



Hydrogen
Europe

Hydrogen Europe Position Paper

Guidance on RED3 implementation in the transport sector

September 2025

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POSITION PAPER

The 3rd recast of the Renewable Energy Directive (RED3) entered into force on 20 November 2023. With an 18-month transposition period, Member States had until 20th May to transpose most of the directive's provisions into national law - including the provisions aimed at promoting the use of renewable energy, and renewable fuels of non-biological origin (RFNBO) in the transport sector.

However, only a few Member States (MS) have transposed the Directive in time. Furthermore, the landscape emerging from the few successful transpositions is a disjointed one with various national governments opting for widely different approaches towards the key provisions.

Hydrogen continues to be a nascent industry in the very early stages of development. While its key role in the energy transition is indisputable, economic viability is still challenging. In such early stage of market development, a clear policy framework is needed to drive sector development. In order to avoid market fragmentation, facilitate harmonisation, and accelerate the growth of a coherent market for renewable fuel of non-biological origin (RFNBO) in the transport sector, Hydrogen Europe makes the following recommendations:

Recommendation #1

Member States should support the use of RFNBO hydrogen as intermediate in conventional fuels and biofuels refining without penalising it.

Recommendation #2

Where an extensive application of the refinery route could limit the availability of RFNBOs on the market we recommend increasing the RFNBO sub-target.

Recommendation #3

If introduced, a cap on the use of RFNBOs as intermediate in fuel refining processes should never be set at a level below the existing pipeline of projects for the use of RFNBO as intermediate product in refineries, following consultation with the industry.

Recommendation #4

100% of hydrogen used as intermediate product in refineries should be accounted towards the RED3 targets in the transport sector.

Recommendation #5

Introduce a single RFNBO target for the transport sector without multiple sub-targets for individual modes of transport – with the exemption of the maritime sector.

Recommendation #6

MS should ensure that the obligations under Art 25.1 (b) include a fair share of the 5.5% combined target for RFNBO. The 1% RFNBO sub-target should be viewed as a minimum, and - depending on MS circumstances - should be increased.

Recommendation #7

In order to provide regulatory stability and investor certainty, Member States should extend the RFNBO targets beyond the year 2030 – even at a conservative level.

Recommendation #8

Member States shall ensure that the minimum obligation for the use of RFNBO in the transport sector is introduced well before 2030, in line with a trajectory set by that Member State, and considering the existing and planned RFNBO consumption over time.

Recommendation #9

The multipliers can help to promote the adoption of RFNBOs and make them cost competitive with conventional biofuels. However, with the exception of the use of RFNBOs in the maritime and aviation sector, the multipliers should only apply outside of the RFNBO sub-mandate.

Recommendation #10

Failure to meet the minimum obligations under Article 25 (including the RFNBO obligations under Article 25.1 (b) should result in a financial penalty.

Penalty should be set at a level slightly above the RFNBO break-even-point considering both production and delivery costs minus the savings from the avoidance of carbon costs and the costs of conventional fuels. If the penalty is set at a level lower than that - it should not be a buyout mechanism and the missed RFNBO amount should be rolled over to the following year.

Recommendation #11

The mechanism for trading credits for supply of renewable energy to the transport sector should be extended to cover the obligations under Article 25.1 (b).

It is important that different types of credits are designed for each separate obligation created (e.g. Article 25.1 (a), Article 25.1 (b) – RFNBO, Article 25.1 (b) – Advanced biofuels).

Recommendation #12

All economic actors delivering renewable energy to the transport sector should be eligible to receive credits - irrespective of whether they are under obligations stemming from the renewable energy directive.

Recommendation #13

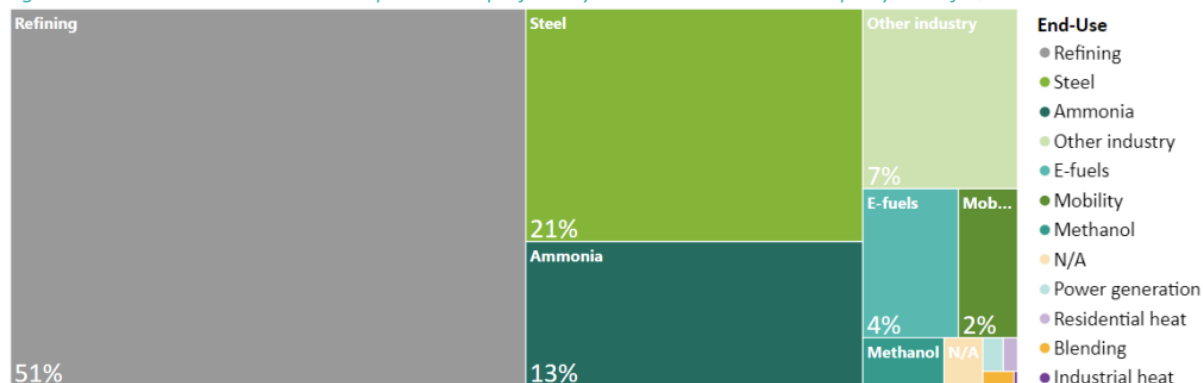
Credits should be valid to demonstrate compliance with the obligation in the same calendar year as the year in which they were issued and the following year, after which they should expire.

