

Delegated Acts on Hydrogen

Methodologies to assess GHG emissions savings and for production of RFNBOs

Background

On 20 May 2022, the Commission published for feedback two draft delegated acts under RED II¹ as part of REPowerEU, the Commission's plan to speed up the energy transition and reduce dependency on Russian fossil fuels. The first delegated act was issued under Article 27(3) RED II and establishes a Union methodology for setting out detailed rules for the production of renewable liquid and gaseous transport fuels of non-biological origin, or so-called 'RFNBOs' (the 'RFNBOs DA').² The second delegated act was issued under Articles 25(2) and 28(5) RED II and establishes a minimum threshold for greenhouse gas emissions savings of recycled carbon fuels, and specifies a methodology for assessing greenhouse gas emissions savings from RFNBOs and recycled carbon fuels (the 'GHG Methodologies DA').³ One core purpose of the draft delegated acts is to ensure that hydrogen production leads to net decarbonisation.

Hydrogen can either play a key role in or present a significant obstacle to the EU's energy transition. To ensure hydrogen contributes to achieving the EU's climate objectives and Paris Agreement commitments, its production must be targeted. Hydrogen must be produced entirely from additional renewable electricity and directed only towards hard-to-abate industrial and transport sectors where other interventions such as electrification, efficiency, or sufficiency are not possible. If the principle of additionality is not adhered

¹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources

² Draft Commission Delegated Regulation 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 (Ref. Ares(2022)3836651)

³ Draft Commission Delegated Regulation supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a minimum threshold for greenhouse gas emissions savings of recycled carbon fuels and by specifying a methodology for assessing greenhouse gas emissions savings from renewable liquid and gaseous transport fuels of non-biological origin and from recycled carbon fuels

to, and if hydrogen is widely used outside hard-to-abate sectors, the production of hydrogen will instead cannibalise existing renewable electricity that is needed to decarbonise other sectors. This would place the EU significantly off-track of meeting its 55% reduction target by 2030 and climate neutrality by 2050.

Civil society has demonstrated how the proposed delegated acts, if adopted, will significantly impede the energy transition by promoting the over-production and consumption of hydrogen, and how they will establish an uneven playing field between Member States. On 15 June, these organisations sent a [letter](#) to President von der Leyen stressing their concerns. As demonstrated by those organisations, the more harmful effects of the proposed legislation can be mitigated through better adhering to a strict principle of additionality and by removing the grandfathering clause (Art. 8 RFNBO DA) and the ability to double-count renewable electricity (e.g., Annex Arts. A.6, A.7 GHG Methodologies DA) from the proposals.

This briefing supplements that analysis and the comments submitted by civil society in connection with this feedback period, by demonstrating that the proposed delegated acts are not only bad policy, they are unlawful. They fail to abide by RED II's plain language on additionality and, if adopted, will breach core principles of EU climate, energy, and environmental law. The following is a concise overview of the main legal problems of the proposed delegated acts, which must be remedied to ensure the acts are lawful.

Legal Flaws in the Proposed Delegated Acts

1. The Proposed Delegated Acts Do Not Abide by the Plain Language of RED II

a. *Use of Time and Pricing Proxies*

RED II establishes clear requirements that the Commission must comply with in adopting the proposed delegated acts. Article 27(3) RED II sets forth the overarching conditions under which electricity used to produce RFNBOs can be treated as fully renewable under the Directive. It establishes separate criteria for electricity obtained via direct connection to an installation generating renewable electricity and for electricity taken from the grid. In the first category, the directly connected generation plant must, among other things, come into operation 'after, or at the same time as, the installation producing' the RFNBOs. Under the second category, electricity taken from the grid to produce the RFNBOs must, among other things, be 'produced exclusively from renewable sources.' Article 27(3) then directs the Commission to issue a delegated act to establish a methodology including detailed rules to apply these requirements in practice. Recital 90 of the Directive further explains that, where electricity is taken from the grid, such methodology must 'ensure that there is a temporal and geographical correlation' between the RES power plant and the production of the RFNBOs, that a power purchase agreement (PPA) be in place between the power plant and the production installation, and that there be 'an element of additionality, meaning the RFNBO 'producer is adding to the renewable deployment or to the financing of renewable energy.'⁴

