

WEBINAR

New policy and demand incentives to accelerate hydrogen deployment in Europe



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July 8th 2026

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Recent developments in the EU regulatory framework for hydrogen

July 8th, 2026

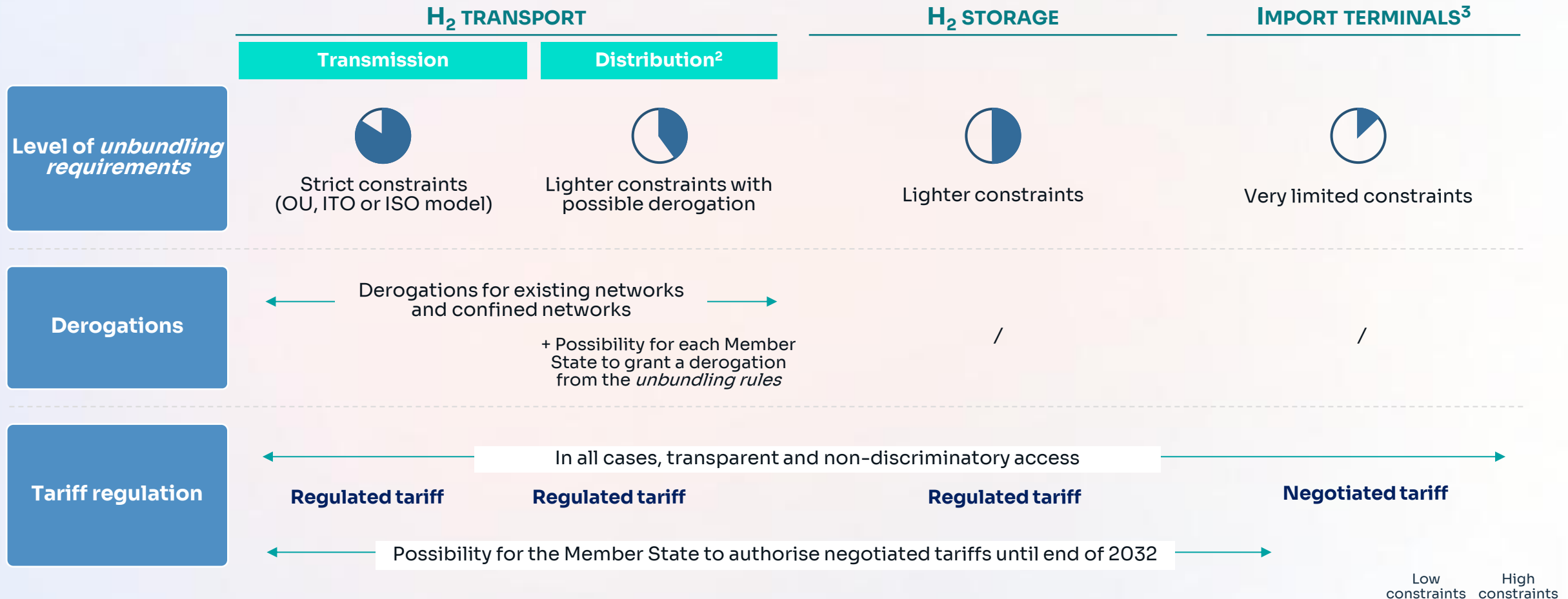
The European regulatory framework distinguishes 3 main categories of hydrogen

Type of hydrogen (European nomenclature)	 H ₂ fossil	 H ₂ low-carbon ("LCF")	 H ₂ renewable ("RFNBO")
Definition	H ₂ produced from fossil energy sources, such as natural gas or coal, without significant CO ₂ capture or emissions reduction threshold	- Regulatory basis: Directive (EU) 2024/1788 + LCF methodology 2025/2359 - H₂ produced from low-carbon sources (nuclear, low-carbon electricity mix, or fossil gas with CCUS), meeting the 70% GHG emissions reduction threshold versus fossil H₂	- Regulatory basis: Delegated Act (EU) 2023/1184 - H₂ produced from renewable electricity (e.g., wind, solar), meeting the 70% GHG emissions reduction threshold, as well as the RFNBO criteria: additionality, geographic and temporal correlation.
Competitiveness	+++	++	+
Environmental impact	+	++	+++
Adoption rationale	Sourcing to satisfy production processes' needs, seeking the most competitive H₂ available source	Sourcing for reporting purposes and meeting CSR targets for reducing GHG emissions	Sourcing for compliance with the regulatory targets, incorporation obligations and mandates

A targeted review is expected in 2026, ahead of the assessment initially planned for 2028, to **adjust the criteria considered too restrictive for market deployment**

- The **consumption of hydrogen** is already an **industrial reality for certain sectors** (refining, etc.), which currently rely mainly on fossil hydrogen
- For other sectors such as the steel industry, it represents a **technological challenge** which will require **process modifications to include hydrogen**

With the 4th gas package¹, future hydrogen infrastructures will be regulated according to a framework comparable to natural gas



1. Directive (UE) 2024/1788 et Regulation (UE) 2024/1789 – 2. Under the assumption that one of the first pipelines could be classified as a distribution network – 3. Terminals used to offload and convert liquid hydrogen or liquid ammonia shipped by sea into gaseous hydrogen – Source: Gas and Hydrogen Directive and regulation

Sizing the transmission network to long-term needs raises challenges around capacity bookings and the competitiveness of the capacity tariff

Indicative theoretical illustration of the evolution of capacity bookings for H₂ transmission or storage