1 Use of hydrogen as an intermediary for the production of conventional fuels and biofuels

European refineries are excellently placed to kick-start the Hydrogen Market and to meet the 2030 targets of the RED directive on renewables in transport by using RFNBO hydrogen as an intermediate product. Furthermore, industrial areas becoming early hydrogen hubs would help to substantially increase demand, create economies of scale and strengthening the case for establishing an interconnecting pipeline network and to further extend the hydrogen market.

The strategy of using RFNBO hydrogen as an intermediate for the production of conventional transport fuels and biofuels is called by many as the “refinery route”. By setting up an adequate refinery route where RFNBO hydrogen can be accounted by fuel suppliers towards their RFNBO obligations, refineries can provide increased certainty as large-scale offtakers to hydrogen producers. This will enable the countries with refining capacities to attract necessary investment in the hydrogen economy and further build on their positioning as hydrogen hubs when currently the green hydrogen market is in an early development stage with little direct demand in the mobility sector. Refineries, among the biggest hydrogen consumers in EU¹, can easily integrate green hydrogen in existing production processes and thereby immediately contribute to CO₂ emission reductions, while boosting investment in large-scale electrolysis projects. The importance of the refining sector for the development of a clean hydrogen market can be highlighted by the fact that currently, **more than half of all clean hydrogen projects past FID in Europe are projects targeting the use of hydrogen as an intermediary in conventional fuels refining**. Jeopardising these projects would have detrimental consequences for the entire clean hydrogen market.

Figure 1. Under construction clean H₂ production projects by intended end-use in Europe by end of Q4 2024



Source: Hydrogen Europe. Note: Other industry refers to hydrogen used as a feedstock in the production of chemicals or projects targeting big industrial clusters without specifying the exact final consumer.

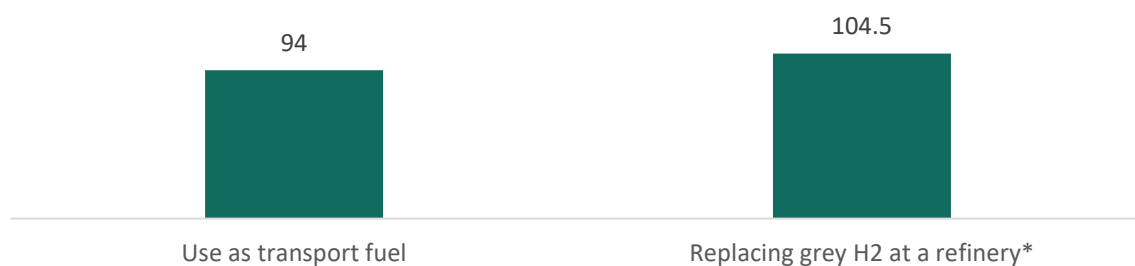
As the recent offtake agreement between TotalEnergies and RWE has demonstrated, the use of hydrogen as an intermediate in oil refining can also be a strong facilitator of the development of hydrogen infrastructure².

Furthermore, it should also be noted that from the point of view of the EU climate change mitigation objectives, the refinery route is as good an application as any, and would result in comparable GHG emission savings to direct use of hydrogen as a transport fuel.

¹ <https://observatory.clean-hydrogen.europa.eu/hydrogen-landscape/end-use/hydrogen-demand>

² See: <https://www.rwe.com/en/press/rwe-ag/2025-03-12-rwe-and-totalenergies-agree-long-term-offtake-agreement-for-green-h2/>

Figure 2. Comparison of the GHG savings of using hydrogen in the refinery route vs direct use as fuel (in gCO₂/MJ)



Source: Hydrogen Europe. *Assuming zero-emission RFNBO hydrogen would replace grey hydrogen produced via steam methane reforming (SMR) of natural gas with 15.1 gCO₂/MJ upstream emissions and excluding potential steam export from SMR.

