



# Innovation Fund

Gianmarco Italia – Policy Officer, DG  
CLIMA

*Opportunità di finanziamento per la decarbonizzazione e la transizione verde*

*04 June 2024*



# INNOVATION FUND

*Deploying innovative net-zero technologies for climate neutrality*

*Funded by the EU Emissions Trading System*



€40 billion\* available  
between 2020-2030

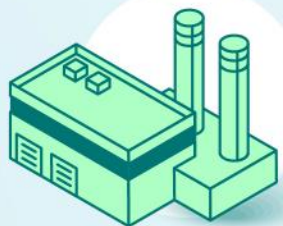


grants awarded through  
regular calls and auctions



avoid GHG emissions,  
boost competitiveness

**supporting innovation in:**



Energy-intensive  
industries



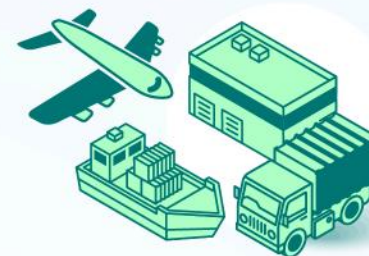
Renewable  
energy



Energy  
storage



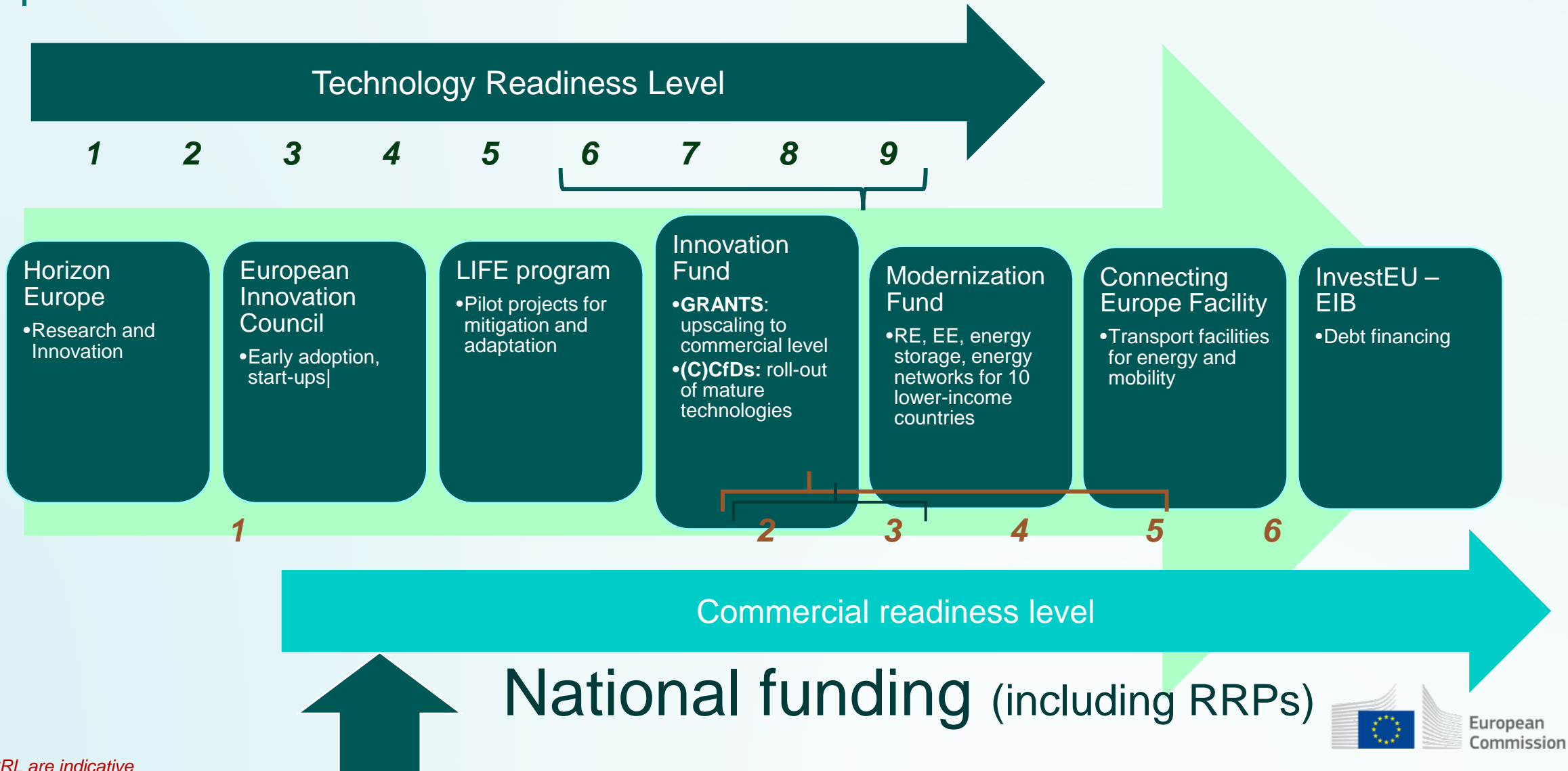
Carbon capture,  
use and storage



Net-zero mobility  
and buildings

*\*based on a carbon price of €75/tonne*

# Innovation Fund – targeted project portfolio



# Supporting urgent policy priorities

In response to **REPowerEU**'s objective of 10Mt of renewable hydrogen production:

- Hydrogen topic under regular grants (€1 billion in 2022)
- 2023 hydrogen auction, at the heart of the European Hydrogen Bank

In response to **Net-Zero Industry Act**:

- Introduction of clean tech manufacturing topic

*All funded clean tech manufacturing projects can deliver **17%** of NZIA solar production capacity, **7%** of battery production capacity and **11%** of electrolyser capacity. All funded CCUS projects can deliver **21%** of the NZIA carbon storage demand.*

In response to the **Wind Package**:

- Budget for Clean tech manufacturing topic was doubled (€700 million in 2022, €1.4 billion in 2023)
- Wind projects are priorities if project scores are equal
- Priority for projects development assistance.



