



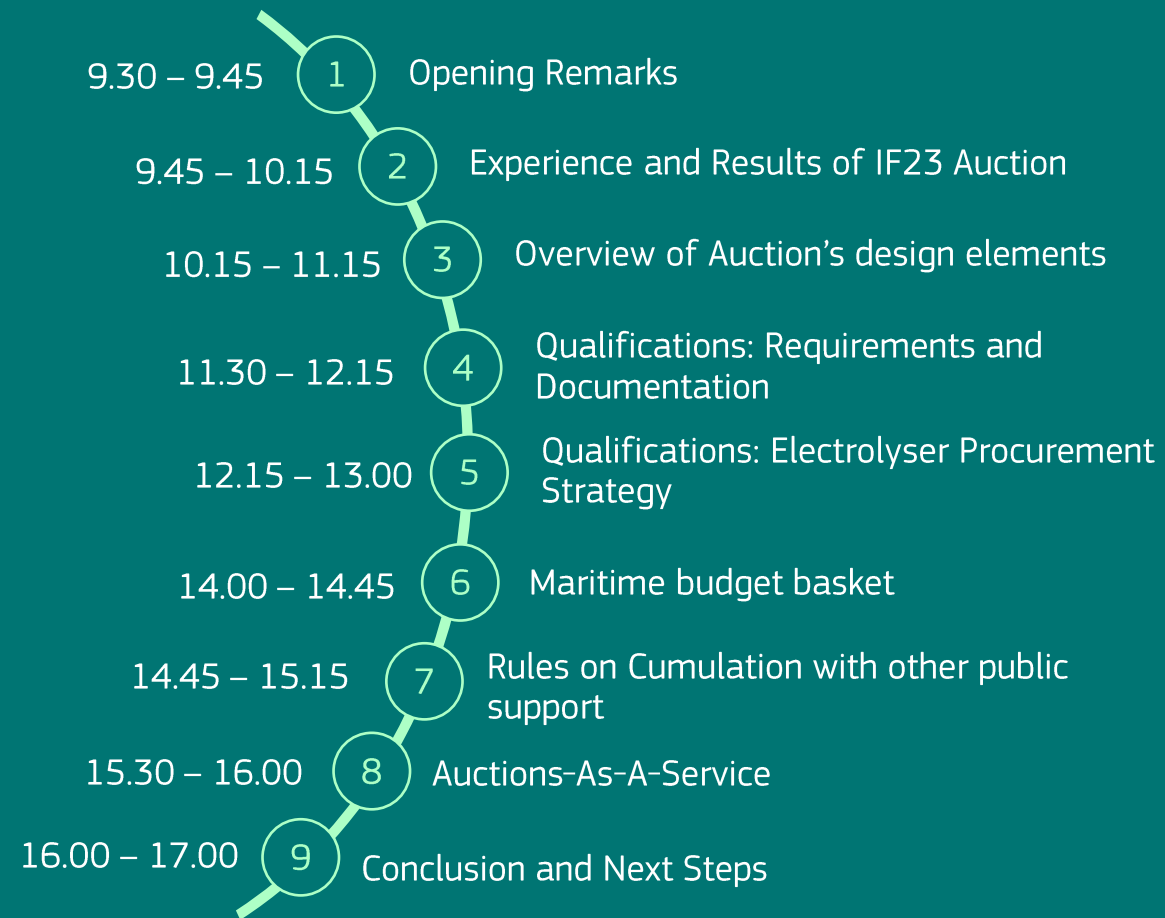
Draft T&Cs – 2024 Innovation Fund RFNBO Hydrogen Auction Stakeholder Consultation Workshop

The event will start at 9:30 CET

Note For Publication

- This presentation reflects the **status of the DRAFT economic Terms and Conditions (T&C)** of the European Hydrogen Bank domestic auctions.
- The workshop that the presentation was created for aims to discuss stakeholder feedback and possibly ADJUST some of the T&Cs.
- Please note that many of the points in this presentation represent or summarize stakeholder opinions, rather than the view of the commission or the final T&Cs.
- The **final T&C** will be officially published on the Innovation Fund Website by **September 2024**

Agenda



Opening Remarks

Stefanie Hiesinger

Head of Unit, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment





INNOVATION FUND

Funded by the EU Emissions Trading System

Deploying innovative net-zero technologies for climate neutrality



€40 billion* available between 2020-2030

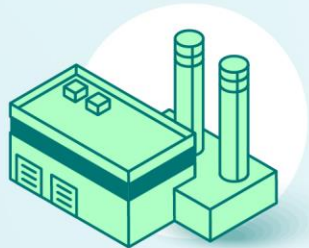


grants awarded through regular calls and auctions



avoid GHG emissions, boost competitiveness

supporting innovation in:



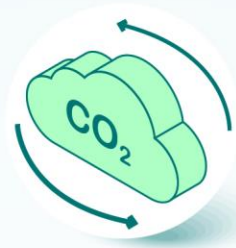
Energy-intensive industries



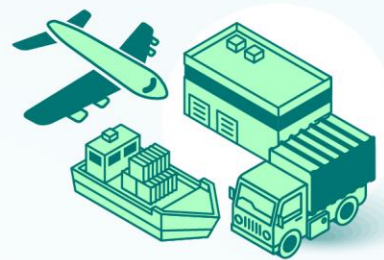
Renewable energy



Energy storage



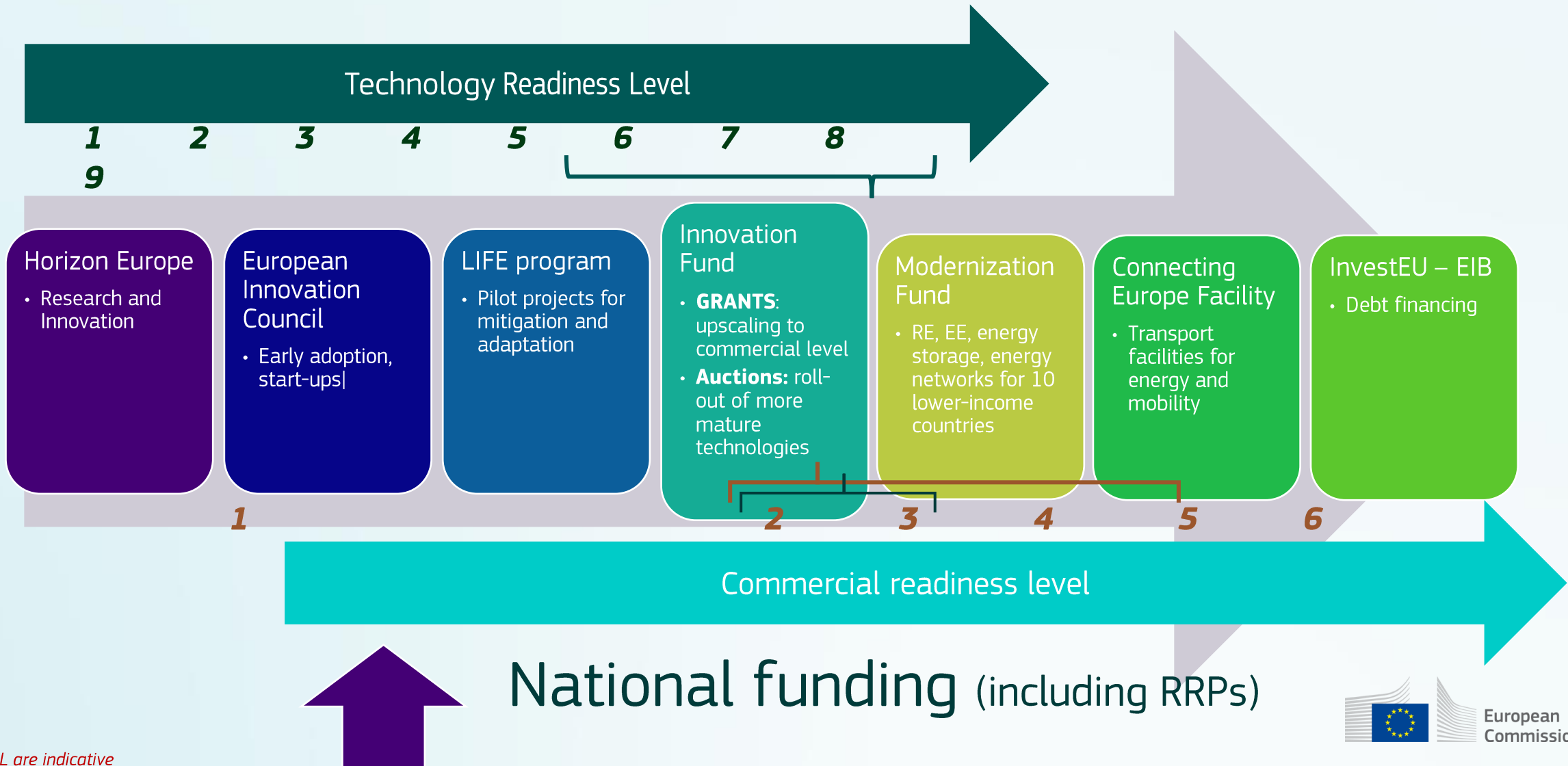
Carbon capture, use and storage



Net-zero mobility and buildings

*based on a carbon price of €75/tonne

Innovation Fund – targeted project portfolio

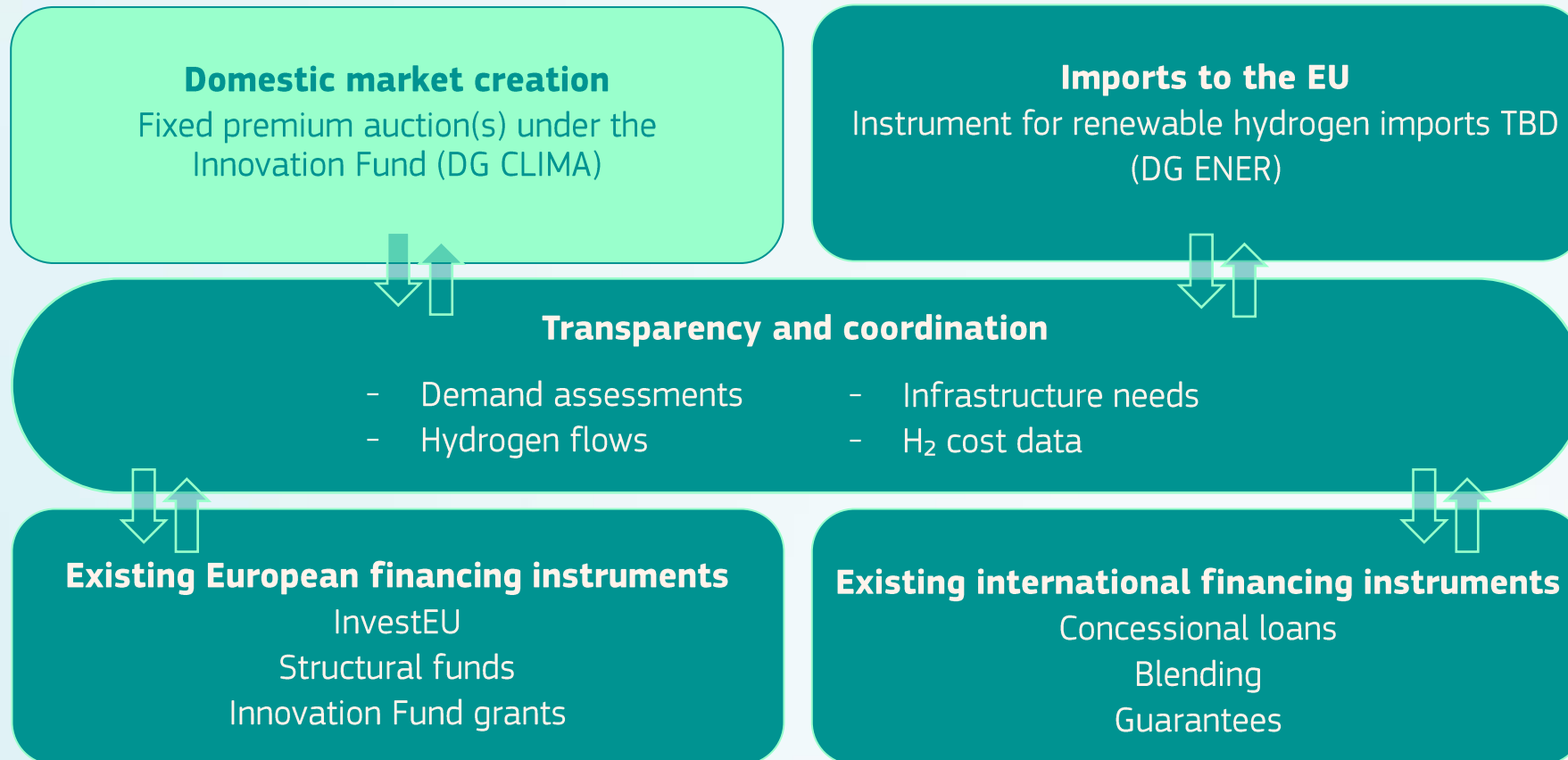


The Innovation Fund can support urgent policy priorities, but holds a long-term line of bottom-up support across sectors



- **Net-Zero Industry Act:** clean tech manufacturing topic (€700 million in 2022, €1.4 billion in 2023).
- **European Hydrogen Bank:** domestic auctions for renewable hydrogen under the Innovation Fund.
- **Wind package:** clean tech manufacturing topic and project development assistance.
- **Strategic Technologies for Europe Platform (STEP):** STEP Seal for Innovation Fund projects.
- **Industrial Carbon Management (ICM) Strategy:** support for CCUS deployments since 2020.

