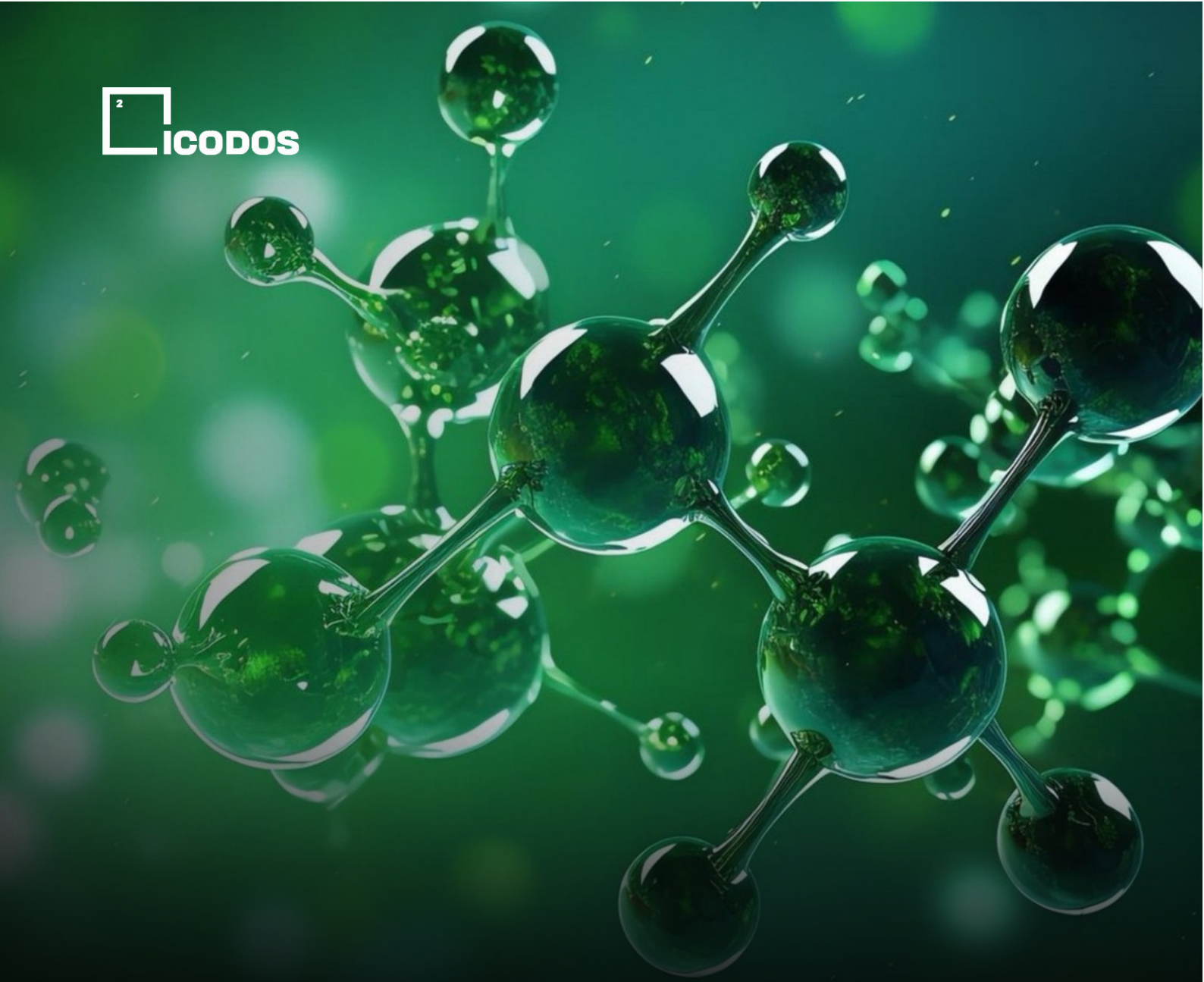


POST-2030 RENEWABLE ENERGY FRAMEWORK

# The leaked RED IV assessment

Options, likelihood and price effect for RFNBO producers and buyers

ICODOS GMBH · 21 SEPTEMBER 2026

SUMMARY

# Twelve member states have legislated an RFNBO quota, and none of those national laws is under review. What the coming legislation can change is which fuels may be sold into them.

The press reported the leak as the end of the EU hydrogen quota. The document says nothing of the kind. Commission staff scored 32 measures, recommend two and propose no law. If both recommendations were adopted, the EU industry target would become a figure that no member state is obliged to meet, and every national transport quota would remain exactly as it stands.

1 **Nothing changes before 2031, and the national quotas run well beyond that year.**
The draft concerns only the years after 2030, and four steps separate it from any change in law: a Commission proposal, two years of negotiation, adoption, and then transposition by 27 national legislatures. The national quotas follow a separate procedure altogether. Only the parliament that passed one can repeal it.

2 **Twelve member states have an RFNBO quota in law, and three publish the penalty for missing it.**
Germany charges 120 euro for every gigajoule missed, the highest in the EU, and requires 10 percent by 2040. Czechia charges about 82 euro and Finland 40 euro. Spain, the Netherlands, Italy and Denmark have an obligation in force but publish no amount. Option K2, the option Commission staff recommend, leaves this duty with the member states.

3 **The industry target reached national law in six member states and binds no company anywhere.**
Article 22a requires that 42 percent of industrial hydrogen be renewable by 2030 and 60 percent by 2035. Italy copied both figures into its own law and obliged no company to meet them. Romania legislated 42 percent for 2030 and 65 percent for 2035, above the directive. Czechia, Slovakia, Lithuania and Latvia complete the six. In July 2025 the Commission sent formal notices to 26 member states for failing to write RED III into national law at all.

4 **ICODOS estimates a 70 percent probability that the EU sets a binding RFNBO share for the years after 2030.**
Since 2021 Parliament and Council have set a reserved share for e-fuels three times. Twice they added one the Commission had left out; once they cut one it had proposed. They have never deleted one. Commission staff reject the single option that would end every hydrogen target, because the companies which invested first would be worse off. Hydrogen Europe asked in April 2026 for clear targets for 2040 and stronger mandates.

5 **ICODOS estimates a 75 percent probability that the list of eligible fuels widens. German law protects most of the value.**
Both recommended options would admit nuclear based and low carbon hydrogen, and both would let hydrogen suppliers sell credits into the transport quota market. That reaches the German RFNBO sub-quota. It does not reach the factor 3 credit in the 37. BImSchV, which runs until 2036, is worth 1,200 to 2,400 euro a tonne at the quota prices traded in 2026 and is tied to RFNBO status in national law.

EXHIBIT 1 | THE FOUR NUMBERS BEHIND THIS SUMMARY

EARLIEST YEAR OF CHANGE
**2031**
Nothing in the draft applies before then.

MEMBER STATES WITH A QUOTA
**12**
Hydrogen Council count, 3 May 2026. Three publish a penalty amount.

PROBABILITY OF A BINDING EU SHARE
**70%**
For the years after 2030. ICODOS estimate; method on page 13.

SUB-QUOTA CEILING, EURO A TONNE
**2,400**
The German penalty of 120 euro per gigajoule. The factor 3 credit applies on top.