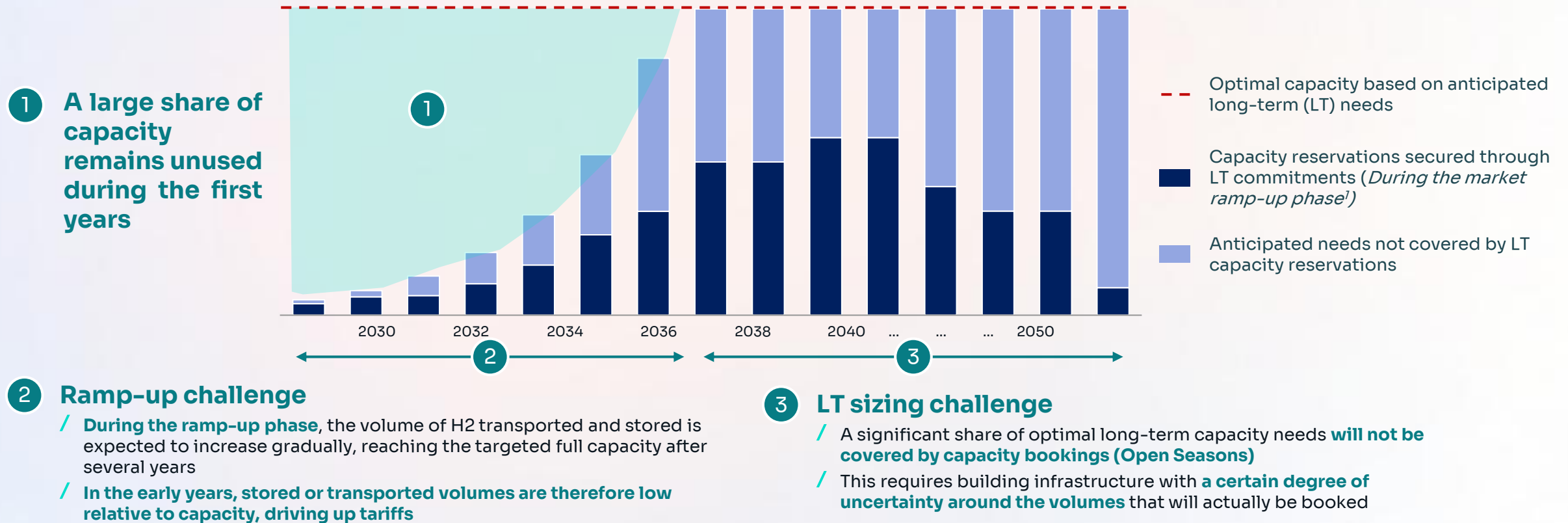
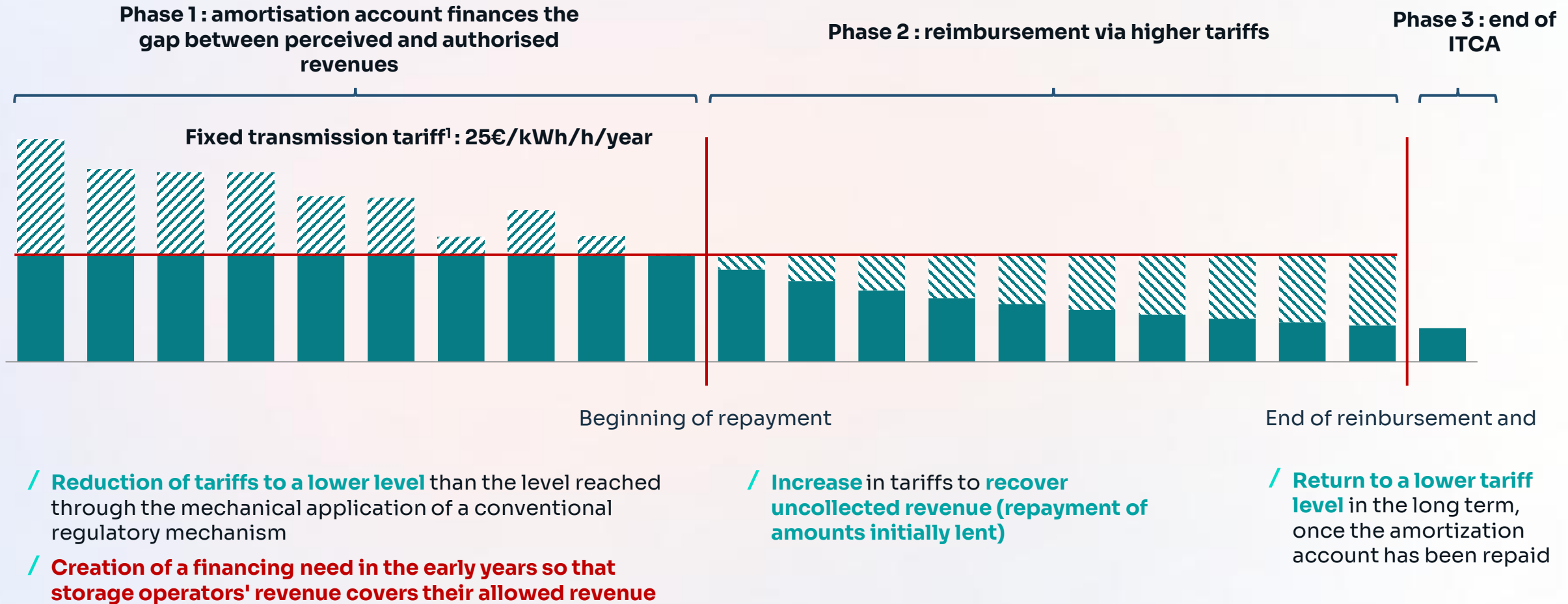
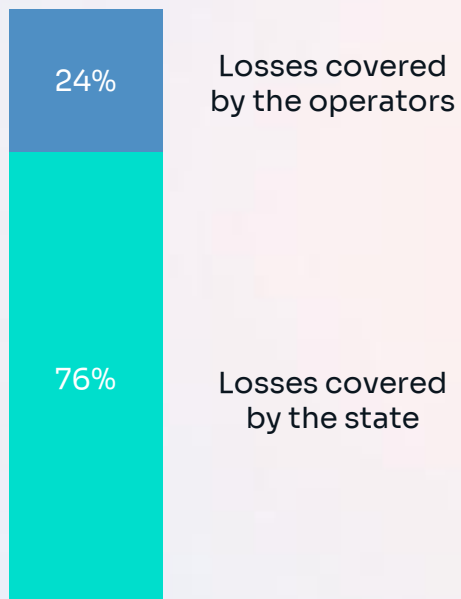


Illustration of the ITCA¹ model which has been proposed to help the development of hydrogen networks in Germany



To facilitate the development of the network, the German government guarantees the coverage of 76% of the amortisation account

AMORTISATION ACCOUNT BALANCE AT MATURITY €M



If the amortisation account balance is negative at maturity, the German State **will cover a substantial share of the amortisation account** borrowings that remain unpaid. Network operators will then have **two years to repay the amount owed to KfW**.

DETAILS REGARDING THE AMORTISATION ACCOUNT AND THE GUARANTEE PROVIDED BY THE FEDERAL GOVERNMENT

- / KfW (the German development bank) provides a **loan of €24 billion** for the amortisation account
- / This amortisation account **provides the liquidity the network operators need to invest in the development of the hydrogen transmission network**
- / If the amortisation account is not balanced by the end of the hydrogen ramp-up, in 2055, **the State will cover 76% of the losses**. The remaining 24% will be borne by the network operators

EU introduced RED III and various regulations to drive the development of renewable hydrogen in the industry and transport sectors



Industry – *Member States*

The RED III Directive sets a target for RFNBO consumption within total H₂ consumption in industries

42% by 2030

60% by 2035



Transport – *Member States*

The RED III Directive sets a target for RFNBO consumption within the transport sector's total energy consumption

1% by 2030



Maritime – *Shipping companies*

If the RFNBO consumption is lower than 1% in 2031, the ReFuelEU Maritime Regulation will introduce an RFNBO incorporation target

2% by 2034



Aviation – *Fuel suppliers*

The ReFuelEU Aviation Regulation sets a target for the gradual incorporation of RFNBO into the fuel supply at major European airports.