European Hydrogen Bank proposed activities



IF23 Auction objectives were fulfilled

Putting Europe's net-zero industry in the lead:



Reducing the cost gap between renewable and fossil hydrogen in the EU

Fixed premium support of up to EUR 0.48 /kg of renewable H₂



Allowing for **price discovery** and renewable hydrogen **market formation**

132 bids received, shared information on first bidding curve at European level



De-risking European hydrogen projects

EUR 800 million budget in grant support to renewable H₂ producers. AaaS with additional German budget (EUR 350 million)



Reducing administrative burden

Simplified application process and results provided in less than 3 months

Goals of this workshop

1. Based on the **Draft Terms & Conditions** of the IF's **2nd Auction for RFNBO Hydrogen** (IF24 Auction), published on the Commission's website, present **main elements of the design** and discuss written **feedback received** from stakeholders
2. Answer and clarify **outstanding questions** from stakeholders
3. Propose **ways move forward** in the design of the Final T&Cs for the IF24 Auction

Next steps

1. Publication of **Final Terms and Conditions** for the Auction (End August/Beginning September 2024)
2. **Open the auction** for receiving bid (end of 2024)
3. **Selection** of bids (spring 2025)

Experience and Results of IF23 Auction

Johanna Schiele

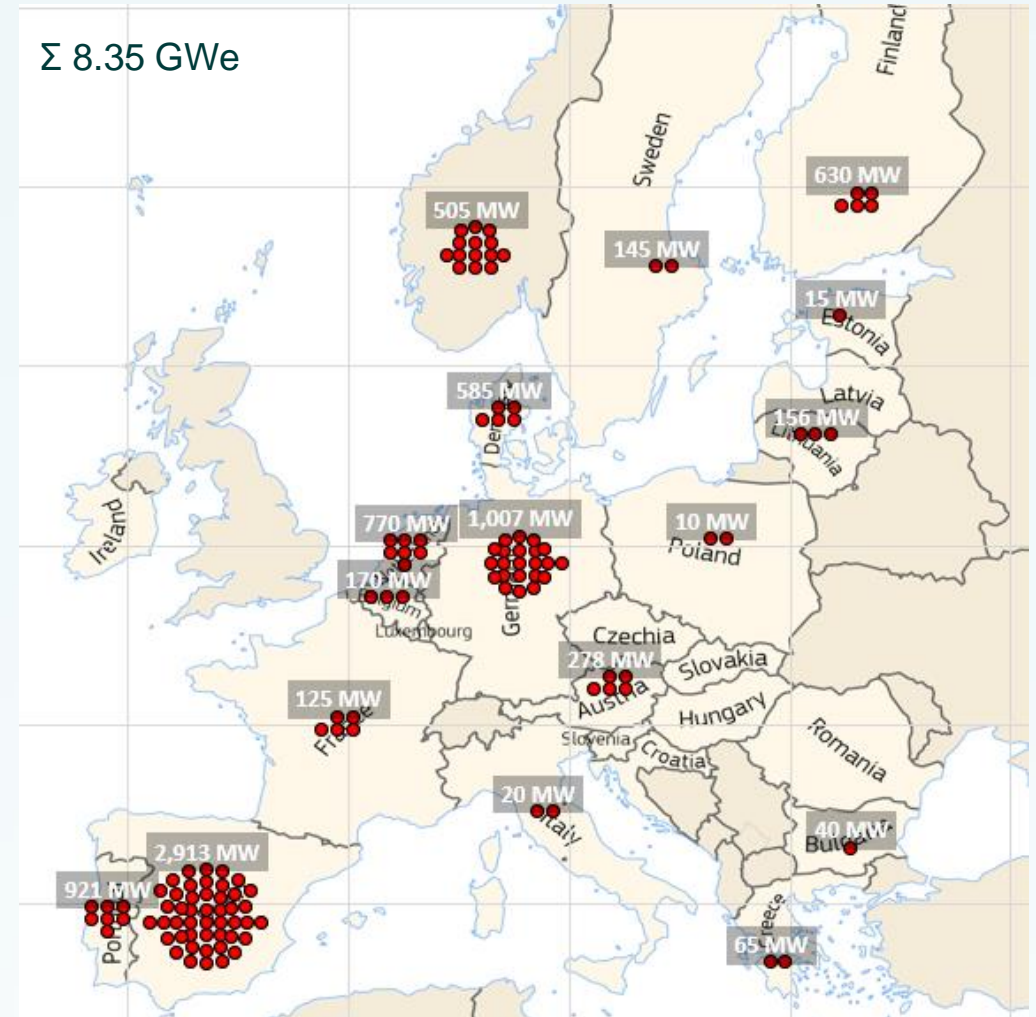
Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



The first pilot auction round was a success, with a high level of participation and competition

- 132* bids from 17 different EEA countries
- 13 projects failing admissibility and eligibility criteria
- Seven selected** bids within the EU 800 million Innovation Fund auction budget...
- ...consuming a budget of EUR 720 million if signed
- Clearing price at EUR 0.48 / kg of H2



* Graphs and analyses on all following charts refer to data from 130 bids, excluding a bid submitted above the ceiling price of 4.5EUR, and a bid with significant data gaps and incomplete application documents.

** Selected bidders will start the grant agreement process with CINEA and sign upon completion.

Seven bids were selected for grant agreement signature, covering 1.5GWe of electrolyser capacity

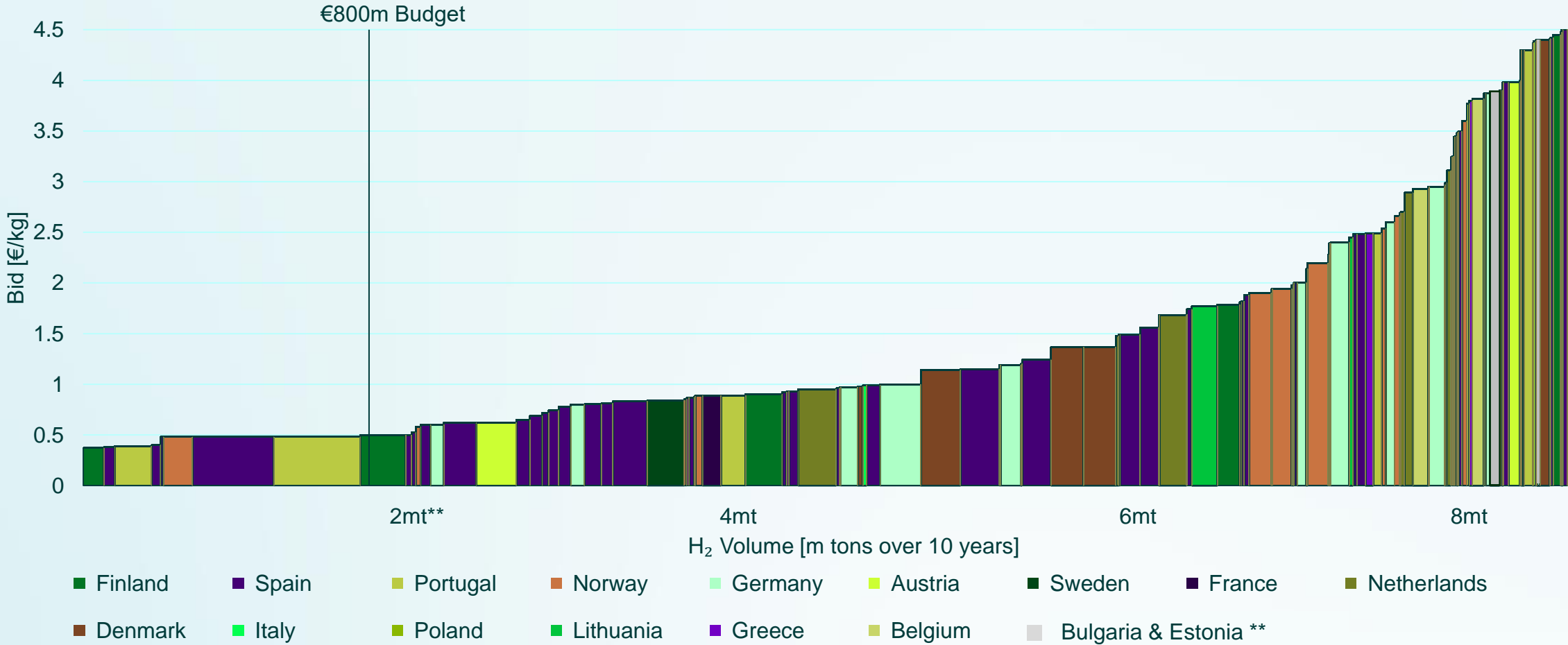
At application stage (MoU/LoI), ~35% of electrolyser capacity of winners intended to be procured from outside the EEA

Project acronym	Project Coordinator	Project location	Bid price (EUR/kg)	Bid volume (kt H2/10years)	Bid capacity (MWe)	Expected GHG abatement (ktCO2/10years) *	Total requested funding (EUR) **
eNRG Lahti	Nordic Ren-Gas Oy	Finland	0.37	122	90	836	€ 45,228,375
EI Alamillo H2	Benbros Energy S.L.	Spain	0.38	65	60	443	€ 24,605,819
Grey2Green-II	Petrogal S.A.	Portugal	0.39	216	200	1477	€ 84,227,910
HYSENCIA	Angus	Spain	0.48	17	35	115	€ 8,104,918
SKIGA	Skiga	Norway	0.48	169	117	1159	€ 81,317,443
Catalina	Renato Ptx Holdco	Spain	0.48	480	500	3284	€ 230,463,819
MP2X	Madoquapower 2x	Portugal	0.48	511	500	3494	€ 245,178,772
			Ø 0.44 €	Σ 1580 kt_H2	Σ 1502 MWe	Σ 10 808 kt_CO2	Σ 719,127,056 €

* Calculated vs. the [2021-2025 ETS benchmark](#) of 6.84 t_CO2e/t_H2. Not taking into account additional carbon abatement due to substitution effects in the H2 end use application (i.e. conservative estimate).

** Remaining budget will accrue back to the Innovation Fund.

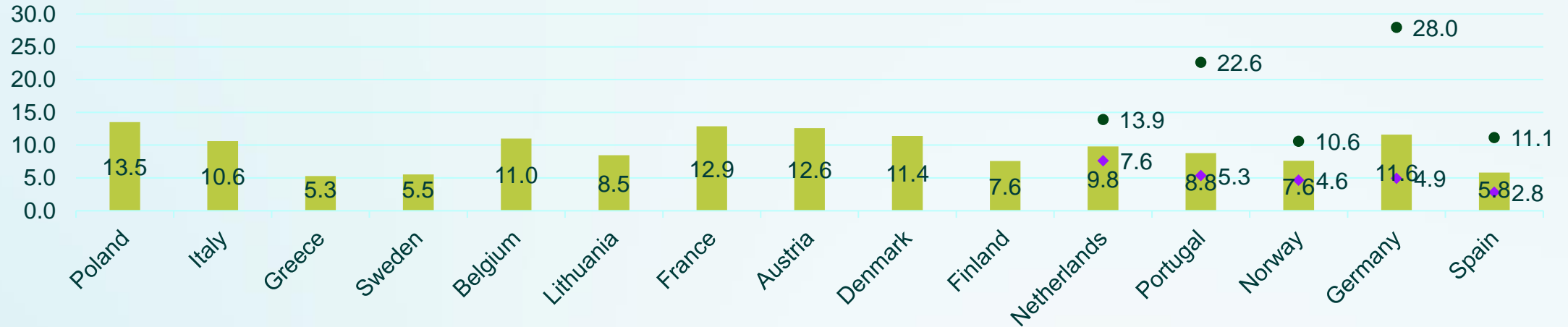
Budget oversubscribed 15x. Bids are well distributed in size and price, resulting in a continuous bid curve



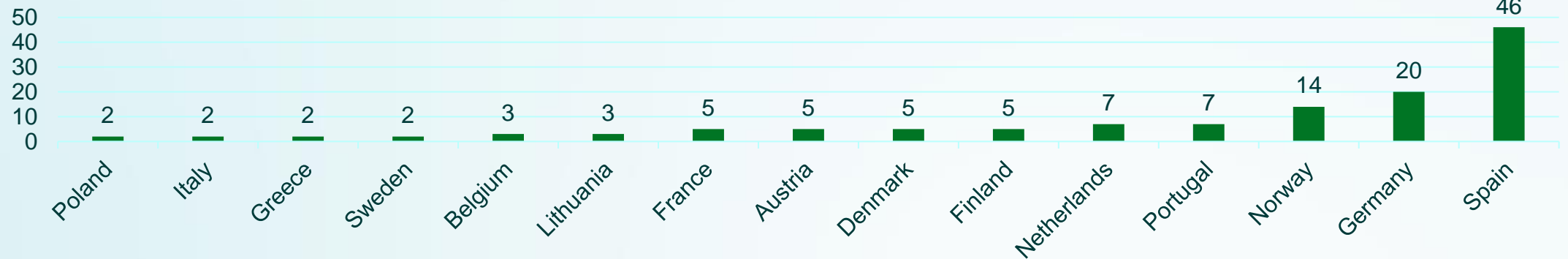
* Bid curve includes 130 bids (i.e. including 13 bids found inadmissible or ineligible, as well as bids not passing or not being evaluated on qualification criteria due to cascade approach – see call text).
 ** Estonia and Bulgaria aggregated for anonymisation reasons, as only 1 bid per country was received.

The average levelized cost of RFNBO H2 of bids located in displayed countries* ranges from 5.8-13.5 EUR/kg

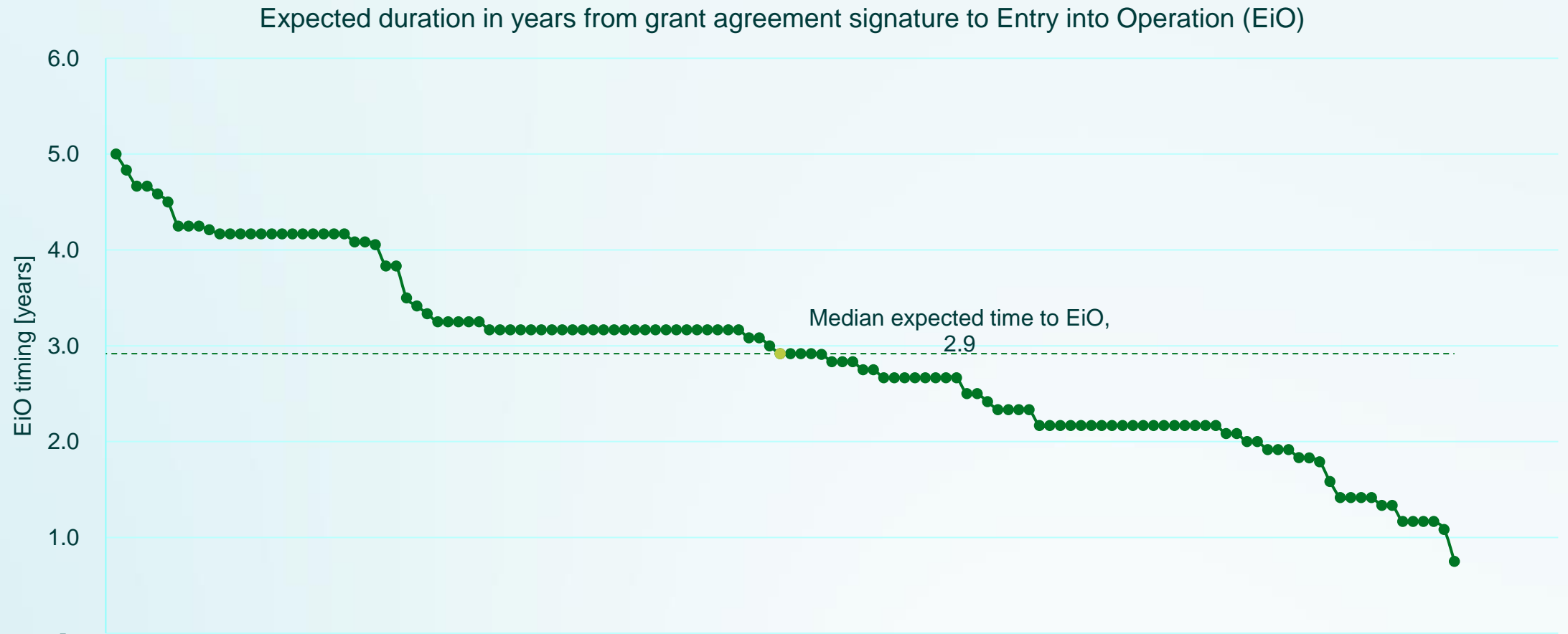
Average and min/max RFNBO LCOH by country*



