



Innovation Fund

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Innovation Fund

Production and use of
Renewable energy
including manufacturing plants for components

**Carbon Capture
Use and Storage**

Scaling up clean tech

**Energy-intensive
industries**
including substitute products

Energy storage
including manufacturing plants for components

Key features

Financed from the revenues of the **EU Emissions Trading System**

Volume of **EUR 20 billion** until 2030 (depending on carbon price)

Large projects: Support of up to **60% of additional capital and operating costs** (up to 10 years)
Small projects: **up to 60% of CAPEX**

40% of grant disbursed at financial close

60% of grant disbursed during 10-years operating period against GHG emission avoidance
Small scale projects – shorter 3-years period

Annual calls for large-scale and small-scale projects

Single applicant or consortium
Projects must be implemented in the EU, NO and IC

Project development assistance

Award criteria

GHG emission avoidance

- Quantitative indicators for absolute and relative avoidance

Degree of innovation

- Beyond incremental innovation and impact on EU policy objectives

Project maturity

- Ready to reach financial close within 4 years? Viable investment? Ready to be implemented?

Scalability

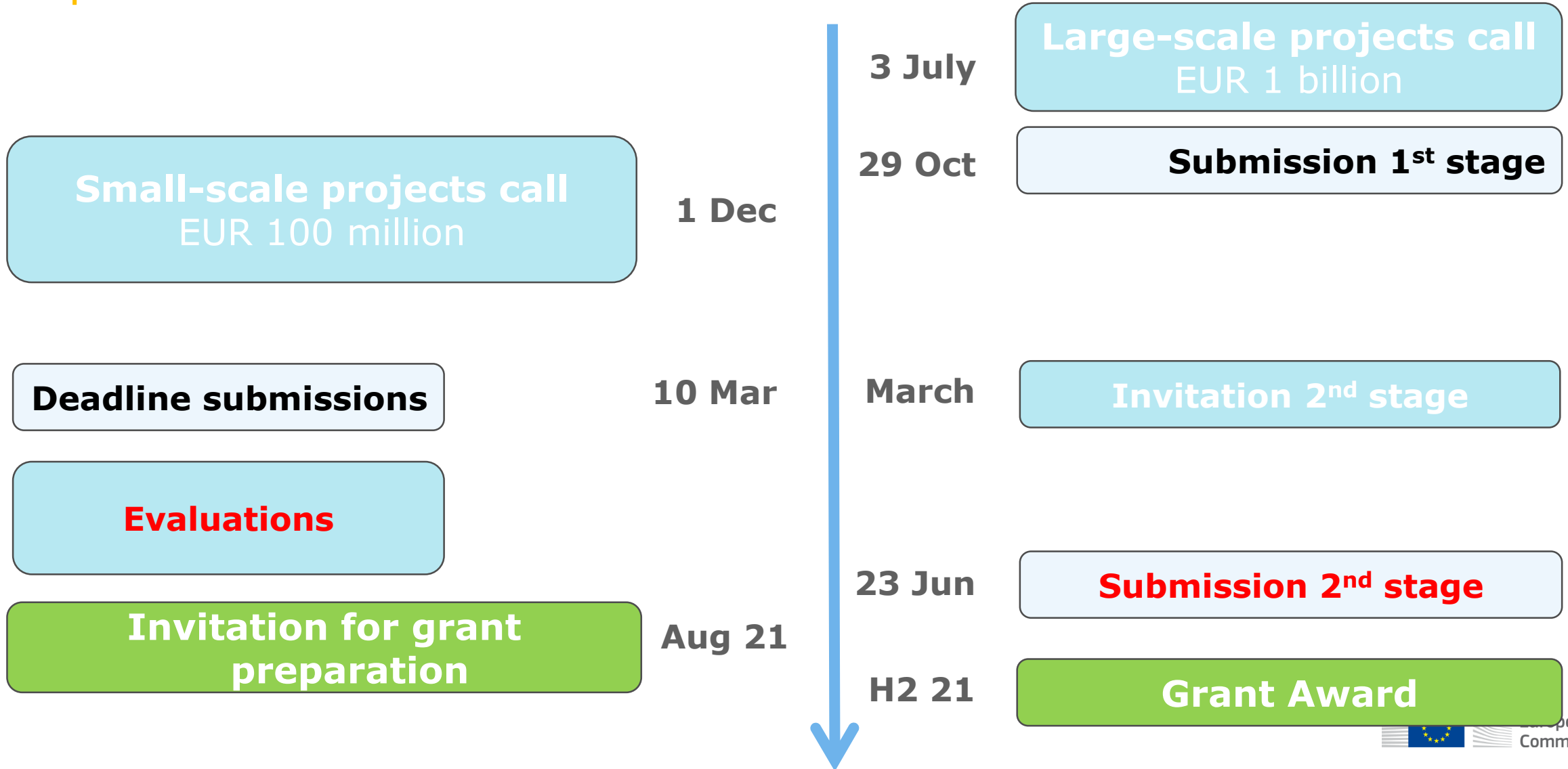
- Market potential for widespread application

Cost efficiency

- Requested support per ton of CO₂

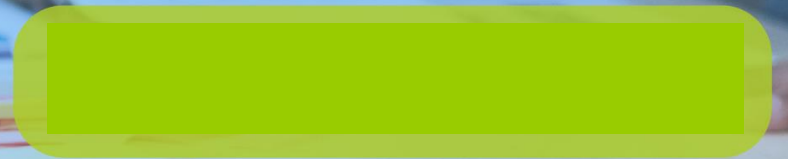
2020	Large-Scale call	Small-Scale call
Size of projects	> € 7.5M CAPEX	Between €2,5 and € 7.5M CAPEX
Eligible activities	<ul style="list-style-type: none"> - Energy intensive industry - Renewables - Energy Storage - CCUS 	Same
Application process	Two stages	Single stage
Selection criteria	<ul style="list-style-type: none"> - GHG emission avoidance - Degree of Innovation - Project maturity - Scalability - Cost efficiency 	Same criteria Focus on innovative projects ready for market entry <i>Encouraged activities: DAC, net carbon removals and substitute products</i>
Grant amount	Up to 60% of additional costs	<ul style="list-style-type: none"> - Up to 60% of total CAPEX - Grant range = € 1,5 - 4.5M
Grant disbursement	<ul style="list-style-type: none"> - 40% at financial close - 60% dependent on delivery of GHG emission avoidance 	Same, shorter monitoring period after entry into operation
Project Development Assistance (PDA)	Yes	Yes

