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**POWERFUELS**

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## Position Paper on the European Commission's proposed Revision of the Guidelines on State Aid for Climate, Environmental Protection and Energy

The **Global Alliance Powerfuels** welcomes the much-needed **revision of the Climate, Energy and Environmental State Aid Guidelines (CEEAG)** and endorses the European Commission's goal to enable Member States to fulfil the EU's environmental objectives of the European Green Deal in a cost-effective way and without undue distortions of competition.

The CEEAG will replace the current Guidelines on State aid for environmental protection and energy 2014-2020 (EEAG), about to expire on 31 December 2021. The new guidelines will outline eligibility criteria for defined categories of aid for climate, environmental and energy measures. The Global Alliance Powerfuels is convinced that they can be a powerful tool to incentivise the up-scaling and deployment of renewable energy carriers, including green hydrogen and other powerfuels, as well as to discourage investments in fossil-based technologies and fuels with a negative environmental impact.

The **Global Alliance Powerfuels** was founded in 2018 and is backed by 16 member organisations and an international network of partner institutions. It is coordinated by the German Energy Agency (dena). The strategic objective of the Alliance is to foster the development of a global market for powerfuels.

The term **powerfuels** denotes not only renewable hydrogen but also all gaseous and liquid fuels from power-to-X processes that draw their energy content from renewable electricity. This includes, but is not limited to, synthetic gas (e.g. methane, hydrogen) and synthetic liquid fuels (e.g. methanol, ammonia, and Fischer-Tropsch products).

Powerfuels complement the direct use of renewable energy and are crucial where direct electrification is not technologically feasible or economical. By offering climate-neutral options to applications with no viable alternatives, powerfuels allow for more far-reaching de-fossilisation of all end-use appliances, across all sectors – thus enabling system-wide emissions reductions in a technology-neutral approach. Powerfuels can also accelerate the integration of the energy system by replacing fossil energy sources in existing end-use consumer equipment in the short term and offering flexibility as a long-term storage option.

### Summary of positions and recommendations

- The Global Alliance Powerfuels welcomes the widened scope of the Guidelines, the **inclusion of new aid instruments** such as **Carbon Contracts for Difference (CCfD)**, and endorses the possibility of allocating **aid amounts covering up to 100% of the funding gap** for decarbonisation projects
- Given the lack of a specific category for hydrogen and RFNBOs in the proposal of the CEEAG, and the unclear definition of different renewable and low-carbon energy carriers (e.g. "low-carbon hydrogen") in the current draft, we suggest to insert a new paragraph to **explicitly list RFNBOs**



when defining the scope of the category of **“Aid for the reduction and removal of greenhouse gas emissions”** (section 4.1.2), and to **update the definitions of renewable hydrogen/ RFNBOs** in accordance with the definitions set out in the RED III

- To ensure **harmonisation with central EU climate legislation**, and in particular the legislative proposals of the “Fit for 55” package, the Global Alliance Powerfuels suggests including a **mandatory review of the CEEAG for 2024**, when all measures of the “Fit for 55” package will have entered into force
- In its proposal, the Commission establishes that **investments in natural gas infrastructure** (e.g. LNG) are generally considered to meet the aid compatibility criteria if they are suitable for the use of hydrogen and renewable gases. To ensure rather than enable the intended integration of renewable energy carriers, we propose to **replace the “fit for use” requirement with a “mandate to supply” RFNBOs** via the infrastructure receiving the aid through binding blending targets
- The demonstration that the aided measures deliver positive environmental effects in relation to decarbonisation should be **simplified for aid for renewable energy carriers, including RFNBOs**. Specifically, we suggest **exempting powerfuels projects** from the provision in Chapter 4.1.4. (103) of the proposed Guidelines that **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**.

## **Detailed position on the proposed CEEAG and recommendations**

### **General remarks**

The Global Alliance Powerfuels welcomes the widened scope of the Guidelines. The added focus on supporting and mobilising public funds for all areas of climate change mitigation, which is reflected in the renaming of the guidelines as well as the stronger focus on sustainability in EU competition policy in general, is important for meeting the investment needs of the Green Deal.

We also support the inclusion of new aid instruments, such as Carbon Contracts for Difference, which will play a crucial role in the transformation of the industry sector by providing long-term investment security while being linked to the market development of carbon prices. The Global Alliance Powerfuels also endorses that the maximum permissible aid has been raised for many measures and that the proposed CEEAG move away from predefined thresholds and towards competitive tendering as the default for determining aid levels and selecting projects. We welcome the possibility of allocating aid amounts covering up to 100% of the funding gap for decarbonisation projects, as this will aid bridging the cost gap to economic feasibility of hydrogen projects while limiting the aid to the minimum necessary for carrying out the project in question.



