Webinar series: Advancing Hydrogen Valleys to FID

Webinar 1: H_2 market & offtake

July 16th 2026

Roland Berger

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Source: Roland Berger

In the next 90 minutes, we plan to give an impulse on the state of the H2 market and what it takes to secure offtake, followed by some time for your questions

Indicative duration	Topic	Led by
09:30-09:40	**Opening and Welcome:** Introduction of participants and discussion topic	**Clean Hydrogen JU, Roland Berger**
09:40-10:30	**Webinar on H_2 market and offtake:** • **What to play:** Status and key drivers of the H_2 market • **Where to play:** Key H_2 end-uses with high offtake potential • **How to play:** Key contractual principles to make offtake bankable • **How to win:** Concrete approach to securing H_2 offtake	**Roland Berger**
10:30-10:55	**Q&A:** Moderated Q&A to answer your questions on the topic	**Participants, Roland Berger**
10:55-11:00	**Wrap-up:** Summary and next steps	**Roland Berger**

A. Opening & Welcome

Clean Hydrogen Partnership

The H2V Facility addresses support needs in the market with the aspiration of achieving 50 Hydrogen Valleys operational/under construction in the EU by 2030

The Hydrogen Valleys Facility at a glance

State as of 2026

81
EU Hydrogen Valleys on the H2V Platform

24
EU Hydrogen Valleys on the H2V Platform operational/ under construction

Dedicated support via the Hydrogen Valleys Facility by Clean Hydrogen Partnership

1. Project Development Assistance
2. H2V Knowledge Centre & Capacity Building
3. H2V Platform (h2v.eu)

Delivery partners
Roland Berger, worley, Inycom

As per the 2024 **European Commission Roadmap** for Hydrogen Valleys

Aspirational target 2030
50 Hydrogen Valleys **operational/under construction** *within the EU*

Source: Roland Berger

Today marks the launch of our new webinar series "Advancing H2 Projects to FID"

Upcoming webinars and self-service material

2026 webinars on "Advancing H2 Projects to FID"

Key facts:

- **Target audience:** Open invitation to any interested participant
- **Registration:** www.h2v.eu/h2v-knowledge-centre
- **Material:** Consolidation of findings and key slides to be uploaded to www.h2v.eu
- **Follow-up:** Persons with interest in follow-up activities can reach out to h2v@clean-hydrogen.europa.eu

Upcoming webinars:

Webinar 1 — Today's session

H_2 market and offtake

Date: 14.07.2026
Time: 9:30 am – 11:00 am

Webinar 2 — Save the date

Key steps in bringing Hydrogen Valley projects to FID

Date: 18.09.2026
Time: 9:30 am – 11:00 am

Webinar 3 — Save the date

Regulatory insights on RFNBO vs. LCH

Date: 17.11.2026
Time: 9:30 am – 11:00 am

Self-service material

- **Com-mercial**
- **Tech-nical**
- **Reg-ulatory**
- **Valley gove**

- Status of the Hydrogen Market
- Offtake strategy and guardrails
- Contracting & procurement strategy
- Hydrogen value chain assessment
- Evaluation of technical suppliers
- Conducting a socio-economic assessment
- Setting up Hydrogen Valley project organisations
- Milestone planning towards FID
- ....

B. Realizing offtake in the current H_2 market

Clean Hydrogen Partnership

We aim to provide an updated view on the current H2 market and key steps to develop offtake for H2 projects

Objectives of today's webinar

Today's webinar will focus on four topics

We will draw from the current H_2 market to explore implications on H_2 offtake

1. What to play:

Status and key drivers of the **H_2 market**

- Role of green hydrogen and current market cycle
- Hydrogen production costs
- Key market drivers

2. Where to play:

Key **H_2 end-uses** with high offtake probability

- Expected H_2 demand and willingness-to-pay
- Recent offtake agreements
- Development of a hunting scheme

3. How to play:

Key **contractual principles** to make offtake bankable

- Types of offtake agreements
- Structure of offtake agreements
- Key terms of offtake agreements

4. How to win:

Concrete **approach** to securing H_2 offtake

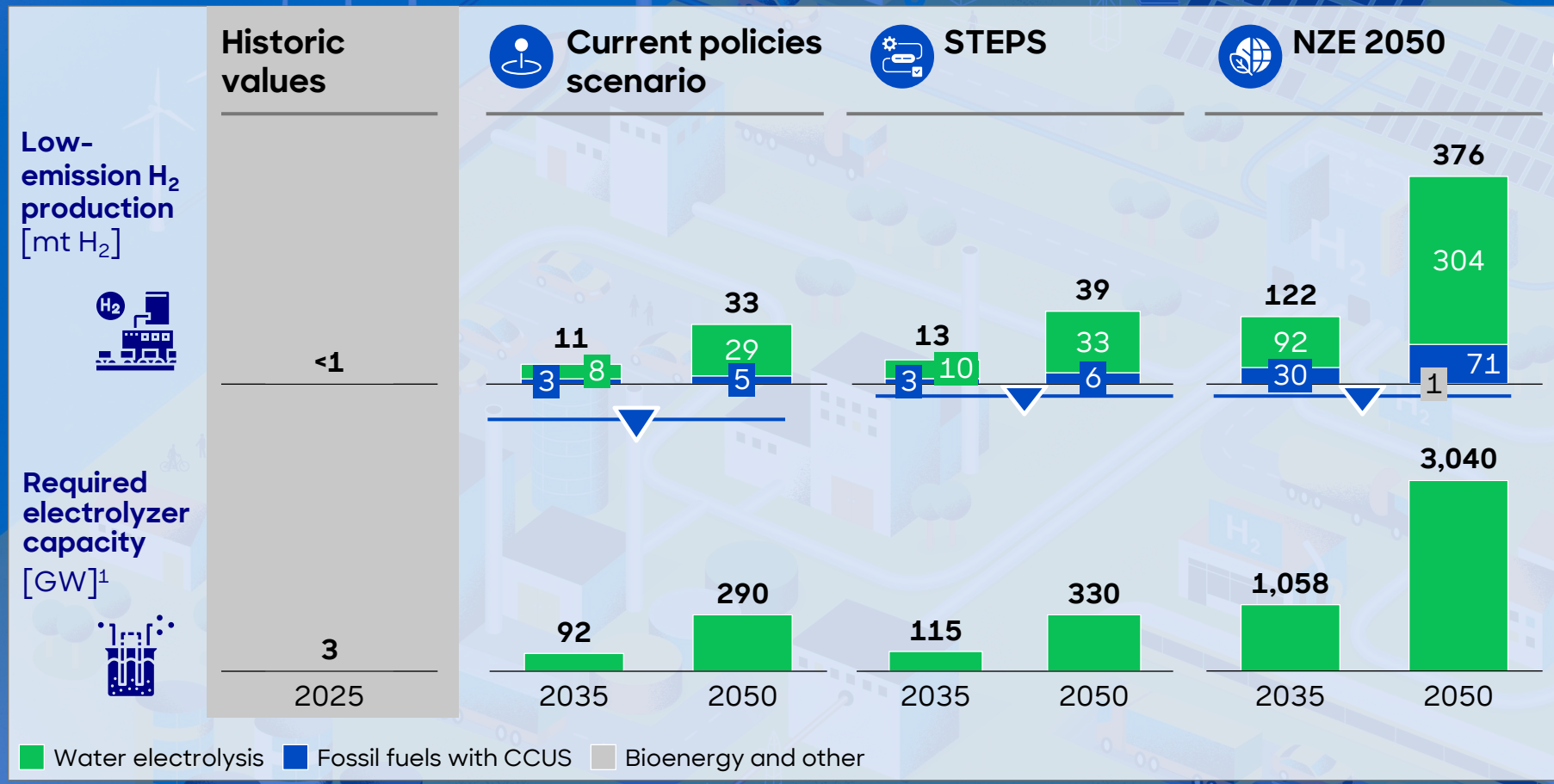
- Key sources of offtake
- Identification of "right" offtakers
- Milestones and activities to realize offtake

B.1 What to play – Status and key drivers of the H_2 market

Clean Hydrogen Partnership

To reach Net Zero in 2050, c. 3 TW of electrolyzer capacity would be needed – A 10x difference to the current and stated policies that fall critically short

Low-emission H_2 production [mt H2] and required electrolyzer capacity [GW] (IEA 2025, Q2 2026)



Key observations

- The **electrolyzer gap** between current policy trajectories and net-zero requirements is stark: CPS and STEPS project only c. 290-330 GW by 2050, a **roughly 10x gap vs. the required c. 3 TW under NZE**
- Even under **CPS and STEPS**, **near-term build-out is highly ambitious**, requiring a **90-100x increase until 2035** compared to today's basis, underlining the importance of clean H_2