Calendar



INNOVATION FUND

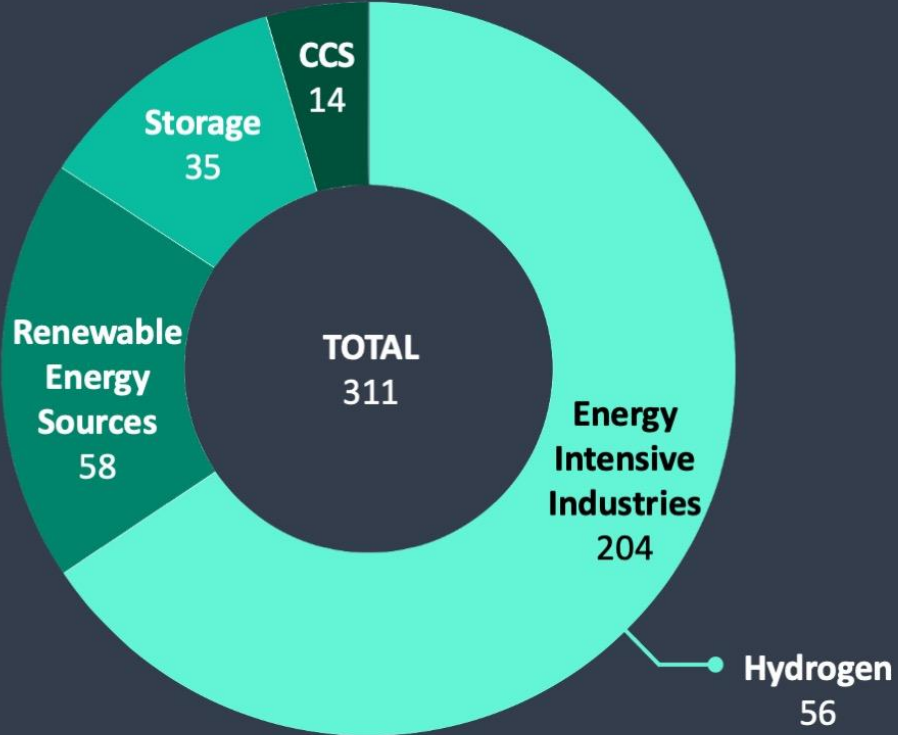
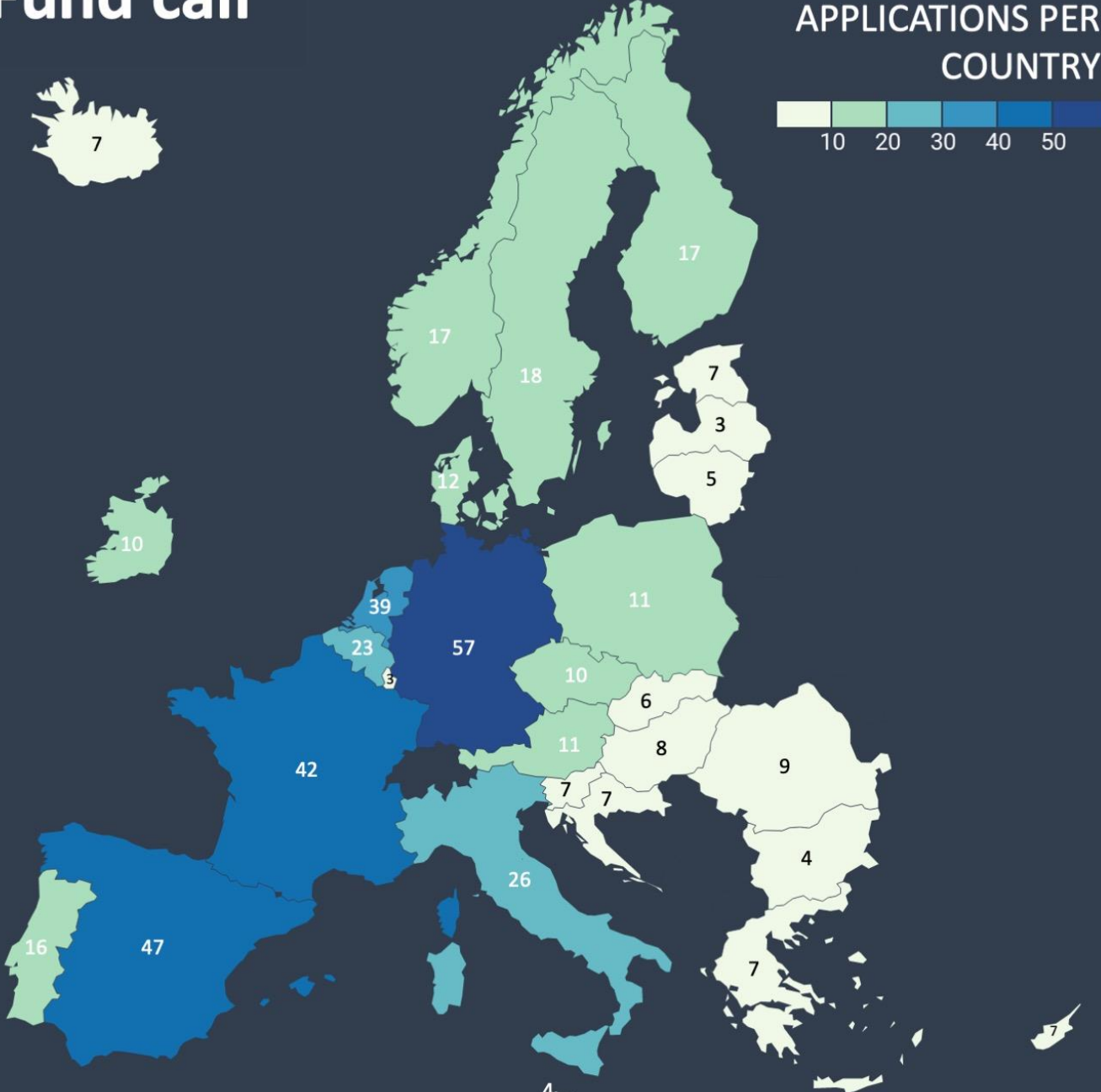
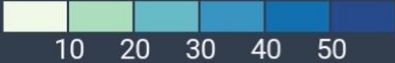
Lessons learnt from the applications
to the 2020 calls



311 proposals submitted
292 proposals admissible and eligible
117 proposals pass all minimum thresholds
70 proposals invited to second stage application
requesting **€6.7 billion**
with potential to avoid **402 MtCO₂e** over 10y
66 proposals submitted in 2nd stage

Applications to first Innovation Fund call

APPLICATIONS PER COUNTRY



APPLICATIONS PER ACTIVITY
of which some are cross-sectoral applications

**70 best projects
come from across
all sectors and
technologies**

- Hydrogen
- CCUS
- Bio-based
- Renewables
- Storage

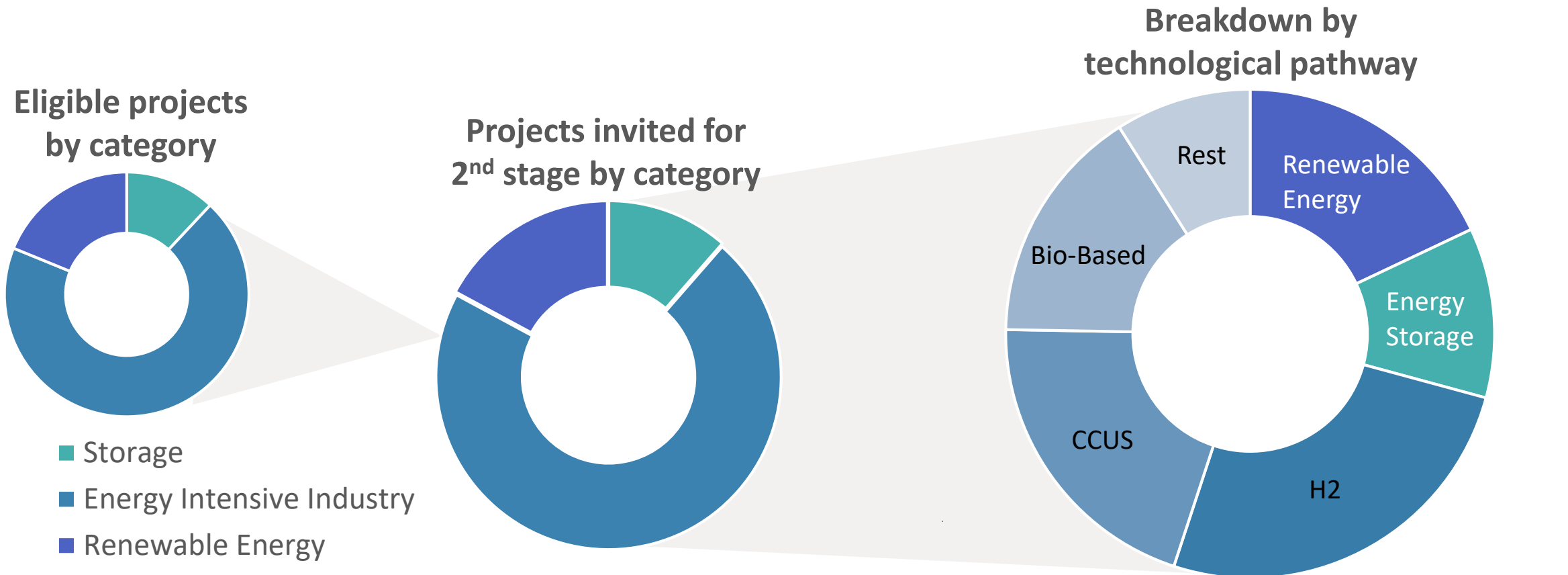
**70 best projects
excel on degree of
innovation and
project maturity**