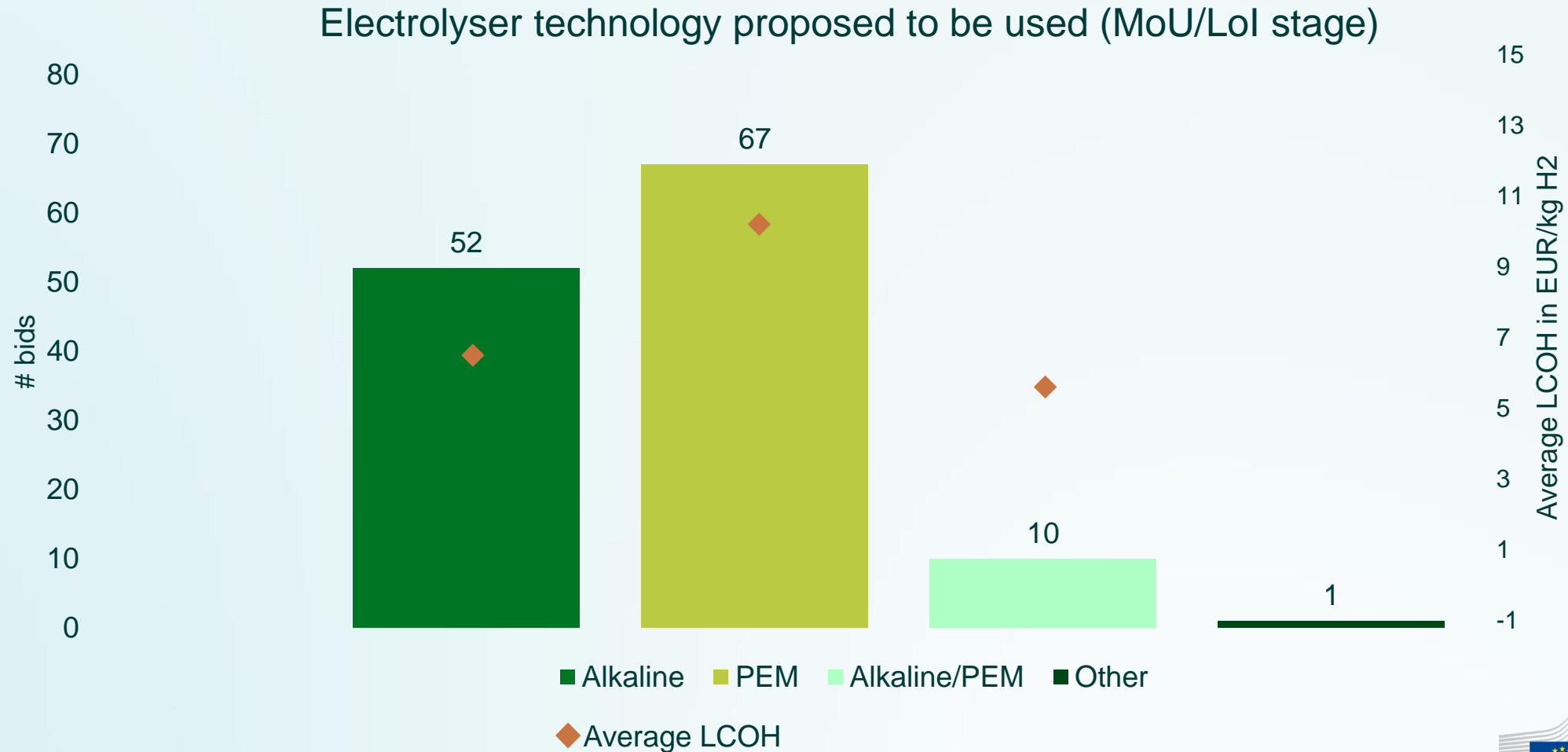
Number of bids per country*



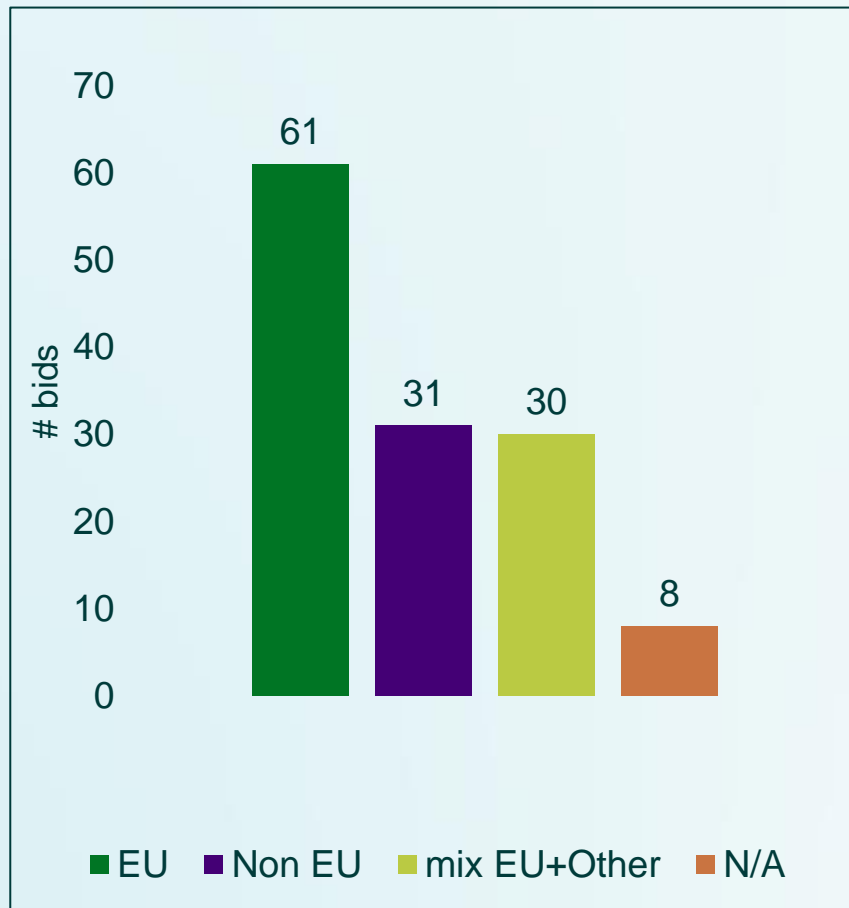
The median expected time to entry into operation across the 130 bids is below 3 years



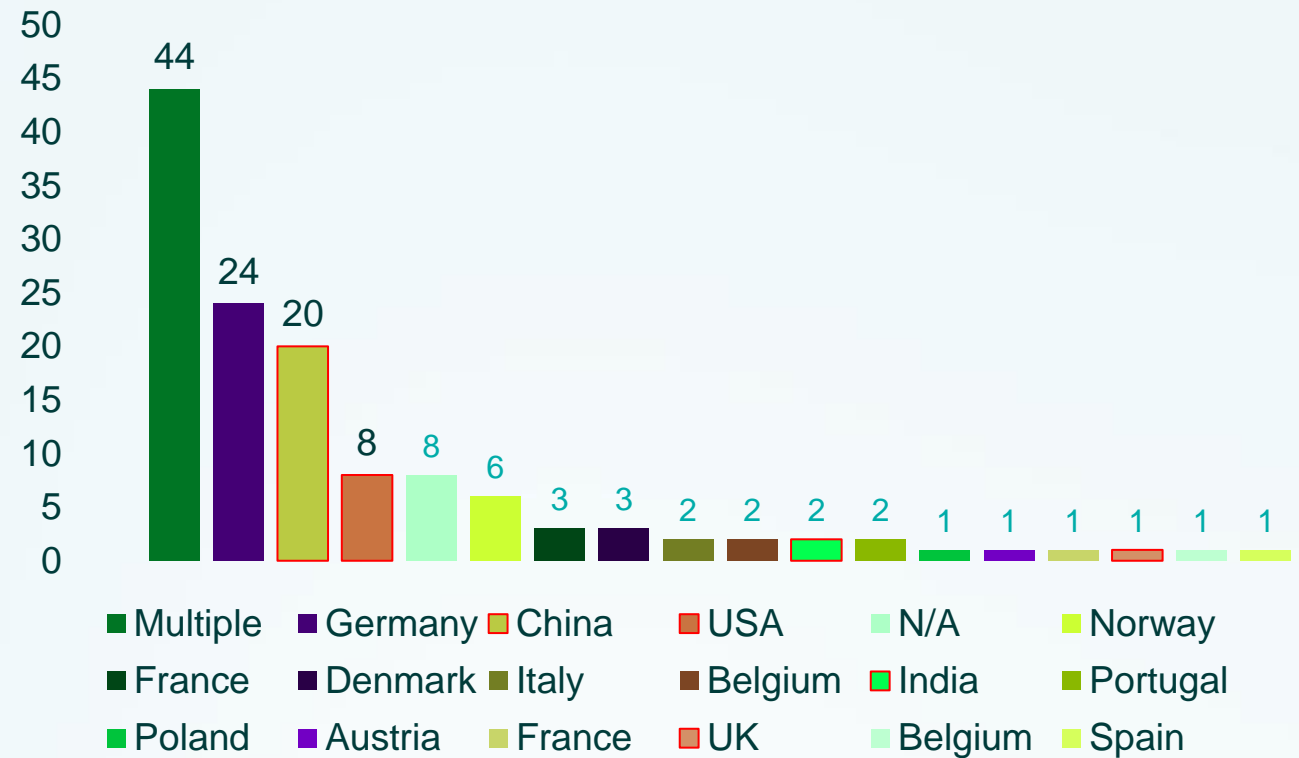
Almost all bidders propose to use Alkaline or PEM electrolyzers, or a combination of those technologies



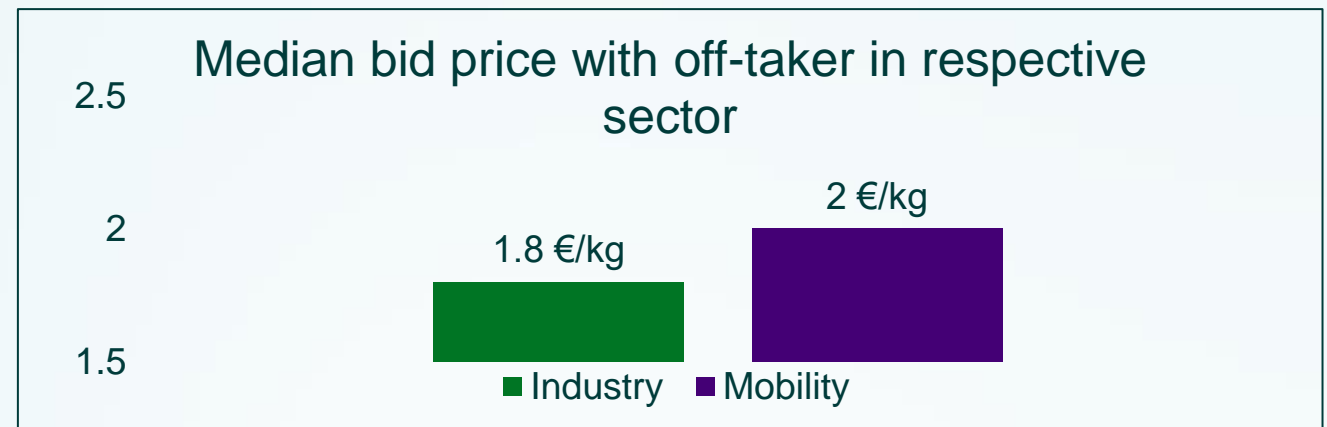
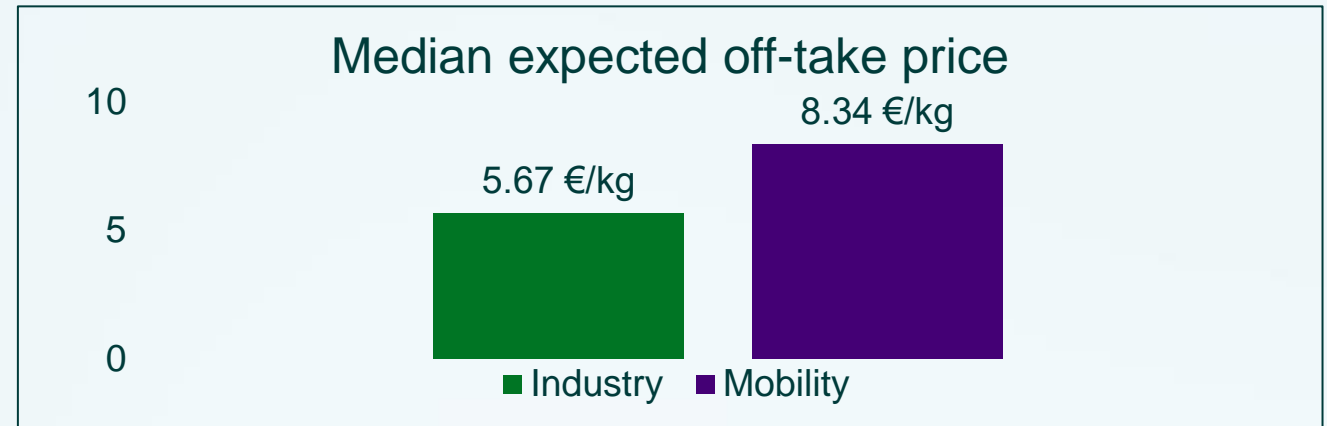
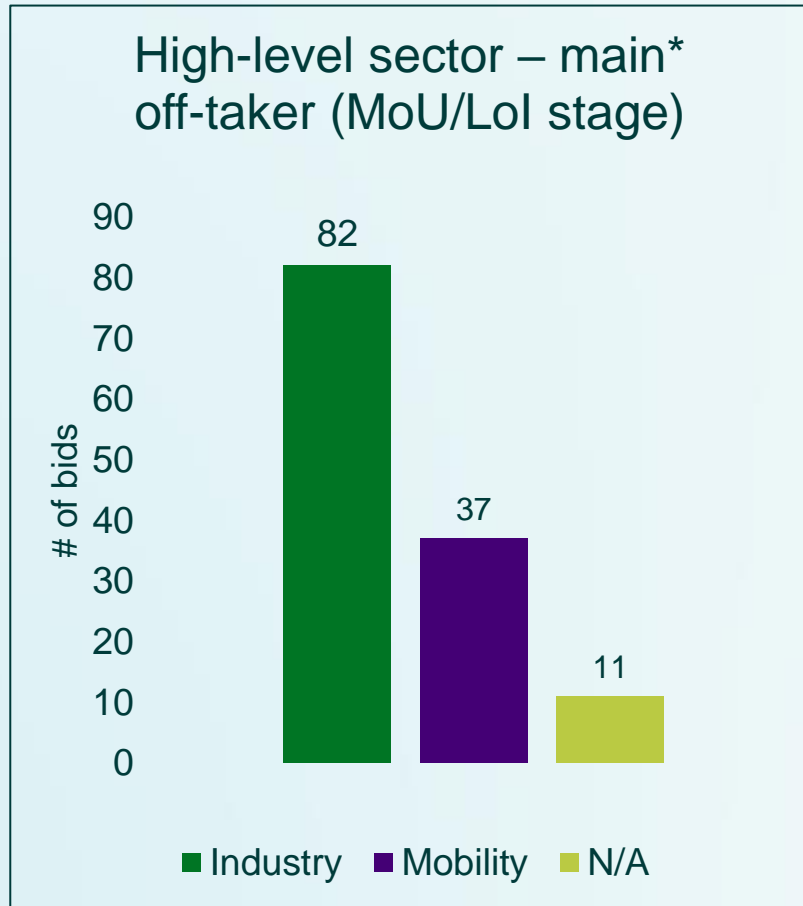
Most projects intend to procure an electrolyser that originates from the EU



Origin of electrolysers proposed to be used (MoU/Lol stage)