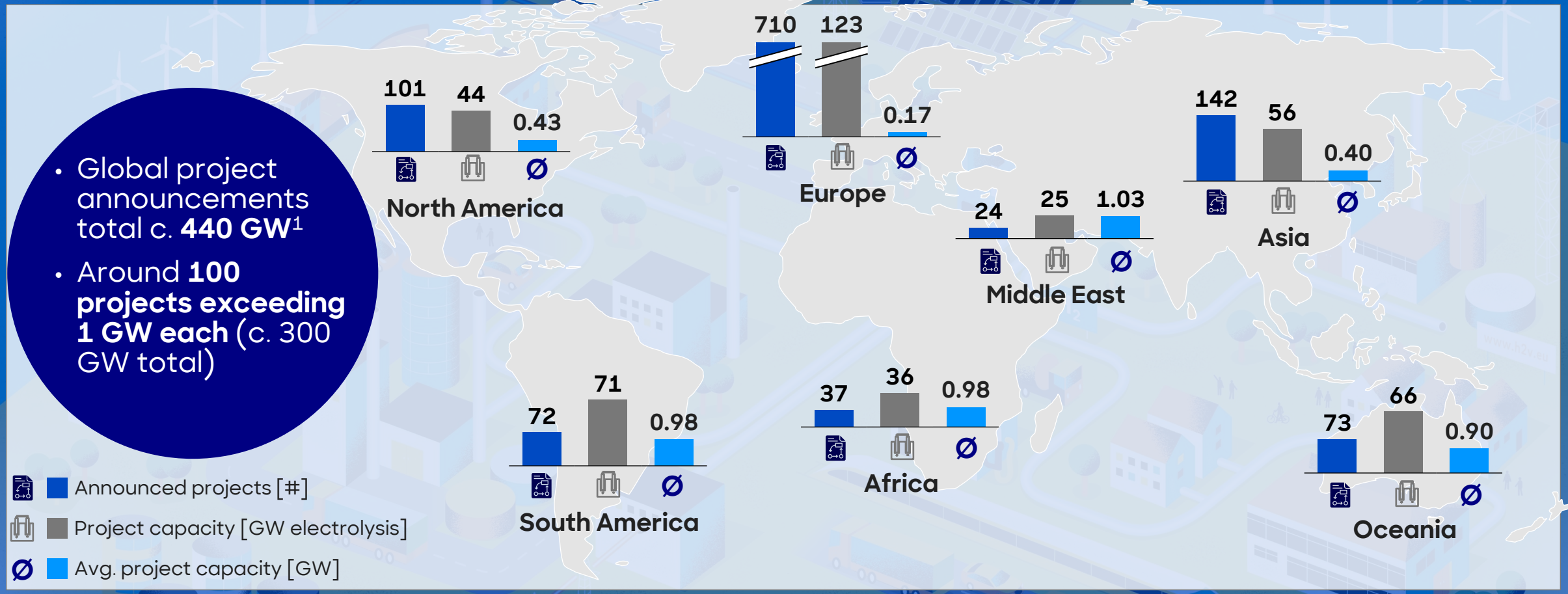
1) As the IEA 2025 scenario does not explicitly state required electrolyser capacity, the corresponding figures were derived by applying the same proportionate relationship between low-emission hydrogen production and electrolyser capacity as observed in the IEA 2023 scenario.

Source: IEA World Energy Outlook 2025, Roland Berger

Global green hydrogen project announcements add up to approximately 440 GW of electrolyzer capacity by 2030

Global announced green hydrogen projects by 2030

- Global project announcements total c. **440 GW**[1]
- Around **100 projects exceeding 1 GW each** (c. 300 GW total)

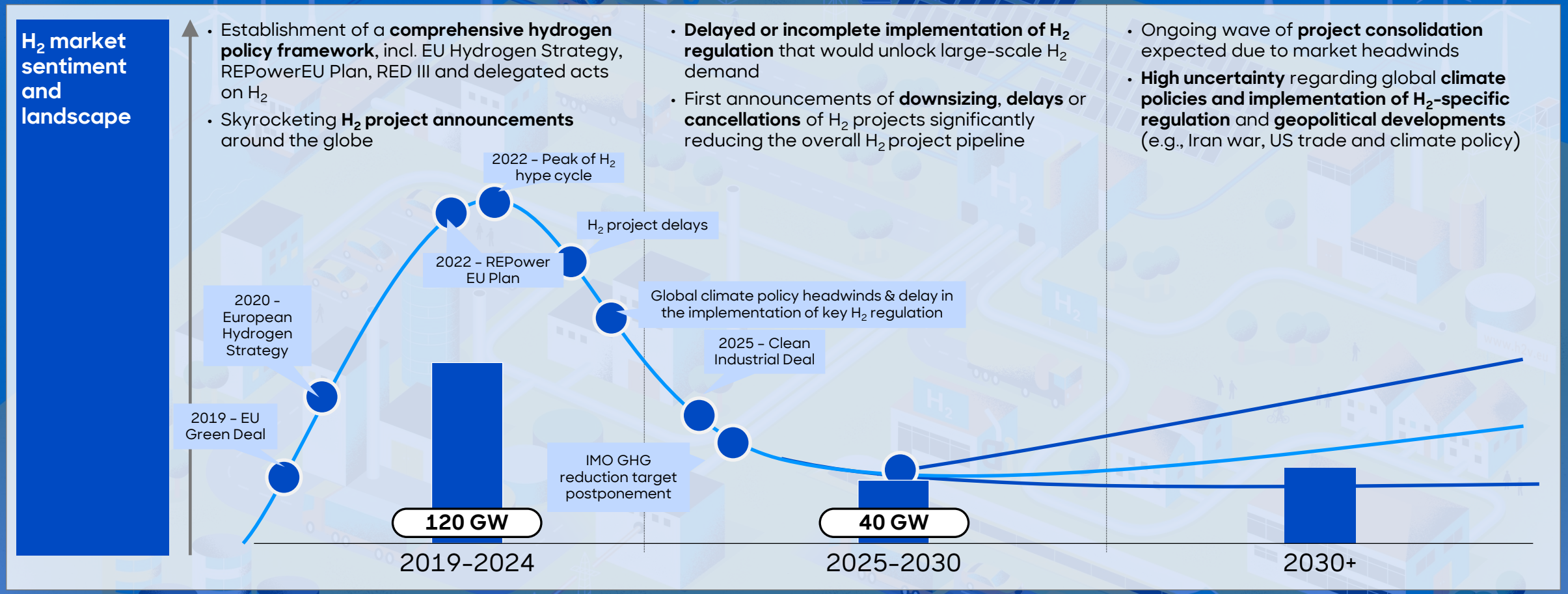


1) As of September 2025, c. 20 GW of projects not included on the map due to unclear or yet undecided project location, only projects with a disclosed start date are included

Source: IEA, Roland Berger

The clean hydrogen hype cycle reached its peak in 2022; since then, market reality hit and the emerging sector is consolidating

Clean hydrogen over the years: from hype to reality



Cumulative RB electrolyzer forecast for 2030 [GW]

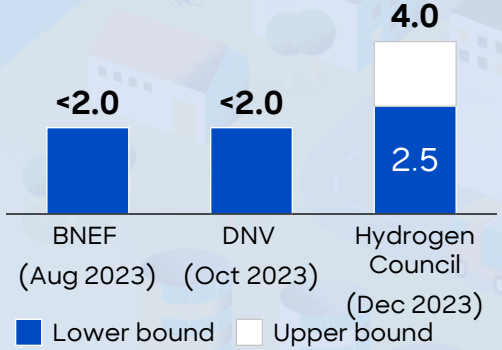
Source: Market research, Roland Berger

Real asset projects have turned out to show much higher production cost than previously anticipated

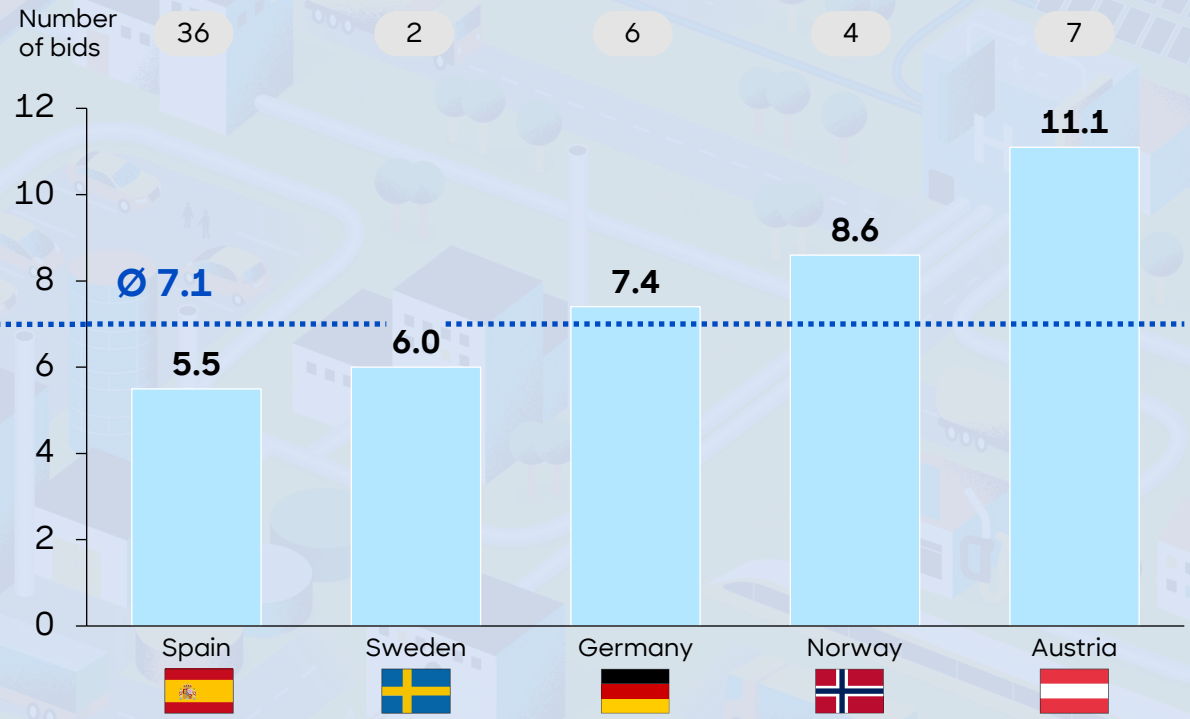
Green hydrogen production cost projections in Europe, LCoH [EUR/kg]