**A high number of
(very) innovative
projects were not
selected due to
challenges on
project maturity**

ZOOM-IN ON PROJECTS BY CATEGORY

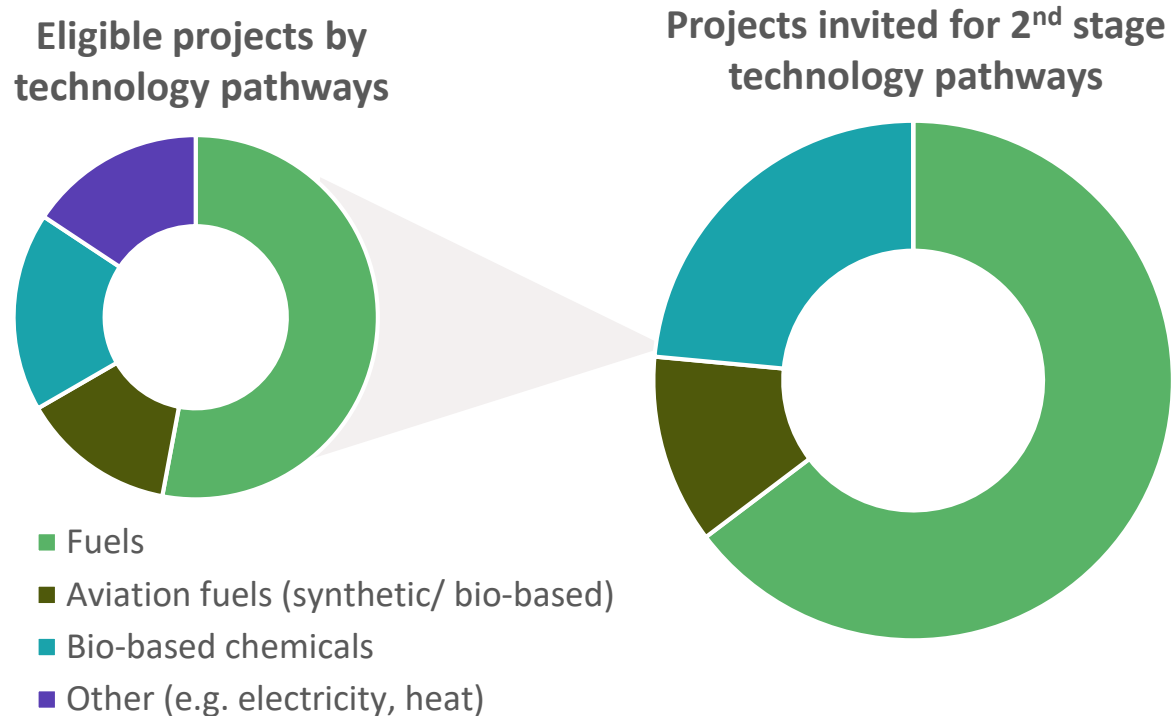
PROJECTS INVITED TO 2ND STAGE COVER ALL TECHNOLOGIES

STABLE SHARE OF PROJECTS PER PATHWAY



LARGE SCALE PROJECTS CALL - ZOOM-IN ON TECHNOLOGY PATHWAYS

LESS THAN 20% OF PROJECTS INVITED TO 2ND STAGE ARE **BIO-BASED PROJECTS**

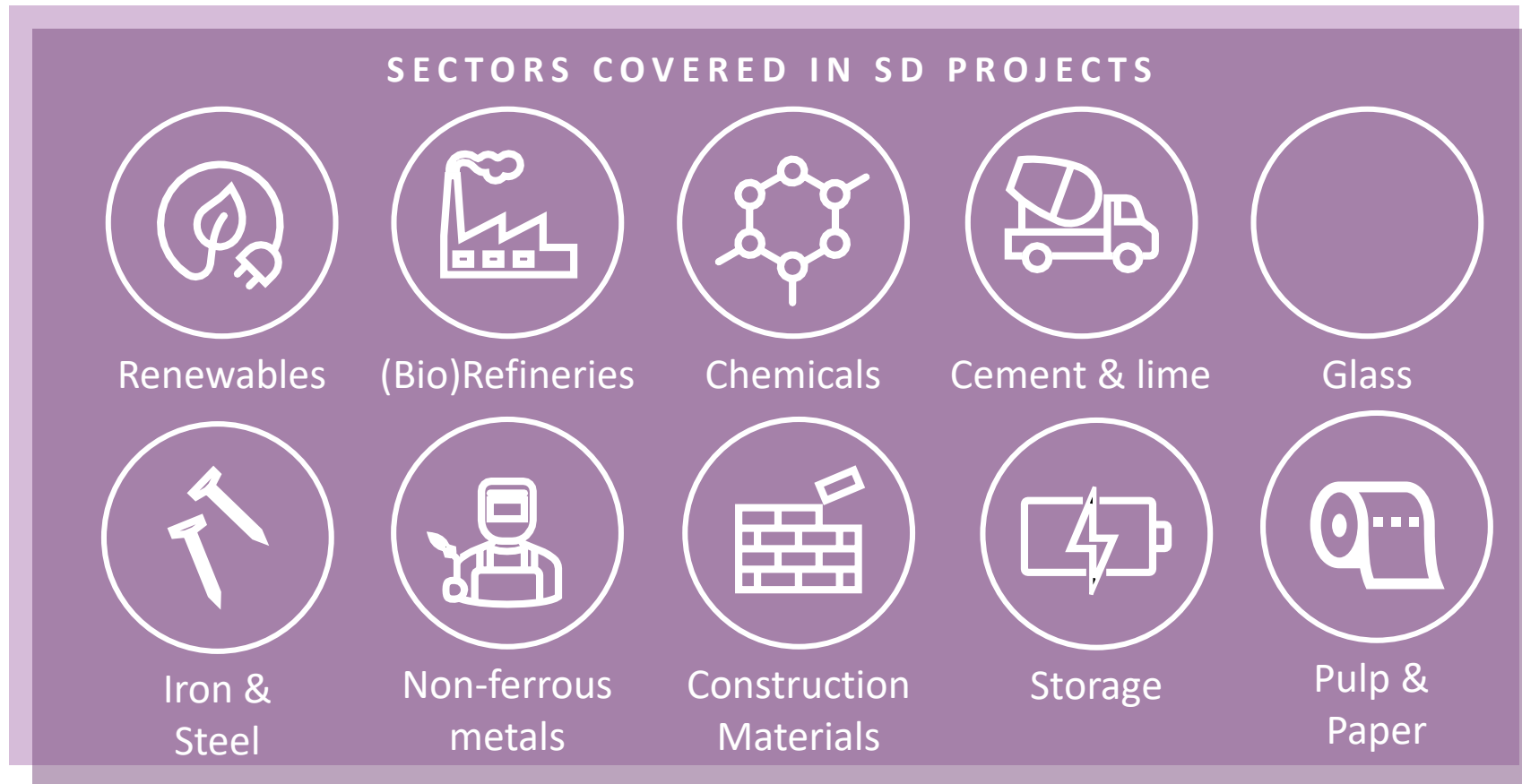


- All bio-based projects invited to 2nd stage will produce fuels and/or chemicals.
- No bio-based production projects focused on electricity or heat only were invited to 2nd stage

Legend: High-level screening of technological pathways. Classification of projects can be overlapping.