# Evolution of the Innovation Fund



Over EUR 6.7 bn already allocated for low-carbon innovation projects

\*Budget allocated to the selected projects during the contracting phase (Grant Agreement Preparation, GAP)

\*\* Budget made available

# Innovation Fund project status

## As of Now:

100 Ongoing Projects, EUR 6.45 bn

27 under Grant Agreement Preparation\*

23 reached Financial Close

6 Entered into Operation

2 from LSC-2022  
+1 LSC 2022  
reserve list

17 from SSC-2022

7 from IF23 Auction

## Expectations for 2024\*:

70 expected to reach financial close

25 expected to enter into operation

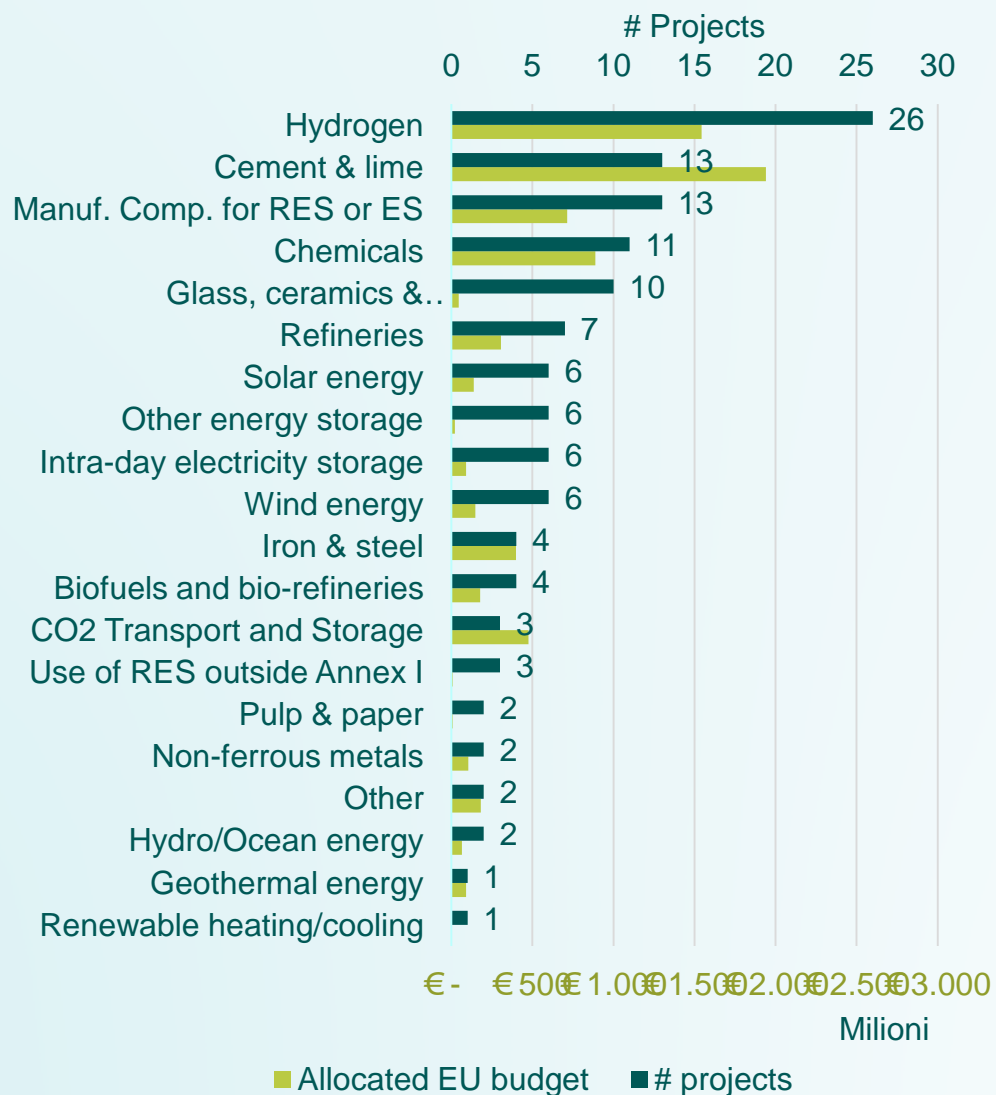
20 small scale projects  
5 large scale projects


Acronym	Call ID	Acronym	Call ID
AAL SEB	SSC-2020	TANGO	LSC-2020
AggregaCO2	SSC-2020	Northstor PLUS	LSC-2021
CarbatteryReFactory	SSC-2020	Agrivoltaic canopy	SSC-2021
DrossOne V2G Parking	SSC-2020	BEAR	SSC-2021
EB UV	SSC-2020	PRIMUS	SSC-2021
EVVE	SSC-2020	VITRUM	SSC-2021
FirstBio2Shipping	SSC-2020	HIPPOW	LSC-2022



# IF Portfolio: ongoing + selected projects\*

Distribution of projects and allocated EU budget per sector



  
24  
Countries\*

  
~457 Mt CO<sub>2</sub> eq  
to be avoided\*

  
€7.4 Billion  
EU granted +  
under GAP\*

  
Projects:  
100 ongoing +  
27\* under GAP

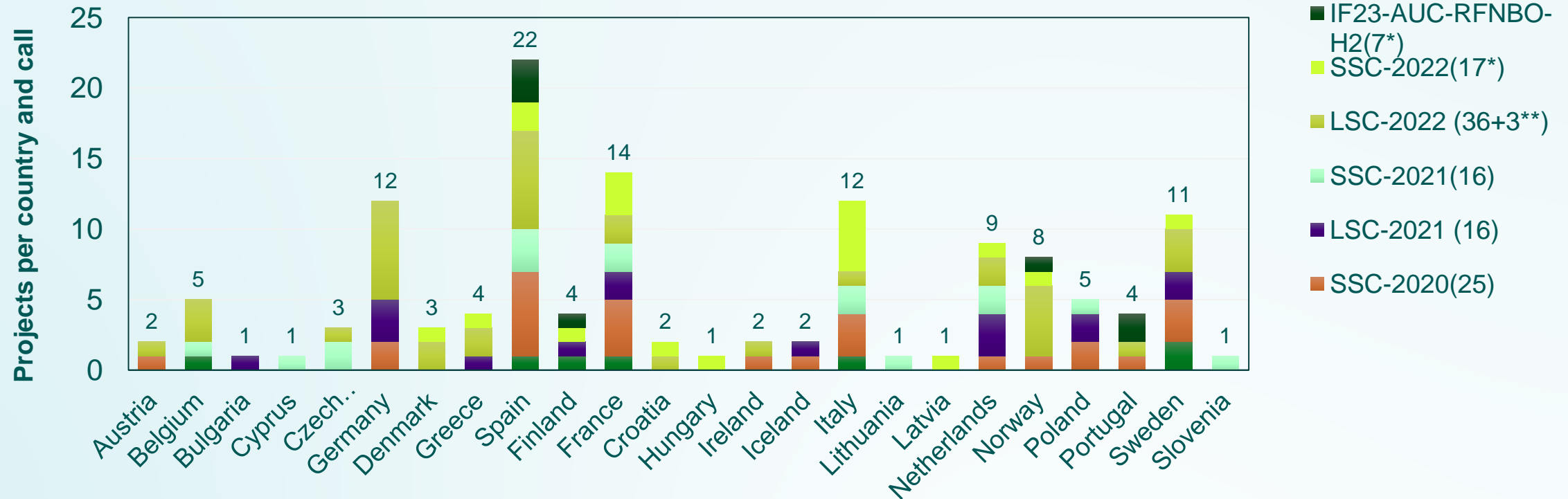
\*Data includes ongoing projects + selected proposals currently under grant agreement preparation (GAP) : 17 from SSC-2022 + 3 from LSC-2022 and 7 from IF23-AUC-RFNBO-H2