Several aspects of the proposed delegated acts fail to uphold these clear requirements. For directly connected electrolyzers, the RFNBO DA does not require that the RES facility comes online at the same time as or after the electrolyser. Instead, Article 3 specifies that the renewables facility must come 'into operation not earlier than 36 months' before the electrolyser. Similarly, Article 4 of the RFNBO DA sets forth the rules for grid-connected electrolyzers, but it fails to meet the requirement that the electricity used to produce RFNBOs be produced exclusively from renewable sources. Instead, it establishes proxies

⁴ This principle of additionality is also echoed in the third paragraph of Art. 27(3), stating the goal to 'ensure that the expected increase in demand for electricity in the transport sector beyond the current baseline is met with additional renewable energy generation capacity.'

which fall short of meeting this requirement. Specifically, Article 4 requires the RFNBOs to be produced within the same one-hour period as the electricity being produced from a renewables facility with which the electrolyser has a PPA (or from renewable electricity from a storage asset charged by that same RES facility during the same one-hour period). Alternatively, using pricing as proxies for renewables deployment, Article 4 allows RFNBOs to be produced in the same one-hour period as ‘the clearing price of electricity resulting from single day-ahead market coupling in the bidding zone ... is lower or equal to EUR 20 MWh or lower than 0,36 times the price of an allowance to emit one tonne of carbon dioxide equivalent during a specified period for the purpose of meeting the requirements of Dir. 2003/87/EC.’

The draft delegated acts made a policy choice to use the one-hour matching period and these pricing metrics as less costly means of meeting the strict textual requirement, under Article 27(3) RED II, that the electricity used to produce RFNBOs in fact must be entirely renewable. As a policy matter, this approach is questionable, since there will be moments within any such one-hour period where the electrolyser in question is generating RFNBOs but the renewables facility is not producing electricity. A shorter cycling period could suffice, considering that electrolysers and other technologies can, and often are required or agree to, cycle on and off within shorter time periods. Alarming, the draft legislation’s introduction of a transitional period under Article 7 of the RFNBOs DA, which requires monthly rather than hourly matching until 2027 makes this matching approach altogether meaningless. In any event, whether these approaches represent good policy is not pertinent to the question of whether they actually comply with the text of Article 27(3) RED II, which they does not.⁵

b. Grandfathering and Double Counting

More troubling, however, is the proposed delegated acts’ use of a grandfathering clause in the RFNBO DA and its introduction of GHG emissions counting methodologies in the GHG Methodologies DA, which significantly erode the principle of additionality enshrined in RED II.

1. Grandfathering

In addition to the matching requirements explained above, Article 4 of the RFNBO DA, which applies to grid-connected electrolysers, provides that the installation generating renewable electricity to the electrolyser via PPA must have come into operation no more than 36 months before the electrolyser, and that the such generation facility cannot be the recipient of State aid. Although the 36-month requirement is a weak proxy on its own for ensuring additionality, the RFNBO DA goes further by introducing a grandfathering clause under Article 8. Under this provision, any grid-connected electrolysers which start operating before 2027 do not need to comply with the 36-month or State aid requirements under Article 4. Such life-long exemption means that any electrolyser coming online before 2027 can connect to an existing rather than additional RES installation without having to demonstrate under RED II that it is ‘adding to the renewable deployment or to the financing of renewable energy’ (RED II Rec. 90) or that it is helping ensure that ‘demand for electricity in the transport sector beyond the current baseline is met with additional renewable energy generation capacity’ (RED II Art. 27(3)). This grandfathering provision is therefore unlawful because it is not called for by the legislation, and it erodes these core additionality requirements.

2. Double Counting

The GHG Methodologies DA further undermines the principle of additionality by setting forth emissions accounting approaches which will allow electrolysers to double count the benefits provided by the

⁵ We also note that Art. 4(1) of the RFNBO DA also allows RFNBO producers to alternatively count grid-connected electricity as fully renewable if the electrolyser is located in a bidding zone in which the average proportion of renewable electricity exceeded 90% in the previous calendar year, as long as the production of RFNBOs does not exceed a maximum number of hours set in relation to that average proportion. Although such 90% threshold is high, using a look-back period as a proxy for current conditions still fails to ensure that the RFNBOs are ‘produced exclusively from renewable sources’ as required by Art. 27(3).