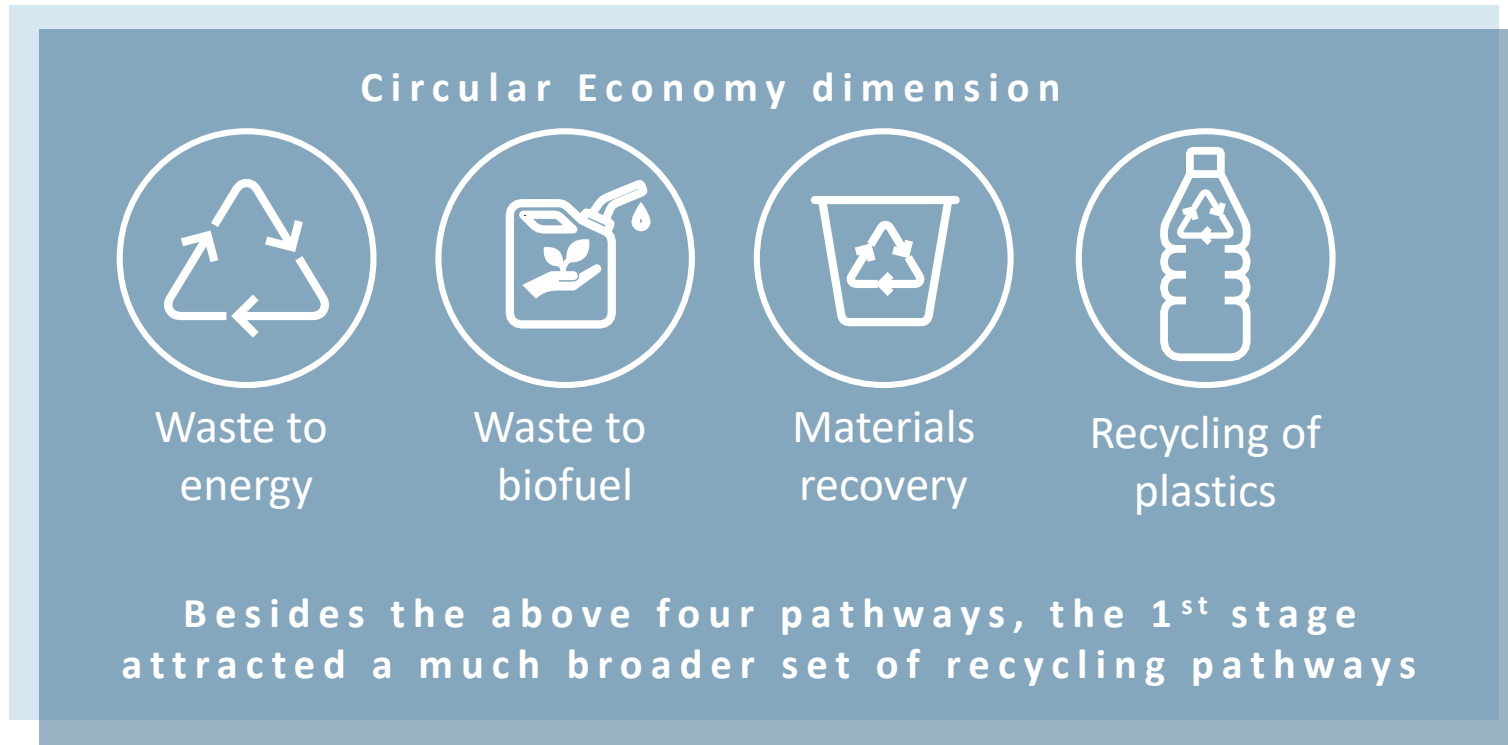
ZOOM-IN ON TECHNOLOGY PATHWAYS

PROJECTS INVITED TO 2ND STAGE COVER ALL KEY SECTORS FOR THE LOW CARBON TRANSITION



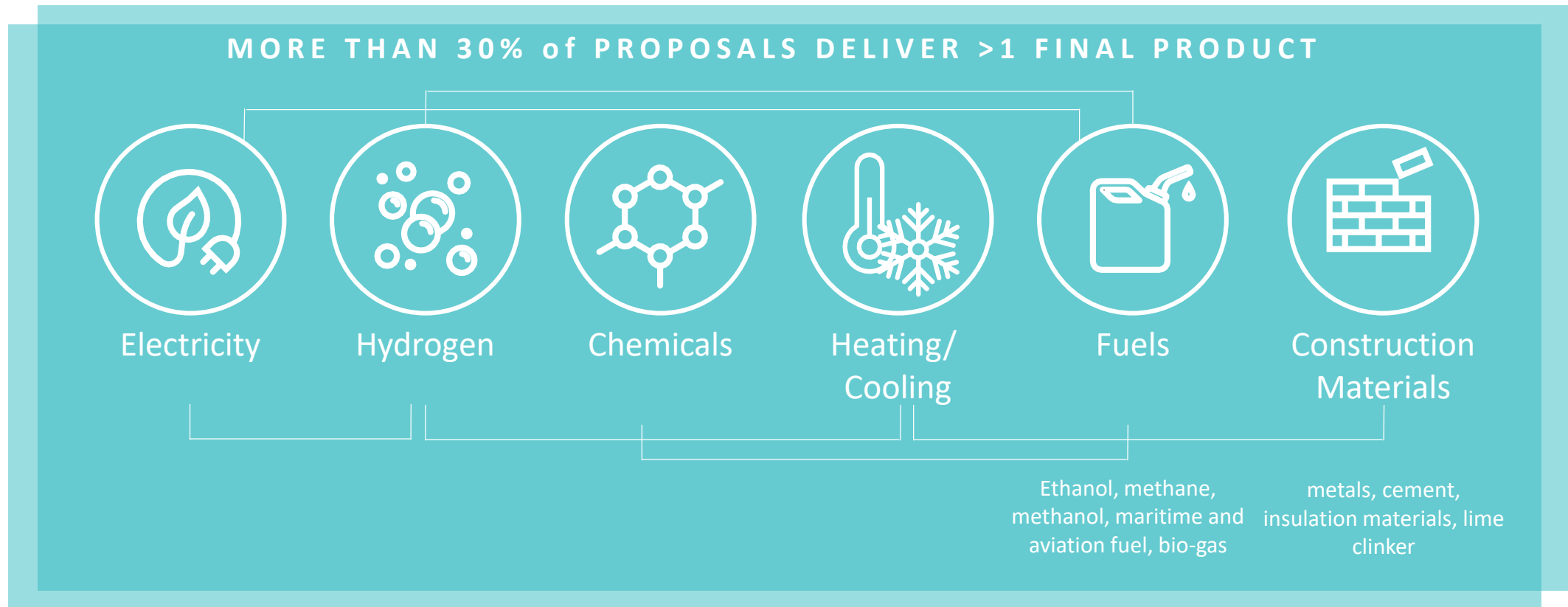
ZOOM-IN ON TECHNOLOGY PATHWAYS

MANY PROJECTS INVITED TO 2ND STAGE ARE STRONG ON CIRCULAR ECONOMY



ZOOM-IN ON TECHNOLOGY PATHWAYS

MANY PROJECTS INVITED TO 2ND STAGE PRODUCE MULTIPLE PRODUCTS



First call for large-scale projects

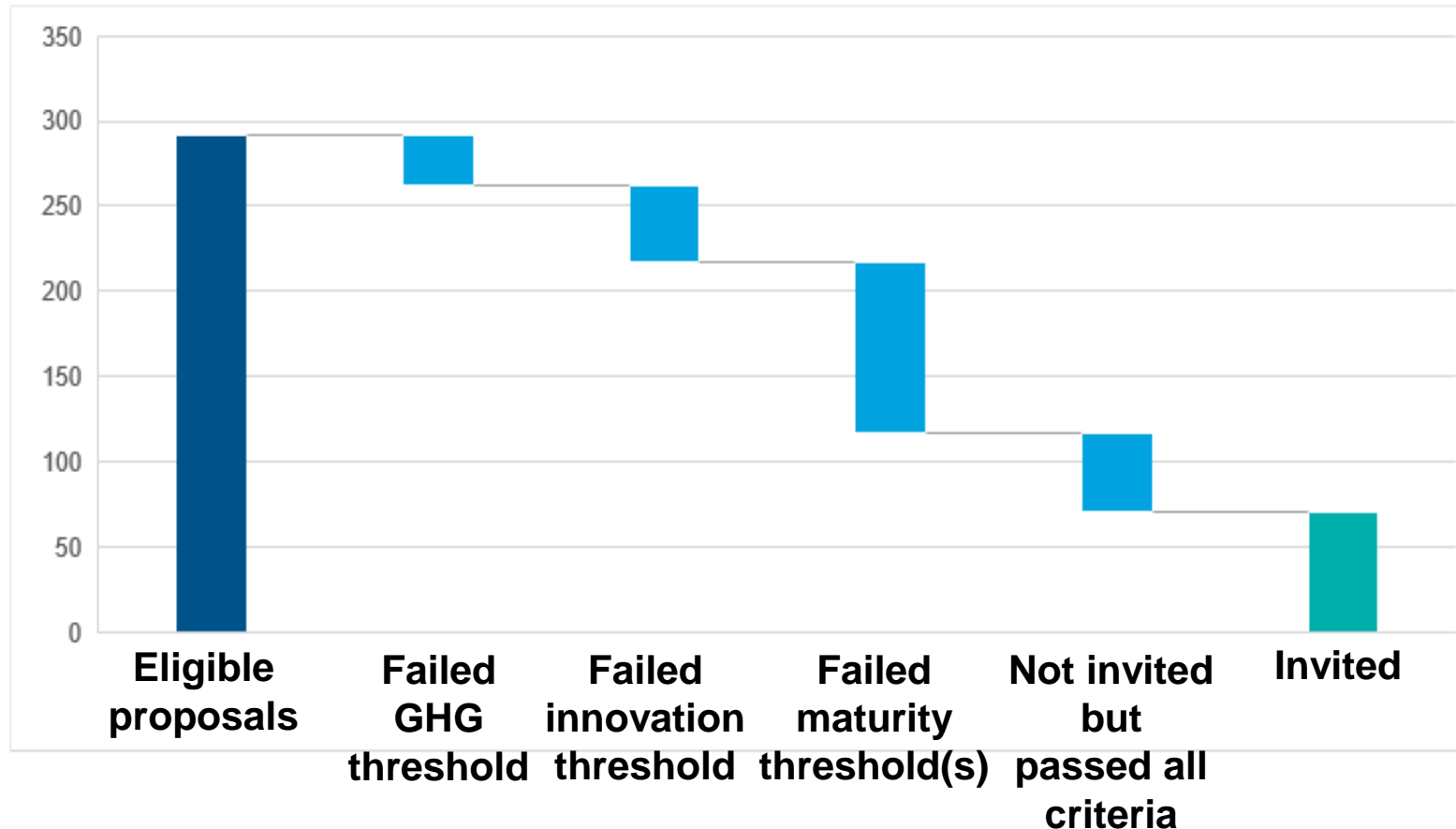
Lessons learnt from first stage

Full slide deck and recordings available here:

https://ec.europa.eu/clima/events/innovation-fund-lessons-learnt-applications-2020-calls_en

SUCCESS FACTORS – TOTAL SCORES

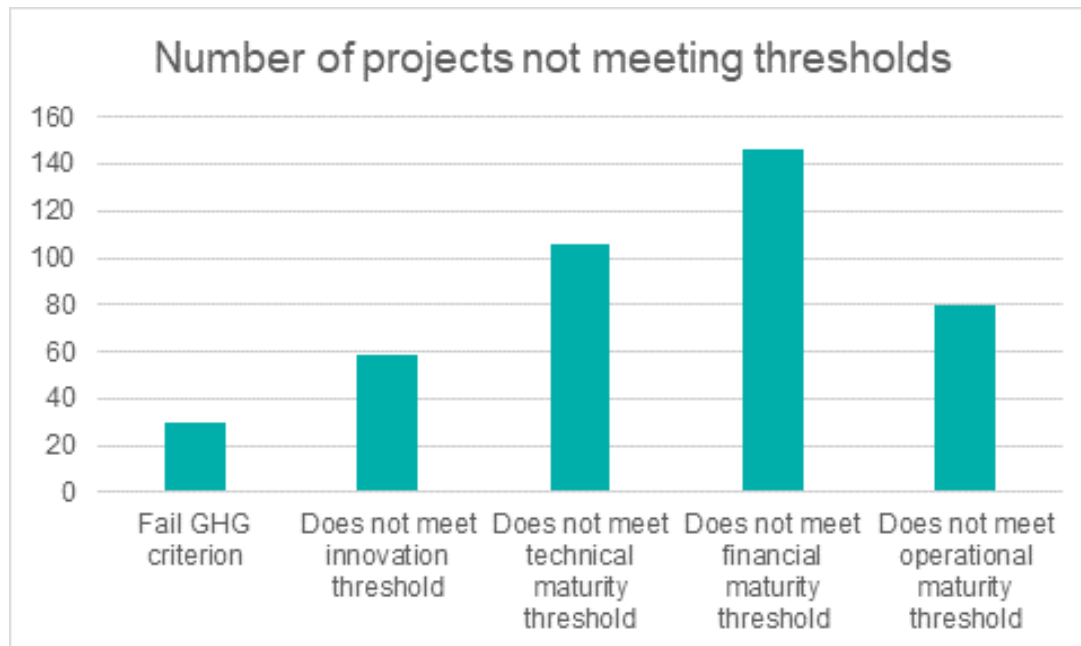
ON THE ROAD TO 2ND STAGE – HIGH NUMBER OF (VERY) INNOVATIVE PROJECTS FAIL ON MINIMUM THRESHOLDS FOR PROJECT MATURITY



