

BEE statement

on the EU Commission's draft delegated act on renewable hydrogen

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Table of Contents

Introduction	2
1. Definitions	2
2. Rules for counting sourced electricity as fully renewable	3
2.1. Additionality	3
2.2. Temporal correlation	5
2.3. Geographical correlation	6
2.4. Exception for redispatch situations.....	6
3. Transitional provisions	7
Summary.....	8

Introduction

On May 20, 2022, the EU Commission presented its official draft Delegated Act implementing the provisions in Art. 27 (3) of the EU Renewable Energy Directive II (RED II). This sets out detailed rules for the production of renewable liquid and gaseous fuels of non-biological origin.

Although this delegated act is technically relevant only for renewable fuels in the transport sector, it is expected to determine the rules for the production of renewable hydrogen in all sectors. For this reason, the provisions in this act are of great importance.

The German Renewable Energy Federation (BEE) welcomes the opportunity to comment on the aforementioned delegated act and evaluates the individual articles of the present draft regulation below.

1. Definitions

In Art. 2, para. 4 of the present draft delegated act, the first European legal definition for renewable hydrogen is given: "renewable hydrogen' means hydrogen derived only from renewable energy sources other than biomass".

Thus, biomass is not intended to be a desirable renewable energy source and therefore should be excluded from renewable hydrogen production. The present draft does not provide a justification why "liquid and gaseous fuels" should only be of non-biological origin.

BEE requests:

Hydrogen based on biomass - especially biogenic residues with no further uses - and biogas should be included in the definition of renewable hydrogen. No plausible reason is given why "liquid and gaseous fuels" should only be of non-biological origin.

Specific proposed amendments to the legal text:

- In the subtitle of the act, the last phrase "of non-biological origin" should be deleted:

„supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a Union methodology setting out detailed rules for the production of renewable liquid and gaseous transport fuels ~~of non-biological origin~~“

- Article 2(4) should be amended as follows:

„‘renewable hydrogen’ means hydrogen derived only from renewable energy sources including biomass“.

- Referring to the following text passage in recital 1:

„To this end and considering the overall environmental objectives in Directive (EU) 2018/2001 it is necessary to lay down clear rules, based on objective and non-discriminatory criteria. As a principle, liquid and gaseous fuels of non-biological origin are considered renewable when the hydrogen component is produced in an electrolyser that uses renewable electricity.“

it can be said that the definition of "renewable" without taking into account energy sources of biogenic origin is "discriminatory" per se. For this reason, the insertion "of non-biological origin" in this and all other text passages should also be deleted.

2. Rules for counting sourced electricity as fully renewable

2.1. Additionality

For electricity sourced from directly connected installations, this draft establishes the following eligibility criteria:

- Electricity sourcing only from installations generating renewable electricity that have been in operation for max. 36 months before the electrolyzer (Art. 3 b).
- Capacity expansion electrolysis: Additional capacities are part of the existing installation, as long as additional capacities are at the same location and the expansion takes place at the latest 24 months after commissioning of the original installation (Art. 3 b).

For electricity sourced from the grid, the draft establishes the following eligibility criteria:

- The installation generating renewable electricity from which the renewable electricity is sourced must be unsubsidized. I.e. it must not have received any support in the form of operating aid or investment aid. Exceptions are subsidies received by installations prior to repowering according to Art. 2, para. 6, and subsidies that are not net subsidies, i.e. when the subsidy is fully repaid (Art. 4, 2.b).
- A power purchase agreement (PPA) must be concluded between the installation generating renewable electricity (or several plants) and the electrolyzer operator (Art. 4, 2)

- The installation generating renewable electricity in the PPA must generate at least exactly as much electricity as the electrolyzer consumes (Art. 4, 2)
- Commissioning of the unsubsidized installation generating renewable electricity must be max. 36 months before or after the commissioning of the electrolyzer (Art. 4, 2 a).
- A change of the PPA possible, i.e. the installation generating renewable electricity continues to be considered as a new installation upon conclusion of a new PPA between the installation generating renewable electricity and the electrolyzer operator (Art. 4, 2 a).
- A later expansion of the electrolysis capacity is possible without new additionality requirements if the expansion takes place within 36 months after commissioning of the electrolyzer (Art. 4, 2 a).

BEE requests:

Additionality is defined in the current draft, among other things, by the support status of an installation generating renewable electricity, see above. This approach would, for example, exclude installations generating renewable electricity from the electricity supply for renewable hydrogen that have in the past been supported by the German Renewable Energies Act (EEG), but are no longer entitled to this support.

Instead of dismantling existing installations generating renewable electricity after their legally granted compensation period has expired, they should be allowed to be used to produce the urgently needed renewable hydrogen.

For this reason, the key criterion for additionality should not be whether or not the installation generating renewable electricity has received subsidies in the past, but whether or not the electricity used is subsidized.

