



# Sectoral perspectives on deployment and lesson learnt - **Energy Storage and Hydrogen**

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# The H2IF project



H2IF aims to define a methodology to accompany R&I results in **Energy Storage and Hydrogen** sectors to industrial readiness and demonstrate how to **scale up Horizon-funded results to IF projects → 3 H2020 projects to the Innovation Fund instrument**

- **Develop a roadmap** for mature R&I results implementation on ES and H2 and identify synergies with IF
- **Implement the roadmap** for upscaling projects and prepare proposals for the IF
- Commit to the deployment of energy storage and hydrogen projects and EU climate targets by **facilitating the innovation pipeline through policy recommendations**
- **Promote, disseminate and communicate** the objectives and achievements of the project and strengthen collaboration with other European R&I energy storage initiatives

# The H2IF consortium



## Industry association



## EU Funds consultancies



## H2020 projects/technology owners



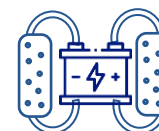
## Innovation proposed



Ni-Zn Batteries



Hydrogen storage technology



Hydrogen-Bromine Flow Battery

# The H2IF activities



2023

**Selection of relevant projects** and project owners

Jan  
2024

Project **kicks off**

Apr  
2024

**Definition of roadmap** to IF readiness

2024  
2025

Kick-off of **proposal writing activities** (collection of documents, IF workshop...)

Apr  
2026

Submission of **1 proposal**

Apr  
2027

Submission of **2 proposals\***

June  
2027

Collection of **lessons learnt** (policy recommendations and innovation pipeline)

\* Of which only 1 identified



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18/05/2026

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# Project's main outputs



- Selection methodology (D3.1)
- IF-readiness assessment survey (D3.1)
- Roadmap to IF application (D4.1, D5.1)
- Annotated IF templates (D4.1, D5.1)
- Dissemination channels
- Advocacy and recommendations