- The high number of projects with good score on innovation but insufficient maturity highlights the opportunity for some projects to still improve further and stand a better chance of being invited in future calls

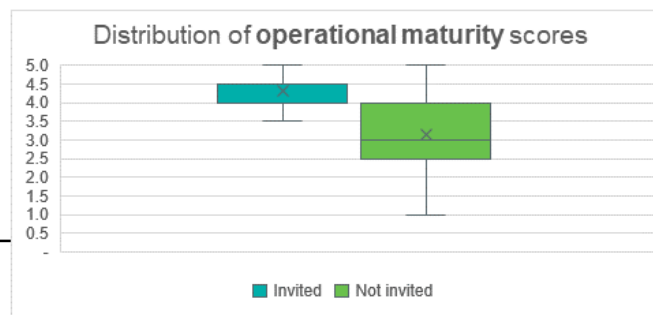
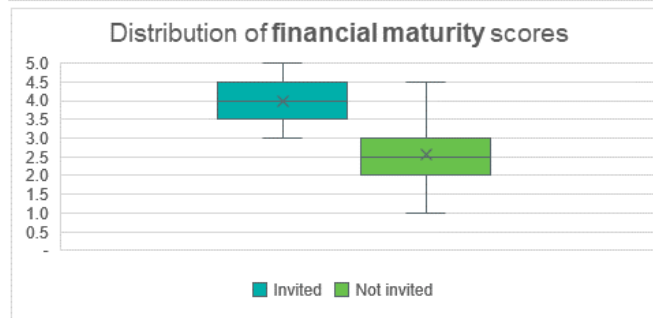
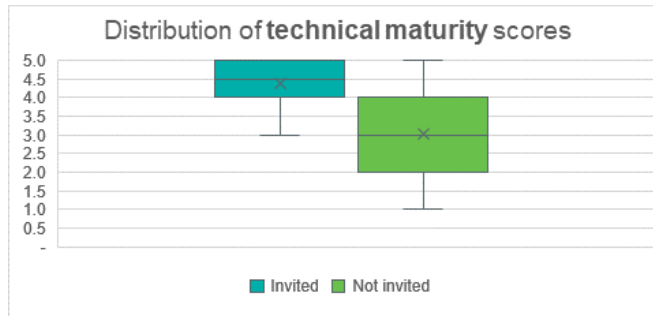
SUCCESS FACTORS

175 ELIGIBLE PROJECTS DID NOT MEET THE REQUIRED MINIMUM THRESHOLDS ON ONE OR SEVERAL CRITERIA



- 60% of all eligible projects failed to meet one or more thresholds
- Overall, the **Project Maturity criterion** proved the hardest for applicants, having three different components where minimum thresholds were required
- The **financial maturity** sub-criterion threshold proved the most challenging for applicants, being missed by over **50% of eligible projects**
- Around 1/5 of eligible projects fell below the Innovation threshold and 1/10 failed the GHG criterion due to manifest errors or not meeting the ETS benchmarks