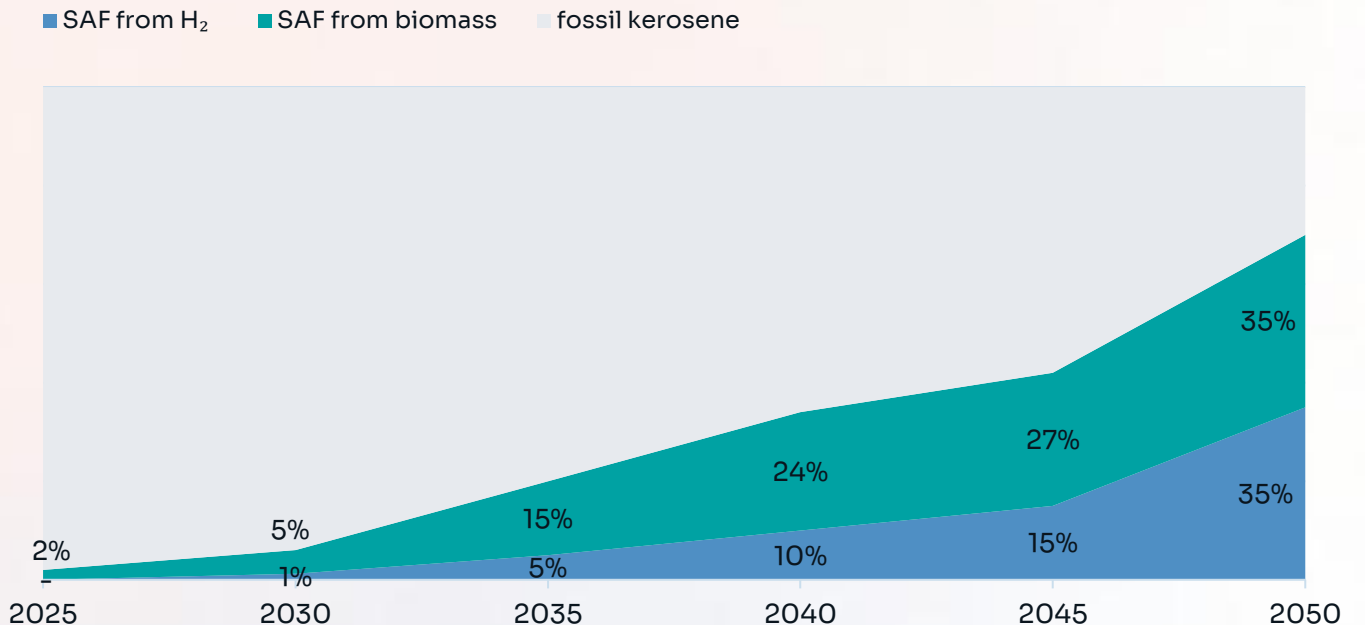
~1% by 2030

10% by 2040

35% by 2050

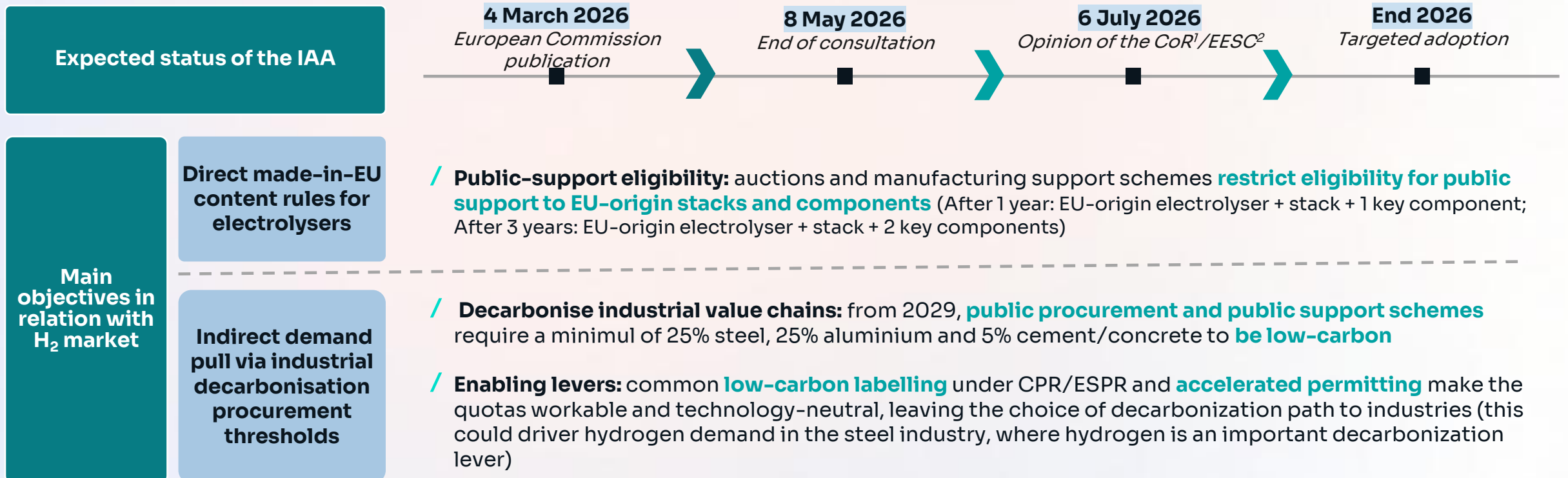
Obligation for aviation fuel suppliers at EU airports to incorporate e-fuel into distributed kerosene

ReFuelEU Aviation regulation adopted in October 2023:



Industrial Accelerator Act (IAA) : a direct lever for EU electrolyser manufacturing, an indirect lever for H₂ industrial demand

Proposed EU regulation aiming to create **lead markets** for low-carbon industry raising manufacturing from **14.3% of EU GDP in 2024 to 20% by 2035**. For H₂, the effect is mainly indirect: the text mobilises public procurement, auctions and support schemes to stimulate demand for low-carbon materials, in particular **steel**, and net-zero technologies, including **electrolysers**.



1. Committee of the Regions, representing regional authorities 2. European Economic and Social Committee representing organised civil society. Source: IAA European Commission, Sia analysis

Thank you

Should you have any questions, please don't hesitate to reach out :



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To what extent can new national demand-side incentives help to
accelerate the growth of the hydrogen market?
A closer look at German policy measures

Online, 8 July 2026

David Siegler



M.Sc.
David Siegler

- Partner and Counsel
- Cologne

PROFESSIONAL EXPERIENCE

- Completed a Bachelor's and Master's degree in Industrial Engineering at RWTH Aachen University, specialising in Electrical Power Engineering
- 3 years in business development and trend scouting at Trianel GmbH
- Consultant at BBH Consulting AG since 2017