WHAT IS IN THIS REPORT


| P. | SECTION | THE QUESTION IT ANSWERS | P. | SECTION | THE QUESTION IT ANSWERS |
|---|---|---|---|---|---|
| 3 | The document | What the draft is | 9 | Four possible outcomes | What each outcome means |
| 4 | The six options | Which options exist | 10 | Timeline | When it can change |
| 5 | Where the binding demand is | Which countries pay today | 11 | Minimum and maximum effect | What it is worth |
| 6 | The industry target | Who wrote it into law | 12 | What happens next | Dates and actions |
| 7 | Which rules create demand | What RED IV covers | 13 | Method | How the figures were built |
| 8 | How likely each change is | The reasoning behind each estimate | | | |


Sources: draft Commission impact assessment for the post-2030 renewable energy framework, sections 5.2.3 and 5.3. National instruments are listed on pages 5 and 6. Probabilities are ICODOS estimates; method on page 13.

SECTION 1 | THE DOCUMENT

## The draft is the first of six stages. Five remain: a quality check, a proposal with an eight week consultation, two years of negotiation, adoption, and transposition into national law. No quota can change before 2031.

Before the Commission proposes a law, its staff write an impact assessment. They list the options, score them and state which they prefer. A preference is not a proposal, and the staff say so themselves: their conclusions are without prejudice to political considerations and to the final legislative proposal of the Commission.

EXHIBIT 2A | SIX STAGES FROM DRAFT TO NATIONAL LAW. THE DRAFT IS AT STAGE 1, MARKED IN GREEN

| STAGE 1 | STAGE 2 | STAGE 3 | STAGE 4 | STAGE 5 | STAGE 6 |
|---|---|---|---|---|---|
| Draft impact assessment<br>September 2026. 70 pages, not yet public. | Commission quality check<br>Late 2026. The Regulatory Scrutiny Board reviews the evidence. | Commission proposal<br>Q4 2026. The first text that can be negotiated; feedback period of eight weeks. | Parliament and Council<br>2027 to 2028. Amendments and negotiation. | Adoption<br>2029, before the European elections in June. | National law<br>2029 to 2031. Each member state writes its own text. |
| PUBLIC COMMENT<br>None | PUBLIC COMMENT<br>None | PUBLIC COMMENT<br>Yes, eight weeks | PUBLIC COMMENT<br>Yes, hearings | PUBLIC COMMENT<br>None | PUBLIC COMMENT<br>Yes, at national level |

EXHIBIT 2 | WHAT THE DOCUMENT IS, AND WHAT IT IS NOT

| ITEM | WHAT IS KNOWN | HOW CERTAIN |
|---|---|---|
| Type | A draft Commission staff working document: the impact assessment for the framework after 2030, 70 pages | In the document |
| Date | 8 September 2026. It cites Commission acts of 17 July 2026 | In the document |
| Commission position | The Commission has not commented on the draft. It has announced the proposal for the end of 2026 | Commission website |
| Status of the numbers | Key figures, the 8 million tonne target among them, are marked in the text as not final | In the document |
| Legal effect today | None. No rule changes and no obligation arises | Certain |
| How binding on the Commission | Not binding. The conclusions are stated to be without prejudice to political considerations and to the final legislative proposal | In the document |

**The reason given for acting.** Renewable energy supplied 26.2 percent of final energy use in the EU in 2025. The national plans now project 42.6 percent for 2030 against a binding target of 42.5 percent, so on paper the headline target is within reach. The shortfall is in hydrogen. Europe had 572 megawatts of electrolysers operating at the end of 2025, and Commission staff themselves describe the level of renewable hydrogen assumed for 2030 as hard to reach.

**What can still change.** The figures are not final. At stage 2 the Regulatory Scrutiny Board can return the evidence for further work. At stage 3 the Commission can propose something other than what its staff recommend. In 2023 Parliament added the 42 and 60 percent industry targets to a proposal that contained neither; it can do the same in 2029 and adopt a text stricter than the one it receives. Member states, for their part, remain free to set a higher level in their own law.

> **The evidence behind the recommendation**
>
> The REPowerEU plan of 2022 called for 10 million tonnes of renewable hydrogen produced in the EU and a further 10 million tonnes imported by 2030. RED III then set far smaller figures, and production has fallen short of those as well. Commission staff cite this record as their reason for ceasing to set binding hydrogen targets. Their own cost analysis puts the difference between the hydrogen scenarios below 0.5 percent of system cost before 2040, so cost decides nothing here. The record of missed targets is the only evidence behind the conclusion.

**Which rules apply until then.** Whatever this process produces will apply from about 2031. Until then the market is governed by three sets of rules: RED III, the six national transport quotas and the two transport regulations. Pages 5 to 7 set out each in turn.

Sources: draft Commission impact assessment, cover page and sections 1.4, 2.1.1, 2.1.2 and 6.1. European Commission, post-2030 renewable energy framework consultation, 20 March 2026. REPowerEU plan, COM(2022) 230.

SECTION 2 | THE SIX OPTIONS

# Commission staff score 32 measures and propose none. Six of the 32 decide the RFNBO market, and staff recommend two of those six: L2, which would replace the industry targets with a single EU target, and K2, which would leave the transport duty with the member states.

Group L covers renewable hydrogen in industry and transport; group K covers renewable fuels in transport. Each group holds three options, and staff recommend one from each. A staff recommendation carries no legal force, and the Commission may set it aside before it adopts anything.

EXHIBIT 3 | THE SIX OPTIONS FOR THE RFNBO MARKET, AND THE TWO RECOMMENDED IN THE DRAFT

| OPTION | WHAT THE OPTION WOULD DO | DETAIL FROM THE DRAFT | RECOMMENDED IN THE DRAFT |
|---|---|---|---|
| L1 | Keep binding national RFNBO targets to 2040 | Member states could transfer credit among themselves and between industry and transport, and low carbon electrolytic hydrogen would count. The 2040 levels are left blank in the draft. | ○ NO |
| L2 | Replace the binding national targets with one EU target, financing and credits | An EU target of 8 million tonnes of renewable hydrogen for industry and refineries. Low carbon electrolytic hydrogen counts. Hydrogen suppliers may sell credits to transport fuel suppliers, and multipliers raise the value of hydrogen supplied to refineries and of derivatives made for shipping and aviation. Financing comes from the Industrial Decarbonisation Bank and the European Competitiveness Fund. | ● YES |
| L3 | End the RFNBO targets and keep only monitoring | The only one of the six under which the 60 percent industry target for 2035 would be removed outright. Commission staff reject it: monitoring alone would give too weak an investment signal, and first movers would be worse off. | ○ NO |
| K1 | End the transport targets and the supplier duty from 2030 | ReFuelEU Aviation, FuelEU Maritime, the car CO2 standards and emissions trading would be the only instruments left. Commission staff reject it: carbon pricing alone would not cut emissions at the same pace for the same cost. | ○ NO |
| K2 | Keep the duty on fuel suppliers and remove the EU transport target | Member states would choose their own level. The credit mechanism would continue and extend to private charging points, ports and airports. Nuclear electricity and low carbon electrolytic fuels would become eligible. Staff tested the three options against four extreme energy scenarios and found K2 the most robust. | ● YES |
| K3 | Set national production targets for renewable fuels | Each member state would have to build its own production chain. Commission staff score it as the most expensive of the three to administer. | ○ NO |

### WHY DERIVATIVES ARE OUTSIDE THE TARGET

**The target covers hydrogen itself, before conversion**

Commission staff exclude derivatives deliberately, so that the conversion of hydrogen into fuel takes place inside the EU. Hydrogen used to make derivatives for shipping and aviation would instead be rewarded through multipliers.