**Structure of the guidelines and aid categories: Clearly define and distinguish aid for renewable hydrogen and other RFNBOs from other decarbonisation technologies**

The technology-neutral approach taken by the Commission by including a section focusing on all aid measures primarily aimed at reducing greenhouse gas emissions (chapter 4.1, “Aid for the reduction and removal of greenhouse gas emissions”) allows for increased flexibility regarding new technologies and cost-effective solutions. Renewable hydrogen and other RFNBOs as well as related technologies such as carbon capture and utilisation (CCU) could potentially be eligible and thus benefit. Other relevant categories for powerfuels projects are listed in chapter 4.3 (“Aid for clean mobility”) and chapter 4.9 (“Aid for energy infrastructure”). However, the lack of a specific category for hydrogen and RFNBOs is nonetheless surprising, given the importance the Commission has attributed to these energy carriers in its Hydrogen Strategy and Energy Systems Integration Strategy, respectively. In the current proposal, dedicated provisions can only be found selectively across the entire document. We suggest to insert the following new paragraph to explicitly list RFNBOs when defining the scope of the category of “Aid for the reduction and removal of greenhouse gas emissions” (section 4.1.2):

*“Support for renewable hydrogen and other renewable fuels of non-biological origin (RFNBO) can be approved to the extent that the aided gases or fuels are compliant with the sustainability and greenhouse gases emissions saving criteria in Directive (EU) 2018/2001 and its implementing or delegated acts.”*

Another point to address is the unclear definition of different renewable and low-carbon energy carriers (e.g. “low-carbon hydrogen”) in the current draft. We suggest to update the definitions of renewable hydrogen/ RFNBOs in accordance with the definitions set out in the revision of the revised Renewable Energy Directive (REDII). The CEEAG should further specify the sustainability criteria RFNBOs have to meet in order for powerfuels to be subsidisable. These should correspond to the requirements laid out in the delegated acts to the REDII (min. 70% GHG reduction; applicability of criteria of additionality, temporal and geographical correlation for electricity sourced from the grid as specified in the forthcoming D.A. to Art. 27 REDII; applicability of criteria for CO<sub>2</sub> sources for the production of carbon-based powerfuels as specified in the outstanding D.A. to Art. 28 REDII). In any case, they should, however, not be stricter than the criteria in the RED.

In addition, the Guidelines should clearly differentiate between renewable and low-carbon hydrogen and classify green hydrogen and other powerfuels as renewable energy carriers. The lack of differentiation between renewable energy carriers like ‘green’ hydrogen from electrolysis using renewable electricity, and fossil-based energy carriers like ‘blue’ hydrogen from steam methane reforming using carbon capture and storage (CCS) becomes evident in several passages in the proposed CEEAG. For example, in chapter 4.1.2 (75), the wording “hydrogen and other low-carbon gases” suggests that all forms of hydrogen should be treated equally regardless of their production pathway or embedded emissions. However, given that embedded life-cycle emissions of renewable hydrogen are significantly lower than those of



fossil-based hydrogen<sup>1</sup>, grouping all forms of hydrogen together is misleading, and assessment of aid eligibility should be based on achieved emission reductions rather than chemical composition.

### ***Ensure harmonisation with central EU climate legislation***

The draft aims at aligning the rules set out in the CEEAG with the goals of the European Green Deal and provisions in major EU climate and energy policies and regulations. This concerns existing pieces of legislation, such as the EU Climate Law, the Taxonomy Regulation and various legal acts of the so-called EU Winter Package, but also upcoming revisions and new legislation that have not yet entered into force. However, harmonization with the latter, and in particular the proposals of the „Fit for 55“ package (published in July 2021) and upcoming “Gas package” (due in December 2021), is not ensured. The draft for the CEEAG was published in June, one month before the Commission published the legislative proposals included in the “Fit for 55” package. This, together with the fact that the CEEAG are an internal law of the Commission and will not undergo negotiations in the trilogue (as will the other proposals), bears the risk of establishing a “parallel legislation” within the EU’s regulatory framework. Despite the Commission’s efforts to create coherence, it will not be possible to anticipate all implications of revisions to carbon pricing, energy taxation, and renewable energy targets, to name a few examples, on the Guidelines before the final versions of the respective pieces of legislation are adopted. To ensure coherence of rules, the Global Alliance Powerfuels hence suggests including a mandatory review of the CEEAG for 2024 (when all measures of the “Fit for 55” package will have entered into force). For example, criteria for aid eligibility of powerfuels projects should be aligned with, and not stricter than the sustainability criteria specified in the REDIII or Gas Regulation. Furthermore, the inclusion of aid instruments like CCfDs in the CEEAG should be streamlined with their support in the revised ETS Directive, and should not be conditional to additional requirements.