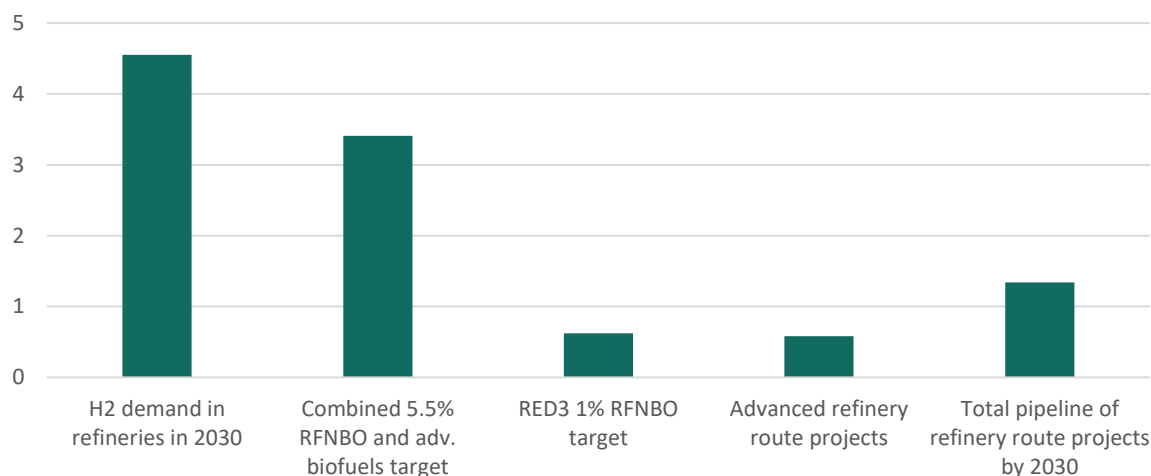
Finally, the replacement of grey hydrogen consumption at refineries would only lead to a minimal increase in the cost of conventional fuels. Allowing for significant decarbonisation impact, with high degree of social acceptance and the least amount of taxpayer support, the refining sector could become one of the lead markets for clean hydrogen.

Recommendation #1

Member States should support the use of RFNBO hydrogen as an intermediary in conventional fuels and biofuels refining without penalising it

One of the strengths of the refinery route - i.e. that it is the cheapest RFNBO compliance option, makes it pivotal in creating large and reliable RFNBO demand, thereby derisking the entire hydrogen market. However, Member States should always ensure that the bootstrapping effect of the refinery route benefits other strategic uses such as the direct use of RFNBOs as transport fuels. As can be seen in the graph below, the refinery route has the ability (reaffirmed by projects in development) to support the achievement of the minimum 1% RFNBO of total energy consumption in the transport sector, equivalent to the lower end of the combined RFNBO + advanced biofuel target of 5.5% (c.f. Article 25.1 (b)).

Figure 3. Potential for RFNBO hydrogen use in the refinery sector compared to the RFNBO sub-target (in Mt)



Source: Hydrogen Europe.

The described interaction would be especially impactful in countries where the size of the refining sector is large relative to the whole transport market. In such cases, our recommendation is to set the RFNBO quota at an adequate level to support the consumption of hydrogen for all transport applications i.e.: above the minimum 1% level (see next section). Only as a last resort solution would a cap be considered - placing a limit on how much the refinery route could contribute to the RFNBO blending quotas without any correction factors below the cap (as was done in Finland). Where a cap is introduced, it should always be associated with an increase of the RFNBO mandate to allow member states to fully leverage the option with the lowest cost of compliance, without compromising on other uses.

Recommendation #2

Where an extensive application of the refinery route could limit the availability of RFNBOs on the market, we recommend increasing the RFNBO sub-target

A cap – contrary to a correction factor - would ensure that the business case for projects below the cap remains sound. However, in order to protect investors, the cap on the use of RFNBOs as an intermediate in fuel refining processes should never be set at a level below the existing pipeline of projects for the use of RFNBO as intermediate product in refineries.

Recommendation #3

If introduced, a cap on the use of RFNBOs as an intermediary in fuel refining processes should never be set at a level below the existing pipeline of projects for the use of RFNBO as an intermediate product in refineries, following consultation with industry

It should also be emphasized that a comprehensive set of support schemes for different applications in the transport sector is needed. Additional measures need to be introduced to make it possible for the obligated parties to comply with the targets. i.e.