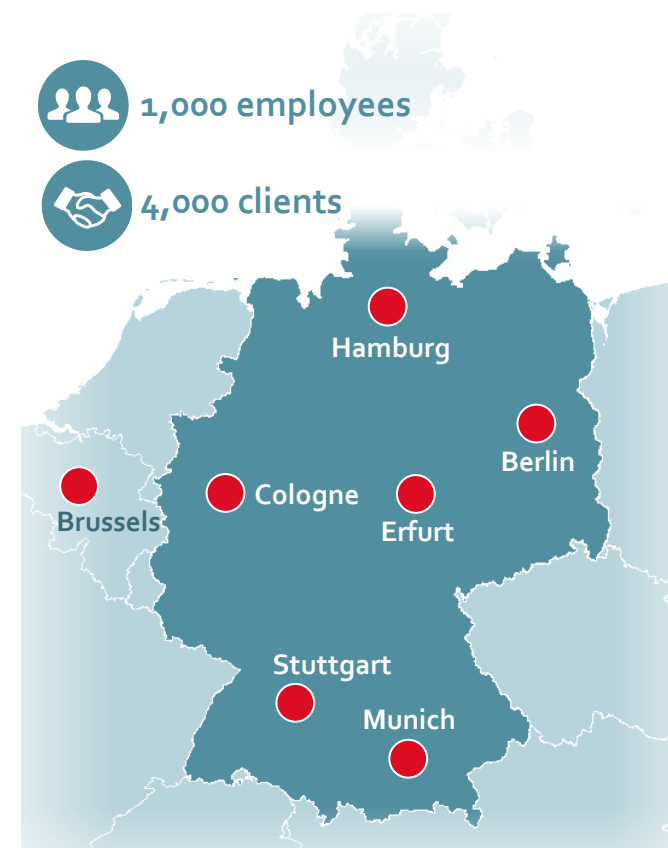
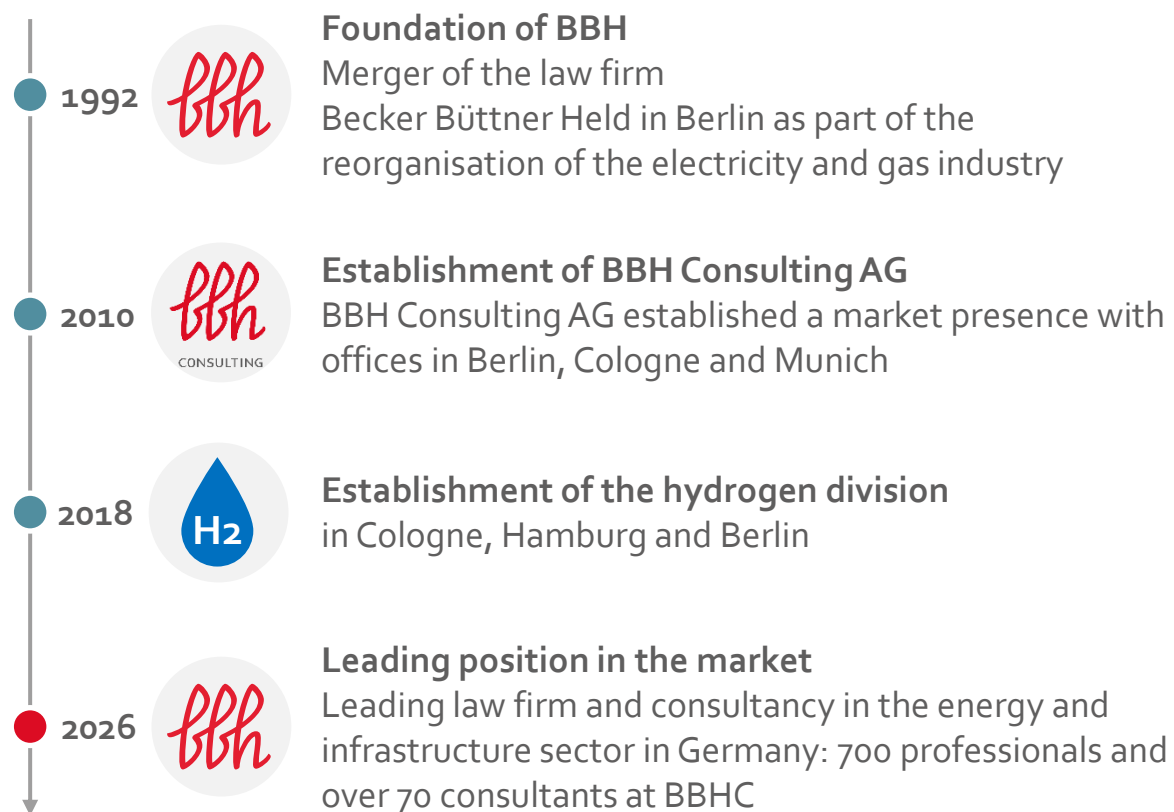
EXPERTISE AND PROJECTS

- Technical and economic consultancy on hydrogen technologies and areas of application
- Business model development and pilot projects for products and services in the hydrogen sector – with a particular focus on regulatory opportunities
- Quantitative evaluation of business models using scenario-based profitability analyses
- Advice on funding for hydrogen technologies at European, national and regional levels
- Advising industry on decarbonisation projects – in particular through the use of hydrogen and its derivatives
- Development and implementation of innovative sales concepts for energy suppliers as well as the industrial and transport sectors
- Implementation of regional transformation processes in the field of sector coupling through hydrogen
- Facilitation of strategy and innovation workshops

BBH and BBH Consulting AG are leaders in their respective fields within the energy sector.

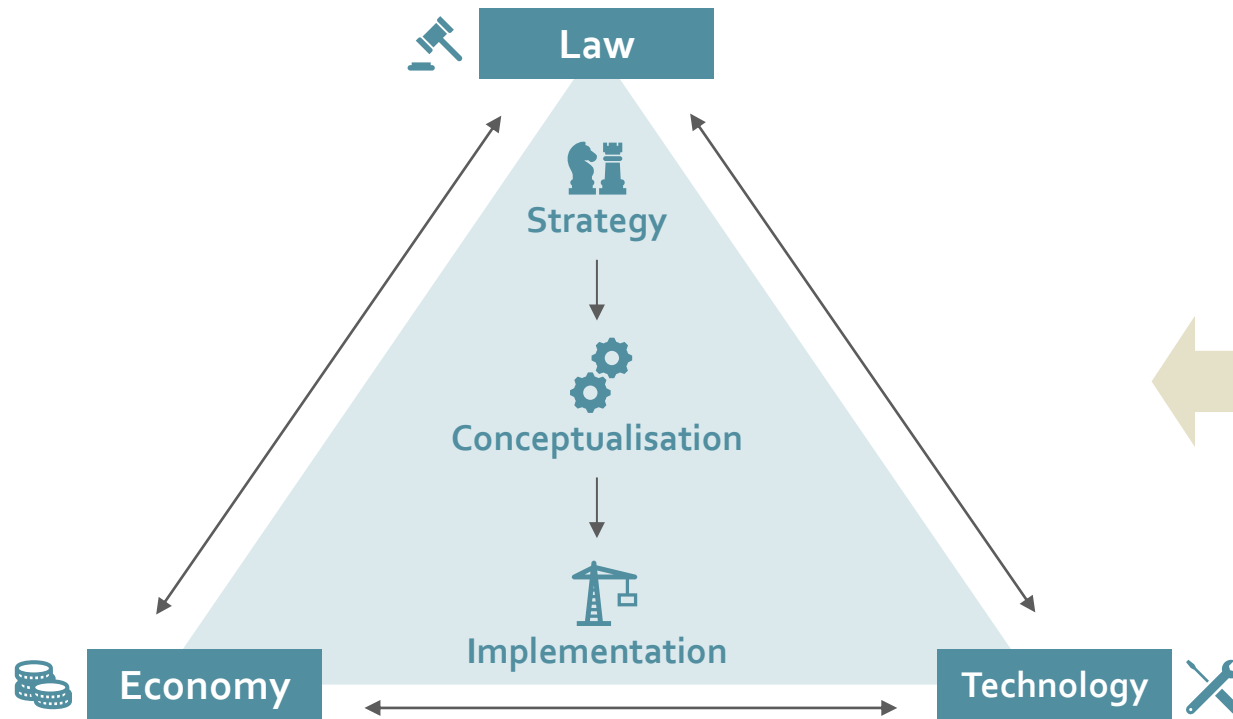


BBH and BBH Consulting AG



Our services range from initial strategic considerations to implementation.