# Innovation Fund Project Portfolio per Country

Ongoing and selected projects\*

24  
Countries\*

Innovation Fund's Project portfolio per country \*\*



\* Selected proposals in contracting phase (GAP) : 17 from SSC-2022\* +3 from LSC-2022 (including 1 LSC-2022 from the reserve list) + 7 from IF23-Auc-RFNBO-H2

\*\*Projects with locations in more than one country have been represented for each country where they are implemented

Terminated projects have been removed from the statistics



# Italy

Ongoing & pre-selected projects (SSC 2022)



**12**  
Projects

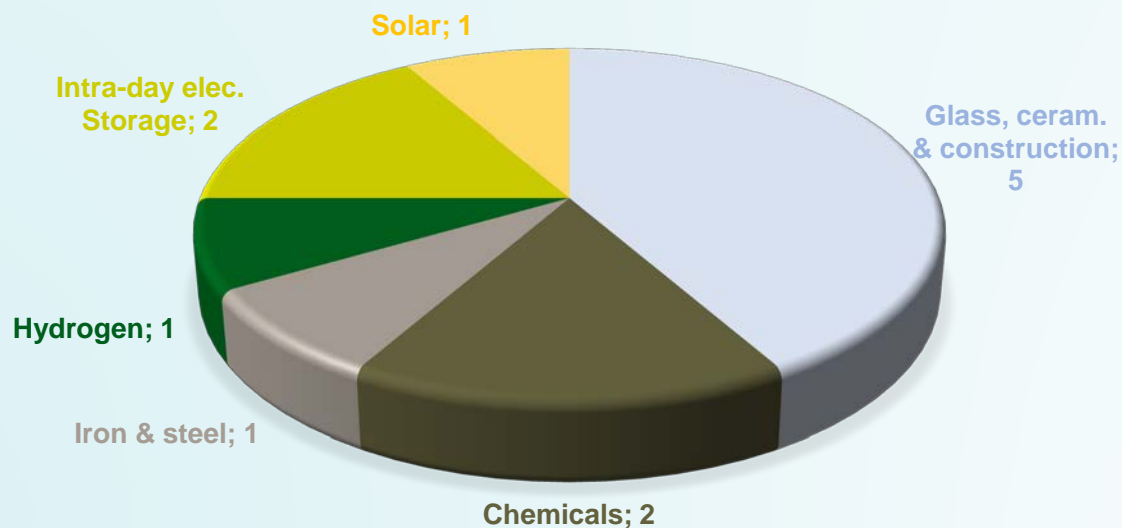


**170.8 million €**  
EU contribution



**25 986 ktCO<sub>2</sub> eq**  
first 10 years

Sectoral distribution



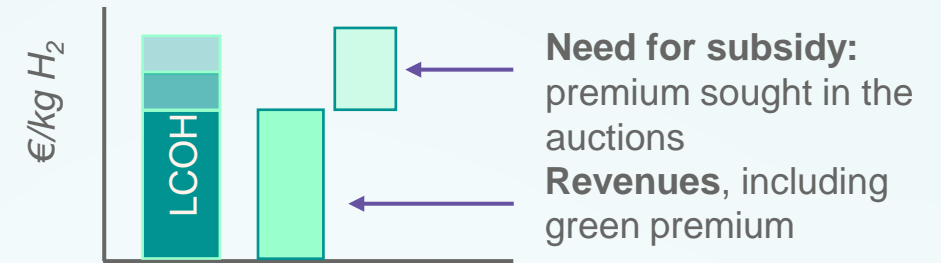
Italy



# Overview of the pilot IF23 Auction

- Budget: **€800M**
- Auctioned good: **RFNBO hydrogen**
- Support in form of a **fixed premium** in €/kg of renewable hydrogen **produced** over **10 years**
- Bids **ranked on price** – budget allocated to projects with the lowest specific support requirements
- **Pay-as-bid** (no indexation to inflation)
- **Output based support**, upon verified and certified production of RFNBO volumes (no payments before entry into operation)
- **Semi-annual** payments
- **Auctions-As-A-Service**: Germany's additional budget of EUR 350 million

Fixed-premium auction

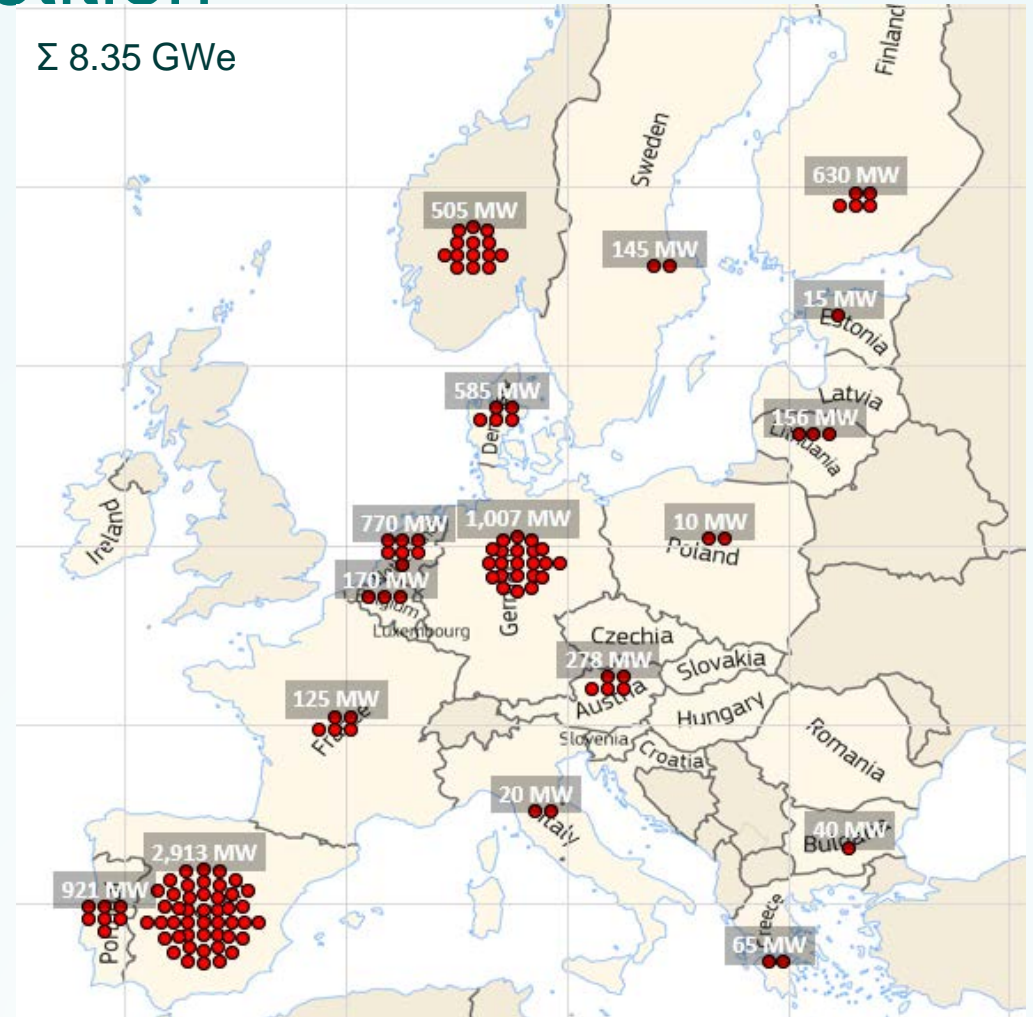


Bids ranked on price only



# The first pilot auction round was a success with high levels of participation and competition

- **132\* bids** from 17 different EEA countries
- Only 13 projects failed admissibility and eligibility criteria
- **Seven bids selected\*\*** requesting a total grant amount of **€720 million**
- Selected bids between **EUR 0.37** and **EUR 0.48 / kg of H<sub>2</sub>**



\* 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.