- ensure there is sufficient deployment of additional renewable energy sources,
- ensure timely development of hydrogen refuelling stations for road mobility,
- ensure timely development of broader hydrogen infrastructure (pipelines, underground storage, bunkering infrastructure),
- provide sufficient funding – including funding for fuel cell electric vehicles (FCEVs),
- create incentives for fuel consumers to use more expensive renewable fuels (e.g. tax breaks for corporations, road tolls exemptions, etc.).

Conventional refineries consume hydrogen primarily for the production of conventional transport fuels and biofuels. As a by-product of this process, a small fraction of the total output is used in the industrial sector (e.g., naphtha), and a minor share of the by-product hydrogen may be used for energy production. However, since such uses are marginal in conventional refineries, we recommend allocating 100% of the hydrogen used in conventional refineries towards the transport target rather than splitting a portion toward the industry target. Allocation to the industry target should be considered only for refineries that engage in petrochemical activities.

Recommendation #4

100% of hydrogen used as intermediate product in refineries should be accounted towards the RED3 targets in the transport sector

The only exception to that rule should be hydrogen used for energy generation and petrochemistry (e.g. steam cracking). This would not prevent MS from allocating part of the hydrogen used in refineries for their reporting to the EU COM of the share of RFNBOs used in industry, for which the MS is the obligated party.

2 RFNBO sub-target in the transport sector

The option provided by the RED3 to focus on a GHG emission reduction target or a renewable energy share provides a choice for MS on how best to comply with their obligation through both renewable energy and recycled carbon fuels (RCF). Depending on a wide array of country-specific circumstances, the Directive leaves MS a lot of flexibility as to how best to decarbonise their transport sectors.

In general, we recommend the creation of a single, overshoot, RFNBO target for the transport sector, without downwards correction factors (e.g. refinery route) and we advise against setting multiple sub-targets for individual modes of transport (e.g. inland shipping). This approach provides maximum flexibility for fuel suppliers and producers to deliver RFNBOs where they are most viable and impactful, reducing compliance costs and accelerating deployment.

However, some exceptions may be justified: for example, a sub-target for the maritime sector could be beneficial in MS with significant shipping activity, given that FuelEU Maritime's RFNBO provisions are not yet binding. Furthermore, a RFNBO sub-target for the maritime sector in countries with large demand would also increase RFNBO volumes, resulting in lower costs in all transport (and industry) applications. In contrast, a separate aviation sub-target is unnecessary, as RefuelEU Aviation already imposes a binding mandate that covers RFNBOs. Overall, a unified target supports market liquidity and simplifies compliance, while optional national sub-targets can be used to address sector-specific gaps or strategic priorities.

Recommendation #5

Introduce a single RFNBO target for the transport sector without multiple sub-targets for individual modes of transport – with the exception of the maritime sector

It's important to maintain 2030 targets in order to protect current investments (not to open up RED rules in a potential 'energy simplification omnibus proposal'). Member States should mandate fuel suppliers to ensure that at least 5.5% of the energy supplied to the transport sector should be either RFNBO or Advanced Biofuels, with at least 1% coming from RFNBO. They are encouraged to set differentiated targets to ensure that both technologies are supported. It is important to consider that the 1% RFNBO target should be treated as the minimum, contrary to the implementation currently foreseen by Denmark³. MS with significant RFNBO use potential should consider exceeding the 1% minimum RFNBO target, especially where national hydrogen targets for 2030 are particularly ambitious. In doing so, they should factor in their long-term fuel strategies for the transport sector, such as the approach that Finland has implemented.

Recommendation #6

Member States should ensure that the obligations under Art 25.1 (b) include a fair share of the 5.5% combined target for RFNBO. The 1% RFNBO sub-target should be viewed as a minimum, and - depending on MS circumstances - should be increased.

Differentiated targets between Advanced Biofuels and RFNBO, including a fair share for RFNBO within the 5.5% combined target, will create legal certainty for investors - as regards the expected size of the market - and facilitate the development of a stable RFNBO market in the short term. In some countries with better conditions for RFNBO production we advise to go well beyond the minimum required by the Directive.

There is no one-size-fits-all solution, as different Member States have different circumstances and face different challenges (including different RFNBO production costs). However, there are a number of elements that should always be considered before settling on the level of RFNBO obligation.

If the availability of feedstock for the production of advanced biofuels is grossly insufficient in the context of the combined 5.5% RFNBOs and advanced biofuels target, MS could consider increasing the RFNBO target in order to facilitate investments and ensure the overall target defined in article 25.1(b) is met.