renewable electricity used to produce the RFNBOs. This DA creates alternative methodologies which RFNBO producers may choose from as convenient, to measure the GHG emissions from hydrogen that cannot be treated as coming from fully renewable electricity under Article 27(3) RED II (See GHG Methodologies DA Recitals 11, 12; Annex para. 6; Annex para. 7). Such methodologies refer in different ways to the average carbon intensity of the grid to determine the GHG emissions of the RFNBO. However, in doing so, the electrolyser which has a PPA with a renewables facility can use electricity produced from that facility both for counting its RFNBOs as fully renewable under Art. 27(3) RED II and the RFNBO DA, and as zero or low-carbon under the GHG Methodologies DA. This results in double-counting and further incentivizes the use of existing rather than additional renewable electricity. It is also contrary to Art. 27(3) RED II, which requires that the renewable properties of electricity taken from the grid be claimed only once and, again, that the expected increase in demand in the transport sector be met with additional RES.

c. Legal Implications

The fact that the proposed delegated acts significantly weaken the requirements in RED II has several legal implications which require the Commission to revisit and revise the acts before their adoption. First, it could be established that the Commission lacked competence and exceeded the delegated powers conferred on it by Article 27(3) (and Articles 25(2) and 28(5)) RED II by disregarding essential elements of those provisions; namely, the requirement as embodied throughout the text of Art. 27(3) that RFNBOs must be produced entirely with additional renewable electricity if they are to be treated as being created with 'fully renewable' electricity. Further, it could be established that the Commission committed a manifest error or misused its powers in concluding that the criteria set forth in the proposed delegated acts are sufficient to meet the requirements of RED II. In either case, the Commission is obligated to revisit and revise its proposals to ensure that they comply with the requirements of RED II.

2. The Proposed Delegated Acts Violate Core and Binding Energy Law Principles

a. European Climate Law

Article 2(1) of the European Climate Law⁶ establishes a binding objective of climate neutrality in the EU by 2050, and Article 4(1) sets a binding EU target of a net domestic reduction in GHG emissions of at least 55% compared to 1990 levels by 2030. To meet these objectives and targets, the law requires Member States and EU institutions (including the Commission) to 'prioritise swift and predictable emission reductions' (Art. 4(1)) and to 'take the necessary measures ... taking into account the importance of promoting both fairness and solidarity among Member States and cost-effectiveness in achieving this objective.' (Art. 2(2)). Further, the Commission must 'assess the consistency of any draft measure or legislative proposal' with the EU's climate targets and objectives 'before adoption, and include that assessment in any impact assessment accompanying these measures or proposals, and make the result of that assessment publicly available at the time of adoption.' (Art. 6(4)). The Commission must also 'endeavour to align' its draft measures and legislative proposals 'with the objectives' of the Climate Law and 'provide the reasons' for any non-alignment. (*Ibid.*)

The weakening of the additionality principle in the proposed delegated acts significantly risks non-achievement of the EU's climate obligations. It will encourage the widespread use of existing renewable electricity and increase the demand for electricity disproportionately for inefficient uses. This will in turn encourage an uncertain amount of fossil fuels to fill the gap if other renewable electricity cannot come online quickly enough (which it will not). Accordingly, the weakening of the additionality requirements do not prioritise swift and predictable emissions reductions, they are not cost-effective, and they are not aligned with achieving the EU's 2030 and 2050 climate obligations, all in violation of the Climate Law. Further, by introducing a 2027 grandfathering provision and allowing producers situated on relatively low-

⁶ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999

carbon grids to double-count the electricity used to produce RFNBOs, the proposed delegated acts will significantly favour certain Member States over others (namely, those that have more renewables on their networks). For this reason, it cannot be said that the measure appropriately promotes ‘fairness and solidarity among Member States.’

The inconsistency of the delegated acts with the Commission’s obligations under the Climate Law would be made apparent if a climate assessment had been conducted, as required. However, the explanatory memorandum to both proposed acts acknowledges that they each constitute a ‘technical proposal’ and therefore ‘did not need to be supported by an impact assessment or an open public consultation, which are usually only required for major initiatives.’ There is no apparent reason to believe that the Commission conducted a climate assessment for the proposed measures. Accordingly, in issuing revised delegated acts which complies with the requirements of RED II, the Commission must also fulfil its obligation to assess their consistency with EU climate law; otherwise, they are unlawful.

