Position paper NLHydrogen RED IV

Adopted on 28 October 2026

NLHydrogen regards the upcoming Renewable Energy Directive IV as perhaps the most crucial European policy file for scaling up the hydrogen economy between now and 2040. In this position paper we make several recommendations and respond to the leaked draft impact assessment, in which the European Commission sets out the first contours of the new policy package.

Major steps have been taken in hydrogen in the Netherlands in recent years: investment decisions on +- 500 MW of electrolysis capacity and on low-carbon hydrogen production, the opening of the first sections of the hydrogen backbone, investments in import infrastructure and dozens of hydrogen refuelling stations in operation. The previous *Renewable Energy Directives* were an important driver of this. At the same time, the sky-high hydrogen ambitions of the beginning of the decade proved in some cases to be too high.

Together with the Dutch government and the European Commission, the Dutch hydrogen sector wants to move towards a balance between realism and ambition. In this context, it is understandable that policy instruments are being adjusted. The underlying strategic course must, however, remain constant. Hydrogen is and remains essential for Europe's strategic autonomy, earning capacity and climate efforts. If we want to realise all these benefits, we need the European Union to remain a reliable partner of the hydrogen community.

Certainty about hydrogen demand is essential; extend the targets for the uptake of RFNBO hydrogen in mobility

In the previous edition of the Renewable Energy Directive (RED III), ambitious targets were set for the uptake of RFNBO hydrogen in mobility and industry. We see that these two drivers of the hydrogen market are moving at different speeds. The mobility targets (both through direct use of hydrogen in road transport and through the refinery route) are achievable, have been transposed by the Member States into national policy and have led to FIDs in electrolysis capacity in Europe and beyond. The industry targets, however, are more complex; transposition into national policy is being delayed and offtake contracts in industry are difficult to sign.

This difference arises because the additional costs of using RFNBO hydrogen in mobility can be passed on to end users much more easily. The value chains are shorter (from green hydrogen production directly to a hydrogen refuelling point, or via a refinery to a gas station), which means the additional costs of green hydrogen can be covered by a

marginal contribution from the European consumer. This successful route can therefore be scaled up and replicated for shipping and aviation.

For further scale-up of hydrogen in the transport sector, we make the following recommendations:

- Set binding standards for the use of hydrogen in the European mobility sector for the longer term (at least until 2040), both through direct use and through the refinery route. In doing so, provide clarity on the refinery route, so that it is implemented uniformly within the EU.
- Stimulate direct use of hydrogen (carriers) in shipping through international CO2 pricing (IMO), bunkering pilots and the construction of ships that can sail on hydrogen carriers; ideally in FuelEU Maritime, so that there is no duplication in European policy.
- Implement an annually increasing obligation for sustainable kerosene (produced with hydrogen) in ReFuelEU Aviation.

In industry, the chains from producer to final end user are longer (example: green hydrogen production → fertiliser production → farmer → food processor → supermarket → consumer). In addition, the industry part of RED III faces stronger global competition than the mobility part, which makes it easy for a buyer somewhere in the chain to opt for a supplier that does not bear the additional costs of green hydrogen. As a result, the higher costs of RFNBO hydrogen cannot easily be passed on to customers.

There is broad concern in industry that companies in the EU have to incur costs that competitors outside Europe do not bear. This is not an issue that is exclusive to RFNBO hydrogen, but it must nevertheless always be taken into account when designing new industry targets for hydrogen uptake in RED IV. Sectors or processes should not be disproportionately burdened compared to production outside of Europe. Otherwise, there is a risk of reduced production or relocation outside the EU without any climate gain.

The end goal should be that customers and end markets pay for products with a lower CO_2 intensity. Decarbonisation can then increasingly be carried by the market. This can be achieved by ensuring that end users are obliged to purchase sustainable (and in this case hydrogen-based) products, while ETS and CBAM put a price on the climate costs of production processes. New hydrogen targets for industry in RED IV only stand a chance of success if they are aligned with the sector-specific possibilities to sell hydrogen-based products in their end markets, and to pass on the EU-specific additional costs in those products.

We make the following recommendations for demand creation in industry:

- Set long-term targets (at least until 2040) for the uptake of RFNBO hydrogen in industry.
- Ensure that hydrogen targets are linked to binding targets for the uptake of sustainable products in European end markets (e.g. a mandatory share of green steel in cars sold in Europe, in construction and in public procurement, and uptake of green fertiliser in food production). Only in this way can the offtake targets be made bearable and affordable for European industry. The Industrial Accelerator Act already takes a number of good steps in the field of demand creation.
- Protect European industry against carbon leakage; use instruments such as CBAM to ensure that climate-damaging production elsewhere in the world does not crowd out clean European production.