# IF23 RFNBO H2 Auction: 7 projects selected for GAP

Project	Coordinator	Country	Bid volume (kt_H <sub>2</sub> / 10 yrs)	Bid capacity (MWe - megawatts electricity)	Expected GHG avoidance (kt_CO <sub>2</sub> / 10 yrs)	Bid price (EUR/kg)
eNRG Lahti	Nordic Ren-Gas Oy	Finland	122	90	836	0.37
El Alamillo H <sub>2</sub>	Benbros Energy S.L.	Spain	65	60	443	0.38
Grey2Green-II	Petrogal S.A.	Portugal	216	200	1477	0.39
HYSENCIA	Angus	Spain	17	35	115	0.48
SKIGA	Skiga	Norway	169	117	1159	0.48
Catalina	Renato Ptx Holdco	Spain	480	500	3284	0.48
MP2X	Madoquapower	Portugal	511	500	3494	0.48

GAP: Grant Agreement Preparation

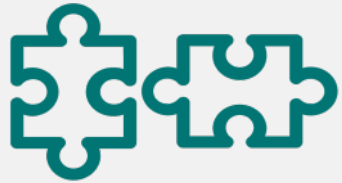
[Link to the press release](#)



# 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

# cumulation of IF grants and public support



## Cumulation rules to be observed

1. No double funding principle for cumulation with EU funds
  2. Specific rules for State aid
- Or both (e.g. in case of Cohesion policy or RRF)



## Contact national authorities

1. Competent national authorities should check State Aid cumulation rules
2. EU programmes implementing bodies check the “no double” funding principle



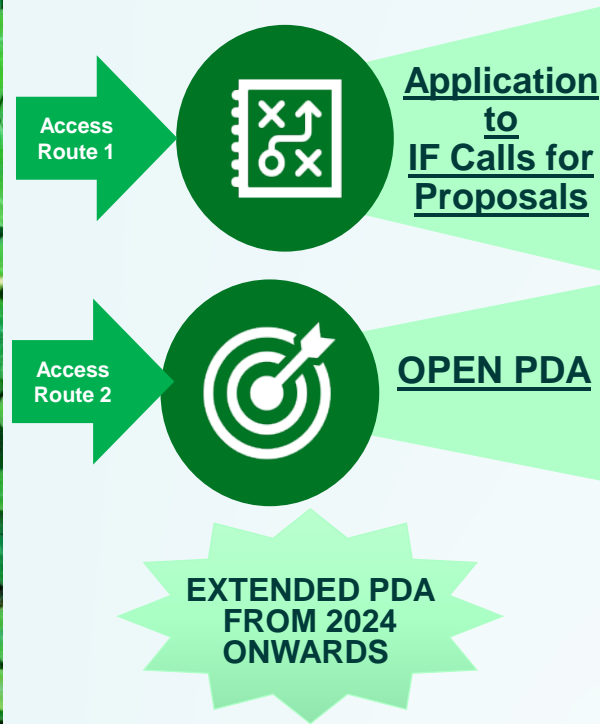
## Inform CINEA

- Timely information is key
1. That project is cumulating
  2. That rules are verified by competent authorities
- (If cumulation is excessive grant might be reduced)



# Innovation Fund PDA

EIB financial and technical experts provide Project Development Assistance (PDA) to Innovation Fund eligible projects



- After submitting an IF grant application, and if unsuccessful, your application may be eligible for PDA.

- PDA aims to **enhance the financial viability and improve the technical maturity of project proposals** for submission to future Innovation Fund Calls (although not compulsory) or other EU funding requests, national grant preparation or financing from private sources.

- Project promoters who are interested in obtaining PDA support may **approach the EIB directly**.

- **Eligibility for the Innovation Fund is a prerequisite** for consideration of Open PDA.

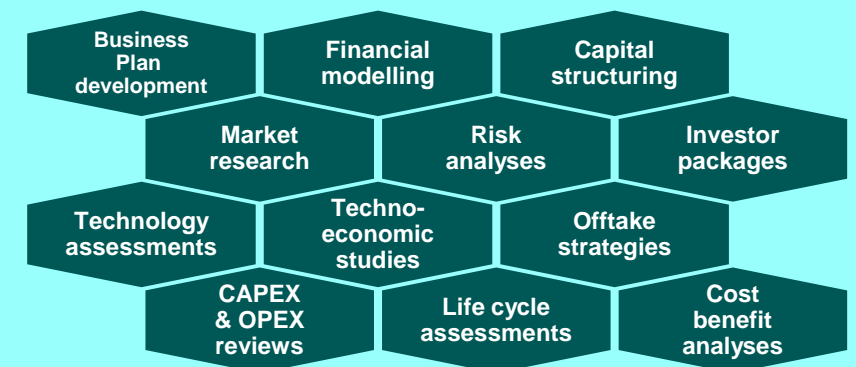
- ✓ Applying or benefitting from PDA is **not dependent** on submitting an application to the Innovation Fund.

- ✓ Under the extended PDA process, **new sectoral and geographic targets are in place**, and a larger number of projects will be supported.

More information on EIB webpage

**Innovation Fund -**  
**Project**  
**Development**  
**Assistance**  
**([eib.org](http://eib.org))**

## Examples of PDA support



# Forthcoming events & Future Calls

11 June	DG CLIMA stakeholders' consultation on the general calls
12 June	DG CLIMA Auction stakeholder meeting
27 June	Innovation Fund Expert Group meeting
27 June	Member States' closed-door meeting
December	Innovation Fund Call 2024
December	Innovation Fund Hydrogen Auction 2024