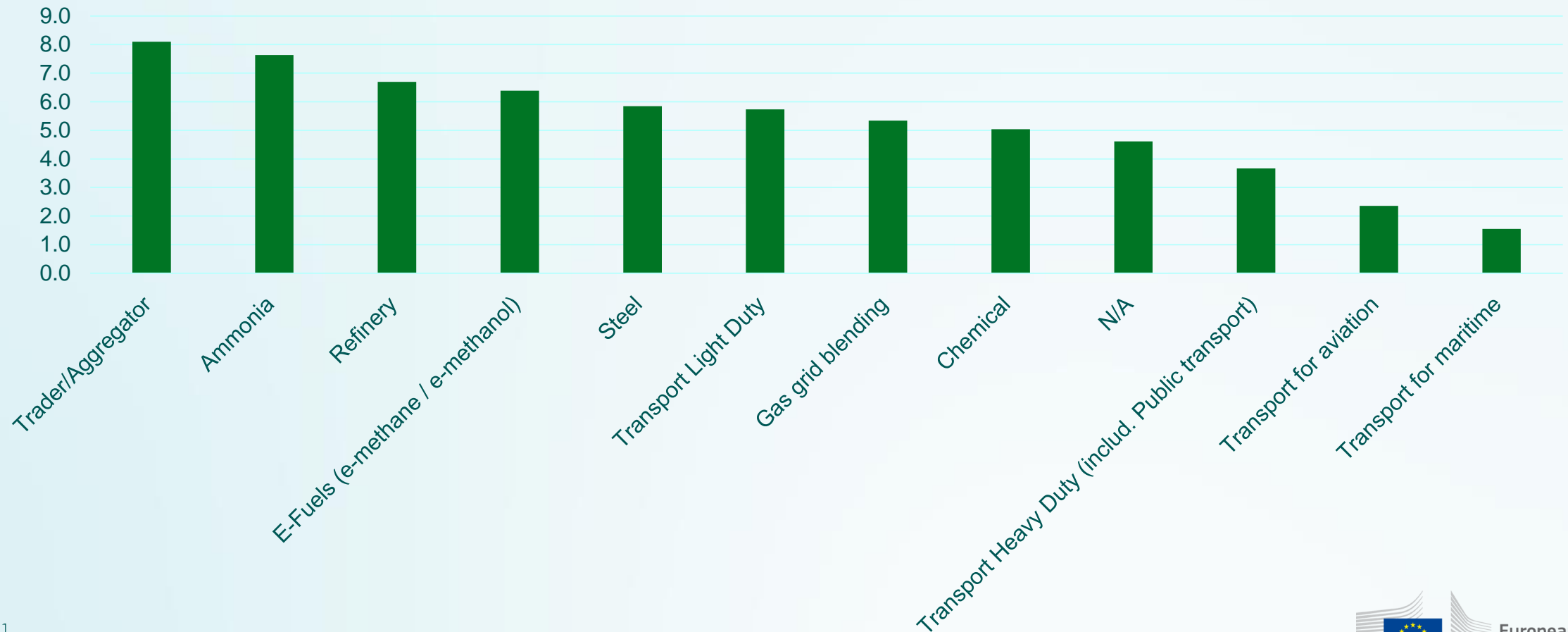


Despite higher willingness to pay in mobility, bids with proposed industrial off-takers are competitive



Volume weighted average off-take price by subsector of the main off-taker

Volume-weighted average off-take price (EUR/kg) by main off-taker

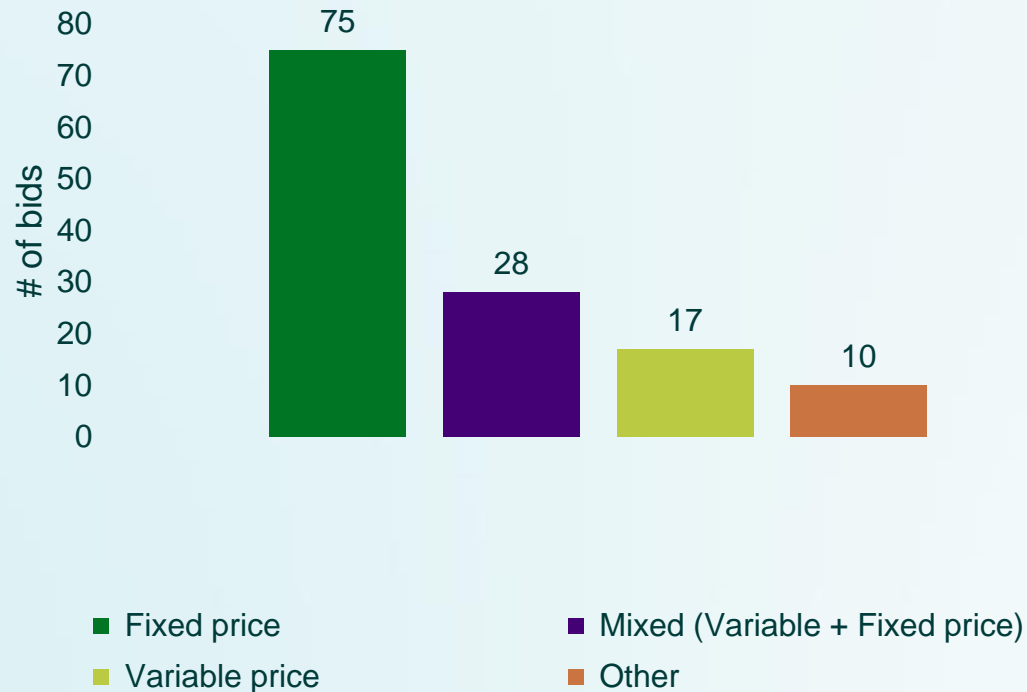


Average off-take price (main off-taker) by country for countries with more than 5 bids

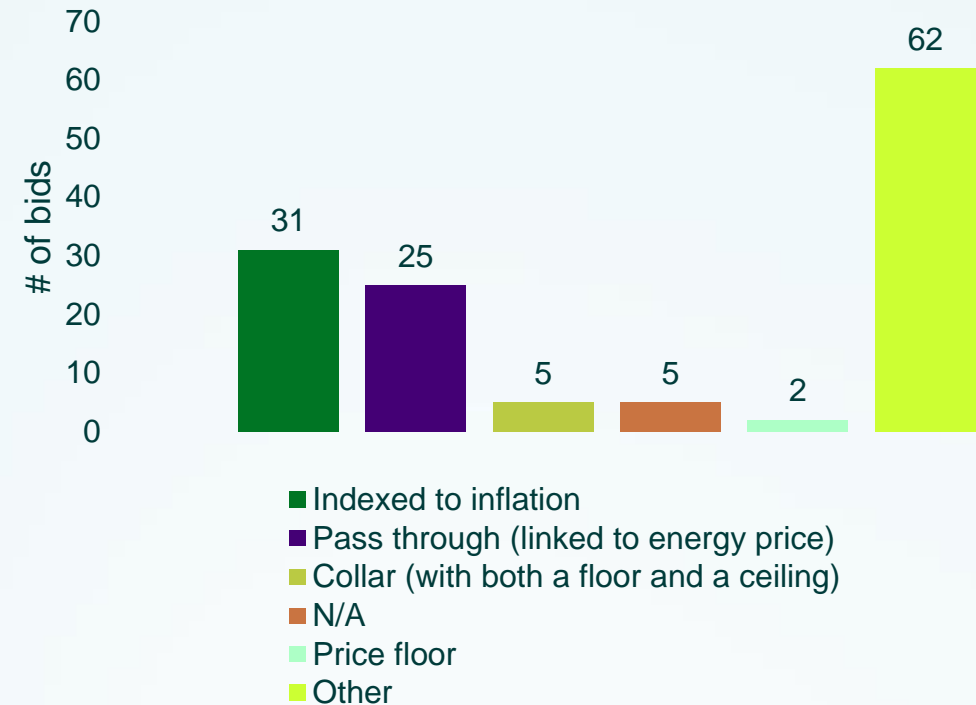


Projects envisage a variety of off-take price and hedging structures

Envisaged off-take price structure



Envisaged off-take hedge structure



Overview of Auction's design elements

Javier Garcia & Johanna Schiele

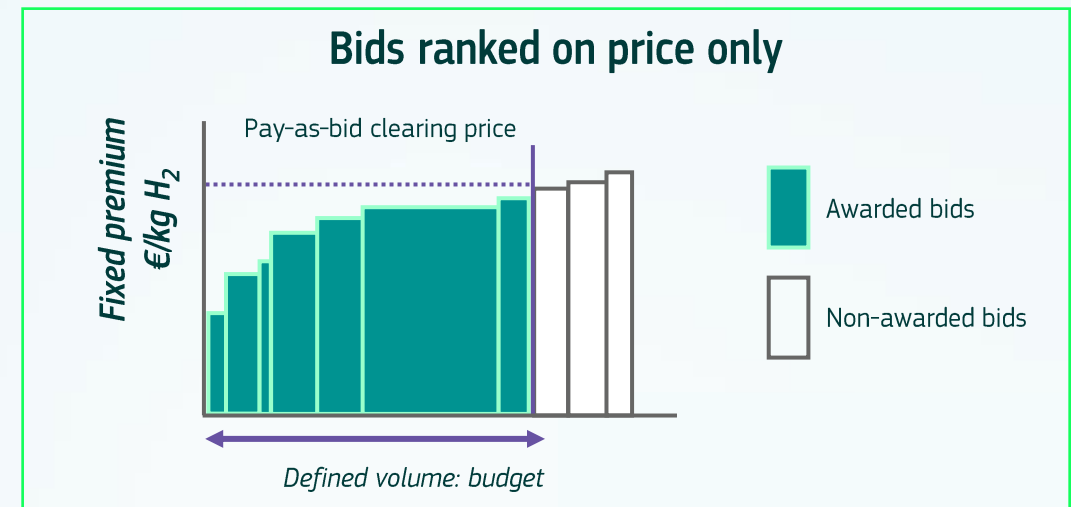
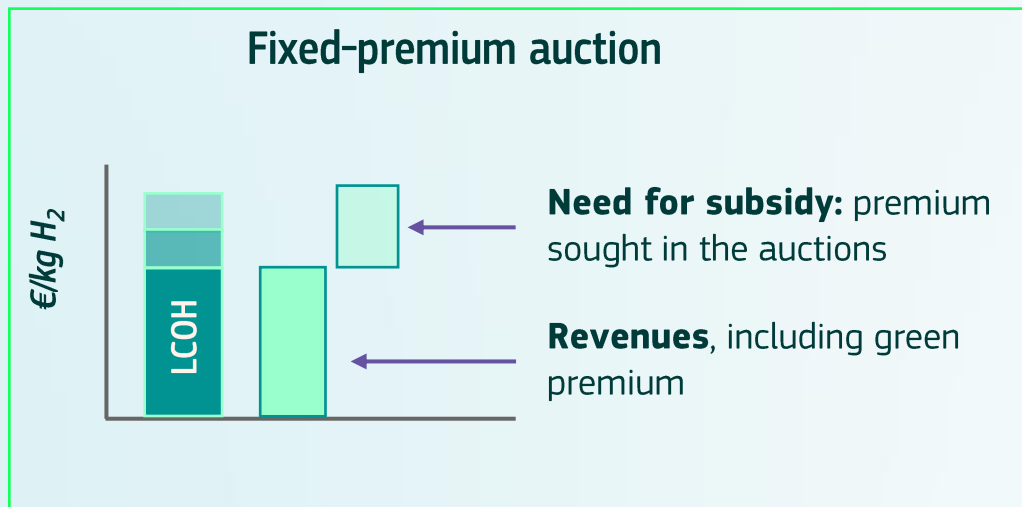
Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Objective of the auction

- Support **production** of **Renewable Fuel of Non-Biological Origin (RFNBO) Hydrogen** as defined in the RED and its Delegated Acts. NEW: Contribution to **Europe's industrial leadership** and competitiveness
- **Fixed-Premium auction**, single stage, pay-as-bid. Bidders are free to decide their bidding strategy.
- **Pass/Fail qualification** criteria and **Ranking based on price**
- **Overall Budget – EUR 1.2 billion**



Eligibility

- Location: **within the EEA** (no virtual production)
- Installed capacity: minimum **5 MWe, new** capacity, **single location**
- Bid ceiling price: **3.5 EUR/kg RFNBO Hydrogen**
- Maximum size of the bid:
 - **1/3** of available budget (general topic) or
 - **1/2** of available budget (maritime)
- Off-taker restriction:
 - For general topic: **no restriction**
 - For maritime topic: **only off-taker belonging to the maritime sector. NEW: no traders/intermediaries** (more details in dedicated session)

Implementation arrangements

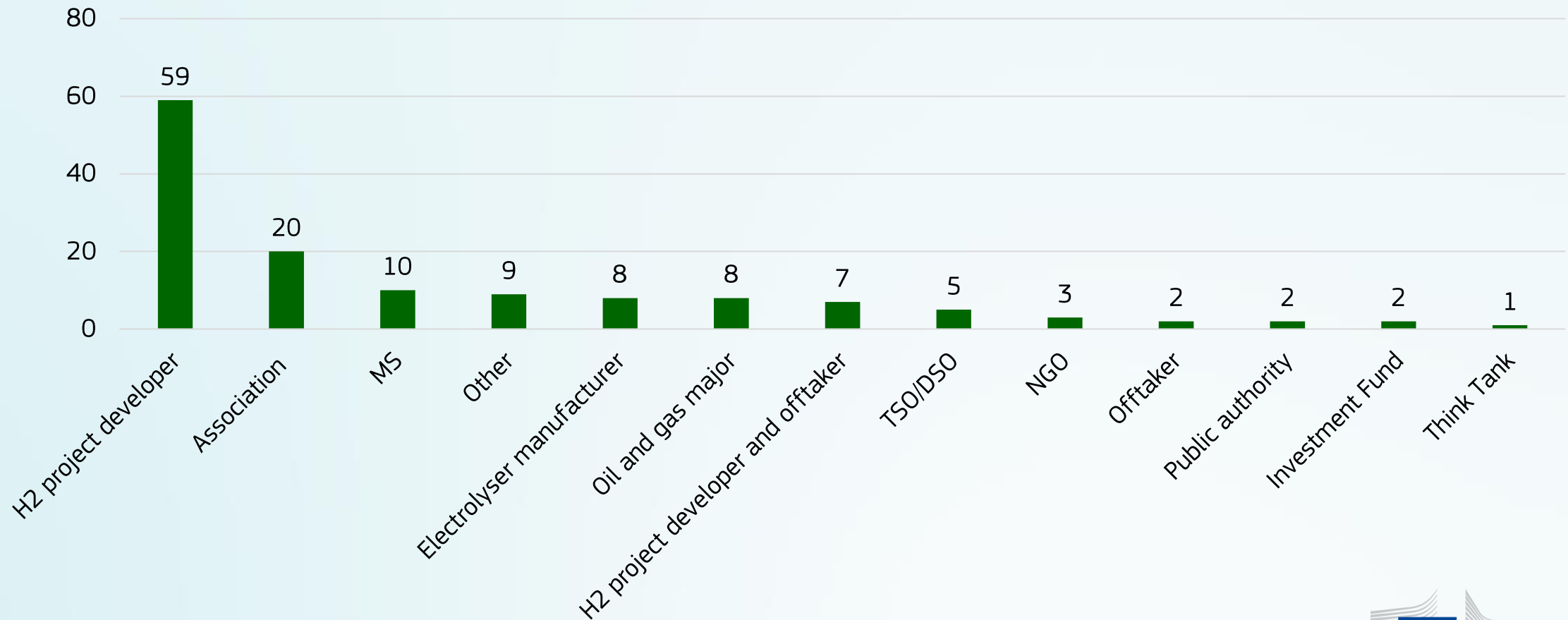
- Entry Into Operation: **3 years** after signing Grant Agreement
- Payments: No payments before entry into operation. Then, **biannual** basis - EUR/kg of RFNBO Hydrogen produced, **certified and verified** for a maximum period of **10 years**.
- Cumulation with other public funding – limitations apply *[dedicated session afterwards]*
- Production requirements:
 - Semiannual production may be increased to **up to 140%** of planned. Total grant amount cannot be increased.
 - Production **can not fall below 30%** of planned production for more than three rolling consecutive years

Implementation arrangements

- Limited cross-subsidisation with non-RFNBO Hydrogen: at the end of implementation, certification that the overall total amount of hydrogen produced achieves at least 70% GHG savings
- Additional reporting
 - Report on changes of the off-taker
 - Confirmation of absence of cumulation with other aid
- Transparency: information sharing to support market formation
 - Selected projects: bid price, name, location, maximum grant amount, capacity, origin of electrolyser
 - Non-selected projects: anonymised and aggregated
 - Information on off-taker price: anonymised and aggregated for all applicants

Written, structured feedback on draft T&Cs received from 136 stakeholders

Feedback submissions by stakeholder type



1584 feedback points made across 51 design elements

General auction design elements	1.0	Objective of the auction	36
	1.1	Auctioned good	49
	1.2	Constraining value	74
	1.3	Support type	16
	1.4	Reference price (n/a)	6
	1.5	Support form	27
	1.6	Safeguards against over-subsidisation	29
	1.7	Ranking of bids	59
	1.8	Bid components	27
	1.9	Minimum and maximum yearly production thresholds	46
	1.10	Production flexibility rules	13
	1.11	Grant duration (disbursement period)	31
	1.12	Indexation of support	46
	1.13	Technology baskets, differentiation by regions or actors	75
	1.14	Method and estimate of subsidy per ton of CO2e abated	18
1.15	Resilience requirements for the electrolyser	67	