2023 consensus view

Hydrogen production cost [COD '30, EUR/kg H_2] view until 2023



2025 real asset projects (based on IF24 - Second auction results)



Influencing factors for cost increase

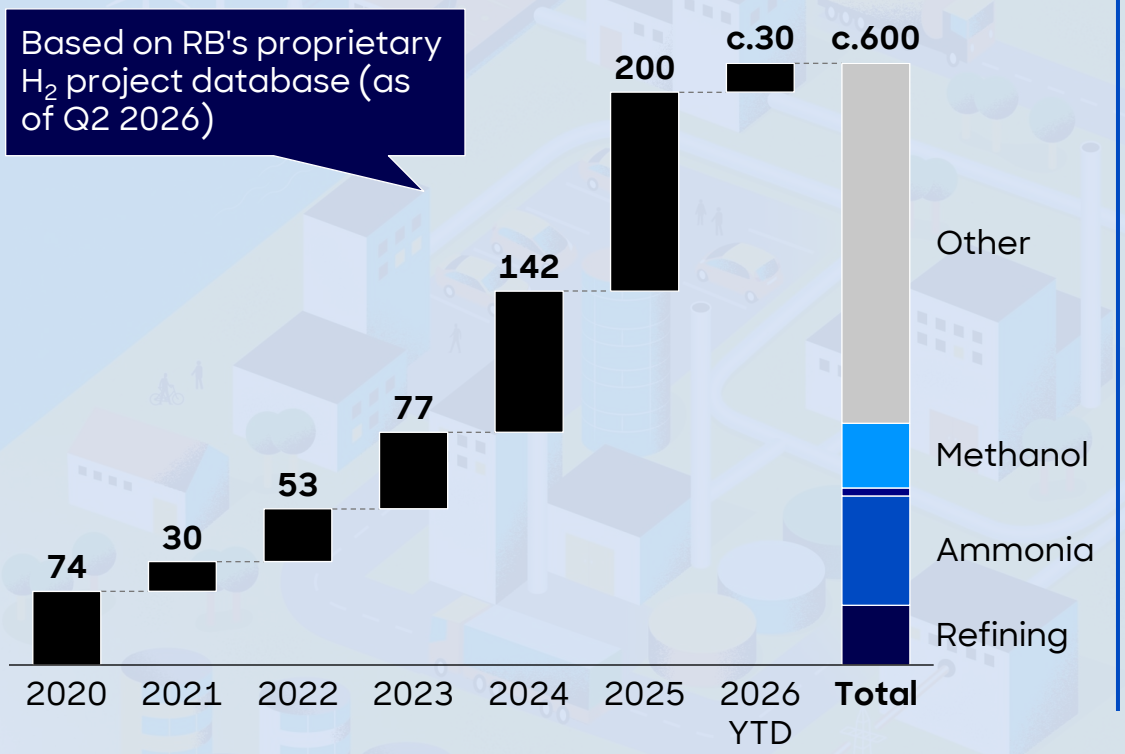
- **Increasing cost of electrolyzer systems**, with limited cost reduction potential; higher-than-anticipated BoP and EPC costs, incl. contingencies
- **Raising capital cost** requiring higher project returns
- **More expensive green electricity cost,** partially driven by strict RFNBO criteria
- Performance **issues of electroyzer systems**, reducing operational hours

Source: EC, market research, Roland Berger

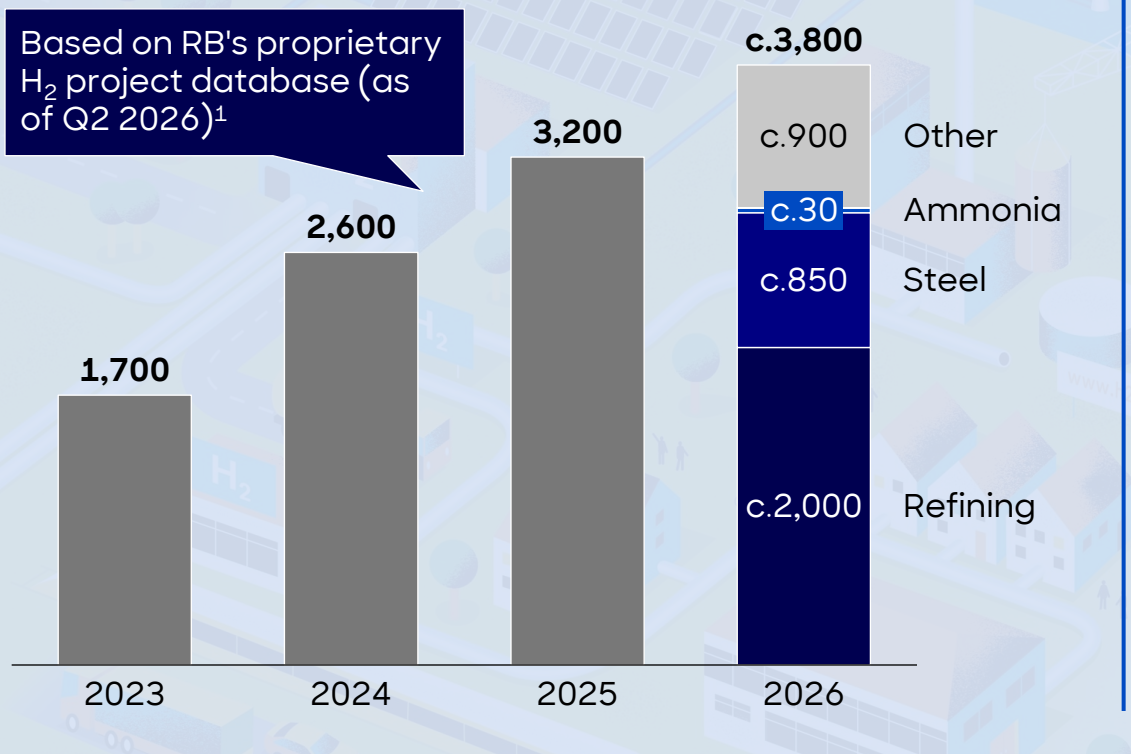
Nevertheless, the H_2 sector is ramping up – operational electrolyzer capacity in Europe is currently c. 600 MW, with another 3.8 GW past-FID

Operational & FID hydrogen projects in Europe [MW]

Operational electrolyser capacity in Europe [MW]



Electrolyser capacity under construction/post-FID in Europe [MW]



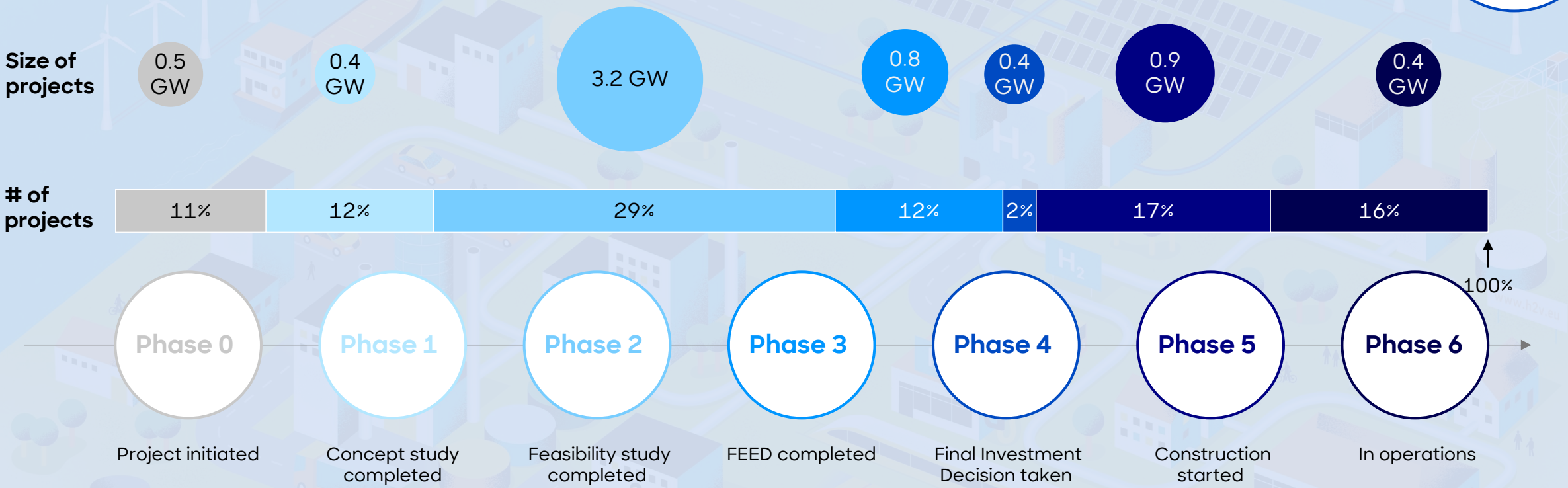
1) Applies to values from 2025 forward

Source: IEA, Hydrogen Europe, Roland Berger

Hydrogen Valleys are a key driver of this growth story – 400MW electrolysis already operational in Valleys, another 1.3 GW post-FID Status

Status of European Hydrogen Valleys on the H2V Platform (n = 82)[1]