All tools available from our website

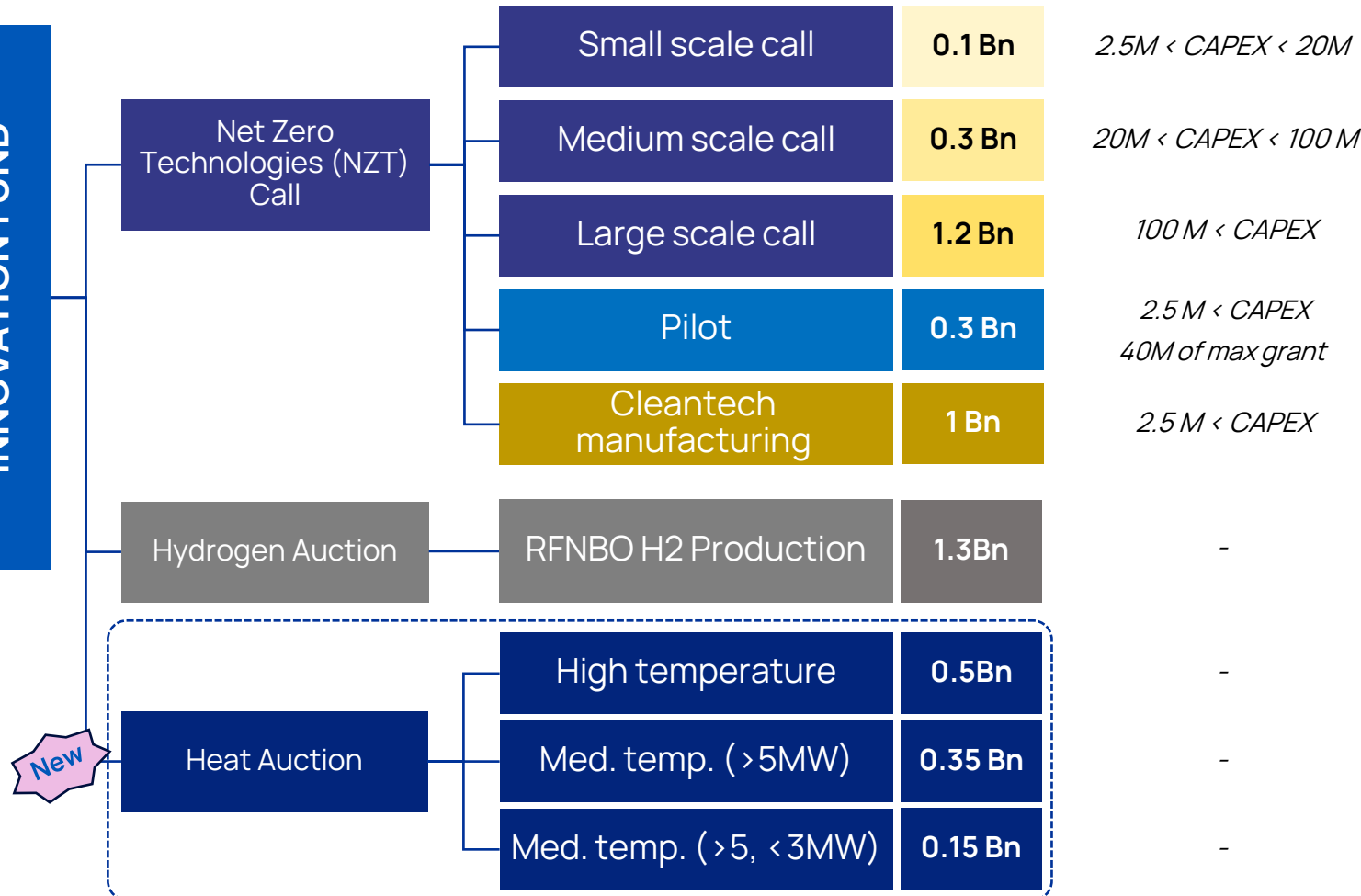


# The IF25 call

€5.2  
billion

Available in IF25

INNOVATION FUND



General decarbonisation topics cover

- Sectors mentioned in Annex I and III of the EU ETS (Energy Intensive Industry)
- CCU, CCS
- Renewable energy and energy storage
- Maritime and aviation

Validating, testing & optimising highly innovative, deep decarbonisation solutions in all IF sectors

Renewable energy installation, electrolyser and fuel cells, energy storage solutions, heat pumps.

Fixed premium upon RFNBO H2 production (up to 10y of operation).

- Projects electrifying industrial process heat via e.g., heat pumps, direct/indirect resistance heating, electromagnetic and dielectric heating, plasma heating;
- Projects using direct-renewable (solar thermal or geothermal) heat for industrial heat processes;
- Hybrid of above-mentioned technologies