# Innovation Fund

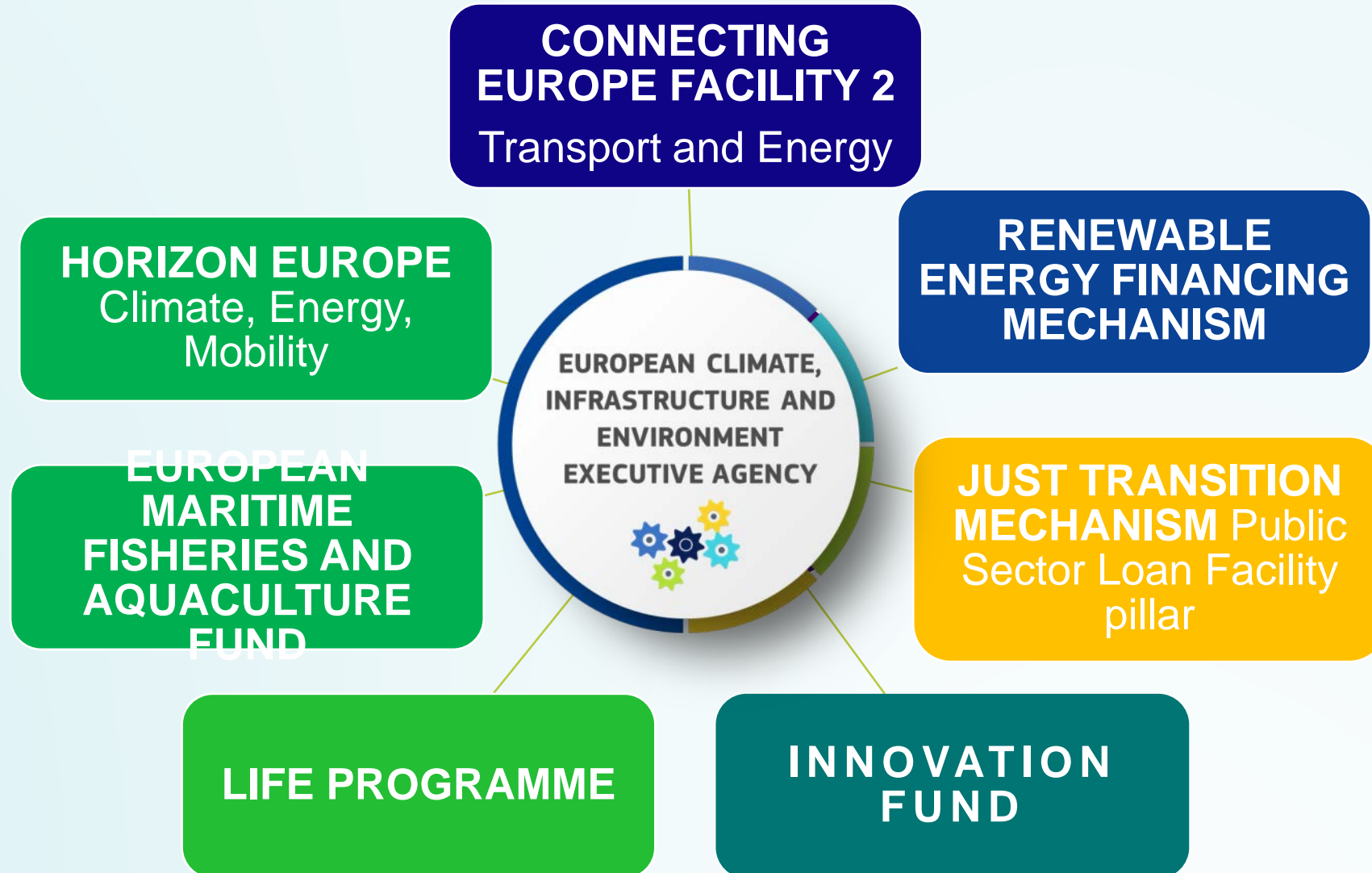
## I criteri di eleggibilità e selezione dei progetti

Gianluca Tondi  
Head of Sector “Energy-Intensive Industries and CCU”  
Innovation Fund unit, CINEA

*Opportunità di finanziamento per la decarbonizzazione e la transizione verde*

*04 June 2024*

# CINEA Funding Programmes



# Innovation Fund 2023 NZT Call (closed)

**Duration:** 23 Nov. 2023 - 9 April 2024

**Funding:** € 4 billion + PDA

**Grant distribution: LUMP-SUM contribution:**

- Grant up to 60% of relevant costs
- Up to 40% of grant at financial close
- Remaining amount of at least 60% after financial close
- Generally, at least 10% after Entry into operation

**Topics:**

- Large Scale Projects
- Medium Scale Projects
- Small Scale Projects
- Clean-tech manufacturing
- Pilot projects

**Sectors:**

- Energy Intensive Industries
- Renewables
- Energy Storage
- Carbon capture and storage
- Maritime
- Aviation
- Buildings

**Location for Implementation:**

EU Member States and  
Iceland, Liechtenstein and  
Norway

[Link to Info Day for recordings](#)  
[Link to funding & Tender Portal](#)



# Eligible activities scope for 2023 NZT call

## Large, medium, and small-scale projects

- **Innovation in low-carbon technologies and processes** in sectors listed in Annex I and Annex III to the EU ETS Directive [2003/87](#), including CCU
- Construction and operation of projects for **CCS**
- Construction and operation of innovative **renewable energy** and **energy storage technologies**
- **Maritime and aviation** transport sectors: energy efficiency, sustainable alternative fuels, electrification, zero-emission propulsion technologies, wind technologies, innovative infrastructure in the maritime sector for EU container transshipment ports

## Cleantech components manufacturing

- **Renewable energy installations** (in photovoltaics, concentrated solar power, on-shore and offshore wind power, ocean energy, geothermal, solar thermal, and others), including their connection to the electricity/heat grid
- **Electrolysers and fuel cells**
- **Energy storage solutions** covering batteries and other storage solutions for stationary and mobile use for intra-day and long duration storage
- **Heat pumps**

## Pilot projects

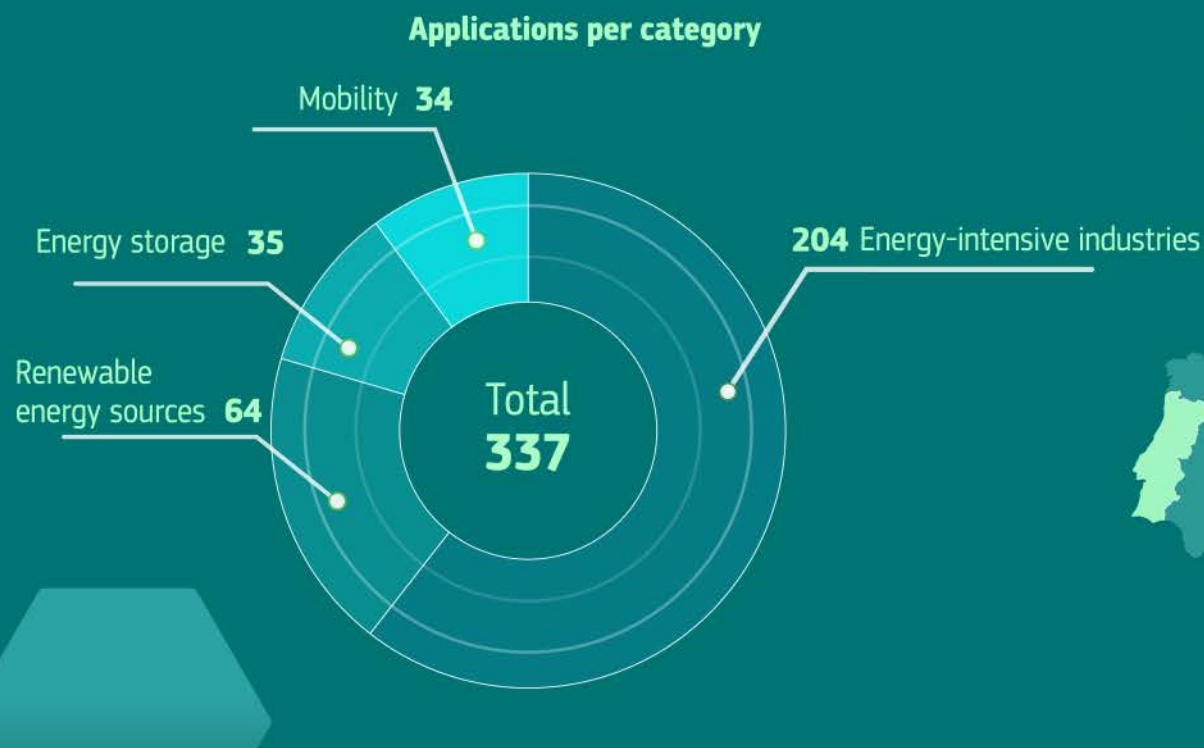
- Construction and operation of projects **validating, testing and optimising highly innovative, deep decarbonisation solutions in all sectors** eligible for Innovation Fund support