INVITED PROJECTS USUALLY PROVIDE MORE DETAILS TO SUBSTANTIATE MATURITY LEVEL

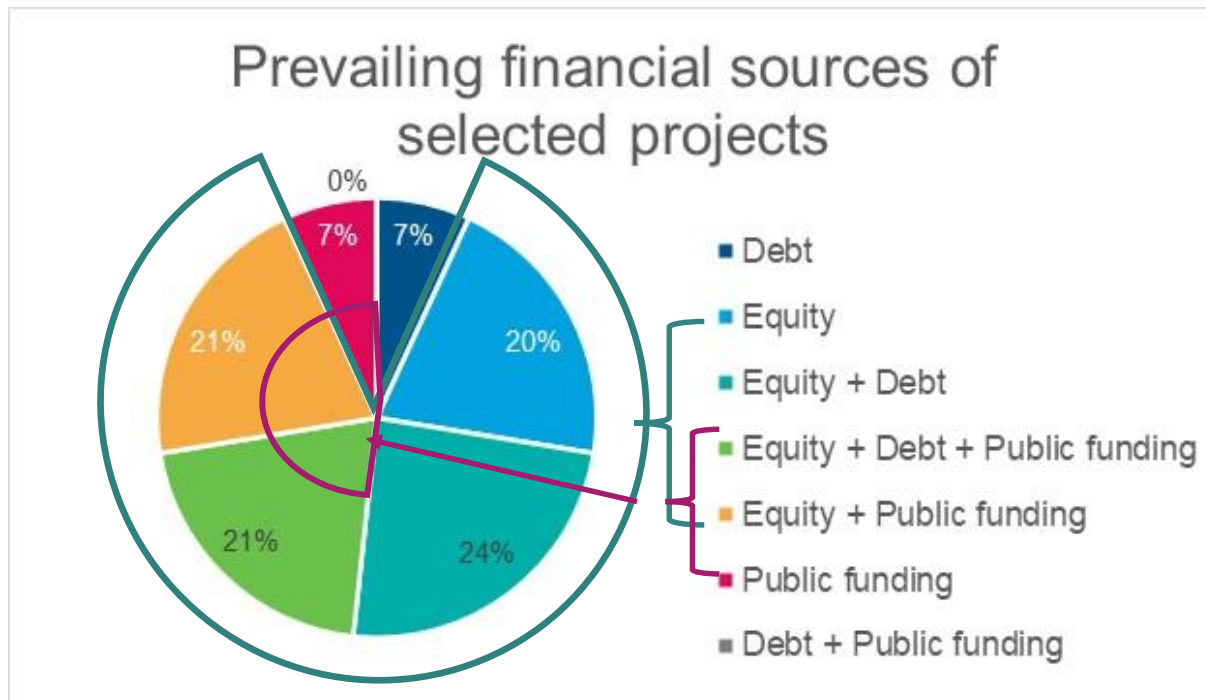


- Invited projects provided **more elements to better substantiate their maturity** (including high quality feasibility study, business plan and implementation plan).
- Most invited projects received a **top score on technical maturity** (success factors = FEED stage, pilot scale demonstration, detailed TRL score).
- Financial maturity appears to be a **key failure factor**, with a larger gap in scores between invited and not invited projects (see details on next slide).
- Most invited projects also **scored highly on operational maturity** (success factors = factual details in implementation plan, permits and EIA in progress).

Legend: Not invited projects include both those meeting and those not meeting thresholds

SUCCESS FACTORS – FINANCIAL MATURITY

FINANCIAL MATURITY APPEARS TO BE A KEY FAILURE FACTOR FOR MANY PROJECTS NOT INVITED TO 2ND STAGE



The overall lower scores on financial maturity in projects not invited to 2nd stage demonstrate high potential for improvement for projects across several areas:

- Diversity in financial sources, including secured equity funding: 85% of invited projects include some form of equity, whereas 48% of invited projects rely on public funding as well.
- Clarity of financial plan (100% of invited projects included a detailed financial plan)
- Financial viability from the start of the project (IRR of invited projects is on average 2.5% higher).

Best practice on Overall Project maturity

Identify technical, financial and operational risks based on a comprehensive risk assessment

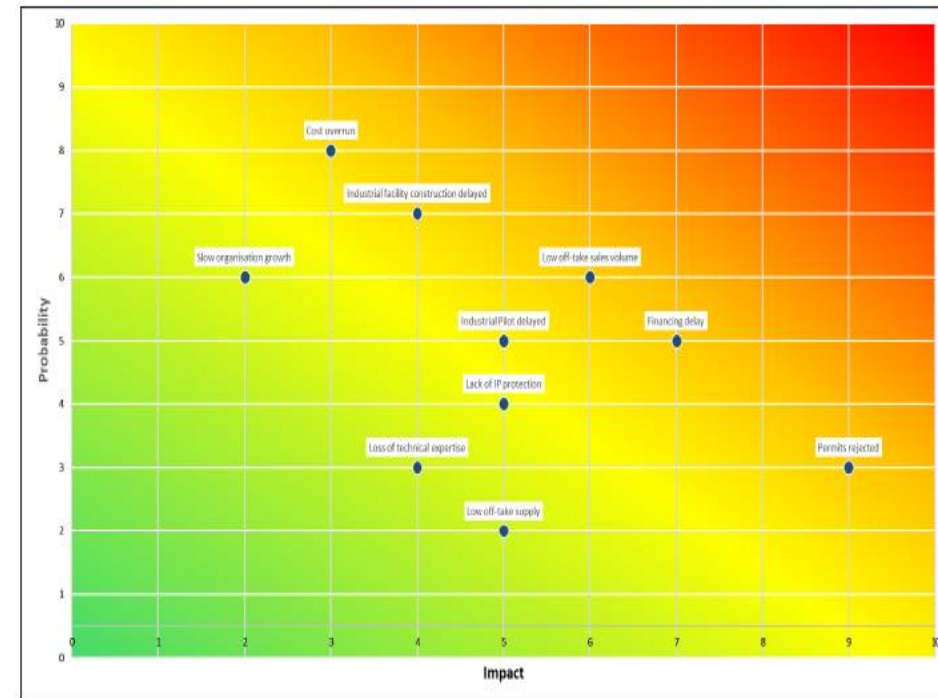
Focus on describing fewer and better formulated risks (>5 but < 10 for each category)

Use a standard scale to measure the probability, impact and overall severity of risks

Calculate total risk scores and plot these as a risk heat map (see diagram to right)

Underpin your risk analysis with supporting information in the three mandatory documents

Ensure that your mitigation strategy is convincing across your major technical, financial and operational risks



Common mistakes to avoid:

- #1 Poorly defined risks with no clear prioritisation or assessment of their potential severity (probability * impact), and no identifiable risk owners
- #2 The sensitivity analysis in the business plan and contingency funding in the financing plan are not linked to the risks added in the financial maturity section of Application Form B (AFB)

Best practice on **Financial maturity**

Financial data

Be consistent and clear with your financial data

Market, costs and revenues assumptions

Fully describe and substantiate your market and financial assumptions, e.g. unit price assumptions, CAPEX, OPEX, revenues WACC estimates

Cash flow projections

Cash flow projections should cover project lifetime and be consistent with project milestones

Ensure cashflow projections are consistent with:

- evidenced documentation or pre-agreements concluded with suppliers and off-takers;
- price/volume quotes (to the extent possible); and,
- expected terms of agreements.

Funding commitments

Provide evidence of credible support by your funders and project partners - such as binding letters of support / MoU / terms of agreement with project funders signed at board level

Ensure conditions precedents are clearly stipulated in the funding agreements

Correlate profitability with the degree of funder commitment

Ensure shareholder's 'skin in the game' cover contribute to their 'fair share' of funding required for any cost overruns/project liabilities

Provide a well-thought through financing structure. BUT, also describe your financial contingency measures ('Plan B') if public support does not work out

Apply to the Innovation Fund when you are ready. IF is not a research programme, focus on business!

