

Cefic position on the Commission proposal amending the Renewable Energies Directive (RED III)

Cefic welcomes the Commission ambition to increase the use of renewable energies by 2030. Europe urgently needs to upscale renewable energies and prepare import routes, to lower the CO₂ content of energy produced and help facilitate the transition towards a climate-neutral energy system.

The chemical industry provides key enabling technologies to make this transition happen. It is a supplier of materials and technologies to a range of sectors including the energy/electricity producing industries. Moreover, energy carriers produced from low-carbon - like renewable - sources (electricity and hydrogen in particular), play a key role in reducing GHG emissions in our sector.

However, we are still far from the volumes of cost competitive and dispatchable renewable and low-carbon energy needed to unleash the business case for electrification and/ or use of hydrogen in our industry, as the EU's 2050 climate neutrality goal implies.

To meet this goal, we need a holistic, technology-neutral approach, encompassing all renewable and low-carbon technologies being cost-efficiently deployed. This includes, inter alia, energy and hydrogen infrastructures, access to abundant and affordable renewable and low-carbon electricity supply and rapid commercialization of new processes enabled by competitive energy prices, which are all key enablers in making renewable and low-carbon energies the natural choice in our industry.

In this respect, it should also be noted that the Commission will publish in December 2021 an additional set of legislations, as part of the "Fit for 55" package, including a proposal on hydrogen. Therefore, it is crucial that the legitimate objective of increasing renewable hydrogen is consistent with the deployment of other low carbon hydrogen solutions. For industry, the priority should be the fast reduction of CO₂ emissions to reach climate neutrality by 2050 while ensuring industry competitiveness during the transition.

The overview of projects collected for the European Clean Hydrogen Alliance investment pipeline already shows that a large scale deployment of clean hydrogen is planned and the priority should be on enabling that deployment by focusing on the increase in renewable and low-carbon electricity capacity e.g. streamlining permitting and on bottlenecks for hydrogen production e.g. infrastructure, investment support.¹

¹ Reference in this document to "clean hydrogen" needs to be intended as defined in the [European Clean Hydrogen Alliance declaration](#), whereby clean hydrogen "includes hydrogen produced from renewable sources and, during a transition period, low-carbon hydrogen (fossil-based with carbon capture as well as electricity based hydrogen) with significantly reduced full life-cycle greenhouse gas emissions compared to existing hydrogen production."

In conclusion, we want to make the revision of the renewable energies directive (RED III) a success of the Fit for 55 Package, as a key enabler of the transition to a climate neutral Europe while safeguarding EU industrial competitiveness, thus strengthening Europe's leading role in tackling climate change.

To that end, we make a series of recommendations focussing on the following areas:

1. Access to cost-competitive renewable energy
2. Access to cost-competitive renewable hydrogen
3. Market creation for renewable and low-carbon products
4. Establishing a level-playing field for biomass

1. Access to cost-competitive renewable energy

Use of electricity is one of the main options identified by our sector on the path to climate neutrality.² This would require, inter alia, to abolish grid bottlenecks quickly, ensure that cross-border interconnectors enable free flow of energy between countries, avoid barriers for renewable energy integration of the power used in industry – for example levies that increase power costs, provision of appropriate energy storage and flexibility, and ensuring access to industrial consumers with no or little local/regional capacities.

On this basis, **we welcome the new proposals aimed at lowering barriers, increasing transparency and regulatory stability, and promoting cost-efficient deployment of renewable electricity.**

Specifically, we welcome provisions to improve the regulatory framework supporting and facilitating the uptake of Renewable Power Purchase Agreements (PPA) (art. 3, 4a), removal of regulatory and administrative barriers to long-term renewables power purchase agreements (art. 15), and the measures to support the cost-effective uptake of offshore wind (art.9) including better cross-EU cooperation when planning grids for offshore wind.

Moreover, we welcome the provisions strengthening the regulatory framework on the guarantee of origins for renewable energy sources (art 19) and provisions facilitating system integration of renewable electricity (art. 20a).

As direct electrification alone will not be sufficient and other low-carbon energy carriers will be needed for industry to reduce GHG emissions, **we welcome the strengthened incentives for renewable fuels of non-biological origin (RFNBOs)** and the underpinning increase in renewable electricity supply. As well, we welcome the consideration of imports of RFNBOs with a robust certification system put in place. At the same time, at least in the short term, renewable energy will not be sufficient to provide all sectors with the required amounts of low-carbon energy at competitive prices. Hence, **recycled carbon fuels should also be included as a full compliance option in the targets of the RED III**, thus safeguarding the well functioning of the EU single market.