7.8 GW



Δ of 1.1 GW without information on project status

1) Figures only refer to those Hydrogen Valleys with known information about project status

B.2 Where to play – Key H_2 end-uses with high offtake potential

Clean Hydrogen Partnership

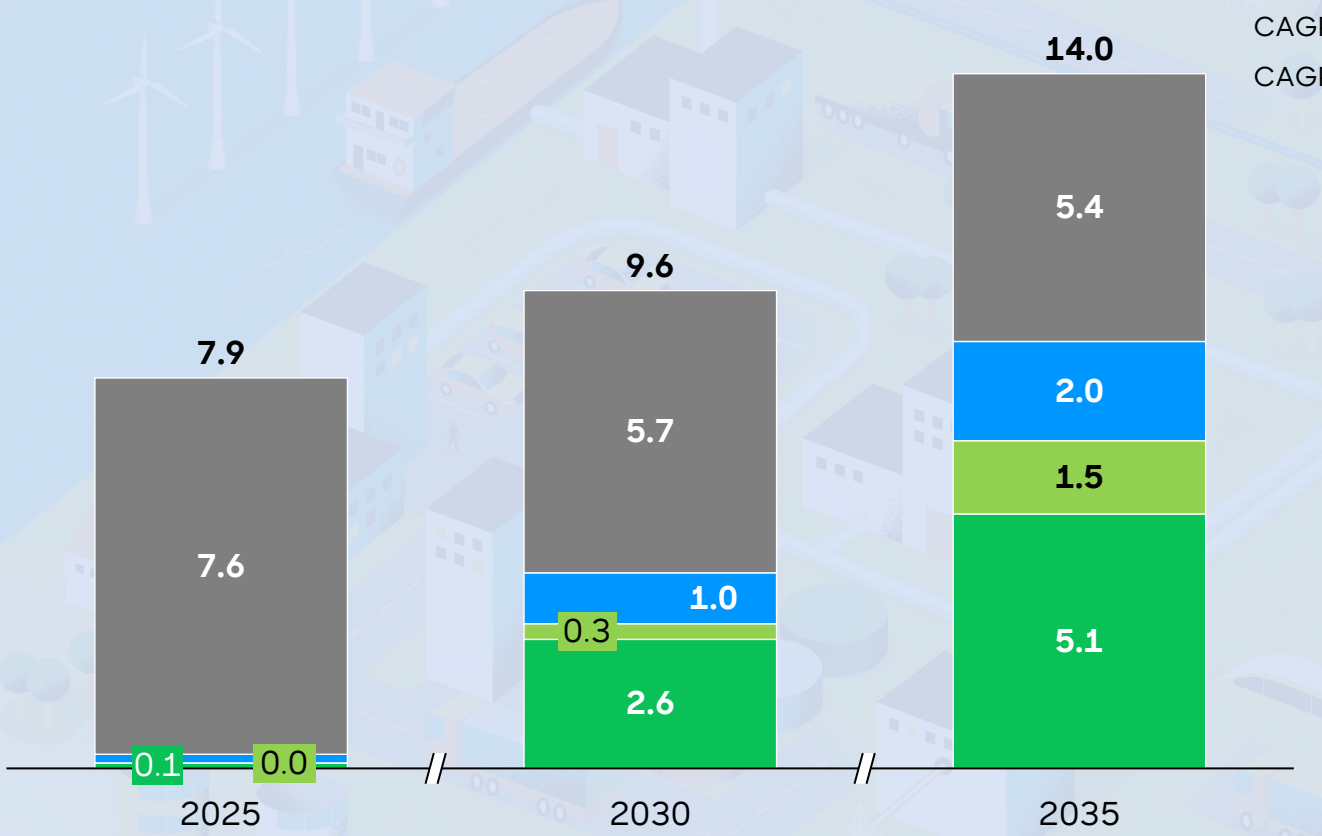
Regulation is the key driver for the uptake of H_2 – The demand across end uses is driven by the EU ETS, RED III and end-use specific regulation

Key regulatory drivers for the uptake of H_2 in the EU

End use segments	CO_2 pricing	Green H_2-specific regulation	End-use specific regulation
Industry			
Steel	**European Union Emissions Trading Scheme (EU ETS)** 1 • EU Emission Trading System **based on a cap and trade principle** for the GHG that can be emitted by installations and operators covered under its scope • The declining EU ETS cap is expressed in **emission allowances** with one allowance giving right to emit one ton of CO_2-equivalents • The **carbon price provides an incentive** for companies to reduce emissions cost-effectively	**Renewable energy directive III (RED III)** 2 • Directive to **promote the use of renewable & low-carbon fuels**, incl. targets for Renewable Fuels of Non-Biological Origin (RFNBOs) • **≥ 42.5%** energy production **from RES by 2030** • **≥ 29% renewable energy** in final consumption of all energy used in **transport** by 2030 **or reduction in GHG intensity by 14.5%**	
Refining			
Methanol			
Ammonia			
Mobility			
Shipping			• **Goal-based regulation**, limiting GHG content of energy used by vessels calling at EU ports • **6% mandatory emissions reduction in 2030**, gradually increased to **80% by 2050** 3 **FuelEU Maritime**
Aviation			*n/a*
Truck			
Bus			
Energy			
Power generation (gas co-firing)			• Regulation for **reduction in GHG emissions** of international shipping • **Reduction targets of minus 20-30% in 2030, and minus 100% in 2050**, compared to 2008 GHG intensity 4 **IMO**
Process heat		*n/a*	5 **ReFuelEU Aviation** • Regulation forces fuel suppliers to distribute increasing levels of SAF, with **blending quotas rising from 6% in 2030 to 70% in 2050** • **Airlines** need **to uplift SAF-blended fuel** before each flight from an EU airport; **EU airports are obliged to provide the infrastructure** for the delivery, storage and uplifting of SAF *n/a*

European demand for electrolytic H_2 could grow to 2.9 mt and 6.6 mt by 2030 and 2035 respectively

European H_2 demand outlook by H_2 type [in mtpa H_2, all colors]



Assumptions

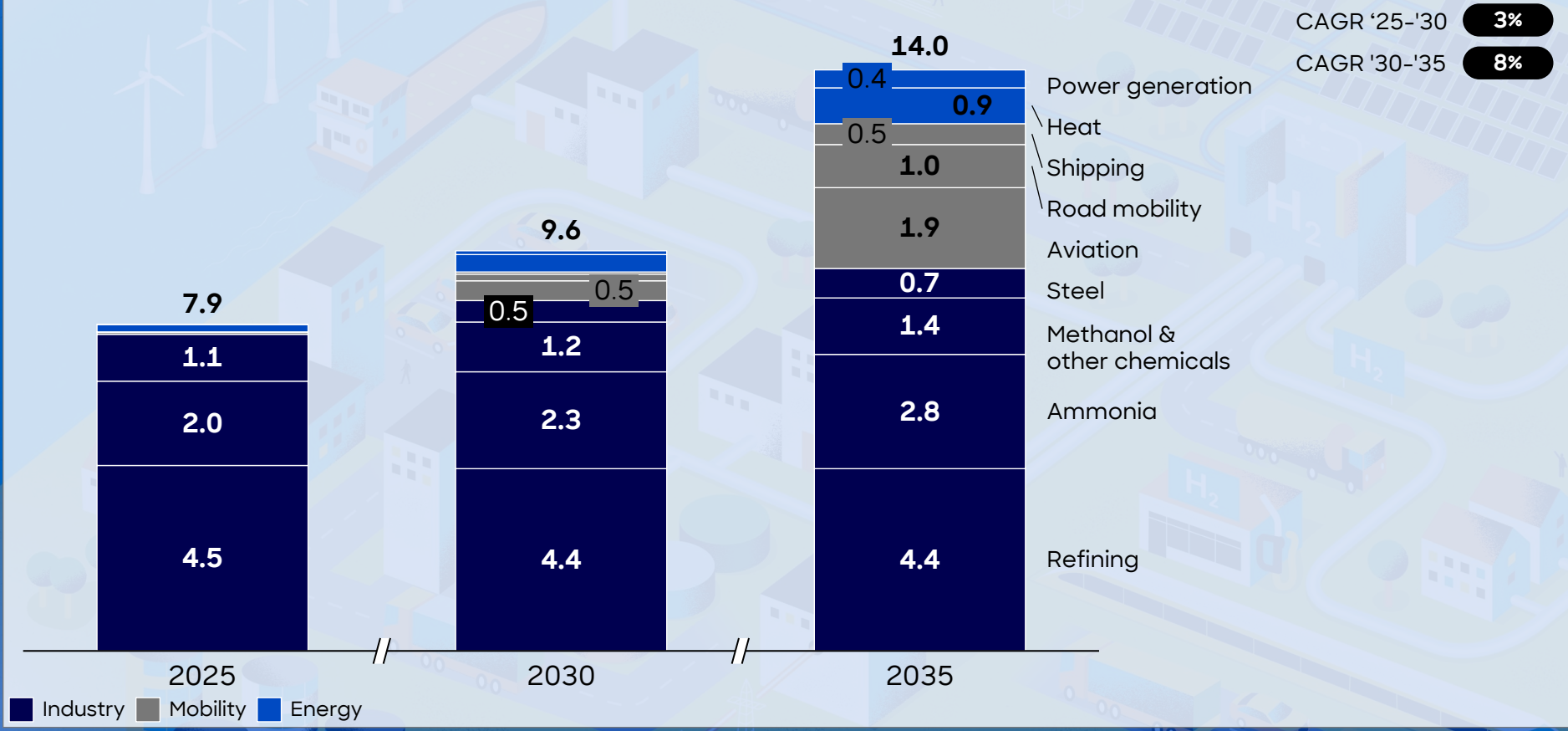
- **Delayed transposition of EU RED III** across member states, and **no corporate blending obligation** to fulfil target of 42% and 60% RFNBO-H_2 in industry by 2030 and 2035
- Instead, member states aim to achieve RED III targets through **demand** and **supply-side support mechanisms**
- Up to **EUR 130 bn in funding** from the EU and member states identified until 2030 that could support the use of "clean" H_2 – **35%** assumed to be directed to industry use
- Funding could unlock **0.8 mt** (1.7 mt) **of clean H_2** in the industry, resulting in an implicit "clean" H_2 share of 18% (36%) in 2030 (2035)