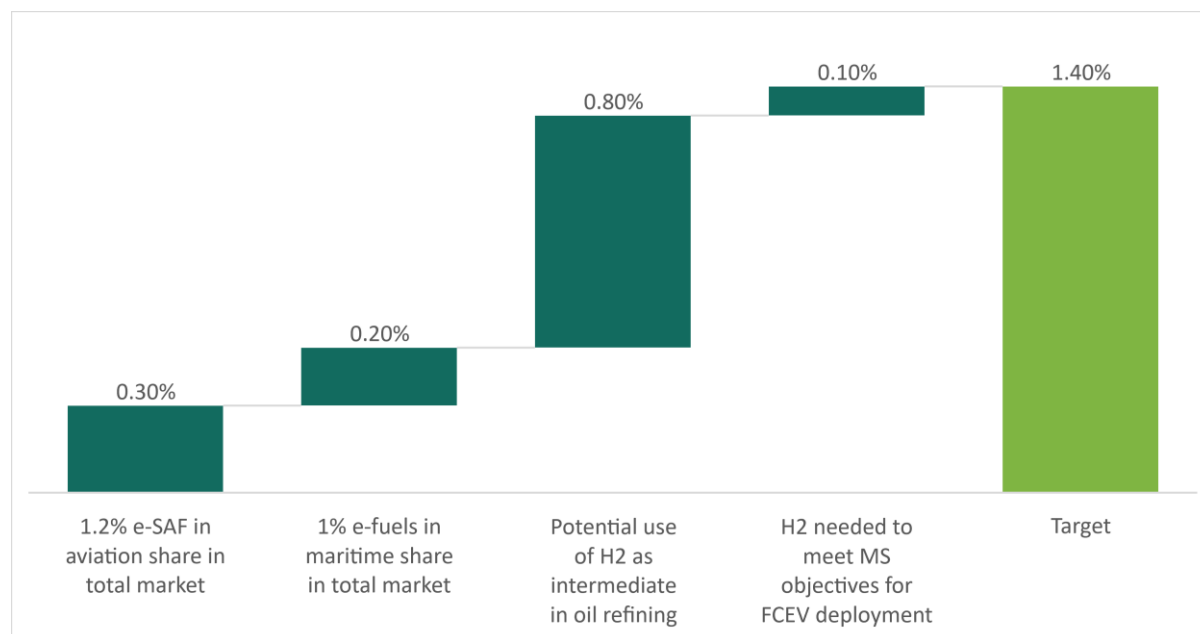
Member States should also evaluate the impact of EU regulations, like the RefuelEU Aviation, FuelEU Maritime, and Alternative Fuels Infrastructure Regulation (AFIR) would have on the local transport sector and consider setting the RFNBO target at a level that ensures all objectives set by those regulations are met with enough margin to also incentivize the switch to RFNBO hydrogen in the

³ More information on the status of RED3 implementation in various Member States in annex.

refining sector and use of hydrogen as a fuel in road transport. The sectors that have specific challenges and involve the creation of a new, complex value chain, need to be promoted by targeted support schemes.

An example of such an approach is illustrated as follows:

Figure 4. Illustrative example to a recommended approach to setting the RFNBO sub-target



Source: Hydrogen Europe.

Furthermore, following the example of the 5-year RefuelEU Aviation e-SAF pathway until 2050, MS should consider extending the RFNBO targets' visibility beyond 2030. Even if the EU 2040 GHG reduction targets are not yet known, Europe has a legal commitment to net zero by 2050 so extending the targets beyond 2030, even at a conservative level, would add much needed investment certainty, as 2030 is not a sufficiently long investment horizon. A credit system has to be developed in order to promote optimal scaling.

Recommendation #7

In order to provide regulatory stability and investor certainty, Member States should extend the RFNBO targets beyond the year 2030 – even at a conservative level

3 Target ramp-up

Article 25.1 (a) states that the 2030 obligations under that article should be introduced, **“in accordance with an indicative trajectory set by the Member State”**.

Additionally, Article 25 1. (b) states that **“the combined share of advanced biofuels and biogas produced from the feedstock listed in Part A of Annex IX and of renewable fuels of non-biological origin in the energy supplied to the transport sector is at least 1 % in 2025 and 5.5 % in 2030, of which a share of at least 1 percentage point is from renewable fuels of non-biological origin in 2030.”**

Finally, **“Member States are encouraged to set differentiated targets for advanced biofuels and biogas produced from the feedstock listed in Part A of Annex IX and renewable fuels of non-biological**

origin at national level in order to fulfil the obligation set out in the first subparagraph, point (b), of this paragraph, in a way that the development of both fuels is promoted and expanded”

Setting a trajectory for achieving the obligations under Article 25 (all obligations transposed under that article), with obligations for the years before 2030 covering minimum shares of RFNBO's and advanced biofuels is not just legally necessary, but crucial from a techno-economic perspective to reward early movers.