### A NEW REVENUE ROUTE FOR HYDROGEN PRODUCERS

**Refinery hydrogen may be sold into the transport quota**

Under L2 a supplier delivering hydrogen to industry or to a refinery may sell credits to transport fuel suppliers. Commission staff describe this mechanism as important for closing the cost gap between fossil and clean hydrogen.

**What the consultation asked for.** Of the respondents, 73 percent wanted the duty on fuel suppliers kept or strengthened, and option K2 keeps it. A separate 60 percent wanted the binding hydrogen rules kept at EU level, and option L2 does the opposite: it replaces the binding national targets with an EU target and a financing package.

EXHIBIT 3B | WHAT IS OUTSIDE THE SCOPE OF THE DRAFT

| SUBJECT | WHY IT IS OUTSIDE THE SCOPE | STATUS |
|---|---|---|
| Shipping and aviation mandates | FuelEU Maritime and ReFuelEU Aviation are regulations, and a directive cannot amend a regulation | ● NO CHANGE |
| The definition of an RFNBO | The production rules are set in separate delegated acts | ● NO CHANGE |
| The rules on CO2 sources | Which CO2 may be used is decided in other legislation | ● NO CHANGE |

Sources: draft Commission impact assessment, section 5.2.3, measures K1 to K3 and L1 to L3, the stakeholder feedback recorded under each, and section 5.3, which Commission staff call the packaged policy option. Content is summarised rather than quoted.

SECTION 3 | WHERE THE BINDING DEMAND IS

## Six member states have an identifiable RFNBO share in transport law and three of them publish a penalty. None of those laws falls within the review, and the Hydrogen Council counts twelve member states with a quota of some kind.

RED III fixes a 1 percent RFNBO share in transport for 2030. Article 27 credits RFNBOs at twice their energy content, so that 1 percent is about 0.5 percent of real volume. Each member state converts the share into a national duty on fuel suppliers and chooses its own level, its own basis of measurement and its own penalty. The figures below therefore cannot be compared directly.

EXHIBIT 4 | RFNBO SHARES IDENTIFIABLE IN NATIONAL TRANSPORT LAW, SEPTEMBER 2026

| COUNTRY | SHARE IN NATIONAL LAW | PENALTY FOR MISSING IT | INSTRUMENT |
|---|---|---|---|
| **Germany** | 1.5 percent 2030, 5 percent 2035, 10 percent 2040. Greenhouse gas basis. Counts three times towards the main quota to 2036 | 120 euro per gigajoule, the highest in the EU | BGBl. I 2026 Nr. 163, 5 June 2026 |
| **Czechia** | 1 percent from 2030, energy basis. About 0.5 percent of real volume, because a multiplier of 2 applies | 2 koruna per megajoule, about 82 euro per gigajoule | Act 42/2025 Sb., Air Protection Act |
| **Finland** | 1.5 percentage points in 2028 and 2029, 4 points from 2030, on the additional obligation | 0.04 euro per megajoule, about 40 euro per gigajoule | Act 446/2007 as amended by 841/2024, in force 1 January 2025 |
| **Spain** | 0.2 percent 2027, 2.5 percent 2030, 11 percent 2040. Energy basis, with a separate sub-objective for advanced biofuels alongside | A very serious infraction under the hydrocarbons law. No amount published | Real Decreto 611/2026, BOE 23 July 2026. Applies from 2027 |
| **Netherlands** | A sub-obligation on fuel suppliers, greenhouse gas basis. Published paths differ between 1.07 and 1.8 percent for 2030 | No amount published | Brandstoftransitieverplichting, in force 1 January 2026 |
| **Italy** | 1 percent by 2030, energy basis. The wording is permissive, so enforceability is open | No amount published | Decreto Legislativo 5/2026, in force 4 February 2026 |
| **Denmark** | The displacement requirement is in force at 7 percentage points from 2030. No RFNBO percentage appears in a Danish source | A fine applies. No amount published | Order under the displacement requirement |

EXHIBIT 4B | IN PREPARATION

| COUNTRY | POSITION IN SEPTEMBER 2026 |
|---|---|
| **Romania** | Law 237/2023 covers transport and industry. The transport target was cut to at least 1 percent in October 2025, and the amending law has passed only the Senate |
| **France** | No RFNBO quota. Hydrogen is an eligible option counted with a coefficient of 2, and low carbon hydrogen became eligible on 1 August 2026 under decree 2026-703. A 1.5 percent target for 2030 was consulted on in May 2025 and is not shown to be adopted |
| **Belgium** | Draft only. It proposes a combined 8.5 percent of advanced biofuels and RFNBOs by 2030, with 4 percent for road. Consultation closed in November 2025 |

### What this means for a buyer

A buyer who signs today is bound by one national law, not by an EU rule. None of those laws is within the review, and under option K2 the duty behind them remains with the member states. A contract therefore follows the level, the basis of measurement and the penalty of one country.

**The levels cannot be compared directly.** Finland measures percentage points of an additional obligation. Germany, Denmark and the Netherlands work in greenhouse gas terms, Czechia, Spain and Italy in energy content. Czechia applies the multiplier of 2, so its 1 percent is about 0.5 percent of physical volume. Germany counts RFNBOs three times against its main quota until 2036. Only the penalty compares across markets, and at 120 euro per gigajoule the German penalty is three times the Finnish one and the highest in the EU.

**More quotas may follow before 2031.** Romania has a law through one chamber, France, Belgium and Poland have drafts, and Greece legislated in May 2026 without publishing levels. The Hydrogen Council counted twelve member states with an RFNBO quota in May 2026, so the table above understates the base rather than overstating it.

Sources: BGBl. I 2026 Nr. 163 and 37. BImSchV § 3b and § 3 Abs. 5 for Germany. Energiavirasto, Jakeluvelvoiteohje of 23 March 2026, for Finland. HYTEP on act 42/2025 Sb. for Czechia. BOE-A-2026-16011 of 23 July 2026 for Spain. Nederlandse Emissieautoriteit on the Brandstoftransitieverplichting for the Netherlands. Decreto Legislativo 5/2026 for Italy. Energistyrelsen on the CO2e displacement requirement for Denmark. Romania Insider and Issue Monitoring for the Romanian legislative status. French customs TIRUERT circular and decree 2026-703 for France. Hydrogen Council, 3 May 2026, for the count of twelve. Levels marked as not published were not in a public text at the date of writing.

SECTION 4 | THE INDUSTRY TARGET

## Six member states wrote the industry target into national law. Romania set levels above the directive and Italy copied the EU figures without obliging any company. This is the target that option L2 would replace.