Qualification requirements	2.1	Qualification requirements	43
	2.2	Completion guarantee	97
	2.3	Minimum or maximum restriction for project size and for bid volume	53
	2.4	Off-taker restrictions	38
	2.6	Regulations for transporting hydrogen	25
	2.7	Consideration of "General measures"	12
	2.8	Cumulating support with other public support for RFNBO hydrogen producer	59
	2.9	Cumulating support with other public support for RFNBO hydrogen off-taker	41
	2.10	Exclusion of cross-subsidisation of "grey" hydrogen	19

Legend:

<20: Strong support

20 < 50: Overall support, some discussion

>50: Substantial discussion

1584 feedback points made across 51 design elements

Design elements defining the auction procedure	3.1	Competitiveness of the process	21
	3.2	Single vs. multiple item auction	3
	3.3	One-stage or two-stage auction	4
	3.4	Auction type	4
	3.5	Pricing rules	2
	3.6	Minimum prices	9
	3.7	Ceiling prices	53
	3.8	Clearing mechanism and marginal bid	29
	3.9	Tiebreaker rule	19
	3.10	Minimum volume of bidders	4
Rights and obligations	4.1	Maximum time to entry into operation	101
	4.2	Sanctions in case of non-compliance with support requirements	45
	4.3	Payment schedules	12
	4.4	Reporting requirements	18
Organisational	5.1	Scheduling/auction frequency	29
	5.2	Timing of the auction (early stage or late stage auction)	2
	5.3	Granting authority	3
Qualification requirements	6.1	Admissibility	13
	6.2	Eligibility	12
	6.3	Renewable electricity sourcing strategy	21
	6.4	Hydrogen off-take and price hedging strategy	22
	6.5	Electrolyser procurement strategy	30
	6.6	Environmental permits	16
	6.7	Completion guarantee letter of intent	12
	6.8	Assessment of maturity	14
Cumulation of support	7.1	Cumulation rules	77

Legend:

<20: Strong support

20 < 50: Overall support, some discussion

>50: Substantial discussion

Budget (“Constraining value”) (1.2)

(74 comments)

Main responses:

1. The Commission should allocate a **larger budget** to the H2 auction (22 comments)
2. The Commission should use the unallocated €80m from the previous auction round (10 comments)

Key reasons provided by stakeholders include:

- European producers need more budget to support market ramp-up and reach EU RFNBO goals.
- For market assurance the Commission should align the budget with the original announcement of EUR 3bn.

COM response:

- The budget allocated to the IF 2024 auction is envisaged to be EUR 1.2bn.
- This has been calibrated in line with available IF Funds and the overall commitment of providing at least EUR 3bn over time to EHB auctions.
- National AaaS budgets may increase this amount further.

Ranking of bids (1.2)

(59 comments)

Main response:

1. Price criteria is well accepted but some stakeholders suggest including **non-price ranking criteria and/or additional pre-qualification criteria**. (42 comments)

Key reasons provided by stakeholders include:

- First auction results showed concentrated awarded bids in few MS due to different (cheaper) energy costs. Options of geographical non-price criteria.
- Future auctions should consider characteristics such as differences in energy prices, energy mix/RES shares, and (regional) hydrogen demand.
- Additional pre-qualification or non-price criteria could focus on the maturity of projects, materialization likelihood, credibility/experience of bidders, CO2 abatement potential, amongst others.

Ceiling price (3.7) (53 comments)

Main response:

1. Concern with ceiling price decrease (38 comments)
2. Concerns on how the lower ceiling price would affect other elements of auction design (maritime topic, AaaS, etc.) (various)

1. Disagree with ceiling price decreases

- Until the completion bonds are provided by winners (Grant agreements signed), lowering the ceiling price is premature
- €3.50/kg (without indexation to inflation) is insufficient to cover the difference between LCOH RFNBO and fossil alternatives in most EU countries

2. Additional considerations

- Ceiling price not binding in light of competition, so slightly irrelevant. Could be increased (2-3 answers)
- Create a specific ceiling price for the maritime basket, at €4.50/kg

Minimum or maximum project size and bid volume (2.3) (53 comments)

Main response:

1. Reduce the maximum grant amount from 1/3 of the budget to enable smaller projects (17 comments)
2. Minimum project size seems well balanced (11 comments in both directions)

1. Reduce the maximum grant amount from 1/3 of the budget to enable smaller projects

- Supports broader market development and ramp up across the EU and across different sectors

2. Minimum project size:

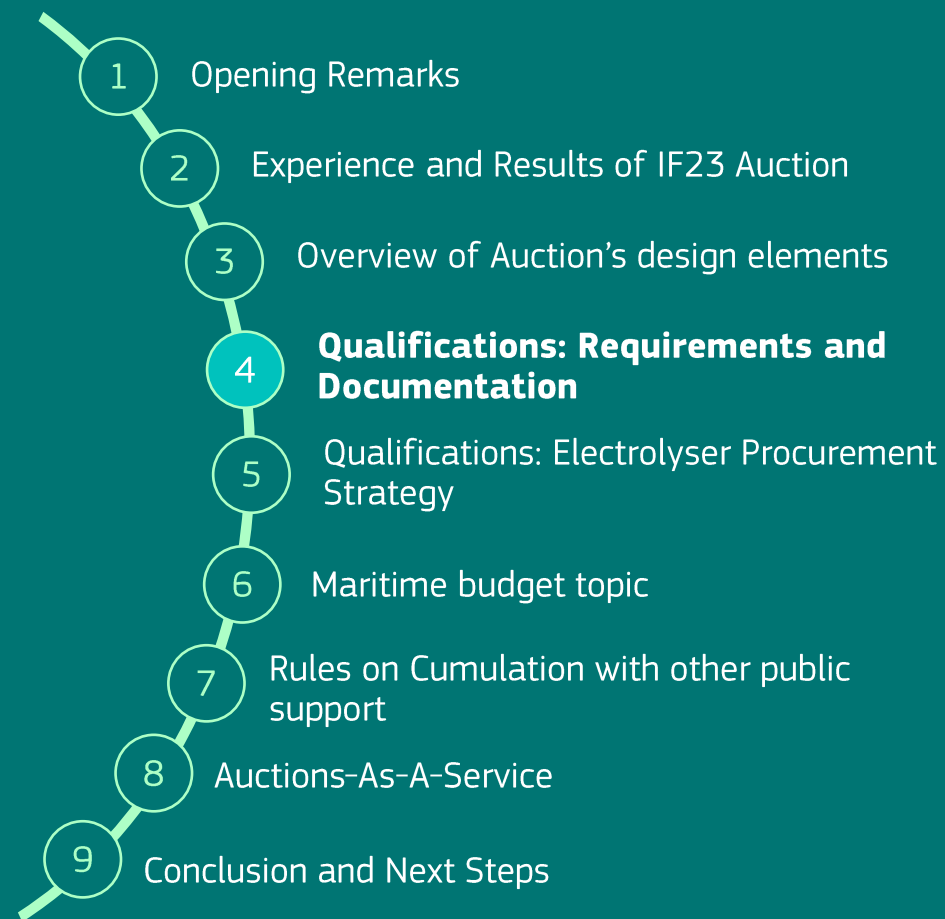
- Reduce the minimum project size from 5 MW to 3MW (3 comments)
- Reduce the minimum project size from 5 MW to 1MW (4 comments)
- Increase the minimum project size to 20MW (4 comments)

Qualification Requirements and Documentation

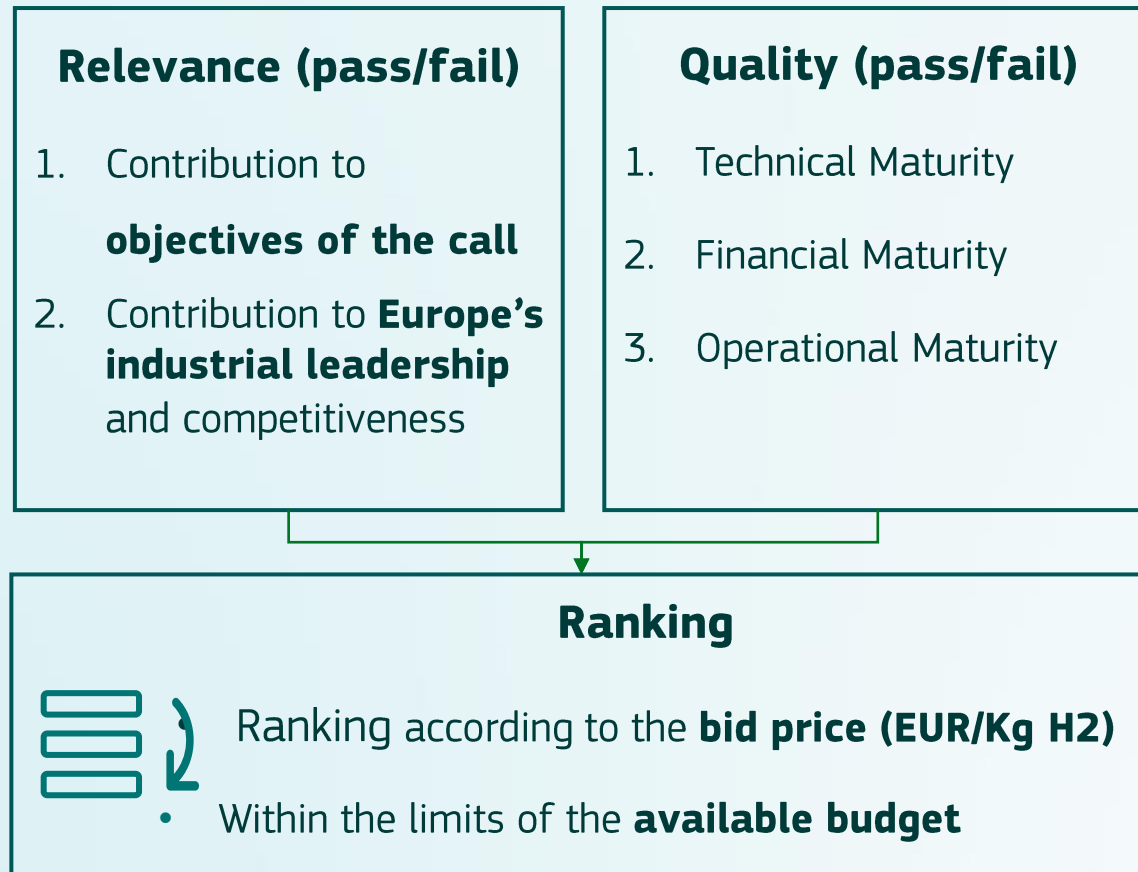
Javier Garcia

Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Reminder: call and assessment structure



Required application documents:

Renewable electricity sourcing strategy

Hydrogen off-take and price hedging strategy

Electrolyser procurement strategy

Plan to receive environmental permits on time

Plan to receive grid connection permits on time

Completion guarantee letter of intent

Required documents for application

Renewable electricity sourcing strategy

- Pre-contractual agreement with power supply **for 60% of energy needs**
- Volume and time profile matching hydrogen production
- Status of **dependent infrastructure**

Hydrogen off-take and price hedging strategy

- Pre contractual agreement with off-taker covering **60%** of total planned RFBNO H2 production. If **integrated project** producing hydrogen derivative, pre-contractual agreement with off-taker for derivative product, equivalent to 60% of total planned RFBNO H2 production (conversion factors provided)
- Price hedging strategy, symmetry with energy supply
- Status of **dependent infrastructure**
- Particularities for **maritime topic** *[dedicated session afterwards]*

Required documents for application

Electrolyser procurement strategy

- Pre-contractual agreement for electrolyser supply consistent with implementation plan
- Compliance with safety standards (ISO 22734:2019)
- Increased information: declaration of **origin**, critical raw materials content, EoL/Recycling plans, responsible business conduct, reporting of public subsidies received.

[dedicated session later in the day]

Plan to receive environmental and grid connection permits on time

- Proof of advance status of environmental and grid connection permits consistent with the implementation plan

Required documents for application

Completion guarantee letter of intent

- Guarantee of entry into operation **within 3 years** after signing grant agreement
 - Value: 10% of requested grant amount
 - Duration: **3 years and 11 months**
 - Provided by bank or financial institution rated at least **BBB-/Baa3**
 - **Template** provided
- Completion Guarantee must be issued **2 months** after receiving the letter inviting to prepare grant agreement. The **provided template** must be used.
 - If project does not enter into operation within 3 years after signing grant agreement, the guarantee is called by the implementing agency and the grant agreement is **terminated**.

Tie-breaker rules...

1. Priority to smaller maximum grant amount requested
2. Priority to countries with fewer funds previously awarded by the IF
3. Priority to shorter time to entry into operation

Additional tie-breaker rules may be added

Completion guarantee (2.2) (97 comments)

3 main responses:

1. Concern with increase to 10%, advocate to remain at 4% (65 comments)
2. Agree with 10% increase (20 comments)
3. Increase completion guarantee to greater than 10% (2 comments)

1. Concern with increase to 10%

Key reasons include:

- Favours large companies/ penalises smaller companies
- Increases barrier to entry
- Reduces opportunity for innovative projects with limited off-takers

3. Increase to greater than 10%

Key reasons include:

- Bond should be increased to 20%,
- Increase to 15% demanded

2. Agree with 10% increase

Key reasons include:

- Ensures bid applications are serious, and not speculative projects

Other suggestions for the guarantee design

- Make use of bid bond in addition to completion bond
- Additional triggering milestones before EiO
- Allow parent institution to issue guarantee
- Increase time to issue guarantee from 2 to 6 months

Maximum time to EiO (4.1) (101 comments)

2 main responses:

1. Concern with decrease to 3 years, advocate to maintain at 5 (or 4) years (92 comments)
2. Agree with decrease to 3 years (7 comments)

1. Concern with decrease to 3 years

Key reasons include:

- Excludes large and complex projects whose construction time typically lasts around 3 years+
- Global and EU based supply chains are not mature enough to provide the required level of electrolysers production capacity and relevant infrastructure
- Uncertainty in permitting times with authorities who are dealing with this technology for the first time

2. Agree with decrease to 3 years

Key reasons include:

- Support shorter timeline to accelerate ramp up
- Ensure high project maturity.