Range of services: BBH Group

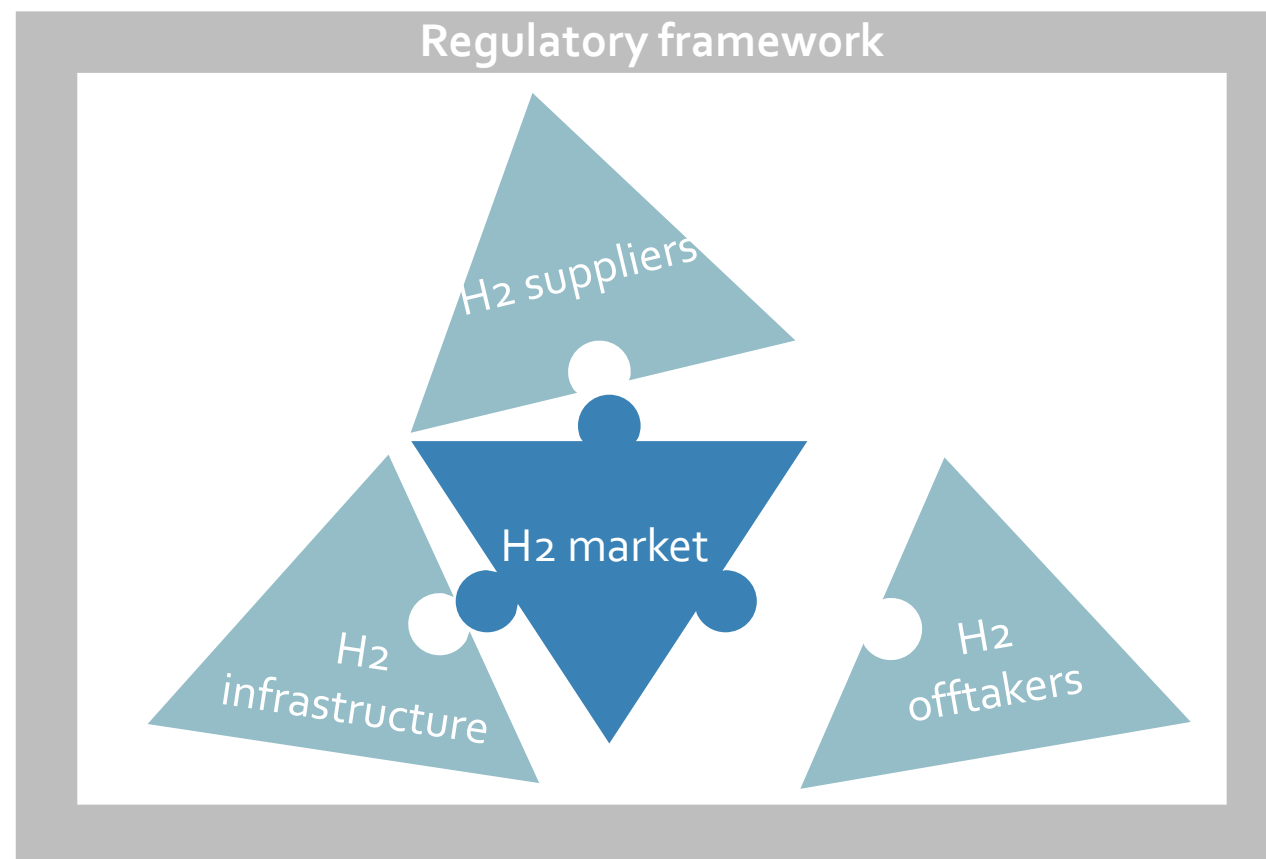


Range of services: Team H2

- Business Unit & Strategy Development
- Feasibility Studies & Potential Analyses
- Business Case Analyses
- Policy Strategies for Hydrogen
- Funding Acquisition
- Permitting Processes
- Procurement of PPAs, hydrogen and plant equipment
- Project Management

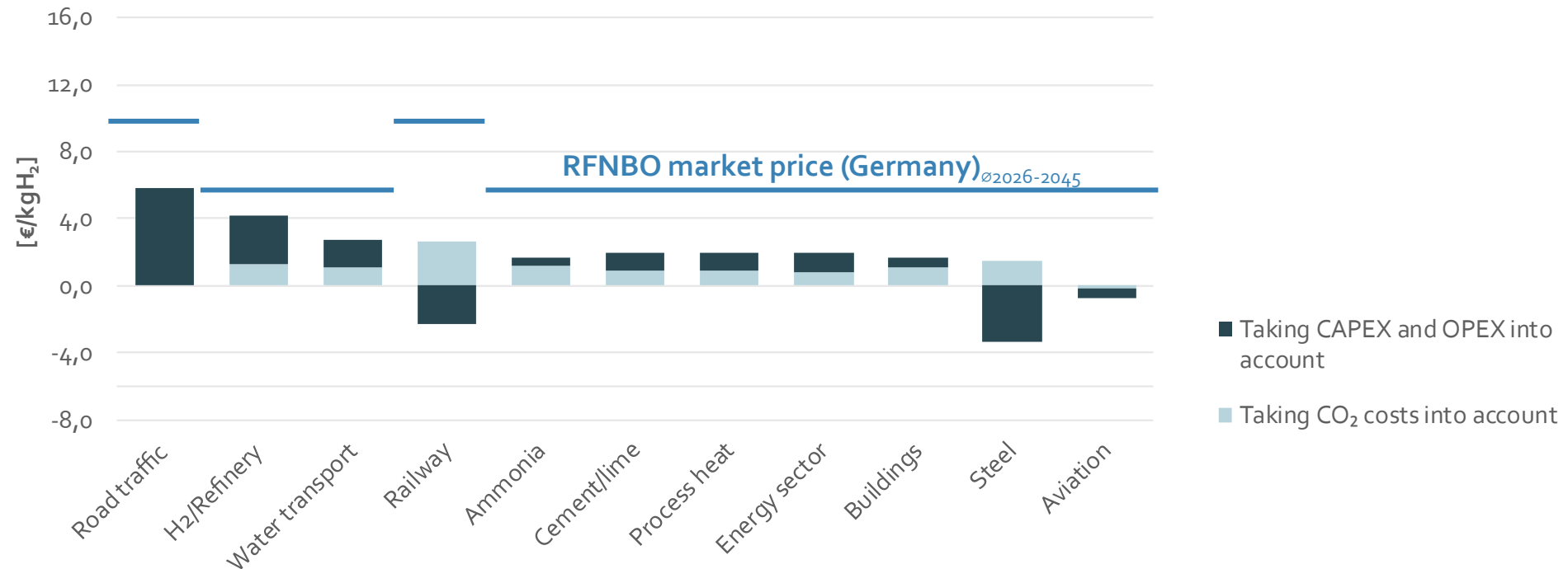
For the market ramp-up, the puzzle pieces – H2 supply, H2 infrastructure and H2 offtake – must all fit together.

Interplay in market ramp-up



There is hardly any business case in any sector without subsidies or market intervention.