H_2 at least: RFNBO-H_2 | Low-carbon H_2 of non-fossil origin | Low-carbon H_2 incl. fossil origin ("blue H_2") | Grey hydrogen

Source: RB H_2 demand and supply model

The mobility sector is expected to be the strongest growing sector, followed by industry (esp. ammonia, and steel)

European H_2 demand by end-use segment [in mtpa H_2, all colors]



CAGR '25-'30 3%

CAGR '30-'35 8%

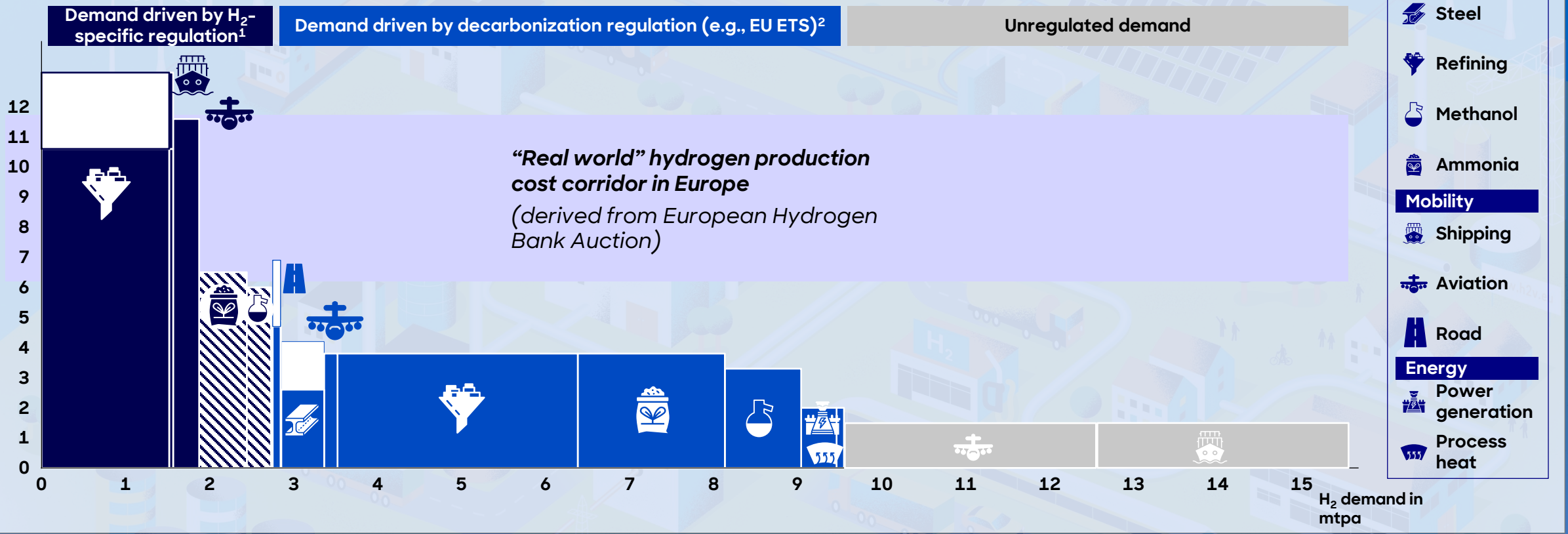
- Today, the largest H_2 consumers are refineries und ammonia accounting for c.6.5 mt of H_2
- By 2035, new emerging uses (aviation, road mobility, shipping) could unlock additional 4.0 mt of "clean" H_2 demand

Disclaimer: "Theoretical" maximum WtP - No expected price points

In 2030, WtP for clean H_2 in Europe is highest for the refining and transport sectors, driven by H_2-specific regulation

Maximum indicative willingness-to-pay for clean H_2 in 2030 in Europe by sector

Maximum indicative WtP for H_2, delivered at final location, 2030
[real values, EUR per kg H_2]

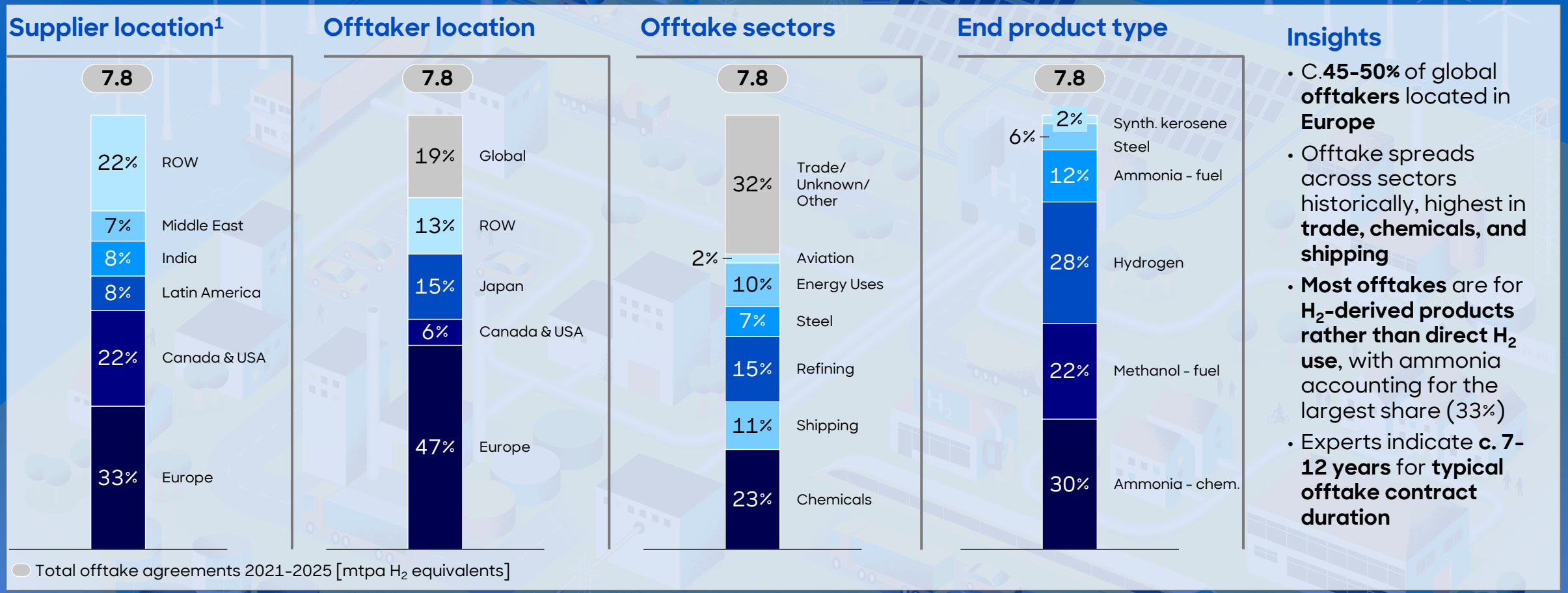


1) Assuming additional RED III penalty of EUR 120/GJ for refining and assuming a non-compliance penalty of 1.5x EU ETS penalty for ammonia; 2) Steel upper value: assuming EUR 100/t green steel premium for steel; road upper value: benchmark against diesel truck

Source: Roland Berger H2 willingness-to-pay model

Global offtake activity is mostly concentrated in Europe – Chemicals, shipping, and refining are the sectors with the most offtake agreements

Mapping of recent binding offtake agreements for green H_2/derivatives, cumulative 2021-2025 [%]



Insights

- C.**45-50%** of global **offtakers** located in **Europe**
- Offtake spreads across sectors historically, highest in **trade, chemicals, and shipping**
- **Most offtakes** are for **H_2-derived products rather than direct H_2 use**, with ammonia accounting for the largest share (33%)
- Experts indicate **c. 7-12 years** for **typical offtake contract duration**