Other suggestions for the EIO

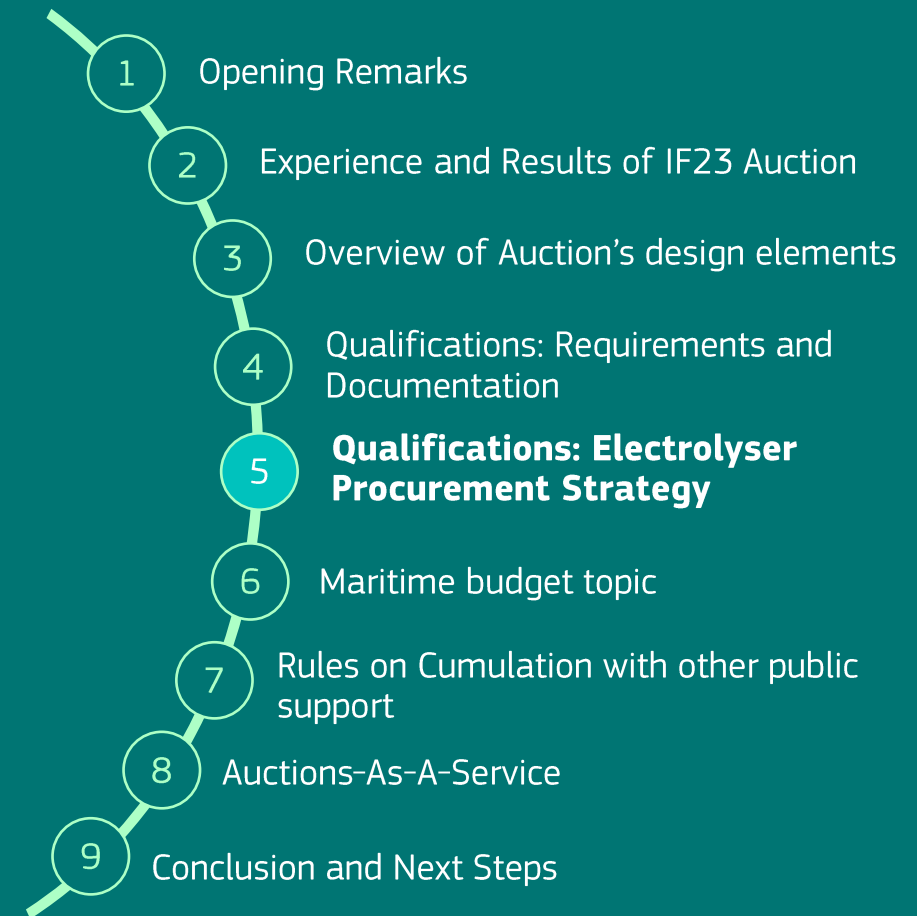
- Include flexibility on the date for specific events

Qualification: Electrolyser Procurement Strategy

Ewelina Daniel

Policy Officer, DG CLIMA C2

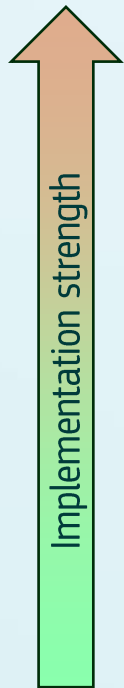
Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Resilience requirements

- Key priority for the EU, in line with Open Strategic Autonomy of the EU, RRF, NZIA and STEP Regulation.
- Since ETS Directive revision, “resilience” criterion has been added to the IF “regular” calls for proposals.
- Similar discussion on IF “regular” grants call yesterday (notably on batteries value chain) - broader approach of “Contribution to EU industrial leadership and competitiveness”.
- EEA electrolysers’ manufacturing industry is today in strong position but already getting challenged (lower production costs and subsidies in third countries for local manufacturers, overcapacity building up, protectionist measures of the trade partners, foreign competitors catching up on performance).
- Number of possible “resilience” requirements and number of ways to implement them in an auction.

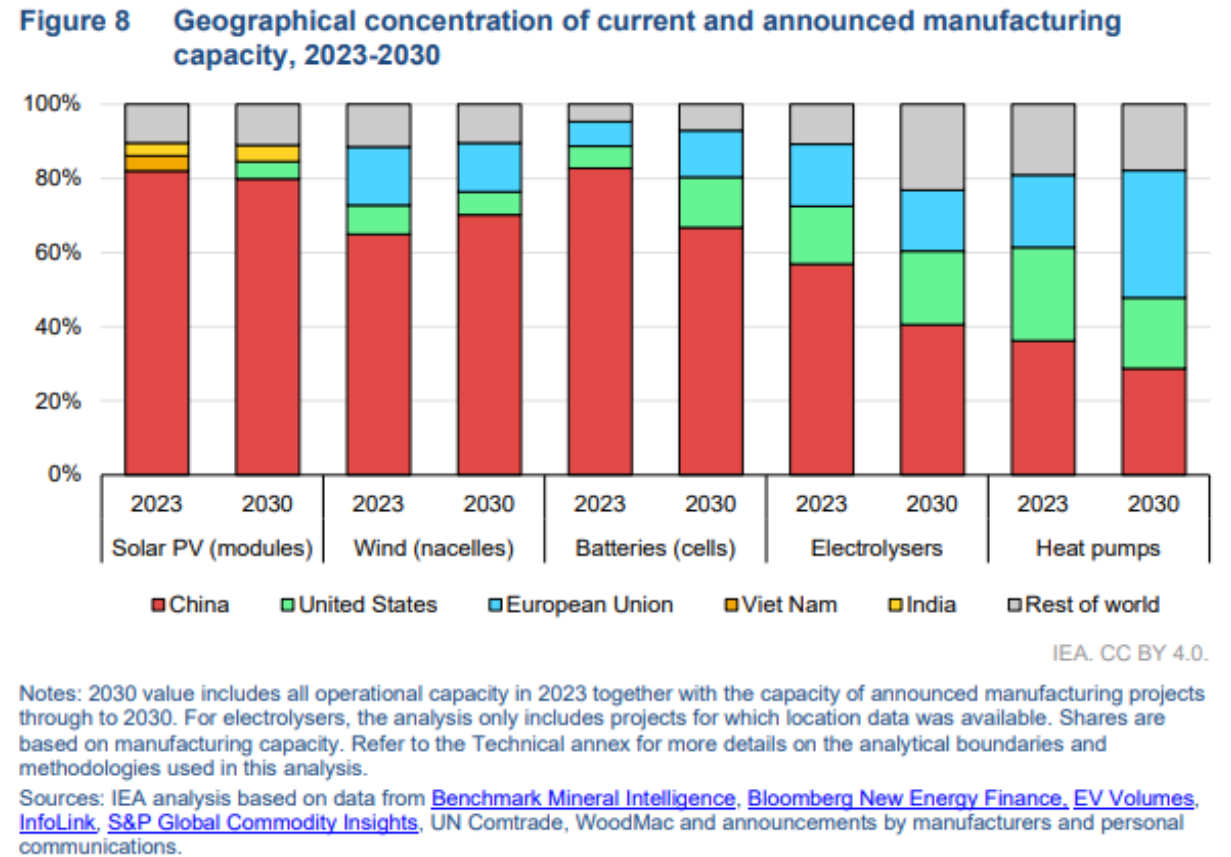
How could resilience requirements be assessed in an auction?



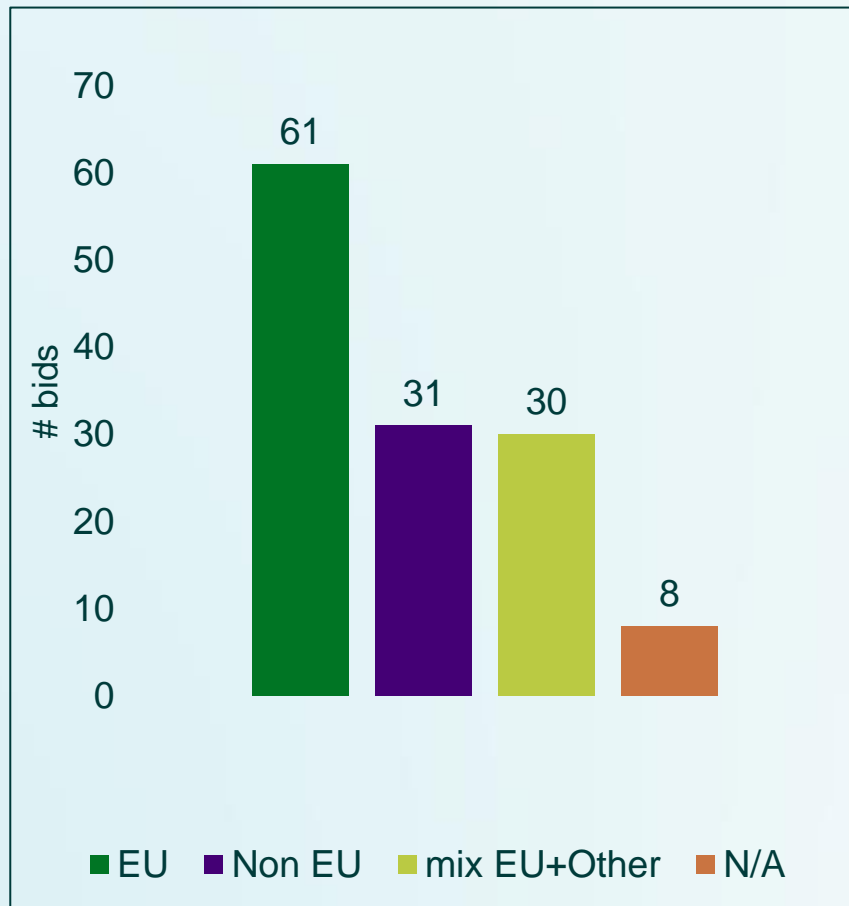
How could it be implemented?	Qualification requirements (Y/N assessment before ranking on bid price)						X Compliance with the Union's intern. obligations
	Non-price ranking criterion Penalty if resilience claims at application stage do not materialise by EiO.						
	Tie-breaker						
	Detailed information gathering & public reporting						
		Responsible business conduct /recycling/CRM	Safety, environ. or performance standards	Research centres in the EEA/OECD, social KPIs	Contribution to EEA industrial leadership	NZIA approach	Origin of equipment
Which requirements could be assessed?							

NZIA approach

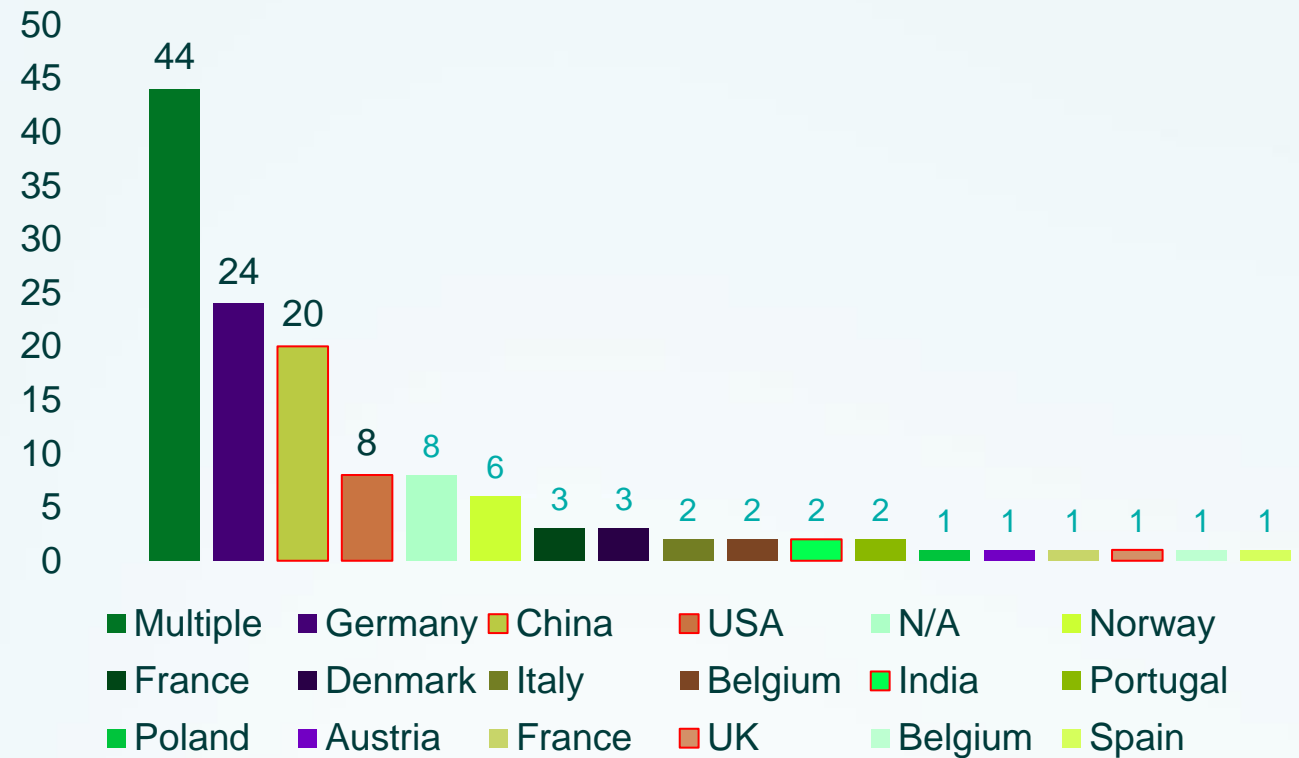
- NZIA now adopted but DAs (notably on resilience) have to be prepared and customs codes will have to be developed.
- NZIA provides possibility of discriminatory measures against trading partners, if overreliance or risk of it can be proven.
- Art 20 approach could be applied in EU funding instruments (EU calls just like national auctions provide subsidies) even as a qualification requirement.
- Today EEA electrolyser industry is in a strong position: 9 out of 15 globally leading manufacturers are based in Europe and have solid share of global manufacturing capacity.



Pilot auction results: most projects intend to procure an electrolyser that originates from the EU



Origin of electrolysers proposed to be used (MoU/Lol stage)



Measures possibly favouring EEA/OECD manufacturers

- Responsible business conduct / CSR requirements
 - Beyond the existing legislation (e.g. CSR Directive, Supply Chain Due Diligence Directive)
 - Existing codes like: International RBC Agreement for the Renewable Energy Sector (signed in 2023) : <https://www.imvoconvenanten.nl/en/renewable-energy>
 - OECD Guidelines for Multinational Enterprises on Responsible Business Conduct
 - Certification or self-declaration?
- Recycling strategy
- CRM intensity
- Research centres in the EEA/OECD
 - Precise definition of research centre
- Social KPIs
- Standards
 - Beyond the existing legislation (i.e. what is required under LV and Machinery Directives)
 - Can trade partners catch up quickly?

Contribution to Europe's industrial leadership, competitiveness

- **Standard approach** under other EU funding programmes
- **In the call text:**
 - 1) Call objectives:** (amongst others) to support European industrial leadership and competitiveness in the hydrogen sector.
 - 2) Relevance sub-criterion (pass/fail assessment)** Contribution to Europe's industrial leadership and competitiveness:

Projects could demonstrate: supporting European hydrogen value chain, resilience of the supply chains, development of new technology, creating new IP rights, partnerships with European research bodies, recycling or other strategy helping to reduce dependency on critical raw materials, contribution to new industrial ecosystems (e.g. hydrogen valleys) or other positive spillover effect, jobs created, trainings or other actions to develop know-how in Europe.

In practice: project would fail if it cannot demonstrate any contribution. Project with value chain outside Europe can still pass this criterion.
 - 3) Mandatory reporting on origin of components + report at the end of monitoring period** on fulfilment of the claims in the application (grant reduction/claw-back possible)

Foreign Subsidy Regulation

- FSR is already in force and can be triggered, amongst others, ex officio by DG COMP upon the complaint received.
- Concretely, if link can be made between the abnormally low bid and the fact that project developer purchased equipment from a supplier that received foreign financial contribution, complaint could be made to DG COMP.
- DG COMP does not investigate all complaints.
- In practice “tick the box” question will be asked if the intended suppliers receive foreign contributions (whether it’s subsidies or on market terms) – on electrolyser procurement strategy.
- Complementary to this, TDI instruments are in place.
- This is not a new requirement but a reminder of the existing legislation.

Electrolysers resilience requirements (1.15) (67 comments)

Main response:

1. Many stakeholders support the introduction of resilience requirements, either as non-price ranking criterion or as an additional qualification requirements (36 comments)
2. But there is also some concern if these requirements are introduced (13 comments)

Clarification required:

- Are there penalties if the ELY is not manufactured in the EEA?
- How will the resilience information be used by CINEA (pass/fail criteria?)