# INNOVATION FUND

Funded by the EU Emissions Trading System

## Applications to the 2023 Net-Zero Technologies call



Total funding requested: EUR 24.6 billion, 6x higher than the available budget (EUR 4 billion)

Overall, potential to reduce 1.4 billion tonnes CO<sub>2</sub> equivalent

# Admissibility and eligibility criteria

## Admissibility

- Submitted before call deadline, electronically and using forms in the Submission System
- **Complete all the application forms and include mandatory annexes** (full list in section 5 of call text)

## Eligibility

- Participants have to be **legal entities**; can be established anywhere in the world.
- **Projects must be located in the EEA (EU Member States and Iceland, Liechtenstein, and Norway).**
- The project must:
  - ⑩ Reach **financial close within four years** after grant signature (maximum time to financial close)
  - ⑩ **Operate at least** (minimum GHG emission avoidance monitoring period) **five years** after entry into operation
    - Except Small Scale Projects and PILOTS – at least **three years** after entry into operation
- Maximum grant amount **must not exceed 60% of the relevant costs**
- Eligible activities

# Award Criteria

## Degree of innovation

- Innovation beyond state of the art (see Annex 1 of call text) at European level (except SSP – European or national)
- Consider the ongoing Innovation Fund [projects](#)

## 1.GHG emission avoidance potential

- Absolute
- Relative
- Quality of the GHG emission avoidance calculation and minimum requirements

## 1.Project maturity

- Technical
- Financial
- Operational

## Replicability

- Efficiency gains
- Further deployment
- Resilience of EU industrial system
- Multiple environmental impacts
- Knowledge sharing

## 1.Cost efficiency

- Cost efficiency ratio (different formula for Pilot projects)
- Quality of the cost calculation and minimum requirements

# Degree of Innovation

- Innovation Fund aims at supporting projects beyond incremental innovation on a scale from intermediate to breakthrough, including scaling-up, considering the European level as reference point (for SSP topic the European or national level)

Very low / incremental innovation

Intermediate or strong

Very strong or breakthrough

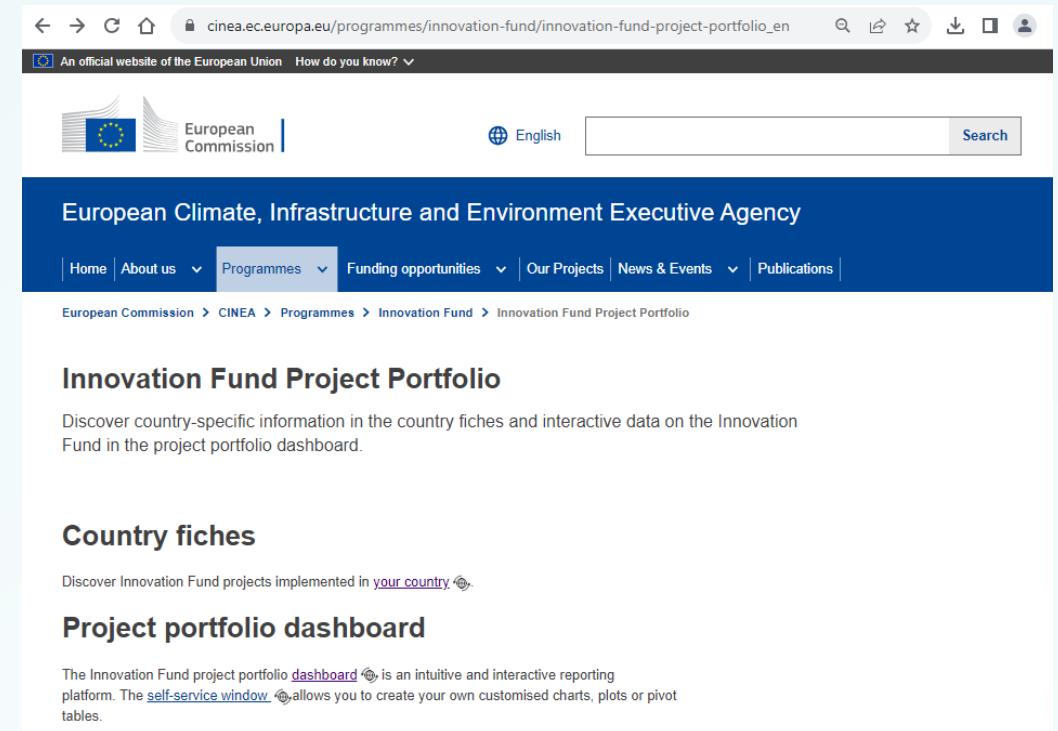
**Incremental innovation:** minor changes or improvements to existing products, processes or business models; implies limited new knowledge / technology; such projects **will not be retained.**

**Intermediate or strong:** new or considerably changed technologies or processes or business models; novel combinations of mature technologies; scale-up of innovative technologies

**Very strong or breakthrough:** completely new technologies or processes or business models; innovations leading to significant changes that transforms entire markets or industries or creates new ones

# References to Innovation Fund projects

- Proposals focusing on innovations similar to the ones of ongoing Innovation Fund projects, must clearly justify where the new innovative elements lie
- Such projects may receive a lower score
- Consult the list of funded Innovation Fund projects ([Innovation Fund Project Portfolio Dashboard](#))

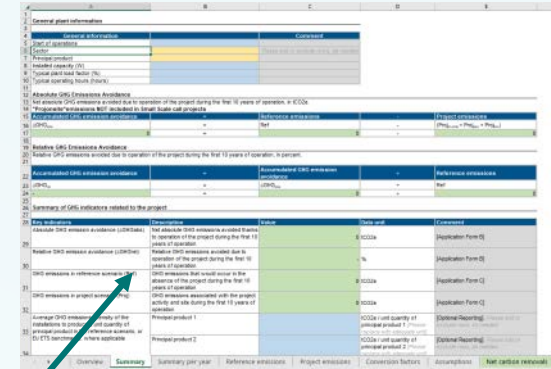


# GHG emission avoidance potential

- Absolute GHG emission avoidance: difference between the expected GHG emissions of the proposed project and the GHG emissions in the reference scenario during 10 years after entry into operation.
- Relative GHG emission avoidance: absolute GHG emission avoidance divided by the GHG emissions in the reference scenario over the same 10 years period

The calculation must be done:

- using the relevant GHG emission avoidance calculator
- following the [Guidance on the GHG emission avoidance methodology](#)



The screenshot shows a complex spreadsheet with multiple tabs. The 'General project information' tab is active, displaying fields for project name, location, and various emission factors. A green arrow points from the 'Guidance on the GHG emission avoidance methodology' text to this spreadsheet.