Specific proposed amendments to the legal text:

- The first sentence of recital 9 should be amended as follows:

„Regarding renewable hydrogen produced from electricity sourced from the grid, its production should incentivise, through a power purchase agreement, the deployment of renewable electricity that does not receive financial support since the renewable hydrogen is already being supported by being eligible to count towards the obligation on fuel suppliers set out in Article 25 of Directive (EU) 2018/2001.“
- Art. 4 2. b) should be amended as follows:

„the renewable electricity has not received support in the form of operating aid or investment aid, excluding support that does not constitute net support, such as support that is fully repaid;“

2.2. Temporal correlation

For electricity sourced *from directly connected installations*, this draft establishes the following eligibility criteria:

- no electricity drawn from the grid for hydrogen production (Art. 3)

For electricity sourced *from the grid*, the draft establishes the following eligibility criteria:

- The electrolysis takes place in the same hour as the renewable electricity generation (Art. 4, 2 c i), *or*
- when electricity is sourced from a storage facility located in front of the same grid connection point and charged during electricity production in the PPA (Art. 4, 2 c ii), *or*
- during a one-hour period in which the electricity price is lower than or equal to €20 per MWh or lower than 0.36 times the current price of a CO₂ allowance (Art. 4, 2 c iii).

The need to meet any of the above alternative criteria does not apply if the electricity comes from a bidding zone where the average share of renewable electricity in the previous calendar year was above 90%, and the electrolyzer does not exceed a maximum number of hours proportionate to the share of RES (renewable energy sources) electricity. This maximum number of hours is calculated by multiplying the maximum number of full load hours of the electrolyzer by the share of RES reported in the bidding zone in the previous year (Art. 4, 1).

BEE requests:

Electricity sourced from directly connected installations:

An electrolyzer that draws electricity from a directly connected installation generating renewable electricity should alternatively be allowed to source electricity from the grid, provided that the criteria in Art. 4 are met. Meeting these criteria requires that only renewable electricity be used to produce the hydrogen. Restricting installations to direct line sourcing would then not be justifiable.

Electricity sourced from the grid:

As an alternative to the above options included in this draft, it should also be possible to use a full load hour limit to meet the temporal correlation criterion.

Specific proposed amendments to the legal text:

- Art. 3 c) should be supplemented by "unless the criteria of Art. 4 are fulfilled".
- An added Art. 4. 2 c iv may read as follows, by analogy with Art. 4. 1:

„Fuel producers may count electricity taken from the grid as fully renewable if the production of renewable liquid and gaseous transport fuel does not exceed a maximum number of hours set in relation to the proportion of renewable electricity in the bidding zone. This maximum number of hours shall be derived by multiplying the total number of hours in each calendar year by the share of renewable electricity reported for the bidding zone where the renewable hydrogen is produced.“

2.3. Geographical correlation

For electricity sourced *from the grid*, the draft establishes the following *alternative* eligibility criteria:

- The installation generating renewable electricity is located in the same bidding zone as the electrolyzer, *or*
- The installation generating renewable electricity is located in an adjacent bidding zone if the electricity price between the bidding zones in the same hour is the same or the electricity price in the zone where RE electricity is produced is lower than in the bidding zone where the electrolyzer is located, *or*
- The installation generating renewable electricity is located in a neighboring offshore bidding zone.

Member states may introduce stricter geographic criteria to ensure compatibility with hydrogen and electricity grid planning (Art. 4, 5).

BEE requests:

It is crucial that electrolyzers are primarily installed at locations with a high supply of fluctuating renewable energies and that they are available to the energy system as a flexibility, while at the same time ensuring the rapid development of a hydrogen infrastructure.

In order to ensure the systemic integration of hydrogen production, the member states should therefore introduce criteria according to Art. 4, 5 of the present draft, which take into account the grid effects of an electrolyser location.

2.4. Exception for redispatch situations

In Art. 4, 4 the present draft specifies that all of the above criteria for renewable electricity sourcing (additionality, temporal correlation, geographical correlation) do not apply during redispatch periods, provided that the electrolysis reduces the need for redispatch by the amount of electricity consumed.

BEE requests:

The present draft does not make it sufficiently clear how the transmission system operators can prove that electrolysis has reduced the need for redispatch by the amount of electricity consumed. There should be clear regulations at the national level to ensure unambiguous verification. In addition, unbundling rules between grid operators and electrolysis operators must also apply when electrolysers are used in redispatch cases.

In principle, strong criteria for renewable electricity sourcing (especially strong criteria for geographical correlation, i.e. construction of electrolysers primarily at locations with a high supply of fluctuating renewable energies) should be enforced immediately to reduce the need for redispatch as such. The funds released by the reduction of redispatch costs can in turn be invested in the faster expansion of the hydrogen infrastructure.

3. Transitional provisions

The present draft specifies in Art. 7 that certain eligibility criteria will only be valid from January 1, 2027. In detail, these are:

- No additionality requirements according to Art. 4, 2 a) and b). This means that until 2027 also subsidized installations generating renewable electricity can be used for electricity supply. All other additionality requirements listed in chapter 2.1. of this statement (conclusion of a PPA between installation generating renewable electricity and electrolyser operator; installation generating renewable electricity in the PPA must generate at least exactly as much electricity as the electrolyser consumes; etc.) are also suspended until 2027.
- The compliance option under Art. 4, 2 c i), according to which electrolysis has to take place in the same hour as renewable electricity generation, also only applies from 2027. Until then, electrolysis only has to take place in the same calendar month as the renewable electricity generation.