# IF24 & IF25

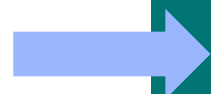
**IF24:** 359 applications

**IF25:** 358 applications

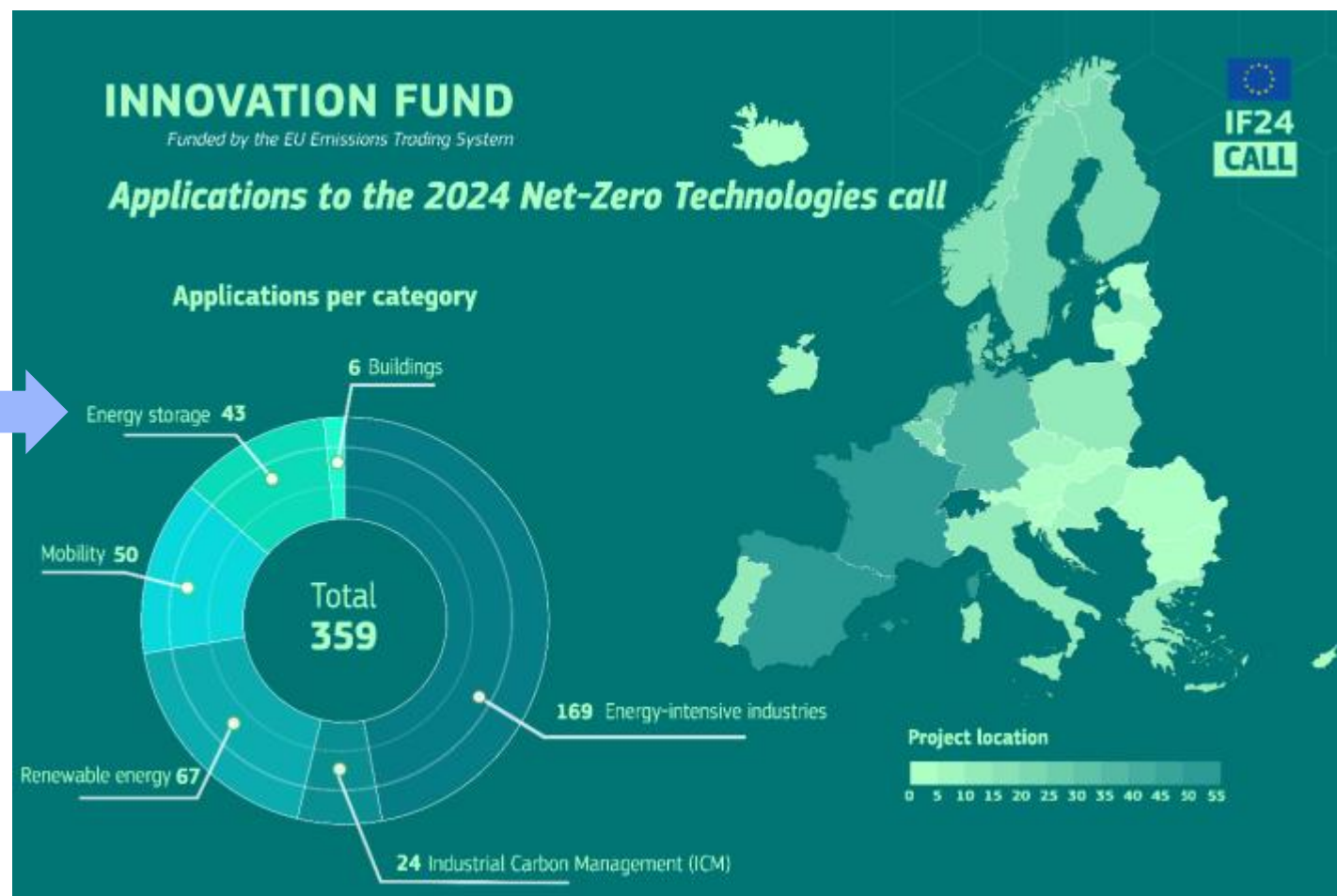
**IF25 - H2 Auction:** 58 bids

**IF Heat Auction:** 85 bids

12%



Topic	Share
Large-scale	39%
Medium-scale	15%
Small-scale	13%
Cleantech Manufacturing	14%
Pilots	19%



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# IF Portfolio - Hydrogen



## Hydrogen

- RFNBO Hydrogen production
- Hydrogen mobility
- Electrolyser manufacturing
- Efficient PEM stack production.



12/22 H<sub>2</sub> Auction 23 and 24 have signed grant

Supported by 12 other projects in PtX, electrolyser manufacturing, hydrogen mobility...

Approximately 3.3B EUR allocated of total IF (approximately 14B EUR)



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# IF Portfolio - Energy Storage



## Batteries

- EV Cell Manufacturing
- Active materials for EV batteries
- Batteries recycling
- Small scale V2G, flexibility

## Batteries + RES

- BESS + Hydropower
- BESS + Wind
- BESS + Solar PV
- Standalone BESS

## Thermal

- UTES
- Heat storage + Renewable Electricity + waste Heat
- Waste heat recovery

## Hydropower

- Pumped storage hydropower installation



**AGATHE** – 8GWh annual NMC



**Sovalis** – 10MW VRFB + PV



**ScaleUp** – Urban District Heat.



**NorbergMine** – Underground Pumped Hydro



**ELAN** – Sustainable AAM



**BESS4HYDRO** – 4MW/8MWh



**GRHENA** – Solar Heat for industry

-30+ awarded  
-Unsigned GAs  
-1.1B EUR of 15B EUR



# Discussion



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# Thank you!



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