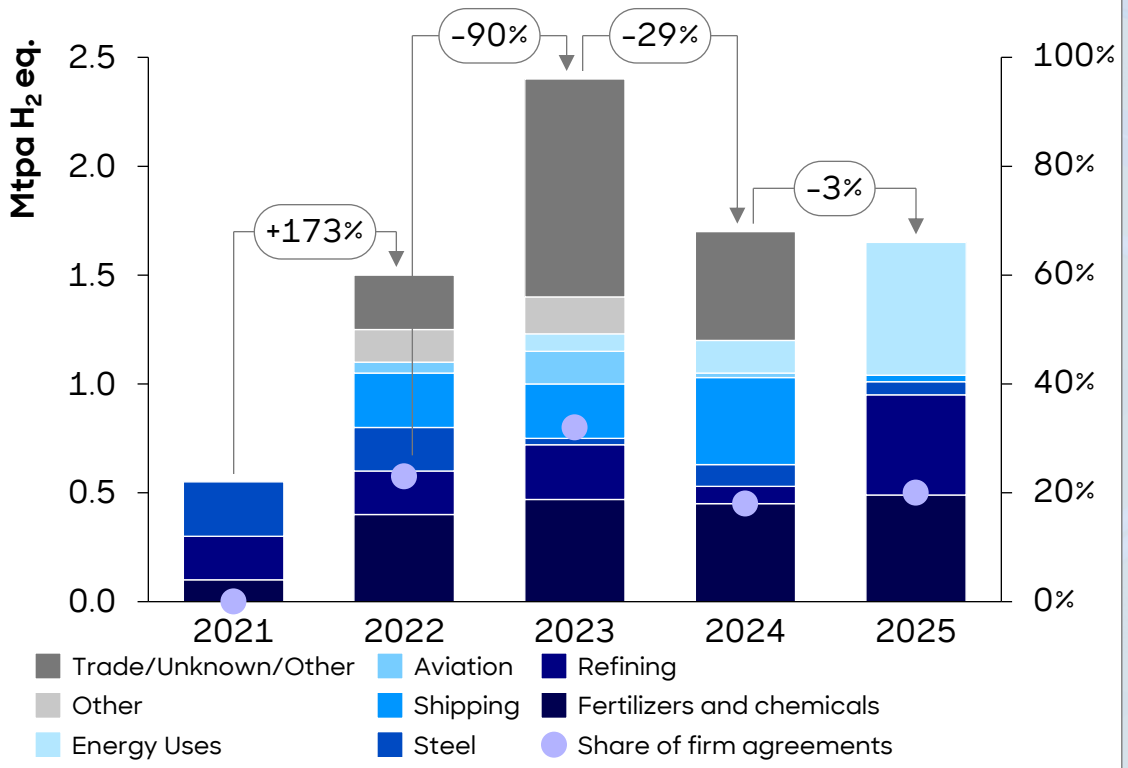
1) 2025 values only until 07/2025
Note: Based on combined analysis of IEA Global Hydrogen Report 2025 and 2026

Source: IEA, Roland Berger

The number of green offtake agreements reached its peak in 2023 and has declined since due to market corrections and project cancellations or delays

Offtake agreements dynamics [mtpa H_2 equivalent, 2021-2025]

Offtake agreements signed for low-emission H_2-based products [2021-2025]



General dynamics

- **Until 2023**: 1st wave of rapid growth driven by ambitious announcements
- **2023-2025**: Market correction as developers halted or delayed projects amid weak demand and rising costs – significant drop in share of firm agreements

Sector specific observations

- **Steel**: Despite ambitious targets, **only one agreement** formed in 2025 due to project cancellations (e.g., flagship EU steel decarb. projects)
- **Refining**: **Recently increasing demand**, tied to refinery GHG quotas
- **Fertilizer & Chemicals**: Global **slowdown** driven by weak EU demand, lack of enforcement, and gas price normalization (pre-Hormus) affecting competitiveness
- **Shipping**: **Significant drop in 2025**, due to the 1 year postponement of IMO regulation adoption to 2026 – earliest implementation by 2028
- **Aviation**: **Sharp decline in 2024** despite ReFuel EU aviation – Key reasons: reg. uncertainty, elevated production cost cost gap, first-of-a-kind projects remaining high risk for investors, project pipeline immature
- **Energy uses**: Driven **almost exclusively by Japanese ammonia import plans** for energy uses under recent Contracts for Difference scheme

Source: IEA, Roland Berger

Large-scale offtake agreements are mostly struck for H_2 derivatives but across end-uses

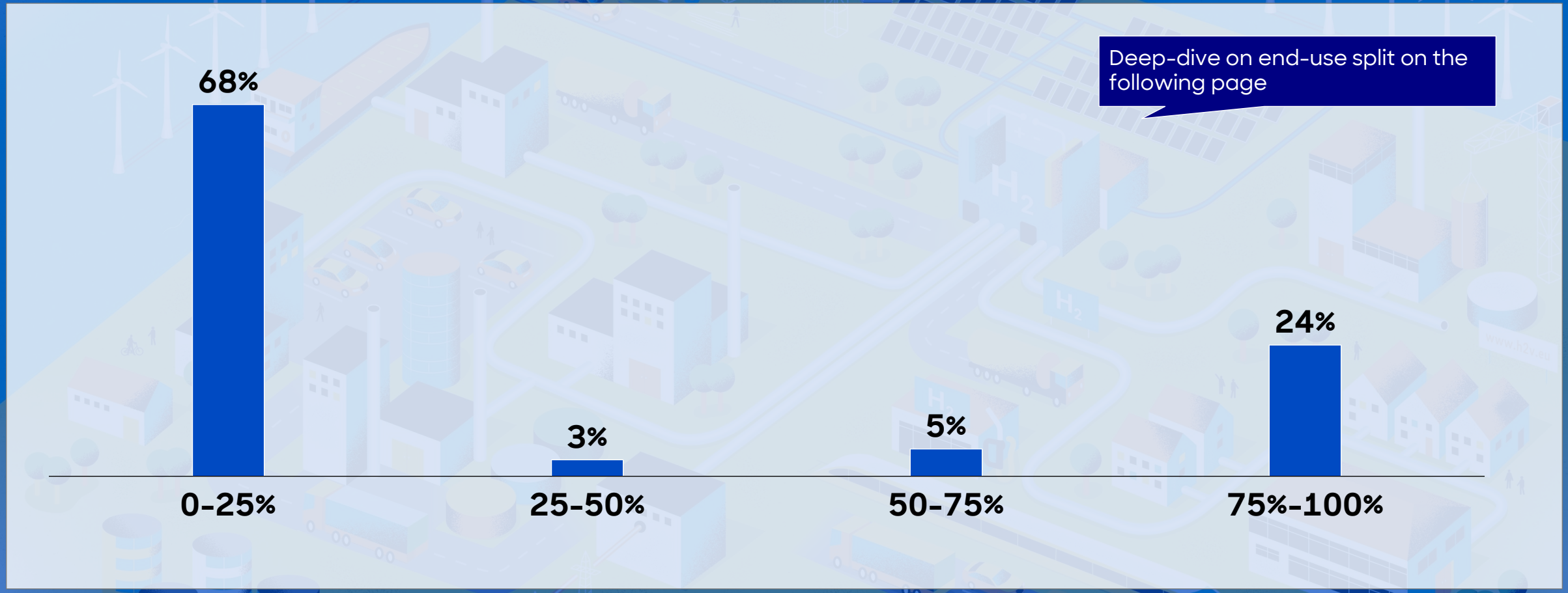
Key recent offtake agreements

	Refining	Energy	Steel	Chemicals
	RWE and TotalEnergies agree groundbreaking long-term offtake agreement for green hydrogen	JERA finalizes agreements for fuel ammonia transport to Japan	Acme Group inks 10-year green iron supply deal with Vietnam's Stavian	Uniper and AM Green sign long-term offtake agreement for up to 500,000 tons per year of renewable ammonia from India
Date of agreement	03/2025	04/2025	10/2025	01/2026
Type of agreement	Firm (long-term purchase agreement)	Firm (Joint Venture, contracts for transport signed)	Firm (binding term-sheet agreement)	Firm (long-term binding offtake agreement)
First delivery	2030 for 15 years	Around 2029	2028 for 10 years	2028
Type of product and end-use	Green H_2 for Leuna refinery	Low-carbon ammonia for coal co-firing	Green steel	Low-carbon ammonia (a.o. to decarbonize chemicals industry)
Amount of product (annual)	30,000 tons	c.1.4 million tons	800 kt of DRI and HBO	Up to 500,000 tons
Offtaker	TotalEnergies	JERA Energy for a New Era	STAVIAN Industrial Metal	uniper
Supplier	RWE	JCF	ACME Leading Through Innovation	am green

Source: Market research, Roland Berger

Securing offtake remains challenging – Most Valley projects on the H2V Platform indicate that they have not yet secured considerable offtake

Share of hydrogen production volume for which offtake has already been secured [% of respondents]

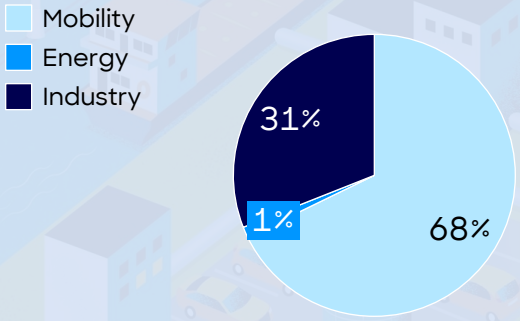
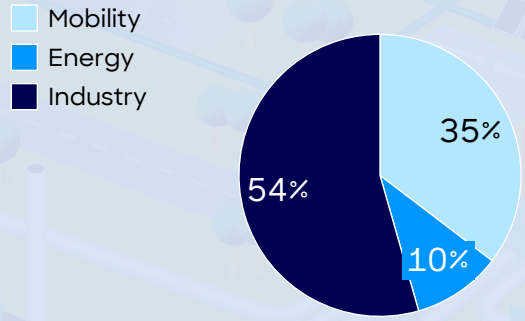
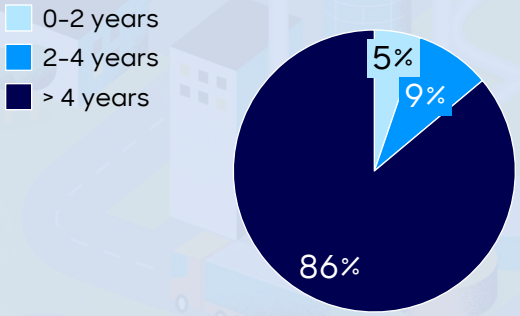
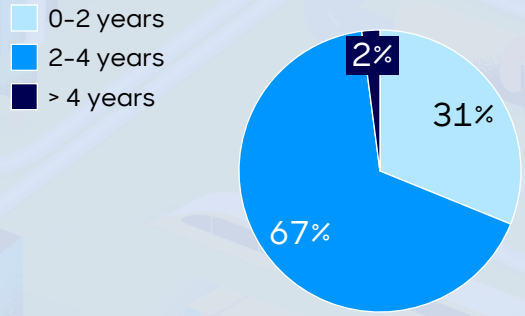