Article 22a of Directive 2018/2001, inserted by RED III, requires that 42 percent of industrial hydrogen be RFNBO by 2030 and 60 percent by 2035, and Article 22b lets a member state cut both figures by a fifth on conditions. Under option L2 a single EU target of 8 million tonnes, covering industry and refineries, would take its place. The table below shows how thinly the present target reached national law.

EXHIBIT 5 | THE INDUSTRY TARGET IN NATIONAL LAW, SEPTEMBER 2026

| COUNTRY | WHAT NATIONAL LAW SAYS | LEVEL AGAINST THE EU 42 PERCENT |
|---|---|---|
| **Romania** | Law 237/2023 sets at least 42 percent renewable from 2030 and 65 percent from 2035. One secondary source, not checked against the Romanian text | ● ABOVE THE EU LEVEL |
| **Italy** | Decreto Legislativo 5/2026 copies the directive's 42 and 60 percent as a national target and imposes no obligation on any company | ● SAME LEVEL |
| **Slovakia, Lithuania, Latvia** | The European Hydrogen Observatory records an industry mandate in each. Levels not established | ○ NOT ESTABLISHED |
| **Czechia** | An industry mandate is recorded. No level and no penalty could be traced to a public text | ○ NOT ESTABLISHED |
| **Netherlands** | Transport only. A bill proposes 4 percent in 2030 and 9.9 percent in 2035, and the Council of State advised in December 2025 that this falls short | ● DRAFT, ONE TENTH |
| **Germany and the other 19** | No industry RFNBO obligation. Germany supports hydrogen through climate protection contracts and the European Hydrogen Bank instead | ○ NO OBLIGATION |

EXHIBIT 6 | WHERE THE PRODUCTION CAPACITY IS

OPERATING IN EUROPE

572 MW

140 projects of at least 0.5 megawatts, the cumulative base at the end of 2025.

UNDER CONSTRUCTION

3,273 MW

97 projects due by 2029, six times the operating base.

HYDROGEN BANK, THIRD ROUND

1,084 MW

1.09 billion euro awarded to 9 projects on 7 May 2026. Finland leads on capacity, Denmark on project count.

EXHIBIT 6B | THE ENFORCEMENT RECORD ON RED III

FORMAL NOTICES

26

Member states warned on 24 July 2025 for failing to write RED III into national law.

REFERRED TO THE COURT

3

Greece, Malta and Portugal, on 29 April 2026, with fines requested.

MEMBER STATES TRANSPOSED

5, 8, 12

Three nested counts: the whole directive, both RFNBO mandates, any RFNBO quota.

**The production and the obligation are in different countries**

The states that legislated an industry obligation produce little hydrogen; the states with the largest production bases legislated none. An assessment in August 2025 found only four member states able to meet an industry quota from their own output: Spain, Sweden, Portugal and Denmark. Commission staff cite this mismatch as their reason for moving to a single EU target, under which production would concentrate wherever clean electricity is cheapest.

**What would change.** The Commission can take a member state to court over a national target, and Exhibit 6b shows it doing exactly that. An EU target of 8 million tonnes places no duty on any member state, so no infringement case and no court case could follow; reporting in the national plans would be the only check. Six member states legislated the target and none binds a company, so the enforceable volume at risk is small. That volume is in transport, in the laws on page 5, and under option K2 the member states keep the duty behind them.

Sources: Directive (EU) 2018/2001 Articles 22a and 22b, as inserted by Directive (EU) 2023/2413. Decreto Legislativo 9 gennaio 2026 n. 5, Gazzetta Ufficiale 20 January 2026. European Hydrogen Observatory for the member states that transposed the RFNBO mandates, updated 30 July 2026. CMS expert guide for the Romanian industry levels. Netherlands Council of State advice of 10 December 2025 on the industry bill. Hydrogen Europe, RED III industry target implementation options for member states, June 2026. European Hydrogen Observatory census reported 24 February 2026. European Commission Hydrogen Bank third auction results, 7 May 2026. Wood Mackenzie, RED III enforcement and investment, 29 August 2025.

SECTION 5 | WHICH RULES CREATE DEMAND

# Five rules create demand for RFNBOs. The draft covers one of the five, and within that one it reviews a single figure: the 60 percent hydrogen target for industry in 2035.

RED IV will succeed the current Renewable Energy Directive. Revising a directive can change the text of that directive and nothing else, and the duty member states place on fuel suppliers belongs to that text. The four other rules are regulations or national laws, and this review can alter neither.

EXHIBIT 7 | THE DEMAND RULES, SPLIT BY WHETHER THE DRAFT COVERS THEM

## WITHIN THE SCOPE OF RED IV

### The four RFNBO numbers in RED III, and who decides each one

| NUMBER IN RED III | WHAT HAPPENS AFTER 2030 | WHO DECIDES IT |
|---|---|---|
| 1 percent RFNBO in transport, credited at twice the energy | Ends in 2030. The directive sets it for that year alone | Settled in 2023, outside the draft |
| 5.5 percent advanced fuels and RFNBO | Ends in 2030, for the same reason | Settled in 2023, outside the draft |
| 42 percent renewable hydrogen in industry by 2030 | Stands. Only later years are in the draft | Outside the draft |
| 60 percent in industry by 2035 | Under review. An EU target of 8 million tonnes would take its place | Parliament and Council, from 2027 |

**What member states did instead:** twelve legislated their own RFNBO quota. Page 5 lists the seven with an identifiable share.

**What this means:** no RFNBO figure disappears before 2031. Both transport shares end in 2030 because Parliament and Council, in 2023, wrote them for that year alone. The industry share for 2035 is the sole figure under review, and staff reject the option that would end it with nothing in its place.

## OUTSIDE THE SCOPE OF RED IV

### FuelEU Maritime, Regulation 2023/1805

Requires the greenhouse gas intensity of ship fuel to fall by 6 percent in 2030 and 14.5 percent in 2035. E-fuels count twice until 31 December 2033. A 2 percent RFNBO share applies from 2034 if use in 2031 remains below 1 percent.

### ReFuelEU Aviation, Regulation 2023/2405

Requires 1.2 percent e-kerosene in 2030 and 2031, 2 percent from 2032 and 5 percent from 2035. On 30 July 2026 methanol became an approved feedstock for jet fuel under ASTM D7566.

### Emissions trading, COM(2026) 616

The July 2026 proposal would set aside up to 110 million allowances through 2040 to cover 90 percent of the price gap for e-fuels in shipping.

### Six national transport quotas

Germany, Czechia, Finland, Spain, the Netherlands, Italy and Denmark each set their own share. Only national law can change them.