Scale-up pathways should be provided for both renewable and low-carbon hydrogen

An important point of attention is the relationship between low-carbon hydrogen and green hydrogen. If Europe wants to use low-carbon hydrogen (both electrolytic and with CCS, and both from residual gases and from natural gas) for rapid and cost-effective emission reduction, value chains will have to be designed for it in a similar way to what has already been done for RFNBO hydrogen. Production, infrastructure and demand must be developed in conjunction, and be supported by policy.

To this end, specific applications must be defined for low-carbon hydrogen (such as process heat in industry, flexible power generation or industrial processes that use carbon as a feedstock alongside hydrogen), which can then be supported by a policy framework.

At the same time, it must be ensured that the targets for RFNBO hydrogen are preserved as well. Admitting low-carbon hydrogen must not lead to a weakening of RFNBO targets or sub-mandates, and low-carbon hydrogen must not count as RFNBO hydrogen.

We make the following recommendations to achieve this:

- Define clear ramp-up pathways for the deployment of low-carbon hydrogen alongside RFNBO hydrogen.
- Treat different forms of low-carbon hydrogen equally; do not create separate treatment for different production routes for low-carbon hydrogen.
- Ensure that new deployment of low-carbon hydrogen is not hindered by the offtake targets for RFNBO hydrogen, as did happen with the company-level obligation for industrial offtake in RED III. An unintended side effect of that rule is that companies wishing to replace their existing natural gas consumption with low-carbon hydrogen are also required to purchase RFNBO hydrogen. This creates a substantial barrier to a potentially promising decarbonisation route.

Imports of hydrogen (carriers) offer a major opportunity

We need imported hydrogen. Imported hydrogen and hydrogen carriers are necessary, because it is unlikely that sufficient renewable electricity will be available in the Netherlands and North-West Europe, now and in the future, to meet the full demand for renewable electricity and hydrogen. NLHydrogen's system study expects 350 PJ of domestic production, and on top of that no less than 850 PJ of hydrogen imports in 2050.

Imported hydrogen can come from dozens of different countries and regions, which allows us to avoid a strong dependence on a few suppliers (as with fossil fuels). In this way, imported hydrogen (and hydrogen carriers) contributes to the future-proofing of steel and fertiliser production, chemicals, fuel production and various other sectors that are crucial to Europe's autonomy.

By focusing simultaneously on locally produced and imported hydrogen, the Netherlands secures a sufficient and competitive supply of hydrogen for the market. In addition, we ensure that the costs of building and using infrastructure can be spread over as many network users as possible. Finally, imported hydrogen requires virtually no reinforcement of electricity grids compared with other decarbonisation routes, which makes the energy transition more feasible and more affordable for everyone.

Competitive international hydrogen value chains can be developed within Europe. Moreover, hydrogen imports offer an opportunity to strengthen relations with like-minded countries and regions. Canadian Prime Minister Mark Carney explicitly mentioned hydrogen exports during his visit to Brussels in September 2026, and the new agreements with MERCOSUR and India also offer opportunities in this respect.

We make the following recommendations to achieve this:

- It is important that the new RED is not approached solely from the perspective of national production and consumption targets, but from the objective of developing a cross-border, integrated European market for renewable hydrogen.
- Focus on the development of hydrogen value chains between EU Member States, and in addition develop strategic hydrogen corridors with other regions (Canada, MERCOSUR, etc.).
- Invest in the development of import infrastructure in European seaports. This can be supported by extending existing European subsidy instruments (EU ETS free allowances, Innovation Fund) to imports, or by further developing the international import pillar of the EU Hydrogen Bank.
- In some European policy frameworks (for example the Sustainable Maritime Alternative Propulsion mechanism for sustainable shipping fuels) and their national transpositions, imported hydrogen carriers are treated differently from hydrogen produced in Europe. As a basic principle, there must be a *level playing field* between locally produced and imported hydrogen, as long as the standards of the DA RFNBO or the DA Low Carbon Fuels are met. Safeguard this level playing field in all European policy that touches on this.

ETS should be used to achieve hydrogen targets

The ETS revision earlier this year creates opportunities for new policy action on hydrogen. The ETS should not only be a stick, but also a carrot, providing incentives for investment in renewable energy and infrastructure. The ETS revenues (carbon credits) should be used for the development of hydrogen value chains and other energy transition applications – in conjunction with efforts on other decarbonisation pathways such as direct electrification and circularity. The previously mentioned development of demand for sustainable products could be facilitated par excellence by ETS funds, as is also stated in the Industrial Accelerator Act.

Hydrogen's system value should be recognized

The recently leaked draft Impact Assessment places strong emphasis on flexibility, congestion reduction and limiting curtailment. NLHydrogen agrees that the importance of these issues increases as the share of renewable electricity rises, and believes that hydrogen can contribute to alleviating these.