Common mistakes to avoid on **Financial maturity**

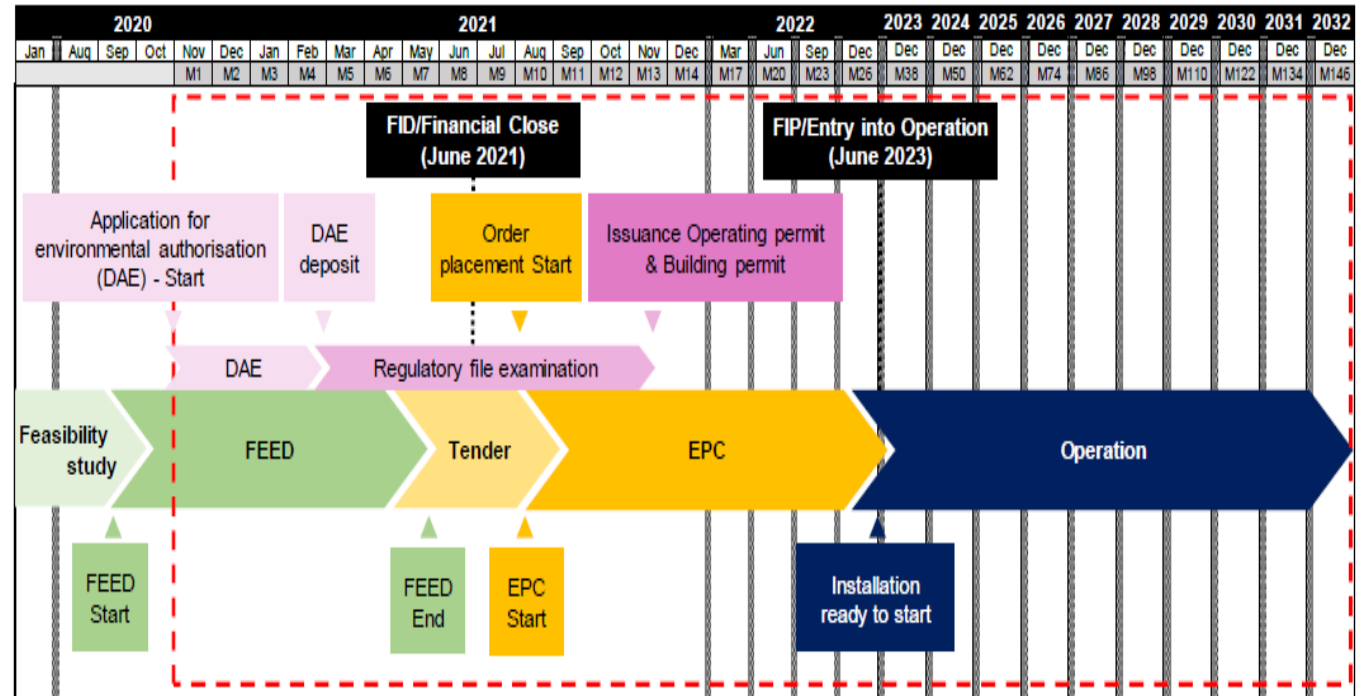
- #3** Lack of shareholder support evidence that would: 1. get the project past the operation phase; or 2. cover for funding shortfalls during operation had not been provided for projects with low profitability and / or exposed to high financial risks
- #4** Steps taken to reach financial close had not been clearly identified
- #5** IRR only calculated for the first 10 years and did not cover the full project lifetime and assumptions for WACC not adequately justified
- #6** Insufficient cash flows projections to cover expected debt financing amounts and cash shortfalls in the early years of operation
- #7** Projected cash flows covered only a limited number of years and not the full project lifetime
- #8** Where debt featured in the financing structure, there was no mention of indicative terms based on negotiation with debt providers

Best practice on Operational maturity

Devise a project implementation timeline that is comprehensive, realistic and consistent with your project's technical (supply of components, construction, etc.) and financial elements (funding allocation over key milestones) in a manner that can be understood by a non-expert audience, whilst ensuring accuracy.

Provide a clear and comprehensive description of the operational steps (permits, licences etc) in line with your deployment and funding expectations

Overall project planning should be consistent across all project documentation

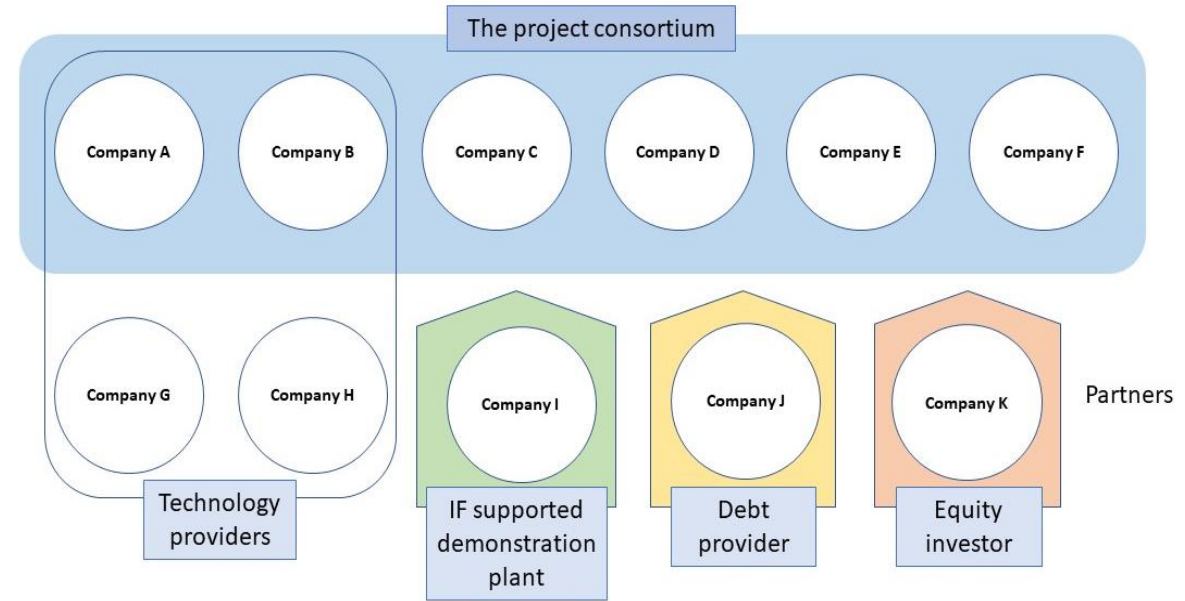


Best practice on Operational maturity

The role and relationships of all consortium partners needs to be well described and illustrated in a diagram (see right)

Key technology suppliers and Engineering, Procurement and Construction (EPC) parties should also be described, including evidence of supply contracts and costs

Your strategy for off-take agreements should be backed by evidence in the form of letters of support / MoUs / Terms of agreement

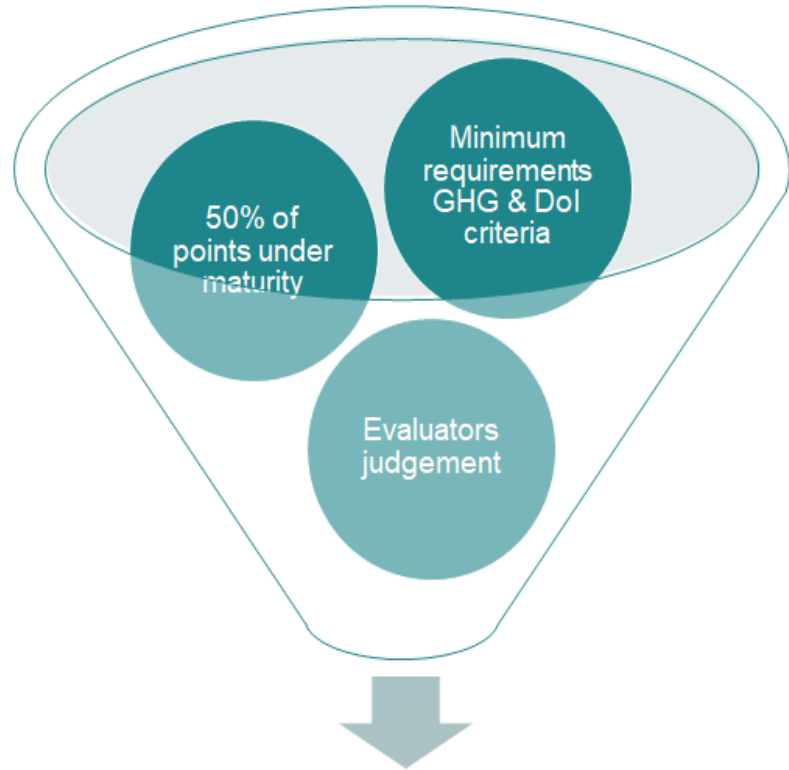


Contractual evidence will help evaluators to confirm your project's correct costings, revenue assumptions and, crucially, the likelihood of your reaching Financial Close