# Project Maturity

Technical maturity

Financial maturity

Operational maturity

# Technical Maturity – key points

**Objective: assess the technical readiness and feasibility of the proposed solution**

Technical feasibility to deliver the expected output and GHG emissions avoidance

Technology risks and proposed mitigation measures

# Financial Maturity – key points

**Objective: assess the project capacity to reach  
Financial Close within 4 years or faster**

**Project business plan**

**Soundness of the financing  
plan**

**Commitment of project  
funders**

**Understanding of project  
business and financial  
risks**

# Operational Maturity – key points

**Objective: assess the capacity of the proposed project to be successfully implemented**

Credible project implementation plan covering financial close, entry into operation and annual reporting after the entry into operation and related deliverables

–Soundness of the strategy for ensuring public acceptance

Relevance and track record of the project management team and soundness of the project organisation

Address project's implementation risks (e.g. dependencies on other projects) and credible risk mitigation measures

State of play and credibility of the plan for obtaining required permits, intellectual property rights or licences and other regulatory procedures

# Replicability

- Replicability in terms of efficiency gains

Replicability in terms of further deployment

- Resilience of EU industrial system

Potential in terms of multiple environmental impacts

Quality and extent of the knowledge sharing

# Cost efficiency

**Requested Innovation Fund  
grant + other public  
support \***

**Absolute GHG emission  
avoidance**

During 10 years after entry into operation

Maximum requested IF  
grant is 60% of total  
relevant costs

Applicants choosing not to  
apply for the maximum  
grant will be more  
competitive when ranked  
against other applicants in  
'cost per unit performance'  
metric.

*(\*) Other public support must impact the same project (i.e. the case of cumulation) and include State aid or funding from the EU funding programmes*



# Relevant Cost

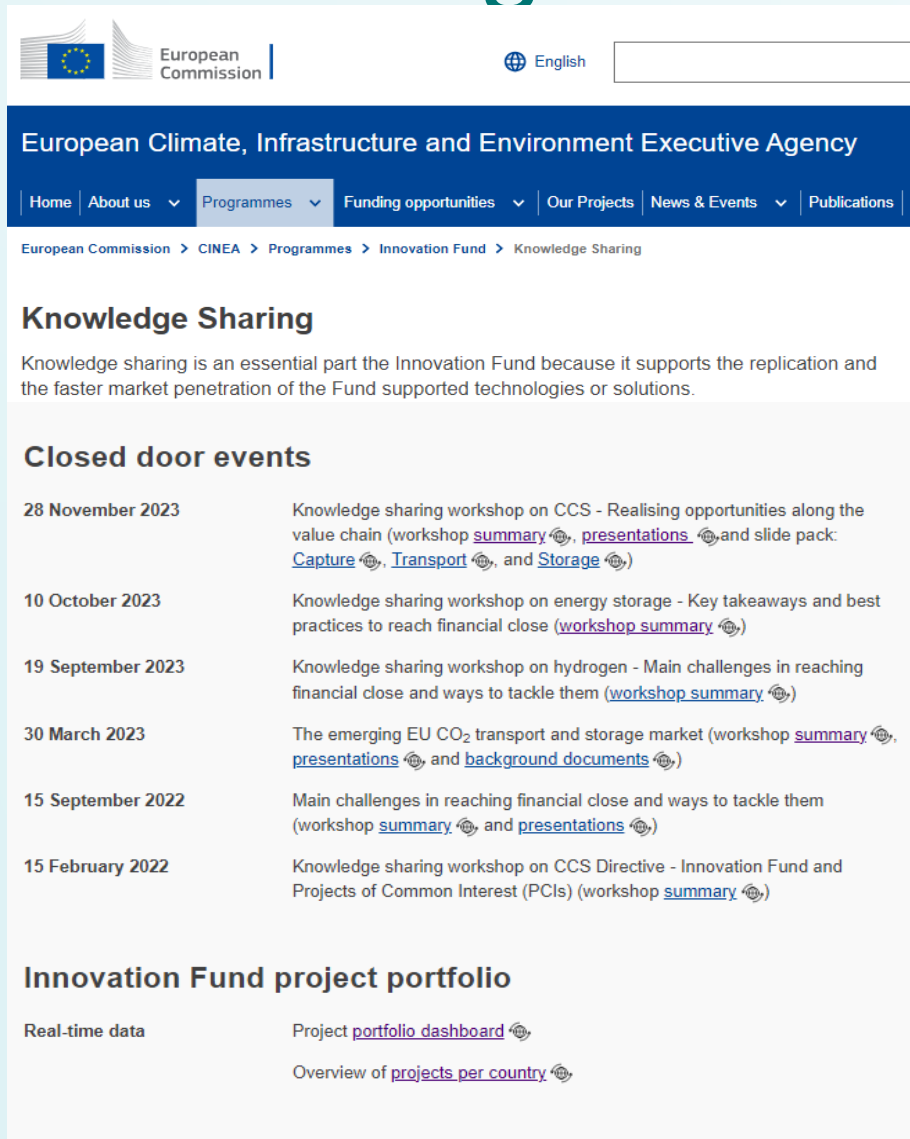
- The Relevant Costs are the net extra costs that are borne by the project proponent as a result of the application of the innovative technology related to the reduction or avoidance of the greenhouse gas emissions
- Relevant costs are calculated according to the [Guidance on the relevant cost methodology](#), using the provided relevant cost calculator
- The [maximum grant amount](#) must be calculated on the basis of the relevant costs and [must not exceed 60 % of the relevant costs](#).

# Knowledge Sharing

COMING SOON (June 2024)

## Knowledge Sharing Annual report

This report sheds light on **challenges** related to difficult market conditions, securing finance and off-take agreements,...as well as **insights** into how IF projects apply different strategies to overcome these challenges.