Obligations covering the period before 2030 will allow obligated parties to develop RFNBO and advanced biofuel production in a phased approach, in a way that minimises development risks and allows the applications of lessons learned from intermediary phases.

In the absence of RFNBO and advanced biofuels intermediary obligations before 2030, the entire market will be delayed and projects that are operational before 2030 will have no market to sell into and will risk staying idle or facing delays and cancellations.

The ideal ramp-up of the targets should be set in a manner consistent with hydrogen production plans and the ability of obligated parties and/or markets to absorb the produced quantities, either directly as fuel or in national refineries, as well as consider potential production projects and infrastructure development delays.

The growth may resemble an exponential function rather than a linear one. If a MS already has operational electrolysis capacity, or electrolysis capacity under construction, the obligation could begin in 2025 or 2026 to reward early movers. If not, it should begin in 2027/2028 to allow obligated parties to develop such capacity.

An obligation in 2027/2028 will be essential especially for those countries that wish to benefit from the transitional period of the Delegated Acts on RFNBO production, which exempt projects coming into operation by 1 January 2028 from the requirement of additionality⁴.

Recommendation #8

Member States shall ensure that the minimum obligation for the use of RFNBO in the transport sector is introduced well before 2030, in line with a trajectory set by that Member State, and considering the existing and planned RFNBO consumption over time

4 Multipliers

The Directive obliges to use a number of multipliers for energy-based targets, designed to promote the use of RFNBOs: a x2 multiplier for RFNBO and x1.2 for advanced biofuels, together with an additional x1.5 multiplier for the use of RFNBO in aviation and maritime sectors.

However, it should be noted, that while Member States have some flexibility in setting up the applicable multipliers, these instruments must align with the purpose set out under RED III. As clarified in recital 78 of the RED III multipliers are intended to adjust for efficiency differences between fuels, incentivize the use of renewable fuels in hard-to-abate sectors, and guide investments where multiple compliance options compete to meet common targets. Their purpose is to stimulate the development of selected markets (i.e. hard to abate transport sectors) and/or rewarding energy efficiency. This implies that putting a multiplier makes sense only when different

⁴ Delegated Regulation 1184/2023, Article 11

energy carriers or different applications compete with each other. In any case, the 1% RFNBO mandate should be fulfilled in real terms; therefore, the use of multipliers to artificially lower this obligation should be avoided.

Therefore, the RFNBO and advanced biofuels multipliers are sensible only if they are applied to the overall targets (Article 25.1 (a) of RED3). In the framework of the RFNBO sub-target, the general (2x) RFNBO multiplier serves no legitimate purpose – with the exception of the use of RFNBOs in the maritime sector, where no binding targets exist.

Recommendation #9

The multipliers can help to promote the adoption of RFNBOs and make them cost competitive with conventional biofuels. However, with the exception of the use of RFNBOs in the maritime and aviation sector, the multipliers should only apply outside of the RFNBO sub-mandate.

Nonetheless, it would be advisable that Member States consult obligated parties of this sub-mandate before setting out the rules of multipliers. RFNBO H2 demand and supply need to be aligned with actual national production capabilities and interaction with other RFNBO targets influencing demand.