Willingness to pay for hydrogen

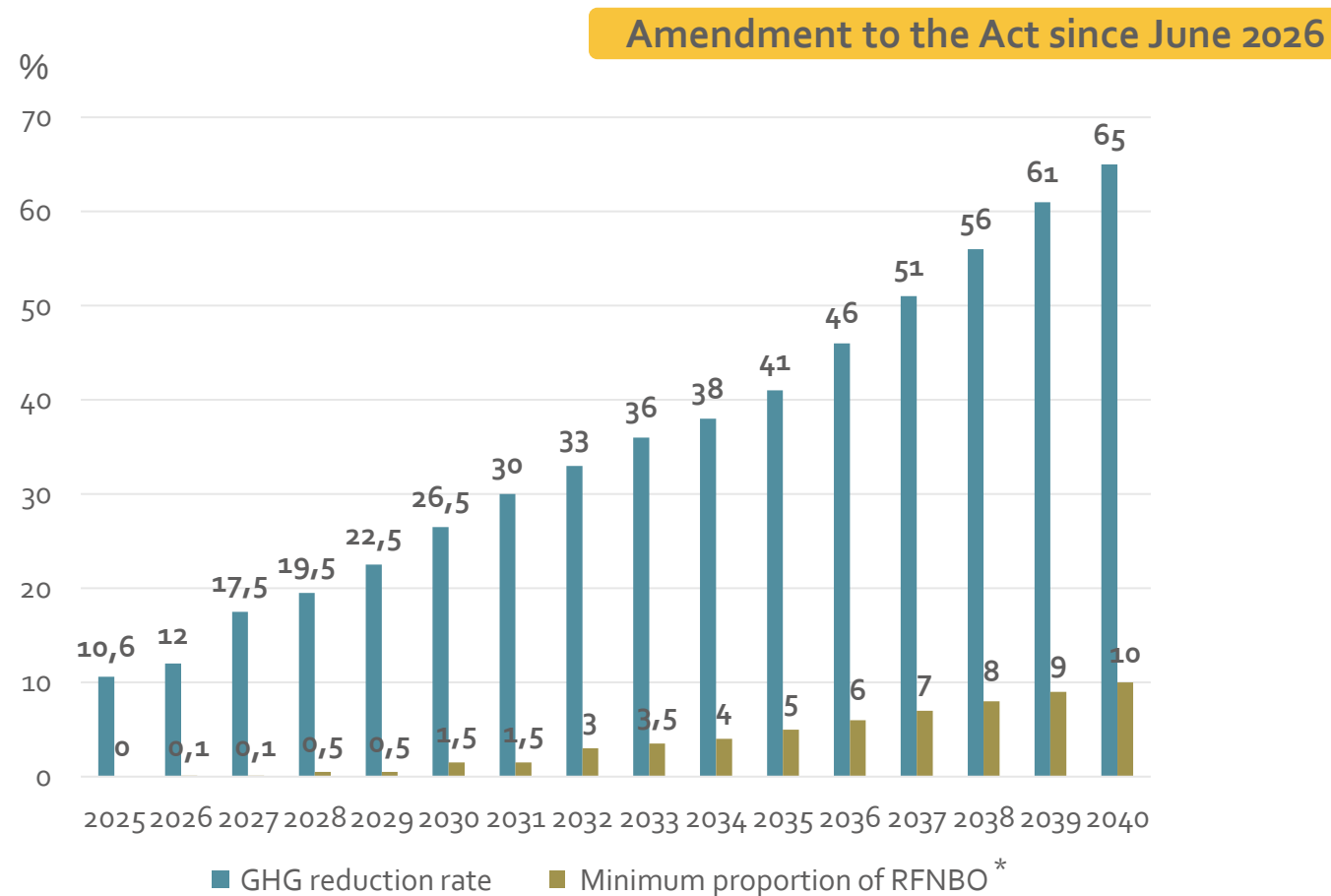


Assumptions regarding RFNBO market prices (∅ €5.44/kgH₂, at filling station: €8.82/kgH₂): Investment: ∅ €1,325/kW excluding subsidies; VLS (in Germany): ∅ 4,550 h; ∅ electricity procurement costs (in Germany): 5.59 ct/kWh excl. AUS: including grid charges, KWKG levy and offshore levy from 2030. CO₂: IEA World Energy Outlook 2025 – Scenario: Net Zero Emissions by 2050 – ∅ 161 €/t_{CO₂}. Source: BBHC's own calculations; willingness to pay based on a 20-year business case (Note: Cost parity refers to common fossil-fuel-based alternative technologies: diesel lorries vs. fuel cell lorries, grey H₂ vs. green H₂, conventional blast furnace route versus direct reduction plant using H₂, natural gas steam boiler versus H₂ steam boiler, diesel ferry versus fuel cell ferry, diesel multiple unit versus fuel cell multiple unit, natural gas gas turbine versus H₂ gas turbine, natural gas condensing boiler versus H₂ condensing boiler, natural gas steam boiler versus H₂ steam boiler, kerosene versus eSAF).

The GHG quota requires oil companies to gradually reduce their GHG emissions.

GHG quota

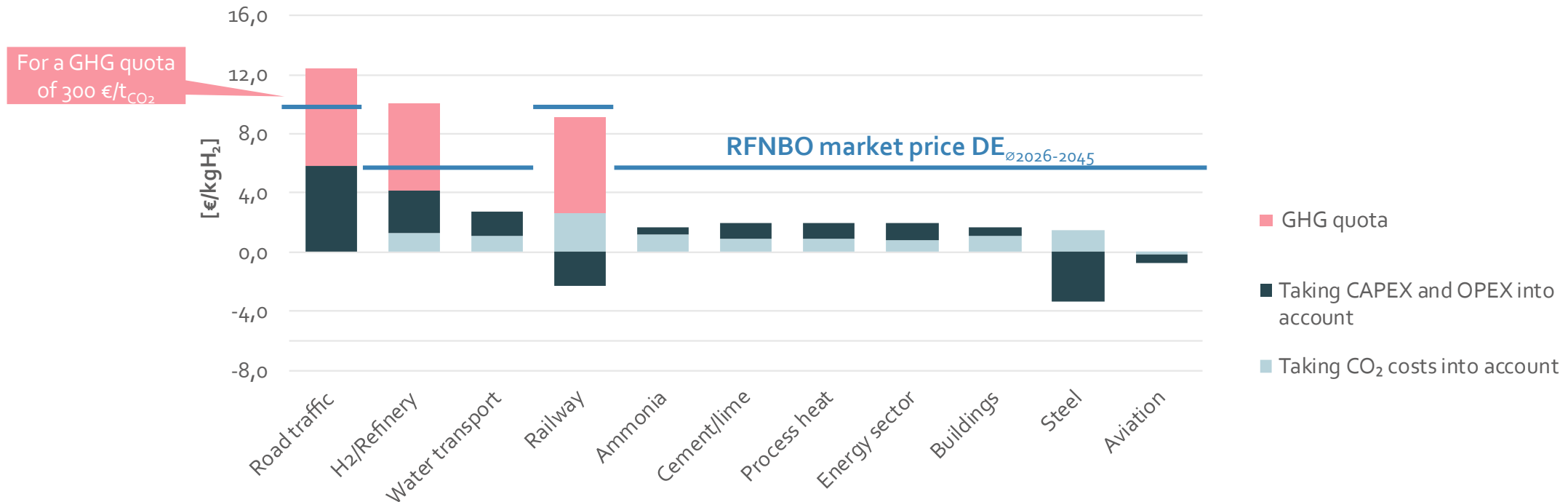
- ▶ EU: Background RED 3
- ▶ German implementation: GHG Quota Act (focus on GHG reduction, not renewable energy share)
- ▶ How it works
 - Entities subject to the quota (oil companies) must reduce their GHG emissions in order to meet the GHG reduction quota
 - Options to fulfill
 - (1) by placing low-emission or zero-emission **fuels** on the market **themselves**
 - (2) by purchasing **GHG allowances** from **other** suppliers of low-emission or zero-emission fuels.



*If the quantities of RFNBO exceed the quota in a given commitment year, the obligated party may apply to have their energy content counted towards the minimum quota for the following commitment year.

The GHG quota can – in some cases – bridge the gap for road transport and refineries.