EXHIBIT 8 | EFFECT BY MODE OF TRANSPORT AFTER 2030, UNDER THE RECOMMENDED OPTIONS

| MODE | WHICH LAW SETS THE REQUIREMENT | STILL BINDING AFTER 2030 | WHAT CHANGES |
|---|---|---|---|
| **Road** | National duty on fuel suppliers under RED IV, plus emissions trading for buildings and road transport | ● NO EU LEVEL | No EU share is reserved for RFNBOs. Each member state sets its own level or none. Nuclear electricity and low carbon fuels may be counted |
| **Aviation** | ReFuelEU Aviation, Regulation 2023/2405 | ● YES | Nothing. The e-kerosene shares of 1.2, 2 and 5 percent stand. A review report is due in January 2027 |
| **Sea shipping** | FuelEU Maritime, Regulation 2023/1805 | ● YES | Nothing directly. The 2 percent e-fuel share from 2034 stands, though the Commission may waive it if supply is short or the price high |
| **Rail** | National duty on fuel suppliers under RED IV | ● NO EU LEVEL | Rail runs mostly on electricity, so the credit mechanism applies to electricity rather than to liquid e-fuels |
| **Inland waterways** | National duty under RED IV only. FuelEU Maritime covers sea going ships above 5,000 gross tonnes | ● NO EU LEVEL | No EU minimum after 2030 and no separate regulation for this mode. National law alone decides |

### Where the demand comes from

Four of the five rules lie outside this review, and staff name two of those four as the main source of future e-fuel demand. Six member states already fix their own transport level. For a producer selling into those markets, the national figure matters more than the EU one.

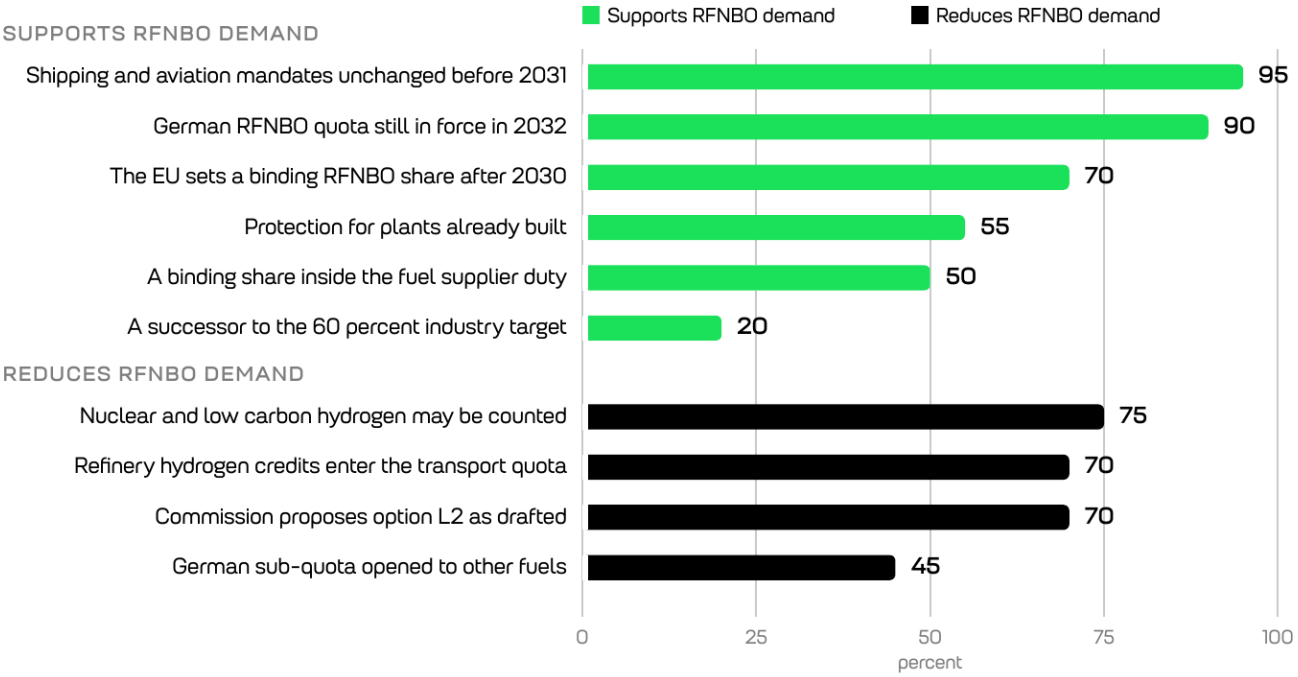
Sources: Directive (EU) 2023/2413 Articles 22a and 25. Draft impact assessment, footnotes to section 5.1, and measures K2 and L2 for the effect by mode. Regulation (EU) 2023/1805 Articles 4 and 5. Regulation (EU) 2023/2405 Annex I. COM(2026) 616.

SECTION 6 | HOW LIKELY EACH CHANGE IS

## ICODOS estimates a 70 percent probability that the EU sets a binding RFNBO share for the years after 2030, and a 75 percent probability that nuclear based and low carbon hydrogen become eligible.

Neither outcome appears in the draft; both will be decided in the negotiation that follows it. Since 2021 Parliament and Council have reserved a share for e-fuels in three laws, and in all three the share survived into the final text. Three out of three gives a base rate near 80 percent. ICODOS lowers it to 70 percent for two reasons: Commission staff recommend replacing the binding national industry targets with an EU target that no member state must meet, and five member states have asked that low carbon hydrogen be allowed to count.

EXHIBIT 9 | PROBABILITY THAT EACH OUTCOME HAPPENS, PERCENT




### ARGUMENTS AGAINST A BINDING EU QUOTA

- Commission staff recommend replacing the binding national industry targets with an EU target of 8 million tonnes that no member state must meet.
- In February 2026 Belgium, supported by Czechia, Hungary, Poland and Slovakia, asked the Council that low carbon hydrogen be allowed to count towards the industry target.

### ARGUMENTS FOR A BINDING EU QUOTA

- Parliament created the 42 and 60 percent industry targets in 2023; the Commission proposal of 2021 contained neither.
- Hydrogen Europe asked in April 2026 for clear targets for 2040 and for stronger mandates.
- Under option K2 the duty on fuel suppliers survives, so Parliament could restore a reserved share within it by a short amendment.

EXHIBIT 9B | WHAT PARLIAMENT AND COUNCIL DID THE LAST THREE TIMES THEY SET A SHARE FOR E-FUELS

| LAW | COMMISSION PROPOSED | FINAL LAW | LESSON FOR RED IV |
|---|---|---|---|
| RED III, transport, 2021 to 2023 | 2.6 percent RFNBO | 1 percent RFNBO within a 5.5 percent share | A large, costly share is cut but not removed |
| RED III, industry | Nothing on the RFNBO share of industrial hydrogen | 42 percent by 2030 and 60 percent by 2035 | Parliament created this target; Commission staff now recommend an EU target in its place |
| FuelEU Maritime | No e-fuel share at all | A 2 percent share from 2034, plus double counting | A small share is added even where the Commission omits one |

Sources: draft Commission impact assessment, measures K2 and L2. Hydrogen Europe call for evidence, April 2026. Council document ST 6486/2026 of 25 February 2026, Belgium with Czechia, Hungary, Poland and Slovakia. European Parliament briefing PE 747085 on the RED III outcome. Probabilities are ICODOS estimates derived from the scenario shares on page 9.

SECTION 7 | FOUR POSSIBLE OUTCOMES

# ICODOS puts the probability of a binding EU RFNBO share after 2030 at 70 percent, of a wider list of eligible fuels at 75 percent and of today's levels continuing at 20 percent.

The four scenarios below do not overlap, and together they exhaust the possible outcomes; every probability elsewhere in this report is a sum of their shares. Three of the four leave a buyer with a functioning market. Only scenario 4 opens a gap in EU rules, and ICODOS puts its probability at 5 percent.