Furthermore, the present draft stipulates in Art. 8 that electrolysers that go into operation before January 1, 2027 are protected as existing installations. Accordingly, these electrolysers do not have to prove any additionality requirements according to Art. 4, 2 a) and b) after 2027 and only a monthly simultaneity according to Art. 7.

BEE requests:

The suspension of the additionality requirements according to Art. 4, 2 a) and b) as well as Art. 4, 2 c i) until 2027 as defined in Art. 7, combined with the grandfathering as defined in Art. 8, mean that the electrolysers that are being put into operation before 2027 can use any electricity contracted via PPAs from installations generating renewable electricity and only have to prove a monthly temporal correlation between renewable electricity generation and electrolysis.

The transitional provisions described above contradict the rationale for renewable hydrogen production expressed in Recital 2, which states that the large need for additional renewable generation can only be met through strict additionality requirements. The provisions create fossil path dependencies and a competitive disadvantage for electrolyzers that come into operation after Jan. 1, 2027. Electrolyzers that do not increase the fossil share in the electricity market block the ramp-up of electrolyzers that actually contribute to CO₂ reduction and hydrogen production that serve the transition of the energy system. In addition, installations with a direct line between renewable electricity generation and electrolysis are discriminated against, as the grandfathering protection in Art. 8 only applies to grid-related electricity.

The BEE demands that the hourly correlation between RES and hydrogen production (Art. 4, 2 c i) is valid immediately, and not only in 2027.

For the above-mentioned reason of the competitive disadvantage for electrolyzers commissioned after Jan. 1, 2027, the BEE also rejects a general grandfathering with regard to Art. 4, 2 a) and b) for electrolyzers commissioned before this deadline.

Specific proposed amendments to the legal text:

- Deletion without replacement of Art. 7, Sentence 2 (suspension of the hourly temporal correlation requirement between renewable energy generation and electrolysis until 2027) and Art. 8 (grandfathering) of the present draft.

If the grandfathering of electrolyzers in Article 8 should be maintained, direct line projects should not be disadvantaged. Discrimination against direct lines is completely unjustified. It should therefore be made mandatory to include that the exceptions in Article 8 also apply to electrolyzers with a direct line connection according to Article 3.

Summary

So far, there are no legal regulations at the European level for the definition of renewable hydrogen. With the delegated act on Art. 27 para. 3 of the Renewable Energies Directive (RED II), the European Commission presents criteria for the inclusion of renewable hydrogen in fuels. This is not a universally valid definition of renewable hydrogen. However, the present delegated act is the blueprint for the overarching definition of renewable hydrogen.

The BEE has made it clear that it welcomes the EU Commission's basic approach to providing a universally valid definition of renewable hydrogen. The BEE also sees the proposed criteria for renewable electricity as positive in their basic orientation, as they can serve to ramp up a system-serving hydrogen economy based on renewable energies.

However, various points of criticism were also pointed out in the present statement, combined with the demand for concrete changes in the legal text.

These criticisms include, in particular, the indication that all available RES should be used for renewable hydrogen production. In particular, it was pointed out that the regulations of the present draft make it impossible to use installations generating renewable electricity for renewable

hydrogen production if they have in the past received support. In order to allow existing installations generating renewable electricity to be used for the production of much-needed renewable hydrogen after their legally granted subsidy period has expired, the key criterion for additionality should not be whether or not the RE plant has received subsidies in the past, but whether or not the electricity used is subsidized.

Furthermore, the BEE has made it clear that there is no plausible reason for excluding biomass in renewable hydrogen production. Biomass and biogas should therefore be included in the definition of renewable hydrogen by deleting the addition of "of non-biological origin" at various points in the draft.

With regard to the criteria for temporal correlation, the BEE proposes to include another alternative criterion that provides for a full load hour limitation analogous to the regulation in Art. 4, 1. With regard to geographical correlation, the BEE points out the importance of more far-reaching national regulations that take into account the system efficiency of electrolysis locations.

Finally – and particularly important - the risks of the transitional provisions in Art. 7 and Art. 8 proposed in the present draft were pointed out. The transitional provisions incentivize a market ramp-up of electrolyzers, leading to an increase in CO₂-intensive fossil-fuel power generation. This is contrary to the general objectives of the Red II. Art. 8 create fossil path dependencies and a competitive disadvantage for electrolyzers that operate in a system-serving manner and are commissioned from Jan. 1, 2027 onwards. For this reason, the BEE calls for the deletion without replacement of Art. 7, Sentence 2 (suspension of the hourly simultaneous requirement between RES-E generation and electrolysis until 2027) and Art. 8 (grandfathering of electrolyzers commissioned before 2027) of the present draft.

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