Green hydrogen plays a key role in optimising the energy system, and creates a more robust business case for offshore wind. The use of hydrogen adds more flexibility to the electricity system, making it easier to keep the grid in balance and to avoid peak loads. Hydrogen infrastructure has a higher energy density than electricity cables and is

relatively cheap to build. Estimates of avoided investments in electricity grids through smart siting of electrolysers point to savings that could amount to as much as €10 billion at Dutch national level by 2040. This amount would multiply at a European level.

To achieve the system value of hydrogen, we make the following recommendations:

- Explicitly recognise green hydrogen production as a system integration and flexibility solution, and quantify its benefits at European level.
- Reward this system role of electrolysers through reduced electricity grid tariffs, as was also recently proposed in Germany (AgNes proposal).
- Offshore electrolysis and flexible electrolysis at offshore wind landing points can absorb variable wind output, limit congestion and curtailment, and avoid part of the otherwise required electricity grid expansion. RED IV should set out a scale-up pathway for this route, which will be important in the future, as also expressed in the Hamburg Declaration by the nine North Sea countries.
- Port and industrial areas can contribute to system integration and flexibility by providing space for hydrogen production, storage, import, conversion and other flexibility solutions that can absorb surplus renewable energy and integrate it into the energy system. Small-scale/decentralised electrolysis can replicate this effect at regional scale.
- Using hydrogen where possible creates more room for electricity where it is needed. For example, building hydrogen refuelling stations can reduce the pressure of electric mobility on the power grid. This preserves grid capacity for developments (such as housing construction) for which a grid connection is truly necessary.

Hydrogen infrastructure development needs to be accelerated

A successful European hydrogen market requires not only production and offtake targets, but also the timely development of the underlying infrastructure. Hydrogen pipelines, storage facilities, import terminals and regional distribution networks are a necessary precondition for investment in production, imports and industrial applications. RED IV must therefore explicitly contribute to the development of an integrated European hydrogen market with strong connections between production areas, ports and industrial clusters.

In addition, pragmatism is needed while the European infrastructure is still being built. As long as physical delivery and network coverage are not available everywhere, temporary transitional measures must remain possible, so as not to block investments unnecessarily and to accelerate market development.

To achieve the system value of hydrogen, we make the following recommendations:

- Accelerate the construction of the European hydrogen backbone and cross-border connections.
- Support investments in storage capacity, including salt caverns, and in import terminals in European ports.
- Stimulate the development of regional hydrogen networks that connect production, storage and offtakers. Let this be demand-driven, so that only routes are developed where actual transport demand exists, thereby keeping the costs of the backbone roll-out as low as possible.
- Harmonise and lower electricity grid tariffs for electrolysers, so that hydrogen production is not hampered by high and widely diverging network costs between Member States, thereby safeguarding a level playing field.
- Apply intertemporal cost allocation (in combination with an amortisation account) when regulating hydrogen transport tariffs, so that the costs of network development are borne not only by the early movers but also by future network users. This creates long-term predictability of tariffs and keeps hydrogen transport tariffs affordable for the early movers as well.
- As long as physical infrastructure is not ready, systems such as adapted mass balance rules, book-and-claim systems and certificate markets can be used to maintain the pace of development of hydrogen production. These must, however, be temporary solutions that do not stand in the way of the further development of physical value chains.

Response to the Draft Impact Assessment

NLHydrogen has read the leaked draft of the RED IV impact assessment with concern. The suggestion to abandon the binding RFNBO targets for both industry and transport would be very damaging to the hydrogen sector, and threatens billions in public and private investments already committed in the Netherlands.

The impact assessment suggests that the green hydrogen market is failing to get off the ground because of the excessively high production costs of green hydrogen. Although these costs are falling less quickly than we hoped a few years ago, this is not the only reason for the delay. The lagging roll-out of RFNBO projects compared with the plans earlier this decade is mainly the result of investment uncertainty. Uncertainty about future targets and regulation hampers the conclusion of long-term offtake contracts, and thereby new investments. The experience with RED III in mobility shows that clear and stable targets do in fact stimulate market development.

Binding targets provide a necessary demand and investment signal and are therefore an important precondition for the further scale-up of the European hydrogen market. The form of the Industry Target chosen in RED III, with binding targets for industry that are not backed by mandatory offtake of end products, does not work well; a better form must be found here, with a good balance between ambition and realism.

The task now is to make these targets achievable and bearable for European industry through demand creation in end markets. Making the industry targets optional, however, is not the right solution, and scrapping the well-functioning targets in mobility would be a step in entirely the wrong direction.

Member States have already invested considerably in extensive compliance schemes based on RED III; these investments have already been made. In addition, industrial offtakers, refineries and investors in RFNBO production technology have by now based their business cases on the architecture of RED III. Adjustments may be needed, but abolishing these targets now would further delay investment decisions and undermine confidence in investments in European energy and carbon markets. Finally, abandoning EU-wide targets undermines the level playing field within the European Union that is necessary for the decarbonisation of industry. Major changes are needed in RED IV compared with RED III, but completely abandoning binding RFNBO targets is not the right way forward.