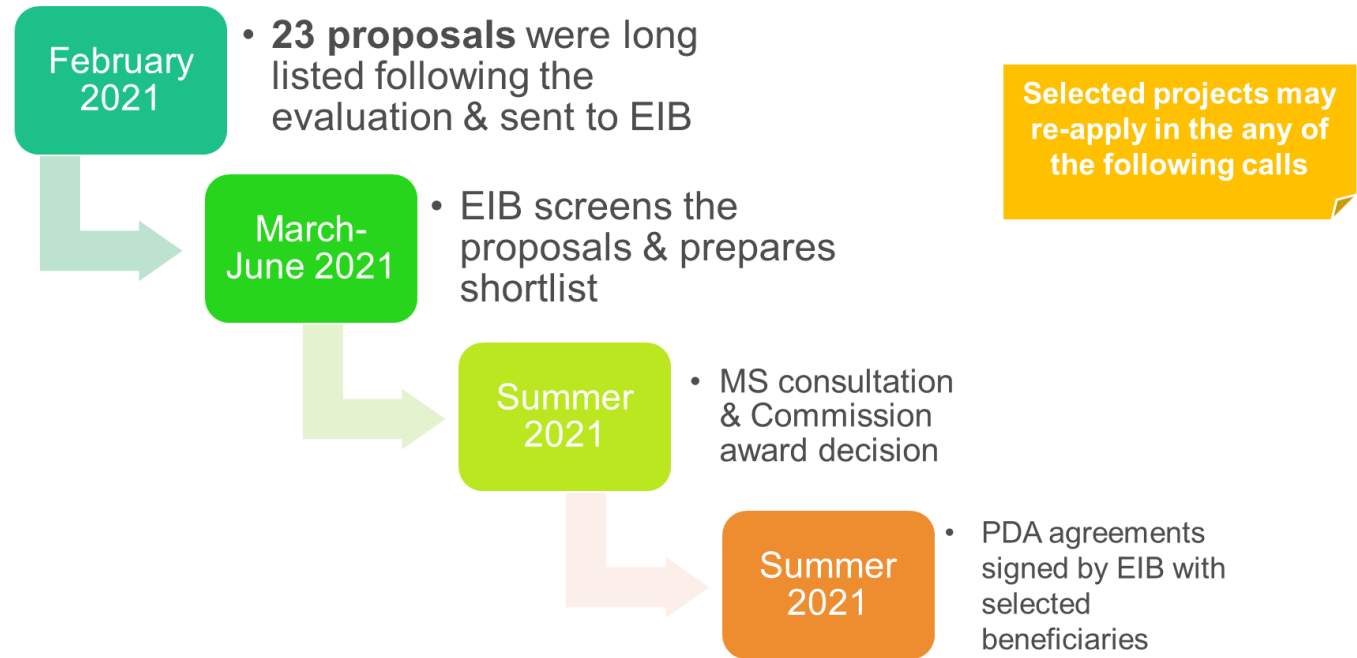
Common mistake to avoid:

#9 Inconsistencies between project implementation plan, feasibility study and/or business plan

23 projects recommended for Project Development Assistance



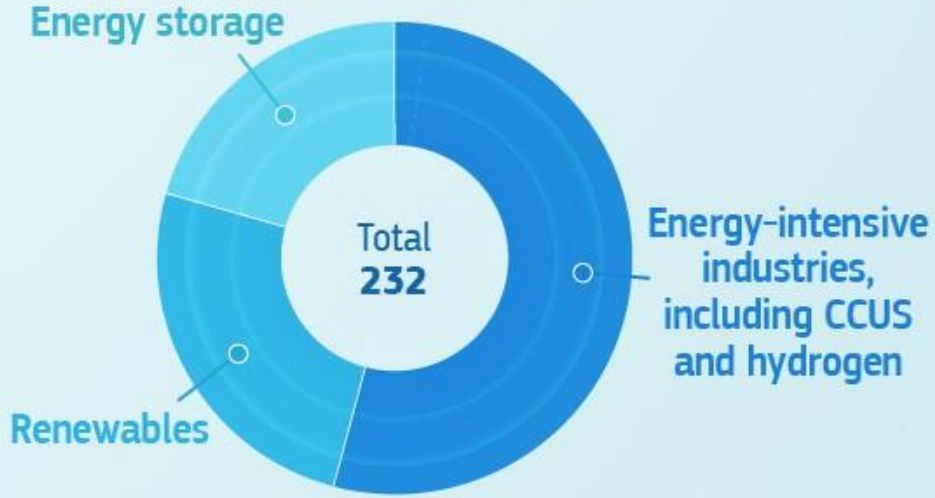
Tailor-made to the specific projects, based on their needs identified during evaluation, to be provided by the European Investment Bank



First call for small-scale projects

Project overview

Applications to first Innovation Fund small-scale call



Applications per activity
of which some are cross-sectoral applications



Applications received per sector

7 sectors with more than 10 applications

Biofuels and bio-refineries

Glass, ceramics & construction material

Hydrogen

Intra-day electricity storage

Other energy storage

Solar energy

Other

12 sectors with 10 or less applications

Bio-electricity

Cement & lime

Chemicals

CO2 transport and storage

Geothermal energy

Hydro/Ocean energy

Iron & steel

Non-ferrous Metals

Pulp & paper

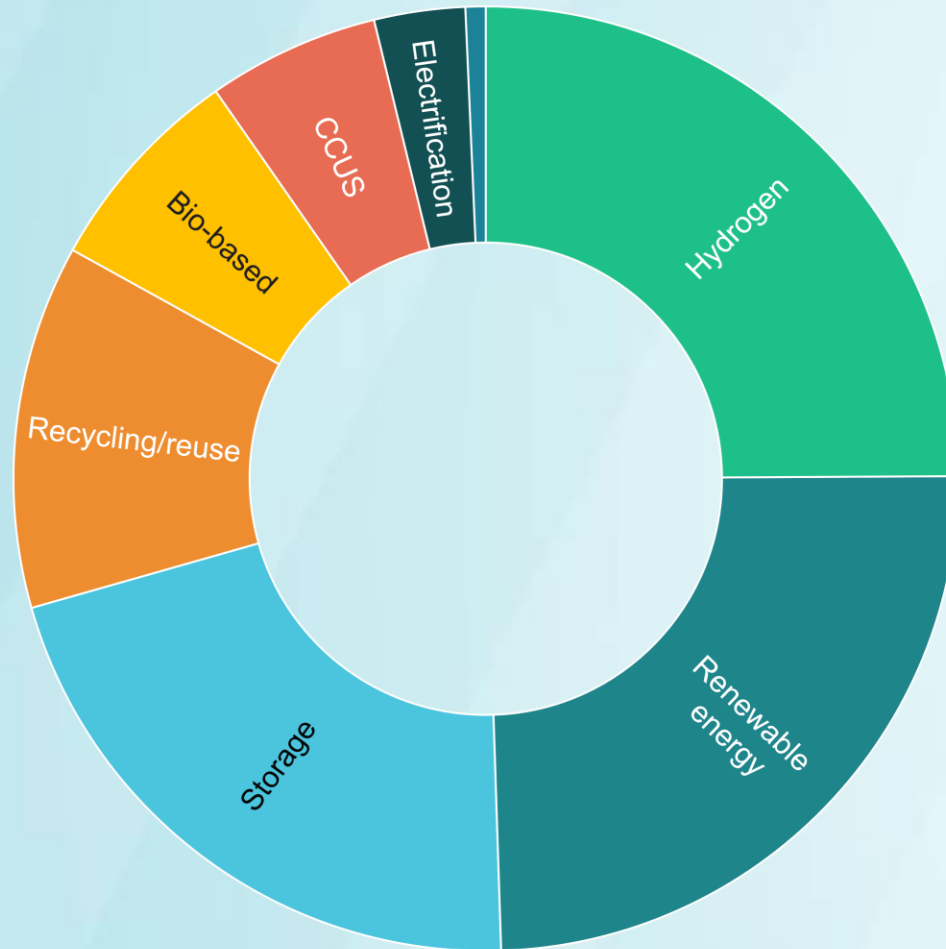
Refineries

Renewable heating

Wind energy

Most proposals received for Hydrogen followed by Solar energy!

Breakdown by technology pathways



Many „out of the box“ solutions

- In particular recycling or renewables
- Including digital solutions and services

Legend: High-level screening of applied technological pathways. Classification of projects can be overlapping.

Preparing the second call for large-scale projects

Single stage

Possible dates

- Launch: October 2021
- Submission deadline: March 2022
- Results: July 2022

More advice

- Turn lessons learnt into „Fitness check“
- Self-check questionnaire for applicants

Mobilise more financing

- Member States have additional funds through Recovery and Resilience Facility
- Review of State aid guidelines
- Continue outreach to private investors

**All call documents available on the
Funding and Tenders Portal**

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/innovfund>

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

Further info, recorded webinars and videos available on IF Website

https://ec.europa.eu/clima/policies/innovation-fund_en

Thank you



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