GHG quota: Willingness to pay



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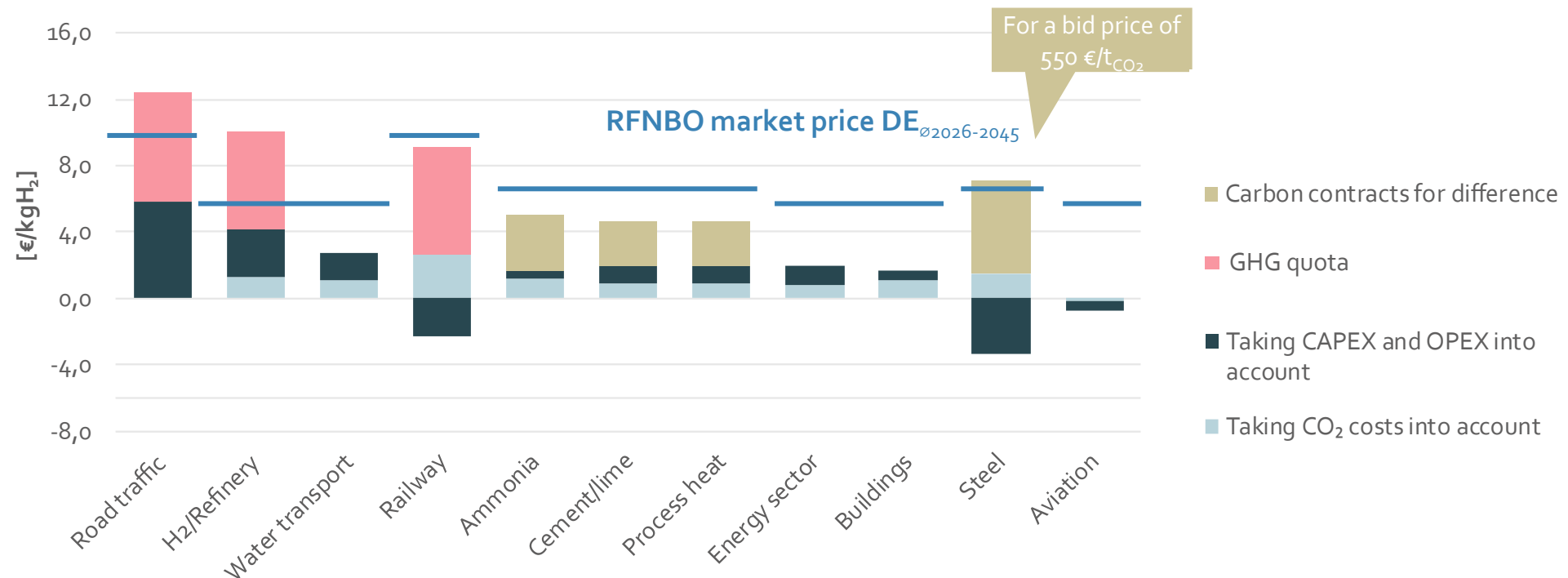
Carbon Contracts for Difference (CCfD) are incentivising the use of hydrogen in industry.

CCfD

-  **Support mechanism:** Subsidising the cost difference (CAPEX and OPEX) between fossil-fuel-based production and low-carbon/carbon-neutral production over 15a
-  **Minimum requirements:** a 50% reduction in GHG emissions in year 4 and an 85% reduction in year 15
-  **Funding volume:** €5 billion (over 15 years)
-  **Eligible applicants:** Industry, industrial steam, CCS/CCU
-  **Eligible energy sources:** In particular, electricity (Priority 1a), hydrogen (Priority 1b) and biomass (Priority 2)
-  **Application period:** 5 May 2026 to 7 September 2026
-  **Expected impact on H₂ market ramp-up:**
 - Companies with **low CO₂ avoidance costs** and **low technological risks** are likely to dominate
→ Projects that utilise direct **electrification** (e.g. large-scale heat pumps, electric boilers) and/or employ high proportions of biomass
 - Due to high decarbonisation requirements and strict biomass requirements, subsidised companies are **also** likely to make **partial use of hydrogen**
 - 2024 bidding round: 5 out of 15 successful bidders plan to use H₂

CCfD are still largely unable to bridge the gap (in projects with solely hydrogen).

CCfD: Willingness to pay



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It is unlikely that the „Electricity Supply Security and Capacity Act “ will have an impact on the use of H₂ until 2040.

bbh

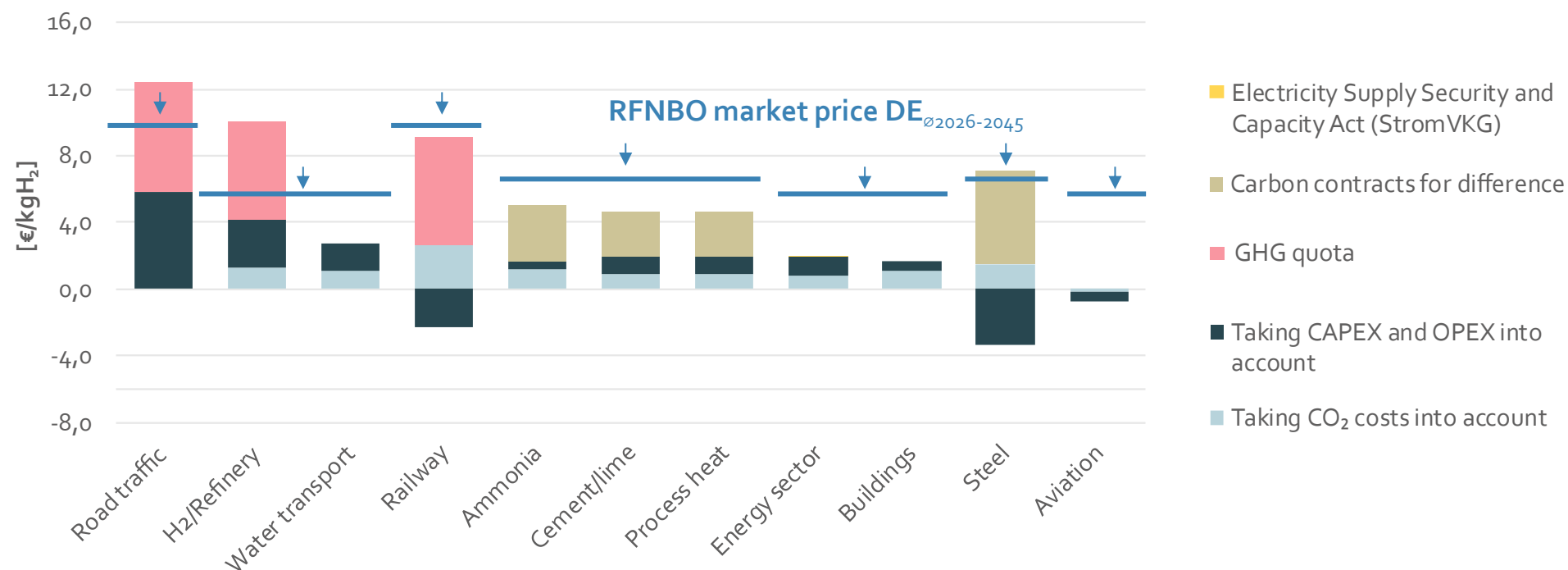
„StromVKG“

- ▶ The **Electricity Supply Security and Capacity Act** („StromVKG“) promotes (new) guaranteed generation capacity through competitive tendering procedures
 - Volume: at least 11 GW*
- ▶ Requirements (relevant to H₂, non-exhaustive)
 - Emissions < 550 g_{CO₂} /kWh (→ natural gas-fired power plants could participate)
 - All (new) power stations must be **designed** to be **H₂-ready****, but are **under no obligation** to **switch** to **H₂**; they are merely required to achieve climate neutrality by 2045
 - H₂ power plants are highly unlikely to compete successfully on price against natural gas power plants
- ▶ *Please note:* Under a **separate measure**, **4 GW of capacity** from gas-fired power plants is to be converted to **H₂ before 2045**.
 - **2 GW conversion in 2040** (tender to be held by 31 December 2027)
 - **2 GW conversion in 2043** (tender(s) to be held between 2032 and 2035)
- ▶ In theory, electrolyzers could receive funding as a **controllable load** under the third round of tenders (2027 and 2029) (though they are likely to be in competition with industrial consumers).