Note: Based on currently 105 H2 Valleys, of which 72 have specified secured offtake between 0-100%, multiple answers possible

Source: H2V, Roland Berger

H2Valleys sourcing offtake in refining with highest success rates – Offtake typically secured 2-4 years ahead of COD

Distribution of secured offtake volumes across H2Valleys

	H2Valleys with **<50% offtake secured**	H2Valleys with **>50% offtake secured**
Share of offtake volumes **by end use**		
Share of offtake volumes **by time to COD**		

Insights

- There is a clear correlation between end uses and the share of secured offtake in H2Valleys
- Most H2Valleys still aim for mobility as an offtaker, however, these projects typically struggle to secure significant offtake
- Projects focusing on industrial offtake (e.g., refining) are on average more successful in achieving project finance
- There is also a strong temporal correlation – projects typically secure most of their offtake 2-4 years before COD

With three questions, H_2 project developers can develop their "offtake hunting scheme" with prioritized end uses and regions for hydrogen offtake

Development of the offtake hunting scheme

H_2 relevance

Step 1

Are there potential local offtakers in industry, energy and/or mobility?

- Identify **local end use segment market potential and relevance** based on market reports, expert insights and policy/regulatory targets

yes

no

Willingness to pay

Step 2

Do they have a sufficient willingness-to-pay?

- Estimate of the **willingness-to-pay per relevant end use segment**
- **This differs regionally** due to varying policy drivers, regulations, subsidies and decarbonization schemes

yes

no

De-prioritize end use segment ✗

Volume forecast

Step 3

What is their low-carbon H_2 demand?

- **Analyze underlying market fundamentals** per prioritized end use segment and focus region
- **Bottom-up low-carbon H_2 demand forecast** per prioritized end segment

De-prioritize end use segment ✗

"Hunting scheme"

Develop "offtake hunting scheme" for hydrogen production

Based on the hunting scheme, **developers may define their optimal offtake strategy** (individual per developer) and even a **longlist of targeted offtakers**

B.3 How to play – Key contractual principles to make offtake bankable

Clean Hydrogen Partnership

Firm hydrogen offtake agreements are the key to achieving project financing for hydrogen project developments

The role of Hydrogen Offtake Agreements in project financing

	Corporate financing (full-recourse)	Project financing (non-recourse)
Applicability to H_2 projects	**Limited** (mostly for balance-sheet financed pilots)	**High** (most mid- to large-scale H_2 projects)
Repayment source	**Corporate cashflows** (limited relevance of individual project)	**Project cashflows**
Security/Credit basis	Sponsor **balance sheet**	**Project fundamentals** (e.g., reliable contracts)
Lender focus	**Company** strength	**Revenue** certainty
Risk allocation	**Sponsor** retains risk	Risks **contractually allocated** (e.g., developers, offtakers, EPC, OEM)
Key requirements to obtain financing	**Financial capacity** of sponsor	**Long-term contracts** (incl. offtake contracts)

!

- Under project financing, **lenders rely on project cash flows** rather than sponsor credit, **making bankable hydrogen offtake agreements a key financing prerequisite** for the financing of H_2 projects
- This is particularly important in **early stage market** environment with **no liquid H_2 market** in place yet

Source: Roland Berger

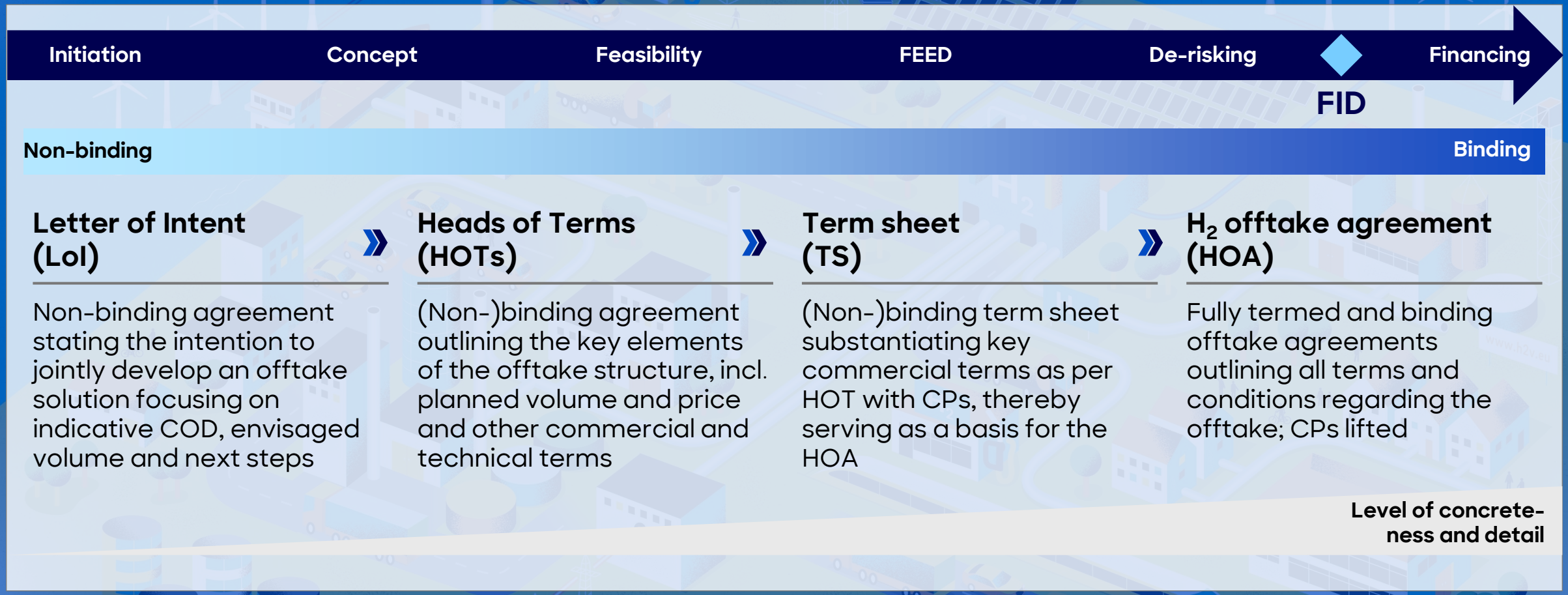
A Hydrogen Offtake Agreement is an agreement between a H_2 producer and its offtaker and defines the terms and conditions for H_2 supply and offtake

Typical contractual relations between Hydrogen Valley players

Source: Roland Berger

Typically, offtake terms are being matured throughout the project development cycle towards a full-fledged binding agreement to be signed pre-FID

Maturing offtake terms to binding agreements



Source: Roland Berger

When designing offtake terms, there are diverging interests to be reconciled – Price and volume terms are key negotiation points

Stakeholder objectives on Hydrogen Offtake Agreements

Hydrogen & derivatives project developer/sponsor

- Maximize **return on H_2/derivative** production asset; **recover fixed and variable project cost**
- Retain **upside potential** from potential future price increases

Hydrogen & derivatives offtaker

- Minimize **H_2/derivative sourcing cost** for compliance volumes
- Retain **flexibility to benefit from decreasing prices** in the future

Project lenders (limited/ non-recourse project finance)

Minimize **probability of default** (PD) and the **loss given default** (LGD)

- Offtake agreements involve **balancing long-term revenue certainty**, **market flexibility**, and **financial security**
- Project success depends on **aligning interests of developers, offtakers, and lenders** despite conflicting priorities
- **Price and volume structures are key points of negotiation** and risk allocation

Source: Roland Berger

Offtake agreements need to consider requirements of financiers to add to project bankability

Lenders' bankability requirements regarding offtake agreements (non-recourse project financing)

Topic	Principle	Option space															
Offtake commitments	Contract type	**Take-or-pay contract**	Take-or-cancel contract	Take-and-pay contract	Requirement contract	Consignment contract	Merchant offtake contract										
	Volume flexibility mechanisms	**Fixed offtake commitment**	Price adjustment for vol. change	Volume swing clause	Force majeure volume adjustment	Cumulative vol. adjustment	Vol. adjustment without penalty										
		Annual (or more frequent) review	Notification period for adjustments	Market-based adjustment													
Pricing mechanism	Type & share of pricing mechanism	**Fixed pricing**	**Hybrid: Index-based / fixed pricing**	Index-based pricing	Index-based sliding scale pricing	Sliding scale pricing	Tiered pricing										
		Variable pricing															
Credit quality of pot. offtaker	Creditworthiness threshold	**AAA**	**AA+**	**AA**	**AA-**	**A+**	**A**	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC-	SD/D
	Creditworthiness guarantees	**Direct sovereign guarantees**	Payment guarantees	Partial credit guarantees	Performance guarantee	ECA guarantees	Government concessions	Political risk insurance									
Tenor of offtake	Contract length	**Offtake tenor > loan tenor**	**Matching offtake and loan tenors**	Offtake tenor w/ flexible terms acc. to loan terms change	Renewable offtake tenor based on market conditions	Offtake tenor < loan tenor											