The screenshot shows the European Commission website's Knowledge Sharing section. At the top, there's the European Commission logo and a language selector set to 'English'. Below this is a blue navigation bar for the 'European Climate, Infrastructure and Environment Executive Agency' with links to Home, About us, Programmes, Funding opportunities, Our Projects, News & Events, and Publications. A breadcrumb trail indicates the path: European Commission > CINEA > Programmes > Innovation Fund > Knowledge Sharing. The main heading is 'Knowledge Sharing', followed by a brief description: 'Knowledge sharing is an essential part the Innovation Fund because it supports the replication and the faster market penetration of the Fund supported technologies or solutions.' Below this is a section titled 'Closed door events' listing six workshops with their dates and key documents (summaries, presentations, and background documents) available for download. The final section is 'Innovation Fund project portfolio', which includes links to 'Real-time data' (Project portfolio dashboard) and an 'Overview of projects per country'.

European Commission

English

European Climate, Infrastructure and Environment Executive Agency

Home About us Programmes Funding opportunities Our Projects News & Events Publications

European Commission > CINEA > Programmes > Innovation Fund > Knowledge Sharing

### Knowledge Sharing

Knowledge sharing is an essential part the Innovation Fund because it supports the replication and the faster market penetration of the Fund supported technologies or solutions.

#### Closed door events

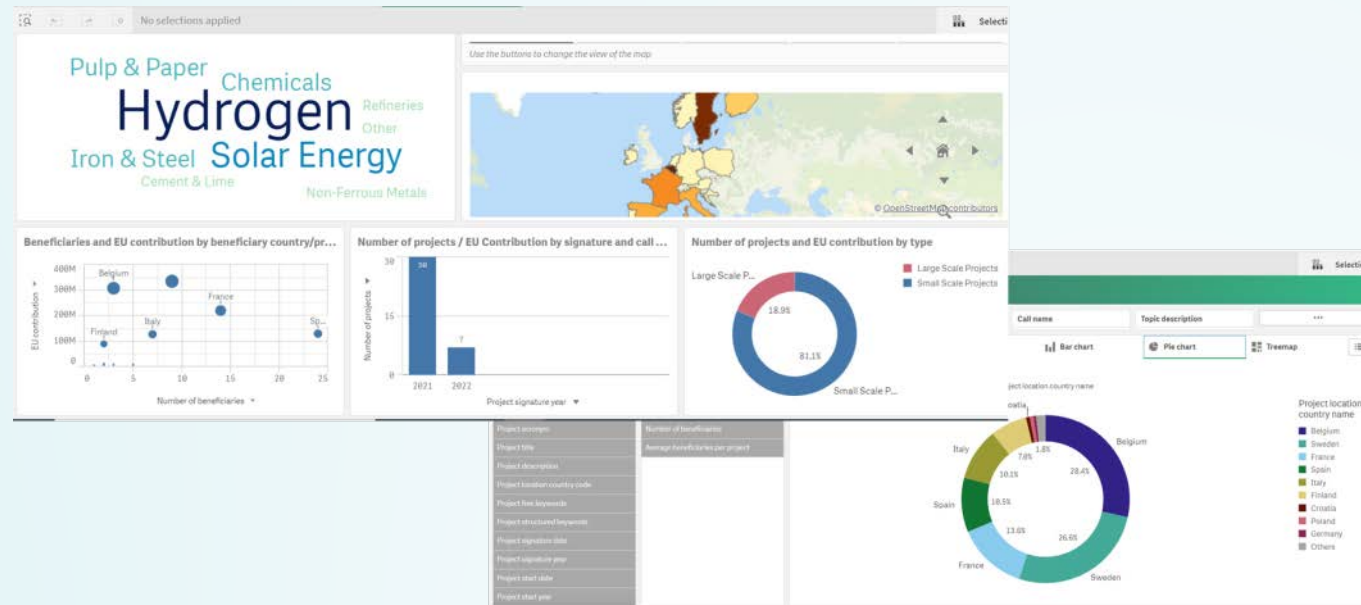
28 November 2023	Knowledge sharing workshop on CCS - Realising opportunities along the value chain (workshop <a href="#">summary</a> , <a href="#">presentations</a> and slide pack: <a href="#">Capture</a> , <a href="#">Transport</a> , and <a href="#">Storage</a> )
10 October 2023	Knowledge sharing workshop on energy storage - Key takeaways and best practices to reach financial close ( <a href="#">workshop summary</a> )
19 September 2023	Knowledge sharing workshop on hydrogen - Main challenges in reaching financial close and ways to tackle them ( <a href="#">workshop summary</a> )
30 March 2023	The emerging EU CO <sub>2</sub> transport and storage market (workshop <a href="#">summary</a> , <a href="#">presentations</a> , and <a href="#">background documents</a> )
15 September 2022	Main challenges in reaching financial close and ways to tackle them (workshop <a href="#">summary</a> and <a href="#">presentations</a> )
15 February 2022	Knowledge sharing workshop on CCS Directive - Innovation Fund and Projects of Common Interest (PCIs) (workshop <a href="#">summary</a> )

#### Innovation Fund project portfolio

Real-time data Project [portfolio dashboard](#)

Overview of [projects per country](#)

# IF dashboard



Available on [CINEA's website](#)

# 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>**

**[Link to the IF23-NZT call](#)**



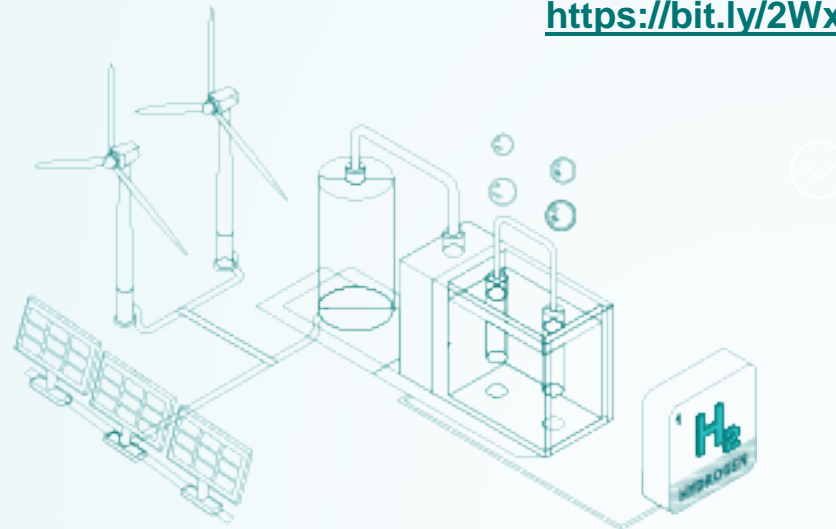
**Further info, planning of new calls, recorded webinars and videos available on the IF Website:**

**[Innovation Fund - European Commission \(europa.eu\)](#)**

**[Innovation Fund - European Commission \(europa.eu\)](#)**

**And more videos available on YouTube:**

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



# Let's keep in touch



[climate.ec.europa.eu  
u  
cinea.ec.europa.eu/programmes/innovation-fund\\_en](https://climate.ec.europa.eu/cinea.ec.europa.eu/programmes/innovation-fund_en)



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

# 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>

## Join as project evaluator for Innovation Fu

- Technical expert
- Financial expert
- GHG expert
- Rapporteur

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



# Thank you



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