* from the tenders for long-term capacity and generation facilities ** technical conversion to H₂ need only be technically feasible in principle

Funding as controllable load reduces the H₂-prices. Willingness to pay will only reach cost parity with CfDs from 2040 onwards.

“StromVKG”: Willingness to pay



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The Building Modernisation Act is unlikely to provide much incentive for the use of hydrogen.

„GModG“

- ▶ The **Building Modernisation Act** („GModG“) has two key levers for **decarbonising** the **heating market**



Biostairs („Biotreppe“)

- Obligated parties: heating system **owners***
- Obligation to **gradually increase** the **use** of **green energy** sources from 2029: 10%; from 2030: 15%; from 2035: 30%; from 2040: 60%
- **Hydrogen competes** in particular with **biomethane**, which is **significantly cheaper**. A minimum quota for hydrogen is currently not under discussion.
- *Note:* New natural gas and oil heating systems may still be installed



Green gas quota

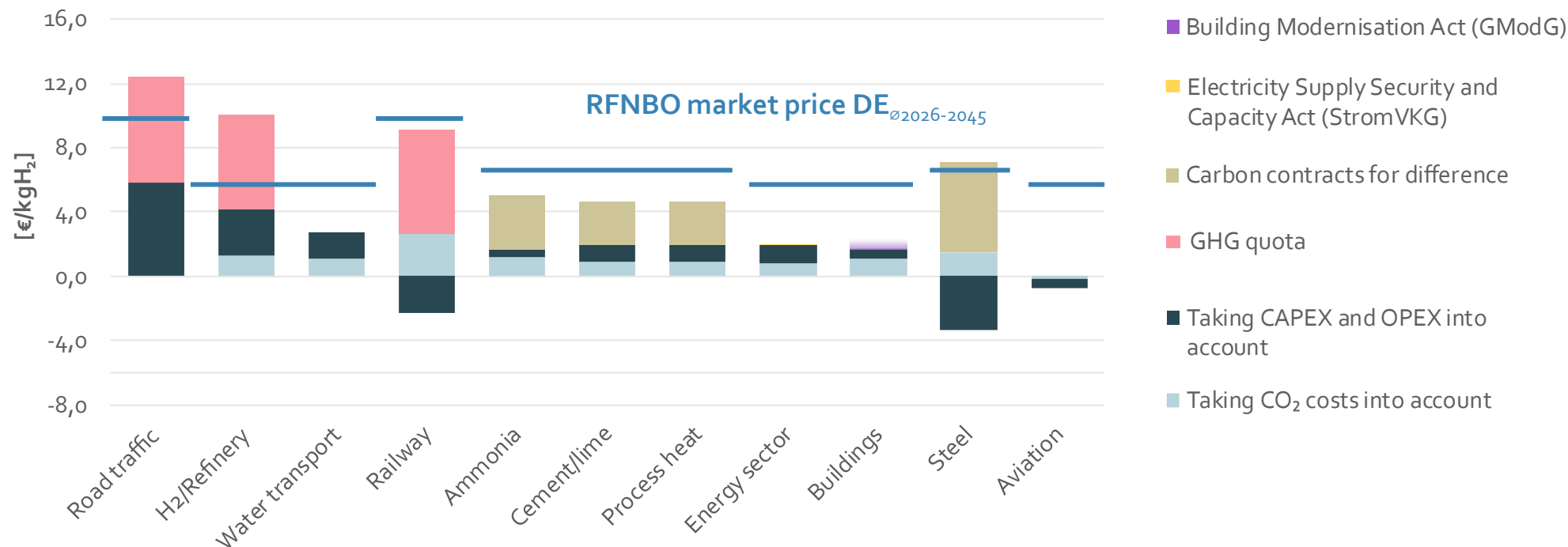
- Obligated parties: **gas suppliers** (utilities)
- Obligation to **gradually blend green energy** sources into the energy supplied (quotas yet to be discussed)
- Implementation in a separate law
- Here too, **hydrogen competes** with the **cheaper biomethane**. If there is no sub-quota for hydrogen (as in the GHG Act), the green gas quota will probably have little impact on the use of hydrogen.

* And landlords

Building Modernisation Act leads to cost parity with biomethane. This does not close the gap with the market price of H2.



GModG: Willingness to pay



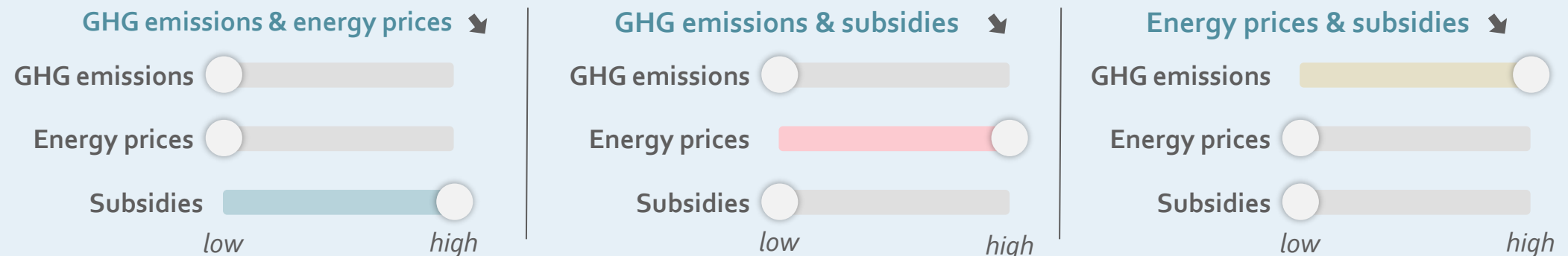
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Current demand drivers are insufficient to enable a huge scaling-up of the market. Political priorities determine how things proceed. *bbh*

Conclusion

- ▶ **Most important prerequisite** for the hydrogen market to take off is the existence of **business cases** for **consumers** (and producers)
- ▶ **Market take-off** is occurring precisely where **multiple funding schemes converge** (e.g. Salzgitter and EWE, or TotalEnergies and RWE)
- ▶ Furthermore, the existing gap between H₂ market prices and consumers' willingness to pay can be closed in two ways
 - **Reducing production costs**: e.g. H₂Global, Innovation Fund Hydrogen Auction
 - **Increasing offtakers' willingness to pay**
- ▶ **GHG quotas** in Germany can lead to viable business cases. But: Quotas have the disadvantage that they are often classified as **not** 'bankable'
- ▶ Other existing **instruments** (e.g. CCfD) will lead to **isolated business cases**, but are **unlikely** to be sufficient to drive a **scalable market ramp-up**
- ▶ Consequently, funding schemes for a state-subsidised central **intermediary** are currently **the subject of intense debate** in Germany

The challenges are well known; the tools are on the table. Implementation is a matter of political priorities:





Thank you very much
for your attention!

David Siegler, BBHC Cologne

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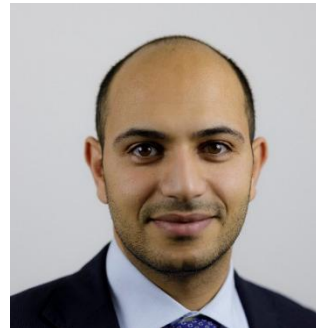
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Questions?

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Coming up next...



October 6th, morning | Conference | Online
Energy for industry : prices, flexibility and decarbonisation



October 6th, afternoon | Conference | Online
New impulses for hydrogen : strategies, production, demand



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