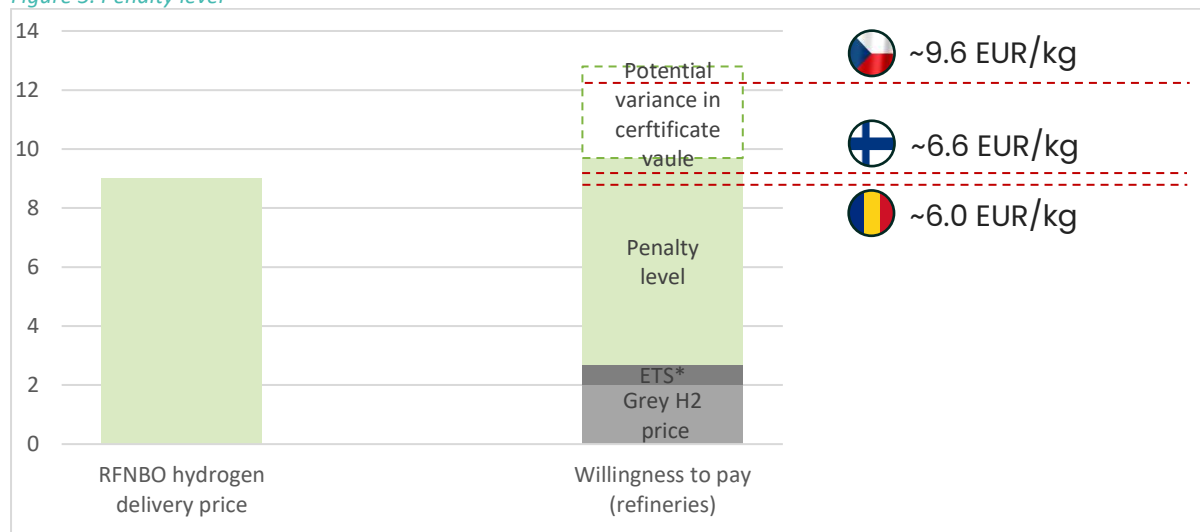
5 Penalties

To be effective, failure to meet the minimum obligations under Article 25 (including the RFNBO obligations under Article 25.1 (b)) should result in a financial penalty. This financial penalty must be set at a high enough level to ensure compliance (i.e. have a dissuasive effect).

When designing the financial amount, MS should aim to set the penalty at a level slightly above the RFNBO break-even-point considering both production and delivery costs, minus the savings from the avoidance of carbon costs and the costs of conventional fuel or grey hydrogen. The figure below exemplifies this logic.

In the example below, in a country where the levelized cost of hydrogen (LCOH) is around €8/kg of H₂, considering €1/kg H₂ delivery costs, the total cost at delivery point would be €9/kg H₂. Considering a grey hydrogen price of €2/kg and a carbon cost of €0.7/kg, the penalty level that would ensure compliance should be larger than €6.3/kg. A comfortable margin is advised to allow for fluctuations in the assumptions. (In the example below, a suitable penalty level would be €6.5 – 7.0 for every kilogram of hydrogen below the target).

Figure 5. Penalty level



Source: Hydrogen Europe.

It is important to stress that there isn't a single penalty level that makes sense for every Member State. Member States should make realistic assumptions of the LCOH expected in their country so as not to set the penalty too low. A penalty that fails to cover additional costs of production and distribution of RFNBO will act more like a tax on fuel suppliers rather than have the incentive effect of developing RFNBO production capacity. Low-level penalties should be avoided.

MS may place differentiated obligations (and hence differentiated penalties) for RFNBO and advanced biofuels. If they choose a combined obligation for part of the obligation, the penalty should be estimated in the same method as above for the two different fuels and set at a level of the more expensive of the two.

Member States may consider designing their penalty system in a manner which is “liberatoire” (i.e. freeing obligated parties from the obligation to comply, through paying the (high) penalty) or “non-liberatoire” (i.e. imposing a penalty for non-compliance, while carrying through the obligation in the following year until full compliance is met). If the penalty is set in the manner described above (i.e. high enough to create willingness to pay), it will act as a buy-out for fuel suppliers. If that is not the case however, we recommend Member States to pursue a “non-liberatoire” penalty system, which will require obligated parties to make up the quantities of RFNBO missing from a compliance year in the following year. This way even a relatively small penalty could still be effective at ensuring that the planned electrolysis capacities are developed in the country.

Recommendation #10

Failure to meet the minimum obligations under Article 25 (including the RFNBO obligations under Article 25.1 (b)) should result in a financial penalty.

Penalties should be set at a level slightly above the RFNBO break-even-point considering both production and delivery costs minus the savings from the avoidance of carbon costs and the costs of conventional fuels. If the penalty is set at a level lower than that it should not be a buyout mechanism and the missed RFNBO amount should be rolled over to the following year

6 Ticket trading system

Article 25.4 requires that “Member States shall establish a mechanism allowing fuel suppliers in their territory to exchange credits for supplying renewable energy to the transport sector. Economic operators that supply renewable electricity to electric vehicles through public recharging points shall receive credits, irrespectively of whether the economic operators are subject to the obligation set by the Member State on fuel suppliers, and may sell those credits to fuel suppliers, which shall be allowed to use the credits to fulfil the obligation set out in paragraph 1, first subparagraph”

The mechanism described in Article 25.4 is critical for effective and cost-efficient compliance with the obligations under Article 25.1. It allows fuel suppliers that over comply with the obligations to sell excess credits to those that fail to do so and allows economic operators that supply renewable fuels to benefit, through the sale of such credits, from the green premium associated with their fuels. Such a mechanism will facilitate the achievement of the target, minimising compliance costs overall (as fuels can be produced and supplied where it is most economically efficient to do so) and reducing the need for state aid support.