² <https://cefic.org/a-solution-provider-for-sustainability/a-journey-to-sustainability/low-carbon-energy-and-feedstock-for-the-european-chemical-industry-study/>

2. Access to cost-competitive renewable hydrogen

The chemical industry is one of the main industrial producers and consumers of hydrogen. The **chemical industry uses hydrogen mainly as a feedstock**. In the chemical sector hydrogen is used to transform molecules into more valuable molecules, that have no energy use.

On the path to climate neutrality, hydrogen can play an important role in our sector. Cefic is therefore fully committed to playing its part to help make renewable and low-carbon fuels, including hydrogen, a reality by 2030. As a matter of fact, Cefic is the facilitating organisation of the Roundtable on clean hydrogen in industrial applications of the European Clean Hydrogen Alliance, where the chemical industry has already presented a significant number of projects aimed at producing renewable and low-carbon hydrogen and deploying its potential for GHG reduction in our industry.

Being one of the main hydrogen industrial users, our sector is directly addressed by the provisions requiring that renewable fuels of non-biological origins (RFNBOs, which include renewable hydrogen and renewable hydrogen-derived fuels) used for final energy and non-energy purposes shall be 50 % of the hydrogen used for final energy and non-energy purposes in industry by 2030 (art. 22a).

This provision has the merits of trying to promote renewable hydrogen to industrial users. However, a framework enabling the uptake of a hydrogen market and hydrogen infrastructure is still missing, including the assessment on the overarching impact on industrial international competitiveness. This provision on RFNBO should therefore be assessed in conjunction with the forthcoming hydrogen and gas market decarbonisation package, to ensure clean hydrogen can contribute to carbon-neutrality in a cost effective manner, avoiding undue impact on international competing sectors, and allow the infrastructure necessary to meet targets develop at appropriate scale.

Moreover, according to the European Commission assessment of the projects pipeline collected in the framework of the European Clean Hydrogen Alliance, we can already expect a large deployment of renewable hydrogen that will put the EU on the path to reach the 40GW objective by 2030 set in the hydrogen strategy. Under these circumstances, Cefic is concerned that a binding sub-target for industry would be counterproductive as it could hamper the deployment of other low carbon hydrogen solutions in the projects pipeline that will also be crucial to reach climate neutrality.

As a matter of principle Cefic supports a technology neutral and cost-efficient approach, as it would give the best chances for a swift development of low carbon technologies by internal competition – sub-targets on specific energy carriers and technologies deliver sub-optimal results and should be avoided. Moreover, measures affecting industry should be developed as part of a comprehensive industrial strategy enabling industry to compete in the global economy.

This being said, even when assuming sufficient supply of renewable electricity for hydrogen production, there are still some further key aspects that require urgent clarification:

- **Renewable hydrogen is not expected to be cost-competitive, at least not in the near term.** Our industry is exposed to international competition and cannot cope with the additional costs deriving from the mandated use of renewable hydrogen in our production processes. As also acknowledged by the European Commission, an early uptake of renewable hydrogen would have to be accompanied by supporting measures for our industry, as part of an overarching industrial policy.

Cefic recommendation: Any proposed target of RFNBO use in industry should be matched by an equivalent commitment to deploy supporting measures for RFNBOs in industry, until RFNBOs become cost-competitive.

- **Production and consumption of renewable hydrogen do not necessarily happen in geographically correlated areas.** The potentials for current and future renewable energies and industrial projects for clean hydrogen are unevenly spread across Member States. Setting a target, at Member State level and on one specific production process, will unevenly impact industry across Europe, leading to distortions of competition in the internal market. A pan-European system of guarantees of origin would allow to handle molecules and their emission backpack separate. This is necessary especially at the early stage of a hydrogen economy as infrastructure is not area-wide available yet.