1. Agree with resilience requirements (and electrolyser procurement strategy)

However, further some concerns are mentioned:

- Technology providers should be able to provide all the requested documents
- Detailed benchmarks, templates, and guidance should be provided to simplify the process
- Some documents should be presented at a later auction stage as the bidding stage can be premature
- Definition of the system boundaries of the electrolyser is needed to have more clarity

Electrolysers resilience requirements (1.15)

Substantial discussion (67 comments)

2. Concern with these requirements

- The requirements are too premature because the market is not yet mature.
- The required data can be hard to obtain/disclosed by suppliers and could affect the possibility of obtaining Lol/MoU
- The procurement strategy should emphasize the quality, reliability, and certainty of procurement rather than the origin of equipment
- Imposing restrictions on the sourcing of electrolysers would endanger EU goals, it could trigger price increases by European manufacturers
- There are doubts about whether this tool is effective in achieving its proposed objectives

3. Concrete suggestions of resilience requirements

- Local content or equivalent measures proposed by some stakeholders. Objective to restrict access of China to EEA markets or to production within the EEA (the key opportunity of EEA manufactures to scale up).
- Proposal that certain critical production steps and components of an electrolyser to be restricted to:
 - countries signatories of the Global Procurement Agreements (GPA): Surface treatment, Electrodes, Membranes bipolar plates, etc
 - EU/EEA: Cell units' assembly and Stack assembly
- Alternative requirements: circularity, RDI or ESG criteria, social KPIs, partnerships with local universities and local research centres
- Standards: electrolyser companies should comply with ISO 22734:2019, performance standard not yet available
- Relax cumulation rules to counterbalance the effect of unfair subsidies?

How could resilience requirements be assessed in an auction?



How could it be implemented?	Qualification requirements (Y/N assessment before ranking on bid price)		✓		✓		✗ Compliance with the Union's intern. obligations
	Non-price ranking criterion Penalty if resilience claims at application stage do not materialise by EiO.						
	Tie-breaker						
	Detailed information gathering & public reporting	✓	✓				
		Responsible conduct /recycling/CRM	Safety, environ. or performance standards	Research centres in the EEA/OECD, Social KPIs	Contribution to EEA industrial leadership	NZIA approach	Origin of equipment
Which requirements could be assessed?							

Maritime budget topic

Javier Garcia

Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Why a specific topic for the maritime sector

- After its revision in 2023, the **ETS Directive extended to maritime transport** – applies to ships above 5,000 gross tonnage.
- **“FuelEU Maritime” Regulation – 80% reduction** in GHG emissions intensity for maritime fuels by 2050. Target of **2% RFNBO for bunker fuels** by 2034.
- **Innovation Fund: 20 million allowances** will be deployed by the IF by 2030 to support the decarbonisation of the maritime sector, through **dedicated topics**, and supporting technology solutions such as **sustainable alternative fuels**.
- Relevance of projects aiming at supply to the maritime sector as received in the pilot IF23 Auction.

Requirements at application for maritime topic

- IF24 Auction: **dedicated topic**
 - non allocated budget will flow to general topic.
 - same overall auction design elements as general topic – except maximum grant requested $\frac{1}{2}$ of available budget
- “Maritime projects” **can choose** if applying for the general topic (as any other project) or benefitting from the dedicated budget basket.
- “Maritime projects”: those presenting with the application pre-contractual off-take agreements with **off-takers belonging to the maritime sector** covering **60% of their planned RFNBO H2 production**.

Off-take strategy particularities

- Off-takers belonging to the maritime sector:
 - use the hydrogen or the hydrogen derivative produced by the project for **carrying out/making use of bunkering activities in ports under the jurisdiction of the EEA.**
 - NEW: proposal that fuel traders or intermediaries will not be accepted
- Together with the off-taker pre-contractual agreement, a **self-declaration from the off-taker** of belonging to the maritime sector, including [NEW]:
 - *if a shipping company:* Maritime Operator Holding Account (MOHA) or IMO number
 - *if a bunkering operator:* endorsement from a maritime authorities (e.g EMSA), Industry Associations (e.g International Bunker Industry Association, SGMF...), Port Authorities (e.g Port of Rotterdam) or a valid statement of a third-party auditor).

Obligations for implementation

- Same rights and obligations as in general topic, and in addition:
- **At financial close**, signed off-take agreement with an off-taker belonging to the maritime sector covering 60% of the planned volumes. If not provided, grant agreement is terminated.
- During implementation: report on changes in the off-take agreement status
- **At the end of implementation**: third-party certification that at least 60% of the produced volumes were supplied to an off-taker of the maritime sector. If not complied, the maximum grant amount may be reduced proportionally to the non-compliance.

Other regional, sectoral, and project technology baskets (1.13) (75 comments)

Main responses:

1. Include additional baskets (or other auction design elements) to benefit specific players, regions, sectors, technologies, etc. (29 comments)
2. Some stakeholders explicitly against the inclusion of baskets (18 comments)

1. In favour of regional baskets or sectoral/off-take baskets:

- To account for differences in regional RES generation potential, energy prices, consumption proximity, demand.
- To focus on other hard-to-abate sectors besides maritime and on CBAM energy-intensive sectors.
- To reflect different willingness to pay in different sectors / by different off-takers.

2. In favour of project specific baskets

- To support non-RFNBO projects (low-carbon fuels, bio-based fuels, RCFs, etc.)
- Basket for SME's or smaller projects with different cost structures.

3. Concerns with the existence of any baskets:

- Not enough input from first auction round, specifically projects with signed GATs, to understand how the market is developing
- Dividing the budget into two different baskets decreases competition and the opportunity for price discovery

Overview of key feedback received on the maritime topic (various comments)

Clarification requests:

- Why including a maritime basket?
- Why is only 60% of the volume of RFNBO production should go into a bunkering-related end-use?
- What is the specific definition of a “maritime off-taker” and compliance process?
- What happens if a selected project under the maritime basket changes their off-takers later, selling to someone who does not qualify as “maritime”?
- Is the support still to be calculated as per unit of H2 production if the final product is an H2 derivative?

Overview of key feedback received (various comments)

Design suggestions:

- **Ceiling price:** Create a separate ceiling price for the maritime sector bucket, maintained at €4.50/kg
- **Project size and bid volume:** Size of maritime topic budget to be dimensioned in order not to penalize MS without ports
- **Basket adjustment:** Include aviation and maritime sector off-takers in one basket
- **Budget:**
 - Budget for the maritime topic should not affect the general auction budget
 - If not used, maritime budget should flow back into general auction budget

Rules on Cumulation with other public support

Ewelina Daniel

Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



General cumulation rules: entities



**Electrolyser
manufacturer**

✓ Other public support is allowed



**RE electricity
producer**

Rules for public support spelled out in RFNBO Delegated Act



Electrolyser

✗ Cumulation is in general not allowed

✓ Some exceptions to this rule

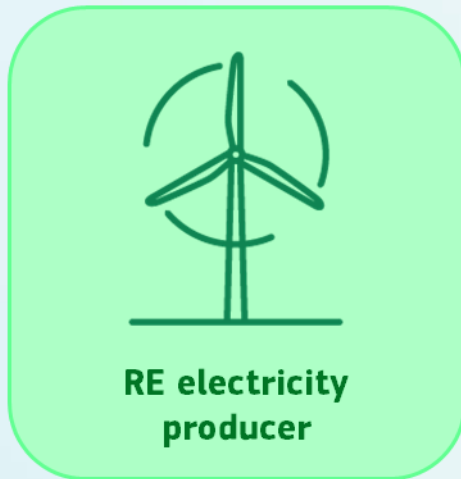


**Hydrogen
Offtaker-Direct
consumer**

✓ For CAPEX or non-dedicated infrastructure other public support is allowed

✗ For OPEX related to consumption of hydrogen from auction winner other public support is not allowed

Cumulation rules: electricity provider



Rules for public support spelled out in RFNBO Delegated Act

Renewable electricity installations¹³ from whom IF auction project will source electricity

X For RFNBO hydrogen producers entering into operation **as of 1 January 2028**, in order to comply with the “additionality principle” established in the Delegated Acts of the RED, the renewable electricity installation from which power is sourced cannot receive **public support** (except cases listed on the right).

V For RFNBO hydrogen producers entering into operation before 1 January 2028, there is no need to apply the additionality requirement and renewable electricity installations can receive public support.

V For RFNBO hydrogen producers entering into operation as of 1 January 2028, the “additionality principle” can be waived for renewable electricity installations if

- The grid has low emissivity (<18gCO₂/MJ)
- The grid has a high share of renewables (>90%)

In such cases, renewable electricity and thus renewable electricity installations can benefit from public support.

V For RFNBO hydrogen producers that are connected to installations generating renewable electricity with a direct line and not via the grid, the exclusion of public support does not apply.

Please consult the Renewable Energy Directive and its Delegated Acts for detailed rules.

Cumulation rules: IF auction project



Electrolyser

X Cumulation is in general not allowed

V Some exceptions to this rule

RFNBO hydrogen producers signing Grant Agreement for an Innovation Fund auction grant ('IF auction project')

X Cumulation with public support for RFNBO hydrogen producer's CAPEX or OPEX is *not* allowed.

X For avoidance of doubt, compensation for indirect emission costs provided under the ETS State aid Guidelines⁶ is a form of State aid and cannot be cumulated.

X For avoidance of doubt, reductions from levies or taxes which reflect part of the cost of providing electricity to the beneficiaries, e.g. reductions from network charges or from charges financing capacity mechanisms or reductions in electricity taxes (not covered by point 403 of CEEAG or equivalent points under other State aid frameworks) cannot be cumulated when they are State-aid

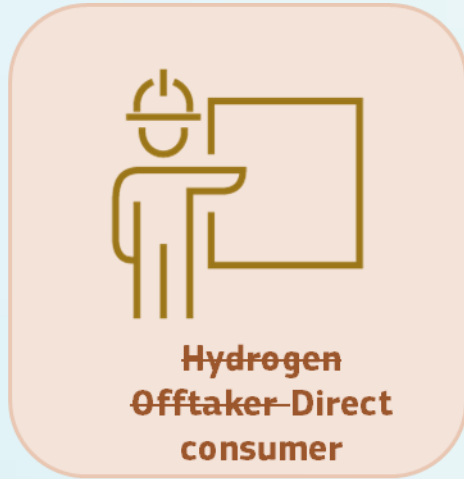
V Cumulation with previous public support for early project development stages such as: research, feasibility studies or FEED studies preceding the commercial operation is allowed.

V Cumulation with previous public support for capacity development that is *not* part of the bid is allowed⁷.

V Cumulation with public support for energy infrastructure⁸ connected to the project (e.g. Connecting Europe Facility support) is allowed, provided that the energy infrastructure is not infrastructure dedicated to this project only ("non-dedicated infrastructure").

V Cumulation with reduction from levies on electricity consumption which finance energy and environmental policy objectives (as described in point 403 and section 4.11 of CEEAG or equivalent points under other State aid frameworks)¹⁰ is allowed¹¹, even if these measures qualify as State aid.

Cumulation rules: direct consumers



- ✓ For CAPEX or non-dedicated infrastructure other public support is allowed
- ✗ For OPEX related to consumption of hydrogen from auction winner other public support is not allowed

Direct consumers¹⁵ of the output of IF auction projects.

Only the output supported by the IF auction grant is concerned. (16)

Output of non-integrated projects is RFNBO hydrogen.

Output of integrated projects¹⁷ is the RFNBO hydrogen derivative (e.g. ammonia, e-gas, e-fuels)

For non-integrated projects:

✗ Direct consumers of the RFNBO hydrogen output that is supported by the Innovation Fund auction grant cannot benefit from public support for operational costs of their RFNBO hydrogen consumption levels.

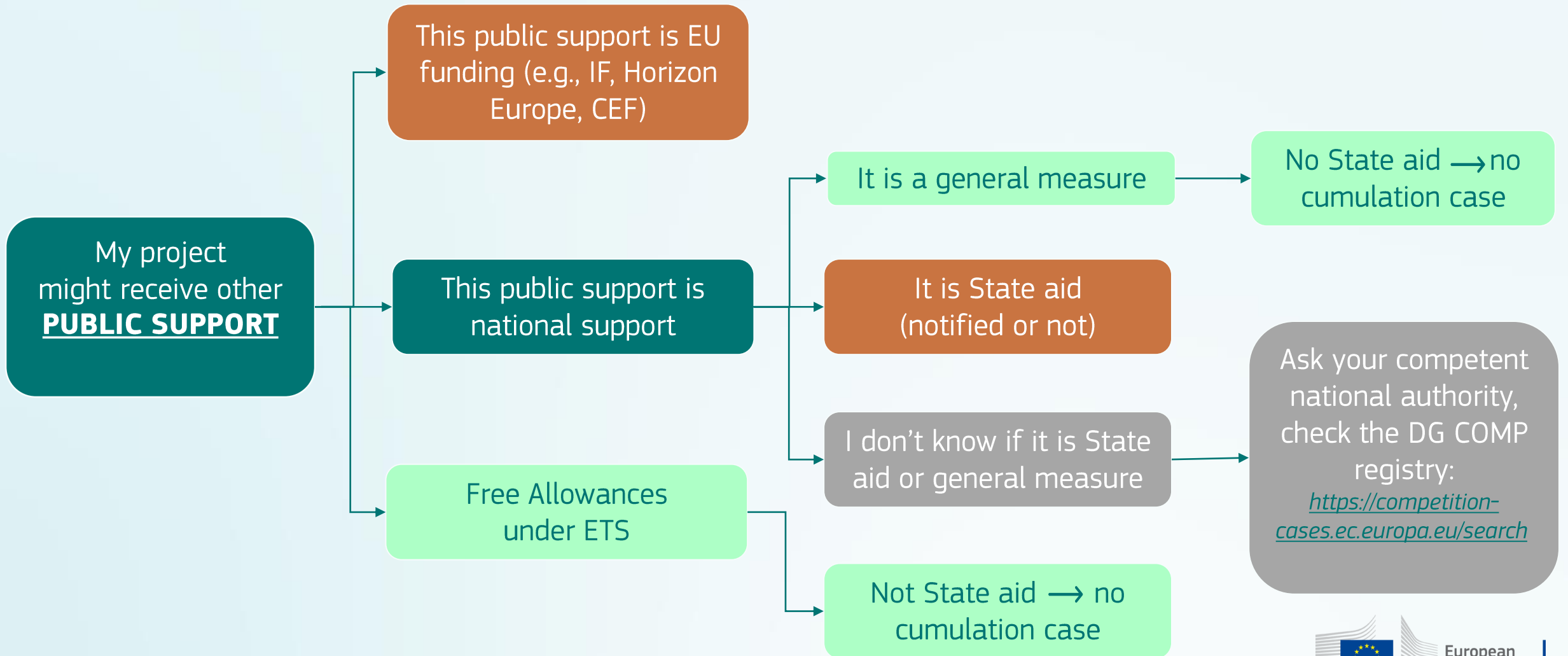
For integrated projects, e.g. ammonia producers:

✗ Direct consumers of the RFNBO derivatives outputs that are supported by the Innovation Fund auction grant cannot benefit from public support for operational costs of their RFNBO hydrogen derivatives consumption levels.

✓ Direct consumers of the output of IF auction projects can benefit from public support for their CAPEX costs.

✓ Direct consumers of the output of IF auction projects can benefit from public support for their energy infrastructure costs provided it is not energy infrastructure dedicated for this project only (“non-dedicated infrastructure”).

Cumulation rules: types of public support



Cumulation rules: in practice

- 1) A **self-declaration** will be required as part of the project application, stating that by the time of grant agreement signature the project will not be in any excluded cases of cumulation.
- 2) If public support was **already awarded but can be renounced**, project can sign the Grant Agreement.
- 3) It is possible to bid with only part of capacity (and if there is **OPEX type of public support for part of capacity that is not bidding** this is not a breach of cumulation rules)
- 4) Non-respect of cumulation rules can lead to Grant Agreement termination + there is DG Competition's general compliance system with State aid and cumulation rules to be observed.

Cumulation rules (2.8 and 7.1) (77 comments)

Main responses:

1. Concern with cumulation rules, requests for higher degree of flexibility (63 comments)
2. Agreement with draft T&Cs (7 comments)

Clarification required:

- General request for more guidance on cumulation support (7 comments)

1. Concern with cumulation rules, requests for higher degree of flexibility

- It is highly likely that the most advanced and competitive hydrogen projects in the pipeline have already received

Specific suggestions of cumulation that should be supported

- At the very least, CAPEX support measures should always be allowed to cumulate with the EHB.
- Cumulation of OPEX supports (i.e. compensation for indirect emission costs provided under the ETS State aid Guideline or tax exemption, grid charge exemptions)
- State Aid
- CBAM (Free Allowances?)