### ***Base assessment of positive environmental impact on actual deployment of decarbonisation technologies and corresponding emission reductions***

We endorse the approach of requiring Member States to clearly indicate the greenhouse gas emission reduction achieved by the decarbonisation projects receiving aid, as well as the costs associated with achieving these reductions (see Chapter 4.1.4, paragraph 98). However, achieved GHG emission savings unfortunately do not consistently feature as the basis of assessing whether a project can be granted aid in the proposed CEEAG. For example, in Chapter 4.9.4., paragraph 339, of the proposal, the Commission establishes that investments in natural gas infrastructure (e.g. LNG) are generally considered to meet the aid compatibility criteria if they are suitable for the use of hydrogen and renewable gases in the long term. However, such a “fit for use” criterion, without linking it to an obligation to blend or phase-in the use of renewable hydrogen in a specified time frame, does not guarantee actual emission reductions associated with the infrastructure investment. To ensure the intended integration of renewable energy carri-

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<sup>1</sup> See IEA, Future of Hydrogen, 2019; Greenpeace Energy, Kurzstudie Blauer Wasserstoff, 2020; Timmerberg et al., Hydrogen and hydrogen-derived fuels through methane decomposition of natural gas – GHG emissions and costs, 2020





ers, we propose to replace the “fit for use” requirement with a “mandate to supply” RFNBOs to the European market via the infrastructure receiving the aid through binding blending targets. The proposal of the CEEAG provides for such mandates in other chapters. For example, for aid measures incentivising investments in natural gas-fired energy or industrial plants, Member States must explain how fossil lock-in effects are avoided. One specific way of doing so foreseen by Guidelines is to commit the beneficiary to substitute natural gas by renewable or low carbon gas on a timeline consistent with the Union’s climate targets (Chapter 4.1.4 recital 110).

While we support such commitments as an effective instrument to safeguard that the integration of renewable energy is not only feasible but actually put into practice, the proposed CEEAG generally do not provide enough clarity on the requirements to demonstrate that projects do not create a lock-in effect for the use of fossil fuels. The draft does not provide a clear definition of ‘fossil lock-in effects’, and leaves it to Member States to justify and explain how such effects are to be avoided. By only providing examples of what such an explanation could entail, and not specifying what constitutes lock-in effects for the use of fossil energy carriers and under which condition they are (not) considered to be created, the proposal causes uncertainty and fails to directly link the compatibility of the investment in question to its long-term climate effect. We therefore suggest extending the general requirement to demonstrate consistency with the Union’s climate and renewable energy targets to all aid measures incentivising investments in fossil fuels-based technologies or infrastructure.

### ***Simplify demonstration of net-positive effect for aid for renewable energy, including RFNBOs***

As mentioned above, green hydrogen and other powerfuels are grouped together with fossil-based low-carbon energy carriers in several passages across the proposed CEEAG. In consequence, Member States would have to meet the same requirements to demonstrate the net-positive effect of aid for low-carbon and renewable hydrogen and their respective derivatives. In our view, however, the demonstration that the aided measures deliver positive environmental effects in relation to decarbonisation should be simplified for aid for renewable energy carriers, including RFNBOs, and these should be exempted from certain conditions non-renewable projects have to meet.

Specifically, we suggest exempting powerfuels projects from the provision in Chapter 4.1.4. (103) of the proposed Guidelines that 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. Most of the additional costs incurred by implementing powerfuels projects to achieve emission reductions, which make these unprofitable under the current market conditions without additional funding, are linked to operational expenses (with electricity costs being the main cost driver). Hence, lifting the restriction to permit OPEX-focused aid only when Member State can prove more environmentally friendly operation processes for powerfuels projects can considerably increase Member States’ ability to provide cost-effective funding for these much needed technologies and energy carriers.



**Contact:**

Deutsche Energie-Agentur GmbH (dena)

German Energy Agency

Johanna Friese

Friederike Altgelt

Chausseestrasse 128 a

10115 Berlin, Germany

Tel: +49 (0)30 66 777-108/160

Fax: +49 (0)30 66 777-699

[powerfuels@dena.de](mailto:powerfuels@dena.de) | [friese@dena.de](mailto:friese@dena.de) | [altgelt@dena.de](mailto:altgelt@dena.de)

[www.powerfuels.org](http://www.powerfuels.org) | [www.dena.de](http://www.dena.de)

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