Cefic recommendation:

- **Any legislative target of RFNBO use in industry should be applied at European level, to be collectively achieved by Member States and taking into account their different potentials.**
 - **A European scheme of guarantees of origins for clean hydrogen shall be established.**
- **The boundaries of this legislative target need to be further defined, as not all hydrogen consumed in industry follows the same production process.** There is a difference between hydrogen delivered or purposefully produced for industrial use, and hydrogen resulting as a by-product or co-produced product of industrial processes used for internal processes or for onsite energy generation.³ Most of the hydrogen used by petrochemicals is hydrogen produced as a by-product or as a co-product, although it is not always distinguished between these types of hydrogen and for simplicity often referred to as by-produced hydrogen^{4[OB]}

By-produced hydrogen is produced alongside the manufacture of the target product. Whenever possible this hydrogen is used for chemical value creation. Examples include hydrogen from steam cracking or from dehydrogenation processes such as propylene or styrene production or hydrogen from chlor-alkali or sodium-chlorate electrolysis. This type of hydrogen cannot be replaced by delivering renewable hydrogen due to the process itself.

Co-produced hydrogen on the other hand is intended to be produced, used or marketed alongside other produced chemicals from the same production process. Due to the linkage to the production of the other co-products, this type of hydrogen cannot easily be replaced by renewable hydrogen. An example of this type of production is hydrogen from synthesis gas production (co-produced products are carbon monoxide and hydrogen).

³ [Chapter 2 Hydrogen Molecule Market 070920.pdf \(fchobservatory.eu\)](#)

⁴ These volumes are not reported in Eurostat, as their production effectively never enters to external market for consumption. They are estimated to be in the range of 0.4-0.6 Mt/year. Source: [Petrochemicals Europe's overview paper on hydrogen](#) (2021)

Cefic recommendation: for the purpose of calculating the share of RFNBOs in hydrogen use, hydrogen as by-product and/or from by-products in industrial installations used in the chemical industry should also be excluded (from the numerator and denominator).

Moreover, the methodology to calculate renewable electricity used for renewable hydrogen production is still missing. Such methodology should follow a flexible and market-based approach and not restrict access to renewable electricity for industrial users that depend on renewable and low-carbon hydrogen for their transformation, as it would make the target even more difficult to achieve. Requirements regarding correlation in time and location are especially difficult for chemical sites with limited regional / local renewable energy capacities.

The methodology is expected to be presented by the European Commission by 31 December 2021 in a delegated act (art. 27.3), based on provisions in the 2018/2001 directive that are currently under review. The risk is to adopt implementing measures inconsistent with the revised regulatory framework.

Cefic recommendation: to enable a meaningful assessment of the proposed RFNBO target on industry, the European Commission needs to urgently provide clarity on the scope and impact of the RFNBO delegated act. The conditions of access to qualifying RFNBO's, and an unambiguous definition of the proposed target need to be clarified.

Renewable hydrogen will play an important role, together with other solutions, in supporting the chemical industry on its path to climate neutrality. At the same time, **an unbalanced approach to renewable hydrogen production and consumption will lead to foreclosing technological competition with other industrial abatement technologies**, including other technologies to provide renewable and low-carbon hydrogen, as renewable hydrogen might not necessarily be the most cost-efficient solution, at least in the near term. Several projects are under development and are at risk if policies are only targeting one specific production methodology.

On top, the impact on international competitiveness is not directly addressed in the proposal, as is the case for example in the ETS. CEFIC recommends a transversal industrial strategy assessing competitiveness in relation to obligations over the package.

Cefic is ready to engage with policymakers in identifying the most appropriate solutions to address the above-mentioned criticalities.

3. Market creation for renewable and low-carbon products

Cefic has long called for the recognition of low-carbon-based materials. **We therefore welcome the provisions to label industrial products and low-carbon materials that are produced with renewable energy and renewable fuels of non-biological origin** as a first step in establishing a comprehensive labelling scheme encompassing also low-carbon products (art. 22a). Amongst others, we regard such a comprehensive labelling scheme as an important contributor to creating a market for renewable and low-carbon products.

4. Establishing a level-playing field for biomass

Cefic has long called for a level playing field between policies promoting renewable energies and renewable-based materials. Likewise, **we welcome provisions aimed at achieving resource efficiency of biomass use** through prioritising biomass material use over energy use while respecting the Waste Hierarchy and the Union Sustainability Criteria, increasing thus the amount of biomass available within the system for all sectors of the bioeconomy and minimising undue distortions of the raw material markets (Art. 3). In addition, we call for the long term predictability of such provisions in order to allow for innovation and investments to take place in Europe .

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About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.1 million jobs and account for 15% of world chemicals production.