- **Lenders expect an acceptable DSCR** covered by guaranteed offtake with **max. de-risked contract options** (incl. take-or-pay, fixed volumes, fixed price, full loan tenor)
- Once this is achieved, the **remaining volumes can be secured via "riskier" contract models**

Maximum de-risked contract option

Source: Interviews with market participants, Roland Berger

For index-based pricing, price can be tied to different market indices – For H_2 and derivatives, correlation with actual cost base of project is key

Deep-dive: Pricing – Comparison of indexation options

	Indexation in fossil energy world	Indexation in clean energy world / H_2 & derivatives
Description	**Pricing mechanism** incl. collar (floor & ceiling) that **ties the price to a specific market index**, often energy prices, allowing for automatic adjustments	Same mechanism as on the left, but **preferably in a way that the clean H2/derivative price develops in line with the underlying cost base of project**
Selected Examples	**Oil & gas industry, price can be tied to:** • Oil prices, e.g., brent crude (Oil price from the North Sea), West Texas Intermediate (Oil price from Texas), OPEC Basket (Avg. oil price from the OPEC members) **Electricity industry, price can be tied to:** • Henry Hub (Natural gas futures on the NYMEX) • Japan Korea Marker (LNG spot price from JPN & SK) **Others, price can be tied to:** • Newcastle coal futures (Coal price from Newastle) • Inflation	**Typically acceptable** **Replicating the underlying variable cost of project:** • (Renewable) electricity price (if partly gird-connected) • Other feedstock prices (e.g., CO_2 price for carbon-containing fuels) • Inflation **Typically challenging** **Replicating offtaker willingness-to-pay:** • Legacy fuel to be substituted (e.g. fossil Jet A1 price, grey Ammonia price, etc.) • CO_2 price development as "green premium" • Regulatory penalties for non-compliance (e.g., ReFuelEU Aviation, UK SAF mandate)

"Pricing structures that replicate the willingness-to-pay of offtake only work if the floor price is high enough to provide lenders with enough comfort that debt repayment is achieved even if index develops negatively. Lenders don't take any price risks and they also don't benefit from potential upsides" – ***Former PF Director, Standard Chartered***

B.4 How to win – Concrete next steps to securing H_2 offtake

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Offtake can be secured via private sector deals, potentially enabled by public funding, or via private/public tenders by offtakers

Approaches for offtake development

Approach	Private sector deals ("Push")	Private sector deals, enabled by public funding ("Hybrid")	Private/public tenders ("Pull")
Description	• **Commercial agreement** between project company and private offtaker • **Proactive business development** by project developer required to close deals	• Government **funding calls providing subsidies** to bridge the gap between production cost and offtakers' willingness-to-pay • **Producers need to partner-up with potential offtakers**, conditional upon funding, because many fundings target offtakers	• Competitive **tender processes for specific volumes**, delivery periods and locations • May be launched by **private sector offtakers** or **government** (or government-backed agency)
Examples	• RWE – Total Energies (03.2025) • Uniper – AM Green Energy (01.2026)	• European Hydrogen Bank • Carbon contracts for difference (CCfD)	• H2 Global • Salzgitter AG, ThyssenKrupp AG

Source: Roland Berger

From these potential offtakers and in line with the aforementioned hunting scheme, a long-list of offtakers should be reduced to a shortlist

Prioritization and sales funnel for the selection of suitable players for offtake

Longlist of offtakers, e.g., developed via hunting scheme (see chapter B.2)

Overall goal

Secure **binding long-term offtake agreements** to de-risk **project for FID**

1 **Market screening:** Continuous offtaker identification, market sounding, and approach refinement, including policy and market monitoring

2 **Commercial agreements:** Converting non-binding LOIs into binding offtake agreements[1)]

- **Signing of non-binding letters of interest (LOIs)** specifying indications on time, volume, delivery point, price formula, etc.
- **Signing of non-binding heads of terms (HOTs)**[2)] for offtake agreements
- **Signing of binding term sheet** offtake agreements **(TS)**
- **Signing of fully termed bankable hydrogen offtake agreements (HOAs)**

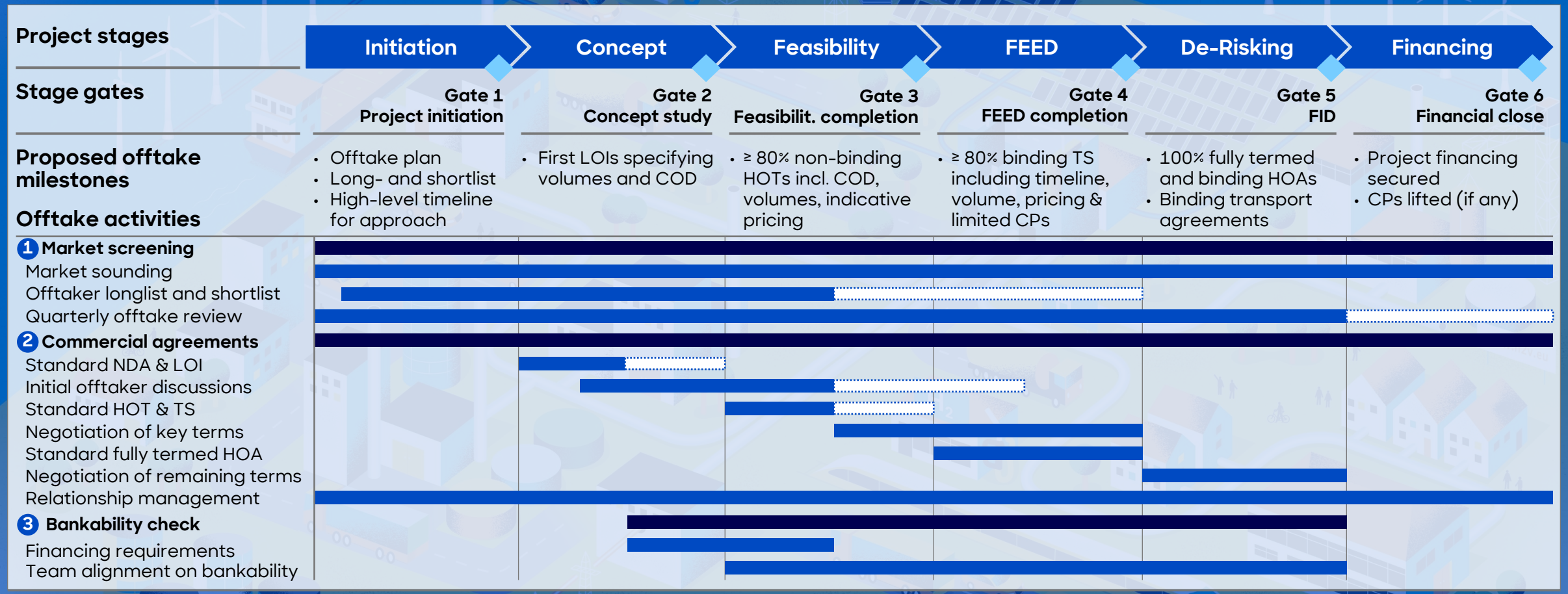
3 **Bankability check:** Continuous bankability checks and feedback loops, including review of lender requirements and offtaker conditions (pricing, volumes, tenor, etc.)

1) In private/public tender approach, the selection process could be slightly different since tender process is usually driven by offtakers; 2) Potentially as attachment to a LOI

Source: Roland Berger

Offtake activities depend on the current project stage and need to be closely aligned with other project workstreams (e.g. technical)

Milestones and timeline for offtake activities



Source: Roland Berger

C. Q&A and closing reflections

Clean Hydrogen Partnership

We would be delighted to see you again at one of our upcoming webinars – Or welcome you on our website for self-service materials

Reminder: Upcoming webinars and self-service material

2026 webinars on "Advancing H2 Projects to FID" + Self-service material

Key facts:

- **Target audience:** Open invitation to any interested participant
- **Registration:** www.h2v.eu/h2v-knowledge-centre
- **Material:** Consolidation of findings and key slides to be uploaded to www.h2v.eu
- **Follow-up:** Persons with interest in follow-up activities can reach out to h2v@clean-hydrogen.europa.eu

Upcoming webinars:

Webinar 1 — Today's session

H_2 market and offtake

Date: 14.07.2026
Time: 9:30 am – 11:00 am

Webinar 2 — Save the date

Key steps in bringing Hydrogen Valley projects to FID

Date: 18.09.2026
Time: 9:30 am – 11:00 am

Webinar 3 — Save the date

Regulatory insights on RFNBO vs. LCH

Date: 17.11.2026
Time: 9:30 am – 11:00 am

Com-mercial

Tech-nical

Reg-ulatory

Valley gove

- Status of the Hydrogen Market
- Offtake strategy and guardrails
- Contracting & procurement strategy
- Hydrogen value chain assessment
- Evaluation of technical suppliers
- Conducting a socio-economic assessment
- Setting up Hydrogen Valley project organisations
- Milestone planning towards FID
- ....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