EXHIBIT 10 | SHARE OF OUTCOMES, PERCENT

SCENARIO 1 · 50 PERCENT

### Small EU quota, wider eligibility

Parliament restores a small binding RFNBO share within the fuel supplier duty. Council accepts it in exchange for letting nuclear based and low carbon hydrogen count.

**Effect on producers and buyers:** a binding minimum level of demand continues, though more sellers may supply it, and the price per tonne falls.

SCENARIO 2 · 25 PERCENT

### EU target replaces national quotas

The Commission proposes option L2 as drafted, and Parliament and Council adopt it. No EU rule then reserves a share for RFNBOs after 2030; an EU target of 8 million tonnes, financing and credits apply instead, and member states keep the duty on fuel suppliers.

**Effect on producers and buyers:** demand rests on national law alone. Germany holds the largest quota; every other state sets its own level or none.

SCENARIO 3 · 20 PERCENT

### EU quota kept

The Regulatory Scrutiny Board rejects the evidence at stage 2, and Parliament holds its position. A binding share close to today's level remains, including a successor to the 60 percent industry target.

**Effect on producers and buyers:** demand and price continue as today. This outcome requires the support of the states with hydrogen industries.

SCENARIO 4 · 5 PERCENT

### Delay

The proposal is not adopted before the European elections of June 2029, and the next Parliament begins afresh. The RED III transport shares end in 2030 with no successor until 2032 or later.

**Effect on producers and buyers:** one to two years without an EU requirement. National law is then the only minimum anywhere in the EU.

### The pattern behind these shares

Parliament and Council add small reserved shares for e-fuels and cut large ones. They wrote 2 percent into the shipping law and set the aviation e-kerosene share above the level the Commission had proposed; when the Commission asked for 2.6 percent RFNBO in transport in 2021, the final law set 1 percent. A successor to the 60 percent industry target would be a large share, and a share within the fuel supplier duty a small one. The scenario shares above follow from that pattern.

EXHIBIT 10B | THE GERMAN MARKET AFTER 2031, UNDER EACH SCENARIO

| SCENARIO | GERMAN QUOTA LEVEL | WHO MAY SELL INTO IT | EXPECTED PRICE PER TONNE |
|---|---|---|---|
| 1. Small EU quota | Unchanged, 5 percent in 2035 | RFNBO plus nuclear based and low carbon hydrogen | The sub-quota premium falls. The factor 3 credit remains |
| 2. EU target replaces quotas | Unchanged in law | As in scenario 1, once Germany aligns | The same range, with the lower end more likely |
| 3. EU quota kept | Unchanged | RFNBO only, as today | Both layers continue as today |
| 4. Delay | Unchanged | RFNBO only until the new rules apply | Both layers continue for one to two further years |

EXHIBIT 10C | HOW THE SCENARIO SHARES PRODUCE THE PROBABILITIES ON PAGE 8

| STATEMENT | SCENARIOS | PERCENT |
|---|---|---|
| The EU sets a binding RFNBO share after 2030 | Scenarios 1 and 3, 50 plus 20 | 70 |
| The EU keeps a share at today's level | Scenario 3 | 20 |
| The list of eligible fuels widens | Scenarios 1 and 2, 50 plus 25 | 75 |
| No EU share applies after 2030 | Scenarios 2 and 4, 25 plus 5 | 30 |

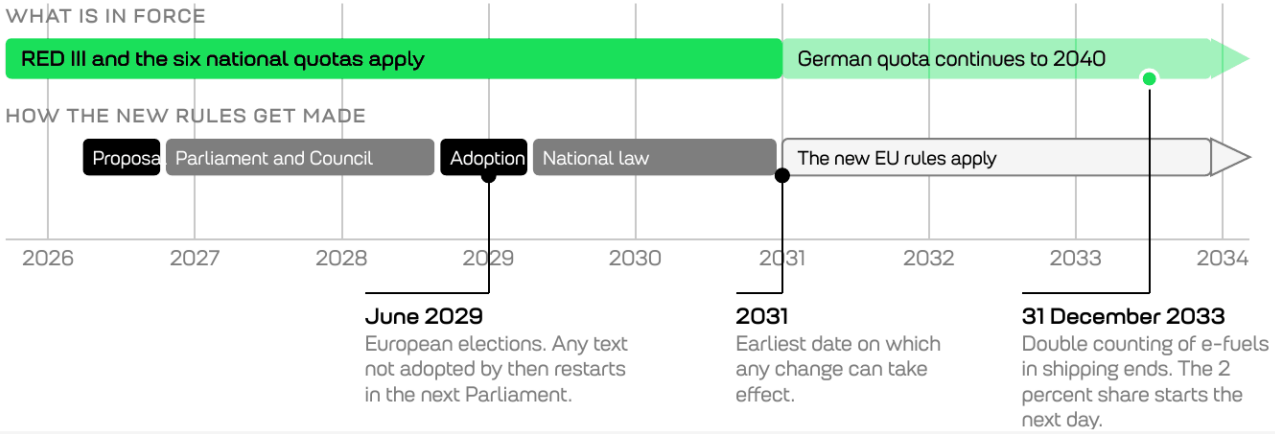
Sources: European Parliament briefing PE 747085. ICCT analysis of the July 2021 Commission proposal. Regulation (EU) 2023/1805 Article 5. Shares are ICODOS estimates.

SECTION 8 | TIMELINE

# Any new rule applies from 2031 at the earliest. RED III and the six national quotas remain in force until then, and the German quota runs to 2040 whatever the EU decides.

A directive requires a proposal, about two years in Parliament and Council, and then about two further years of national law making. RED III took 27 months from proposal to publication and another two years to enter national law. Applied to a proposal at the end of 2026, the same arithmetic yields 2031.

EXHIBIT 11 | LEGISLATIVE SEQUENCE AND THE PERIOD IN WHICH TODAY'S RULES APPLY




**Three dates in the next four months**

October to November 2026: the quality check on the assessment. 4 December 2026: the vote on the global shipping rules at the IMO. Q4 2026: the RED IV proposal, with the hydrogen strategy.

FIXED DATES IN THE CALENDAR

| DATE | EVENT |
|---|---|
| 4 Dec 2026 | Vote on the global shipping fuel rules at the IMO |
| Q4 2026 | RED IV proposal, with the hydrogen strategy |
| 1 Jan 2034 | The 2 percent e-fuel share in shipping begins, unless waived |

WHY 2031 IS THE EARLIEST DATE

The Commission proposed RED III in July 2021; the final text appeared in the Official Journal in October 2023, 27 months later. The RED IV proposal is due at the end of 2026. Two years of negotiation would place agreement in late 2028 and adoption in the first half of 2029, and national law then takes a further 18 to 24 months.

Two consequences follow. Plants operating today and the six national quotas are unaffected for at least five years. And because the RED III transport shares end in 2030 while RED IV applies from 2031, a year may pass with no EU rule in transport; the six national quotas have no such gap.

EXHIBIT 11B | THE THREE NUMBERS BEHIND THE 2031 DATE

RED III TOOK

**27**

months from the proposal in July 2021 to publication in October 2023.

MEMBER STATES THEN HAVE

**18 to 24**

months to write the directive into national law.