Cumulation rules (2.8 and 7.1) (77 comments)

Specific suggestions of cumulation that should be supported (cnt'd)

- Producers should be able to **resign from previous public support received** by the project, to access exclusively the EHB fixed premium
- Inclusion of a **pay-back clause for IF grants** or national support if the bid is successful would help de-risking projects
- **Temporality:** cumulation to be allowed in early stages then slowly decrease
- Aid that is cumulated must have been awarded on a **competitive basis**
- A geographical spread in allocation of funding by setting a minimum number of Member States that must be awarded funding per auction
- **No cumulation** should be allowed for **projects outside Europe**, as this may create unfair competition with EU domestic production projects
- If the auction does not have a sufficient budget or a price floor, cumulation will be necessary to avoid a 'race-to-the-bottom'

2. Agreement with draft T&Cs

- **No cumulation rule for the same costs** should be maintained in upcoming auctions to create a level playing field between RFNBO producers in different member states.
- Allowing cumulation would be an additional driver for bids by non-mature projects

Auctions-As-A-Service

Johanna Schiele

Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Auctions-as-a-Service – What is it?

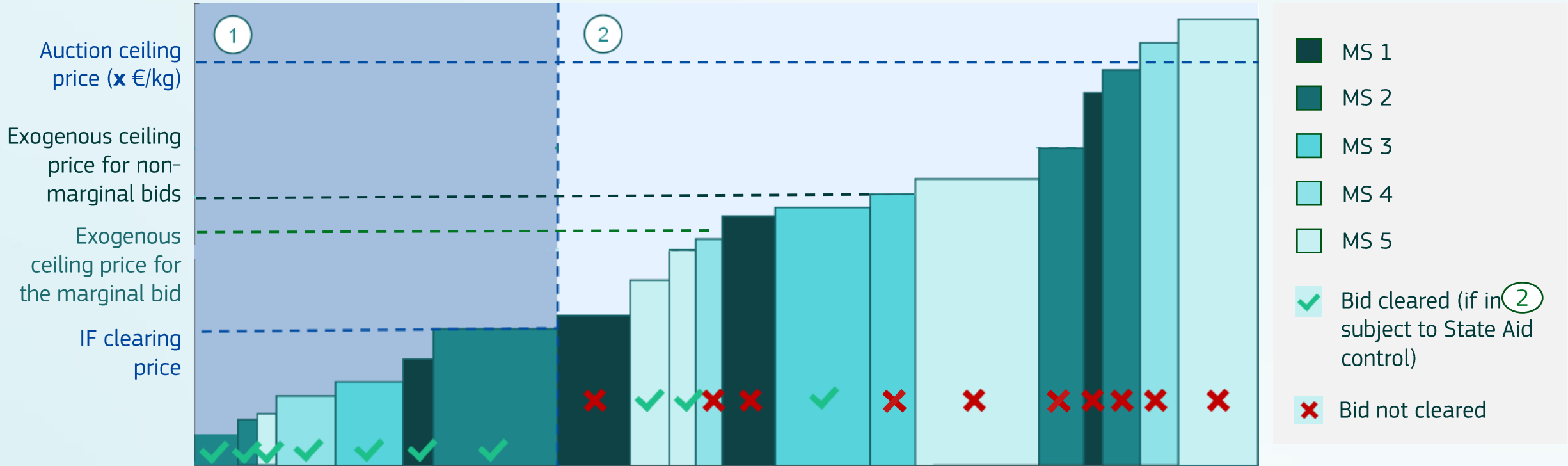
- A way for EEA Member States to use the Innovation Fund hydrogen auction to allocate *additional, national funds* to national projects.
- A way for EEA Member States to make use of a scheme that is by design CEEAG compatible, and to State-aid-notify a national support scheme with the help of Commission templates.
- A way for EEA Member States to avoid unnecessary administrative burdens of new support schemes.
- A way to streamline Hydrogen funding across the EEA

➤ **Great option for allocating national funds such as RRF or Modernisation Fund resources with streamlined State aid process & reduced administrative effort through an existing scheme**

Auctions-as-a-Service Concept

€/kg_H2

illustrative



IF budget clears lowest bids until exhausted, independent of MS of the bids ("best in Europe")

- Member State (MS) budgets clear lowest bids from their own MS only ("best in MS"), until national budget is exhausted. Award subject to State Aid control.
- MS who contribute no own budget cannot award any national bids.

kg_H2

Exogenous ceiling price factor: Pragmatic approach to reduce MS spending uncertainty

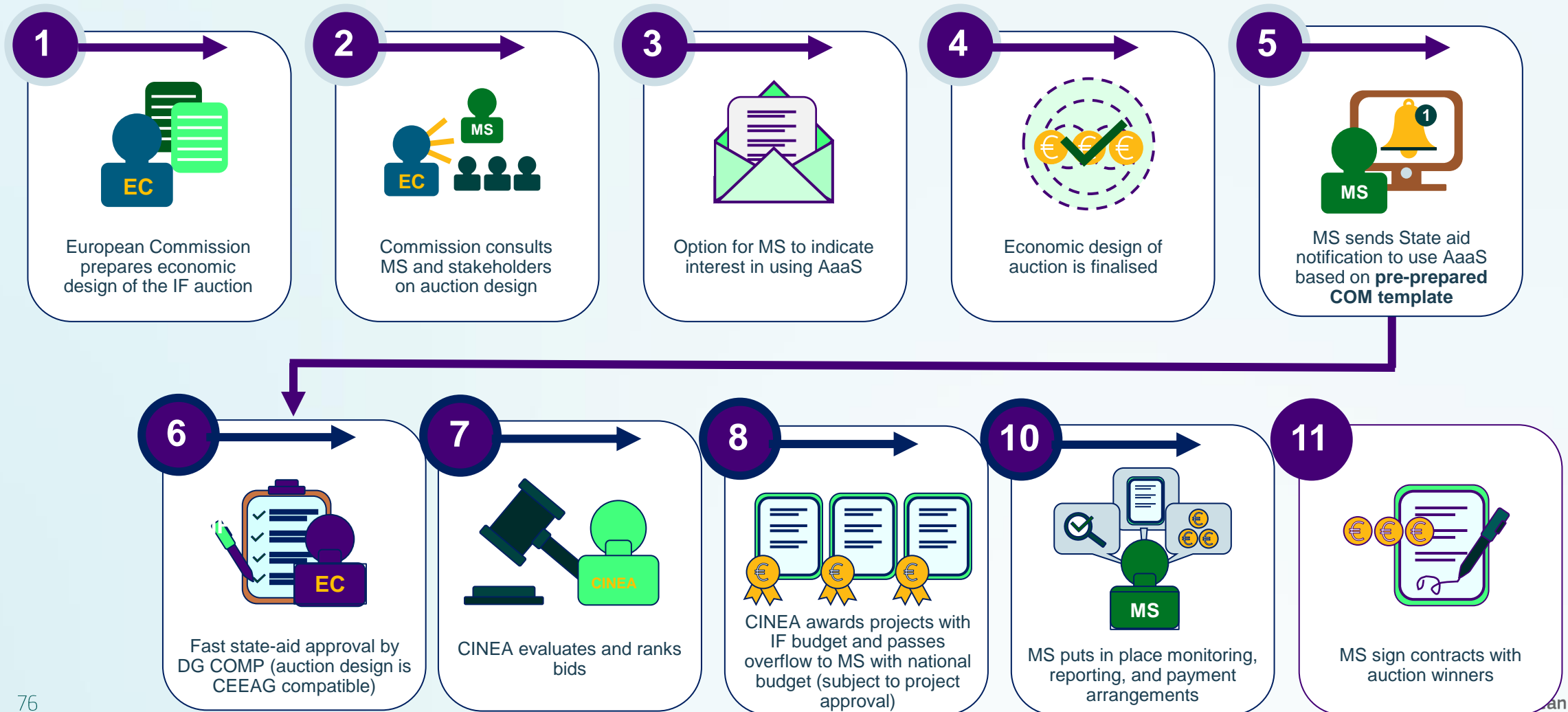
Current rule (Pilot auction round)

- Member State specific, exogenous ceiling price beyond overall auction ceiling price defined as 3 x the last IF-awarded bid that is not from the same country as the AaaS budget.

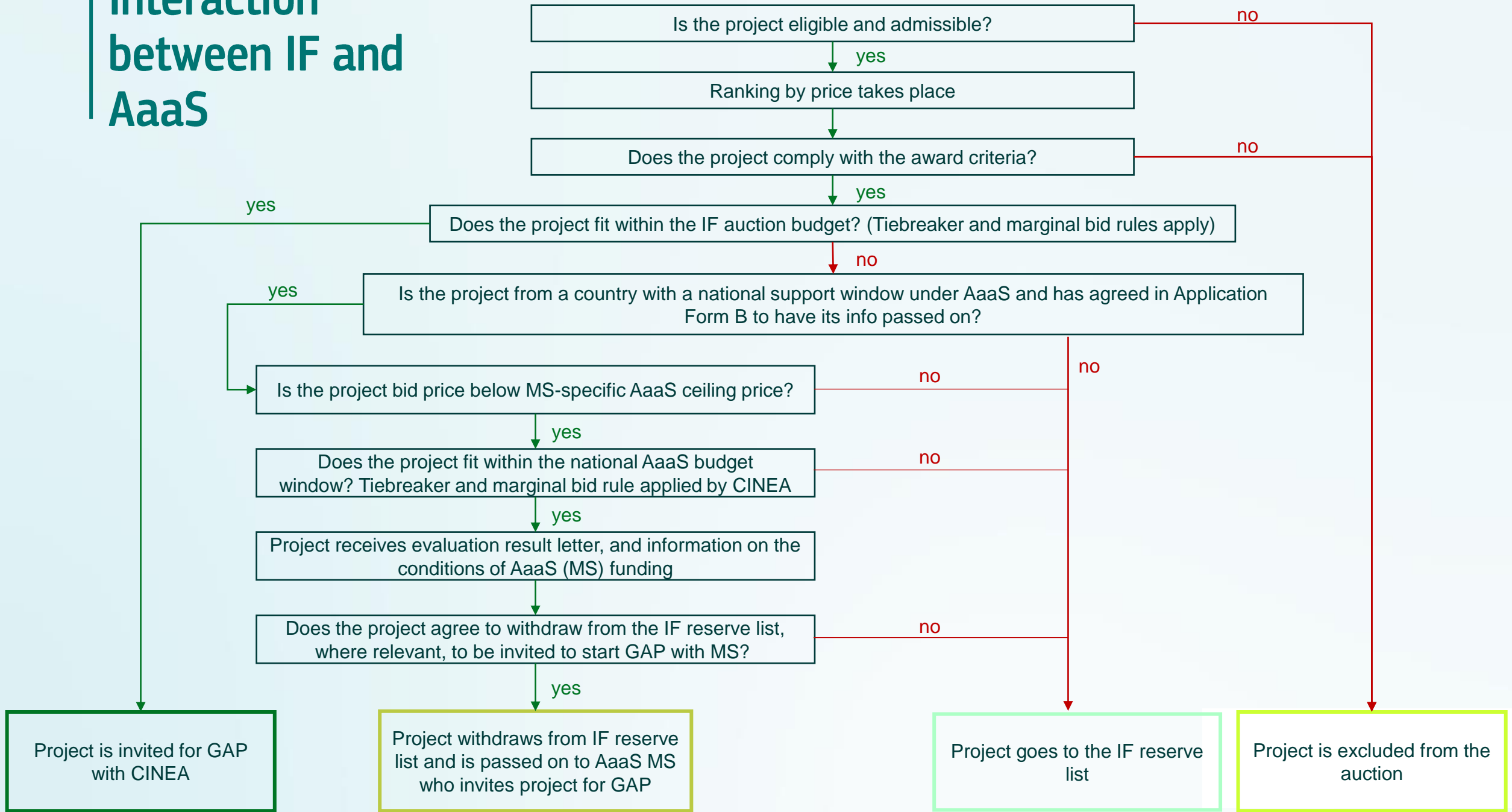
Possible suggestions to improve this rule under consideration:

1. A volume control mechanism based on ex-ante national pipeline assessment i.e. setting limits to the maximum volume (in MW or EUR) that MS could allocate through AaaS based on an exogenous indicator of expected demand such as electrolyser permits requested or granted.
2. Moving to multiplication factors that can take into account different national price structures, but still avoid strategic bidding (methodologies yet to be identified).
3. Increase the current exogenous multiplication factor of 3.

Auctions-as-a-Service Process



Interaction between IF and AaaS



Conclusion and Next Steps

Stefanie Hiesinger

Policy Officer, DG CLIMA C2

Low Carbon Solutions (II): Research & Low Carbon Technology Deployment



Next steps

1. Publication of **Final Terms and Conditions** for the Auction (End August/Beginning September 2024)
2. **Open the auction** for receiving bid (end of 2024)
3. **Selection** of bids (spring 2025)

Sign up as an EU expert

for the INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality



More information here:



<https://europa.eu/IRtnFw>

Become a project evaluator for the Innovation Fund

- Technical experts
- Financial experts
- GHG experts
- Rapporteurs

[Sign up as an expert \(europa.eu\)](https://europa.eu)



More information



All (past) call documents available on the Funding and Tenders Portal including:

- ✓ Guidance and calculation tools on GHG emissions and relevant costs
- ✓ Frequently asked questions

<https://europa.eu/!QB67by>

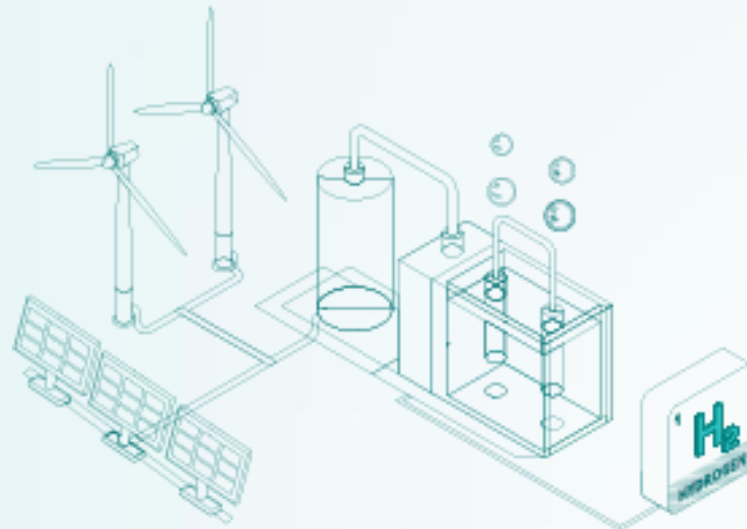


Further info, planning of new calls, recorded webinars and videos available on the IF Website:

<https://europa.eu/!rx34Dt>

And more videos available on YouTube:

<https://bit.ly/2WxK8w7>



Let's keep in touch



climate.ec.europa.eu

cinea.ec.europa.eu/programmes/innovation-fund_en



[@EUClimateAction](https://www.facebook.com/EUClimateAction)



[@EUClimateAction](https://twitter.com/EUClimateAction)

[@cinea_eu](https://twitter.com/cinea_eu)



[@EUClimateAction](https://www.youtube.com/@EUClimateAction)

[CINEATube](https://www.youtube.com/CINEATube)



clima-innovation-fund@ec.europa.eu



[Subscribe to the Innovation Fund mailing list](#)



[EU Environment and Climate](#)

[European Climate, Infrastructure and Environment Executive Agency](#)



[@ourplanet_eu](https://www.instagram.com/ourplanet_eu)

Thank you



© **European Union 2023**

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.,