While the Directive mandates that such a mechanism should be developed for compliance with Article 25.1 (a) (i.e. the general obligation), Member States should extend its scope to cover the obligations under Article 25.1 (b). It is important that different types of credits are designed for each separate obligation created (e.g. Article 25.1 (a), Article 25.1 (b) – RFNBO, Article 25.1 (b) – advanced biofuels.

Recommendation #11

The mechanism for trading credits for supply of renewable energy to the transport sector should be extended to cover the obligations under Article 25.1 (b).

It is important that different types of credits are designed for each separate obligation created (e.g. Article 25.1 (a), Article 25.1 (b) – RFNBO, Article 25.1 (b) – advanced biofuels.

Furthermore, while the Directive mandates that economic operators that supply renewable electricity are to be allowed to receive credits, irrespectively of whether they fall under the scope of the obligation, this should be extended to economic operators which supply advanced biofuels and RFNBO to the transport sector. Indeed, an important part of the market of RFNBO will be supplied by independent producers that are not “fuel suppliers”, subject to the obligations of Article 25. **Not allowing such RFNBO/Advanced biofuel suppliers to receive credits for their supply, on equal footing with “fuel suppliers” would have significantly adverse competitive consequences and should be avoided at all costs.**

Recommendation #12

All economic actors delivering renewable energy to the transport sector should be eligible to receive credits - irrespective of whether they are under obligations stemming from the Renewable Energy Directive

It is important that a link between the supply of eligible fuels (e.g. RFNBO and advanced biofuels) and the transport sector is established as a pre-condition for the generation of credits to ensure that such fuels contribute to the decarbonisation of the transport sector, in line with the objectives of Article 25.

To avoid any confusion with other instruments (e.g. proof of sustainability / guarantees of origin, etc.) it should be clearly stated that the only purpose of such “credits” is to demonstrate compliance with the specific obligation under Article 25 they are meant to facilitate and that such credits are discontinued at the moment that fuel suppliers demonstrate compliance with their obligations to the enforcing authority.

To facilitate trading while avoiding large price fluctuations and abuse, banking of credits should be made possible. Credits should be valid to demonstrate compliance with the obligation in the same calendar year as the year in which they were issued and the following year only, after which they should expire.

The transposing act should clearly define the act that triggers that generation of a “credit”, and the entity empowered to receive it. While for excise duty goods, such a moment and person are easy to identify (the excise duty point, and the entity responsible for paying excise duty), for products not subject to excise duty, such as hydrogen, specific rules are needed. For example, generation of credits should be triggered by: (i) for hydrogen sold as a fuel: “the supply at a public or private hydrogen refuelling station by the operator of the station”, for (ii) hydrogen used as an intermediary product, the consumption of hydrogen by a fuel supplier in the process of production of conventional fuels and biofuels”.

It is necessary for an enforcing authority to be empowered to monitor the “generation, transfer, and cancellation” of credits and ensure a smooth and efficient functioning of the system. It is preferable that the same authority responsible for the management of the credit system is the same as the one empowered to monitor compliance with the obligations and enforce fines for non-compliance.

Recommendation #13

Credits should be valid to demonstrate compliance with the obligation in the same calendar year as the year in which they were issued and the following year, after which they should expire

Annex: status of the RED implementation in the EU Member States

Last update: 26th May 2025

ITEM	Finland	Czechia	Romania	Denmark
Status	Adopted	Adopted	Adopted	Executive order published
Mandate base	RE (34% in 2030)	RE (29% in 2030)	RE share	GHG reduction
RFNBO Target 2030	4% (road mobility only)	1% (effectively 0.5% with multipliers)	5%	0.9% (excl. aviation)
Sectoral Subtargets	No (but the target is only for road transport – other sectors not covered so far)	No	None	No (but the target excludes aviation from denominator, includes it in numerator)
Multipliers	No (i.e. not even the ones in RED)	Same as in RED (2x for all and 1.5x for maritime and aviation)	1.2x for maritime and aviation 1.6x for public HRS	1.5 for aviation and maritime
Penalty	0.055 EUR/MJ 6.6 EUR/kg On top of a penalty for missing the general target 0.04 EUR/MJ	2 Kč/MJ 0.08 EUR/MJ 9.6 EUR/kg	Up to 0.25 LEI/MJ = 0.05 EUR/MJ = 6 EUR/kg	Companies missing the obligation are liable for a fee but the fee not defined
Use of H2 as intermediate	CAP (1% in 2030)	No constraints	No constraints (but no multiplier)	No constraints

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