THE EARLIEST EFFECT IS THEREFORE

**2031**

and the six national quotas continue without interruption.

**The outcome is still open**

This sequence describes the procedure and settles nothing about the result. Parliament and Council can amend the text at every stage, and the version adopted in 2029 may be stricter than the proposal from which it began. A member state may also keep a higher level in its own law.

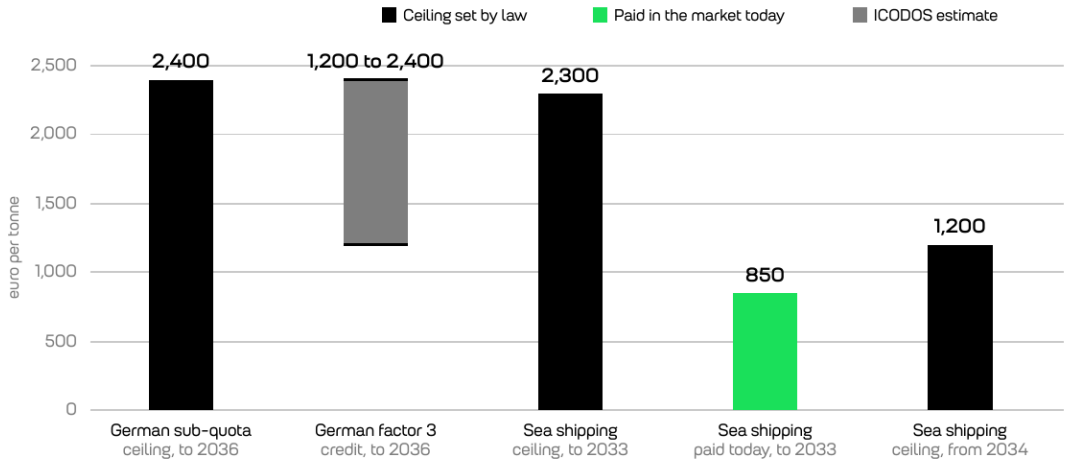
Sources: Commission Work Programme 2026. Commission news item on the post-2030 framework, 20 March 2026. Directive (EU) 2023/2413 publication date. Regulation (EU) 2023/1805 Article 5. Council presidency calendar.

SECTION 9 | MINIMUM AND MAXIMUM EFFECT

# Nothing changes before 2031. Two German instruments set the value of a tonne, and only one of them is exposed to a wider list of eligible fuels. The factor 3 credit of 1,200 to 2,400 euro is written in national law.

Two separate German rules give a tonne of e-methanol its value. A supplier that misses the RFNBO sub-quota pays 120 euro per gigajoule, which is 2,400 euro for the 19.9 gigajoules in a tonne. Separately, an RFNBO counts three times towards the main greenhouse gas quota until 2036, worth 1,200 to 2,400 euro at the prices traded in 2026. A wider list of eligible fuels reaches the first rule. The second is tied to RFNBO status in German law.

EXHIBIT 12 | THE VALUE OF ONE TONNE OF E-METHANOL UNDER EACH RULE, EURO PER TONNE




One tonne of methanol contains 19.9 gigajoules at lower heating value. German sub-quota: the penalty of 120 euro per gigajoule under section 37c of the Federal Immission Control Act. With no other means of compliance, the market price stays close to that ceiling. Factor 3 credit: section 3 paragraph 5 of the 37. BImSchV multiplies the energy of an RFNBO by three for the main quota until 2036, tapering to one by 2040. At a base value of 94 kilograms of CO2e per gigajoule, one tonne carries 3.9 to 5.6 tonnes of credited saving, worth 1,200 to 2,400 euro at 300 to 420 euro per tonne of CO2e. Whether one tonne may both discharge the sub-quota and earn the credit is not settled in the public texts, so the two are shown separately and are not added. Sea shipping: the FuelEU reference intensity is 91.16 grams of CO2e per megajoule and the target to 2034 lies 6 percent below it, so one tonne earns about 1.7 tonnes of CO2e. The penalty works out at about 640 euro per tonne of CO2e for a conventionally fuelled ship and rises as a ship's own intensity falls. The credit traded at 108.60 euro per tonne on 16 September 2026, against about 210 euro in February. Both include about 130 euro of avoided emissions trading cost at 85 euro per allowance. Double counting until 31 December 2033 doubles the shipping figures. Figures are rounded.

EXHIBIT 13 | MINIMUM AND MAXIMUM EFFECT, BY AREA

| AREA | MINIMUM EFFECT, NEAR CERTAIN | LARGEST PLAUSIBLE EFFECT |
|---|---|---|
| **Quotas before 2031** | No change at all. Every rule that applies before 2031 stands exactly as it is | No change at all. The draft covers only the period after 2030 |
| **EU transport share** | The 1 percent share expires in 2030 by its own terms, with or without the draft | No EU share is set for any year after 2030 in any mode other than aviation and sea shipping |
| **EU industry share** | The 42 percent for 2030 stands. The 60 percent for 2035 would give way to an EU target of 8 million tonnes, with financing and credits | As in the minimum case, and low carbon and nuclear based hydrogen also count towards it |
| **National quota levels** | Unchanged. Germany reaches 10 percent in 2040 at 120 euro per gigajoule, and five other states keep their own levels | Levels unchanged in law, but met from about 2031 by a wider list of fuels |
| **Price per tonne** | Unchanged. The sub-quota ceiling of 2,400 euro and the factor 3 credit of 1,200 to 2,400 euro both continue | The sub-quota premium falls once other fuels may be sold into it. The factor 3 credit remains, since German law ties it to RFNBO status |
| **Sea shipping** | Double counting until 31 December 2033, then a 2 percent share from 2034 | The Commission waives the 2034 share on price or supply grounds, and the ceiling falls to about 1,200 euro per tonne from 2034 |
| **National law** | The court cases against Greece, Malta and Portugal continue, and RED III remains enforceable | Member states that have yet to write RED III into law delay further, since the rules change in 2031 in any case. Each of the six reviews its own level between 2029 and 2031 |

Sources: BGBl. I 2026 Nr. 163, the second law on the greenhouse gas quota, and BT-Drs. 21/5530 of 22 April 2026 for section 37c of the Federal Immission Control Act, section 3b and section 3 paragraph 5 of the 37. BImSchV. Section 3 of the 38. BImSchV for the base value of 94 kilograms of CO2e per gigajoule from 2026. Regulation (EU) 2023/1805 Annex I and Article 23 for the reference intensity, targets and penalty. OceanScore pool price index of 16 September 2026 for the traded FuelEU credit. Trading Economics for the allowance price of about 85 euro on 16 September 2026. BImSchG § 37c and 37. BImSchV § 3b for the German penalty and path. Draft Commission impact assessment, measures K2 and L2, for eligibility and credits.

SECTION 10 | WHAT HAPPENS NEXT

## The proposal is due by the end of 2026. Five questions, each answered between now and 2027, will show which of the four outcomes is most likely.

Commission staff will revise the text before the Commission adopts a proposal, and Parliament and Council will revise it again afterwards. The dates below depend on neither revision. Exhibit 16 sets out what a producer or a buyer can do in the meantime.