b. Energy Solidarity Principle and Energy Efficiency First Principle

Article 194 TFEU establishes the Union’s objectives on energy policy. These include ensuring the functioning of the energy market, ensuring security of energy supply in the Union, promoting energy efficiency and energy saving and the development of new and renewable forms of energy, and promoting the interconnection of energy networks. It further provides that such objectives should be pursued ‘in a spirit of solidarity between Member States’. The General Court’s recent judgment in Case T-883/16,⁷ and confirmed by the Court sitting in Grand Chamber in Case C-848/19 P,⁸ confirmed that the principle of energy solidarity is the specific expression of the principle of solidarity, a fundamental principle of EU law, in the field of energy.⁹ The judgment established that the principle is binding on Member States and EU institutions¹⁰ in respect of all objectives of the Energy Union,¹¹ including the objective of promoting energy efficiency. Applying the principle in practice requires Union institutions to take into consideration the interests of all stakeholders liable to be affected, avoid the adoption of measures that might affect their interests, and to do so in order to take account of their interdependence and de facto solidarity.¹² Further, various interests must be balanced wherever there is a conflict between them.¹³

The proposed delegated acts form a key measure of EU energy policy, which means the Commission must examine whether they are consistent with the energy solidarity principle before they are adopted. Given the lack of impact assessment conducted before the acts were proposed, it is unlikely the Commission conducted such analysis. If such an analysis were undertaken, it would demonstrate that the proposed delegated acts do not comply with the principle. As noted above, the grandfathering clause and the GHG accounting methodologies heavily favour Member States which have significant penetration of renewable electricity on their existing networks. These provisions will incentivize a substantial increase in electrolyser installations in such Member States before 2027, as producers rush to come online before being subject to stricter rules. Producers will also seek to build electrolysers first in those Member States with significant RES penetration to take advantage of double-counting rules. This will result in a decades-long imbalance between RES-heavy Member States and those further behind on their energy transition.

Article 194(c) TFEU also includes energy efficiency and energy savings among the objectives of EU energy policy. The Governance Regulation¹⁴ introduced ‘energy efficiency first’ as a binding legal principle,

⁷ Judgment of 10 September 2019, T-883/16 EU:T:2019:567

⁸ Judgment of 15 July 2021, C-848/19P, ECLI:EU:C:2021:598

⁹ *Ibid.*, para. 38.

¹⁰ *Ibid.* para. 43

¹¹ *Ibid.* para. 47

¹² *Ibid.* para. 71

¹³ *Ibid.* para. 73

¹⁴ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action

defining it as ‘taking utmost account in energy planning, and in policy and investment decisions, of alternative cost-efficient energy efficiency measures to make energy demand and energy supply more efficient, in particular by means of cost-effective and end-use energy savings, demand response initiatives and more efficient conversion, transmission and distribution of energy, whilst still achieving the objectives of those decisions.’ (Art. 2(18)). The Energy Efficiency Directive provides that the energy efficiency first principle ‘needs to be considered whenever decisions relating to planning the energy system or to financing are taken.’¹⁵ The Climate Law also states that Member States’ and the Commission’s actions ‘should also take into account the ‘energy efficiency first’ principle of the Energy Union’ among other principles.¹⁶

Again, it is clear that the proposed delegated acts are inconsistent with the energy efficiency first principle. The Commission recognizes that electrification of demand sectors ‘is generally the most cost-effective and energy-efficient way to decarbonise final energy demand’ and ‘[c]oupled with an increased contribution from renewables, energy efficiency and a circular economy, electrification delivers a substantial part of the emission reductions across the energy system.’¹⁷ Hydrogen only presents a cost-efficient solution when targeted at priority, hard-to-abate sectors that cannot be electrified. However, by imposing weak additionality requirements, the delegated acts will cause hydrogen to cannibalise renewable electricity that should be directed to decarbonise other end uses, derailing investment to least environmental and cost efficient solutions. Accordingly, the energy efficiency first principle also requires strict adherence to additionality, which the proposed delegated acts fail to do.

Conclusion

For the foregoing reasons, we highly recommend that the Commission amend the proposed delegated acts by removing the grandfathering provision (Article 8 of the RFNBO DA) altogether, and by removing the ability for electrolysers to double-count the renewable electricity they use to produce RFNBOs, as allowed by the proposed accounting methodologies in the GHG Methodologies DA. For specific suitable amendments to make with respect to these issues, we refer you to the amendments proposed by Bellona Europa in their comments filed in connection with the feedback periods on these proposed delegated acts.

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¹⁵ Rec. 2, Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018

¹⁶ Rec. 9, Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality

¹⁷ Impact Assessment Report Accompanying the Proposal for a Directive and a Regulation of the European Parliament and of the Council on common rules for the internal markets in renewable and natural gases and in hydrogen (recast), 15.12.2021 SWD/2021/455