion.

#### IV. CARBON CONTRACTS FOR DIFFERENCE

By definition, regional carbon pricing policies, especially the ETS, do not establish global carbon prices and thus the regional carbon prices do not indicate the level of economically feasible support for investment and operation of emission lean production. Consequently, to enable Carbon Contracts for Difference (CCfDs) to cover the full abatement costs of the new low-carbon processes for sectors most exposed to international competition the reference should not be the ETS price but the level of a global carbon price.

- The first sentence of **footnote 61, relating to Point 103**, should therefore be amended: *"A contract for difference entitles the beneficiary to a payment equal to the difference between a fixed 'strike' price and a reference price – such as a market price, per unit of output. They have been used for electricity generation measures in recent years but could also involve a reference price linked to the ETS **or any globally applied carbon price for sectors most exposed to international competition** – i.e., 'carbon' contracts for difference".*

## V. ANNEX I

### **Aligning the economic activities of Annex I with EU Taxonomy economic activities**

We have noted that Annex I does not fully cover the same NACE activity codes that were set out for the Delegated Acts on Climate Change Mitigation and Adaptation of the European Sustainable Taxonomy. This can be particularly seen with the lack of inclusions of such industrial activities as manufacture of cement (NACE code C23.5.1) or manufacture industrial gases, including hydrogen (NACE code C20.1.1).

- Inclusion of those sectors in the EU taxonomy by defining specific emission targets for them while excluding some of them from being eligible for aid in the form of reductions from electricity levies does not seem coherent, hence, for sake of consistency, Hydrogen Europe calls for Annex I to include all economic activities covered by the EU Taxonomy.

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