EXHIBIT 14 | THE NEXT STEPS IN THE PROCESS

| WHEN | WHAT HAPPENS | WHY IT MATTERS FOR RFNBO PRODUCERS AND BUYERS |
|---|---|---|
| October to November 2026 | The Regulatory Scrutiny Board reviews the impact assessment | The last technical check before the proposal. The Board publishes its opinion alongside the proposal |
| 4 December 2026 | Vote on the global shipping fuel rules at the IMO | The largest single determinant of e-methanol demand outside the EU |
| Q4 2026 | RED IV proposal, published with the hydrogen strategy | The first text Parliament and Council can negotiate. No such text exists before this date |
| January 2027 | Commission review report on the aviation fuel law | In that report the Commission states whether the e-kerosene shares stand as written |
| 2027 to 2028 | Parliament and Council negotiate | The stage at which Parliament can restore a binding share, as it did in 2023 |

EXHIBIT 15 | FIVE QUESTIONS ANSWERED BETWEEN NOW AND 2027

| | QUESTION | ANSWERED | WHAT EACH ANSWER WOULD MEAN |
|---|---|---|---|
| 1 | Whether the revised hydrogen rules place RFNBO and low carbon hydrogen in one instrument | Autumn 2026 | One instrument would make a shared list of eligible fuels more likely, which underlies the 80 percent estimate on page 8 |
| 2 | Whether the Regulatory Scrutiny Board criticises the hydrogen chapter | Published with the proposal | Criticism would lead ICODOS to raise scenario 3 from 15 percent towards 25 percent |
| 3 | Whether the proposal contains any binding number at all | Q4 2026 | Any binding number, however small, would confirm scenario 1 as the most likely |
| 4 | Which political group leads on the proposal in the European Parliament | Q1 2027 | The group that created the 42 and 60 percent targets in 2023 would probably defend a successor |
| 5 | Whether Germany defends a national quota in Council or asks for alignment with the EU level | 2027 | The clearest indication of future demand in the largest quota market |

EXHIBIT 16 | WHAT PRODUCERS AND BUYERS CAN DO BEFORE THE PROPOSAL IS NEGOTIATED

| WHO | ACTION | BY WHEN |
|---|---|---|
| RFNBO producers and buyers | File comments during the feedback period on the proposal, drawing on the gap shown on page 4 between what the consultation asked for and what Commission staff recommend | Within eight weeks of publication, expected Q4 2026 |
| Buyers with German contracts | Establish which of the two German instruments each contract relies on, and how the contract treats a change to either one | Before signing terms that extend beyond 2030 |
| Producers building plants now | Record the date of the final investment decision. Commission staff argue that the companies which invested first should be protected | Before Council agrees its position, 2027 |

SUMMARY

Commission staff propose nothing in this paper. Of 32 measures they recommend two: the first would replace the national industry targets with an EU target, financing and credits; the second would leave the duty on fuel suppliers with the member states. They reject the option that would end hydrogen targets with nothing in their place. Nothing changes before 2031. Twelve member states keep an RFNBO quota in national law, and the shipping and aviation mandates continue as written. The open question for a producer or a buyer is which fuels may be sold into those quotas; that the quotas exist is not in doubt. Method and sources are on page 13.

ICODOS GmbH, 21 September 2026.

METHOD | HOW THE FIGURES IN THIS REPORT WERE BUILT

## Three rules produce every figure in this report: one source for the draft, one set of four scenarios for every probability, and one published penalty or traded quote for every price.

Exhibit 17 states the three rules. Exhibit 18 lists the seven points ICODOS could not verify and explains how each is handled. A reader who disagrees with a figure should be able to trace it to the rule that produced it.

EXHIBIT 17 | THE THREE RULES

| RULE | WHAT IT MEANS IN PRACTICE |
|---|---|
| **Sourcing** | Statements about the draft are taken from the draft itself, sections 5.1, 5.2.3, 5.3 and 6.1, not from press reports about it. Statements about law in force come from the Official Journal, national gazettes and Commission press releases. Every market price carries a named quote and a date |
| **Probability** | The four scenarios on page 9 are the base. They do not overlap and they sum to 100. Every probability about the shape of the EU framework after 2030 is the sum of the scenarios that contain it, as Exhibit 10c shows. Probabilities about instruments outside the review are stated separately. ICODOS derives the scenario shares from three inputs: how Parliament and Council treated the same law between 2021 and 2023, the published positions of member states and industry bodies, and the cost each change would impose on the states that must agree to it |
| **Price** | The value of a tonne follows from the penalty in the relevant law, or from a traded price where one is published. The conversion basis of 19.9 gigajoules per tonne of methanol and the full arithmetic appear in the caption beneath Exhibit 12 |

EXHIBIT 18 | WHAT IS CONTESTED OR UNVERIFIED, AND HOW IT IS HANDLED

| ITEM | POSITION |
|---|---|
| How many member states have written RED III into national law | The three published figures measure three different things. Cullen International reported five on 30 June 2026 for the directive as a whole. The European Hydrogen Observatory reported eight on 30 July 2026 for the RFNBO mandates in transport and industry together, but names only six. The Hydrogen Council reported twelve on 3 May 2026 for any RFNBO quota. All three are given |
| The German quota price | No exchange or public index exists for the German greenhouse gas quota, which is traded bilaterally. Published figures for mid 2026 range from about 300 to 420 euro per tonne of CO2e, and both ends are used here |
| The Romanian quota | The transport target was cut to at least 1 percent in October 2025 and the amending law has passed only the Senate, so Romania appears on page 5 as in preparation. The industry figures of 42 and 65 percent rest on one secondary source |
| The Danish and Dutch levels | No Danish source gives an RFNBO percentage or a multiplier, so page 5 shows the displacement requirement instead. Dutch sources give 1.07 and 1.8 percent for 2030, and both are noted rather than one being chosen |
| Who signed the February 2026 Council paper | The Council register records Belgium, Czechia, Hungary, Poland and Slovakia. Argus reported additional support from France, Italy and Romania. ICODOS follows the register |
| German factor 3 credit | Section 3 paragraph 5 of the 37. BImSchV ties the factor to the main quota and section 3b sets the sub-quota without a cross reference, so on the plain reading one tonne does both. No provision says so expressly. The two are shown separately here and are not added together |
| The German RFNBO market price | No traded price is published. Page 11 shows the penalty ceiling instead and names it as such |

### TWO GROUPS OF MEMBER STATES THAT ARE OFTEN CONFUSED

In February 2026 Belgium, Czechia, Hungary, Poland and Slovakia asked the Council to let low carbon hydrogen count towards the RED III industry target. In March 2026 a different group, comprising Germany, Spain, the Netherlands, Austria and Poland, asked the Commission to bring forward its review of the RFNBO production rules. Only Poland signed both. The first group wants the target opened to other fuels; the second wants the production rules eased for RFNBOs themselves.

### ABOUT THIS REPORT

Published by ICODOS GmbH, Mannheim. ICODOS designs, builds and operates plants that convert CO2 and renewable electricity into e-methanol. This report is not legal advice. Comments and corrections are welcome at icodos.com.

### VERSION

Version 1, 21 September 2026. Public. The draft impact assessment is dated 8 September 2026 and had not been published by the Commission at the date of writing.

ICODOS GmbH, 21 September 2026.