European Commission

EU Policy and Innovation Fund

CCUS project network

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DG Climate Action

- *CCUS in Clean Planet for All*
- *Innovation Fund – summary*
- *Knowledge sharing in NER 300 programme*
- *Knowledge sharing in Innovation Fund*
- *Questions*

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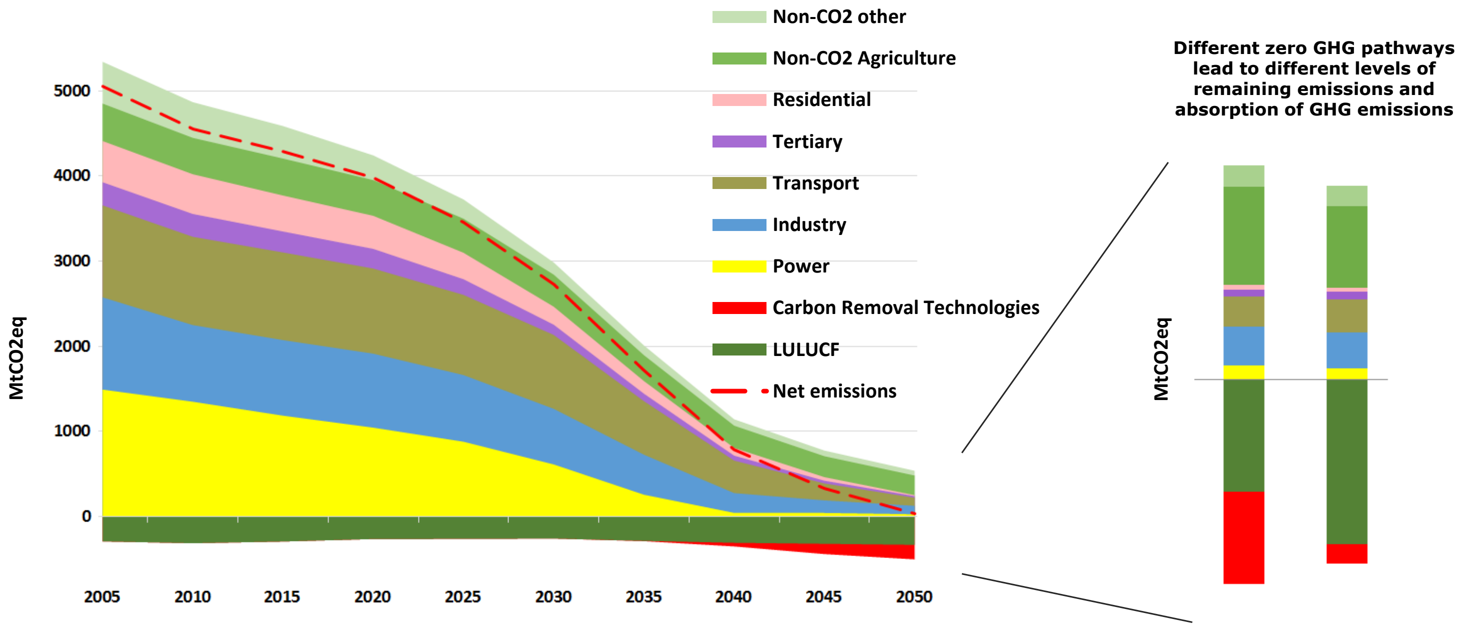
Our Vision for a Clean Planet by 2050

- ✓ EU leads in clean energy transition and GHG emissions reduction. Ambitious 2030 targets. 60% reductions in 2050 with current policies – not in line with the Paris Agreement.
- ✓ Radical transformations necessary: central role of energy system, buildings, transport, industry, agriculture.
- ✓ There are a number of pathways for achieving a climate neutral EU, challenging but feasible from a technological, economic, environmental and social perspective.

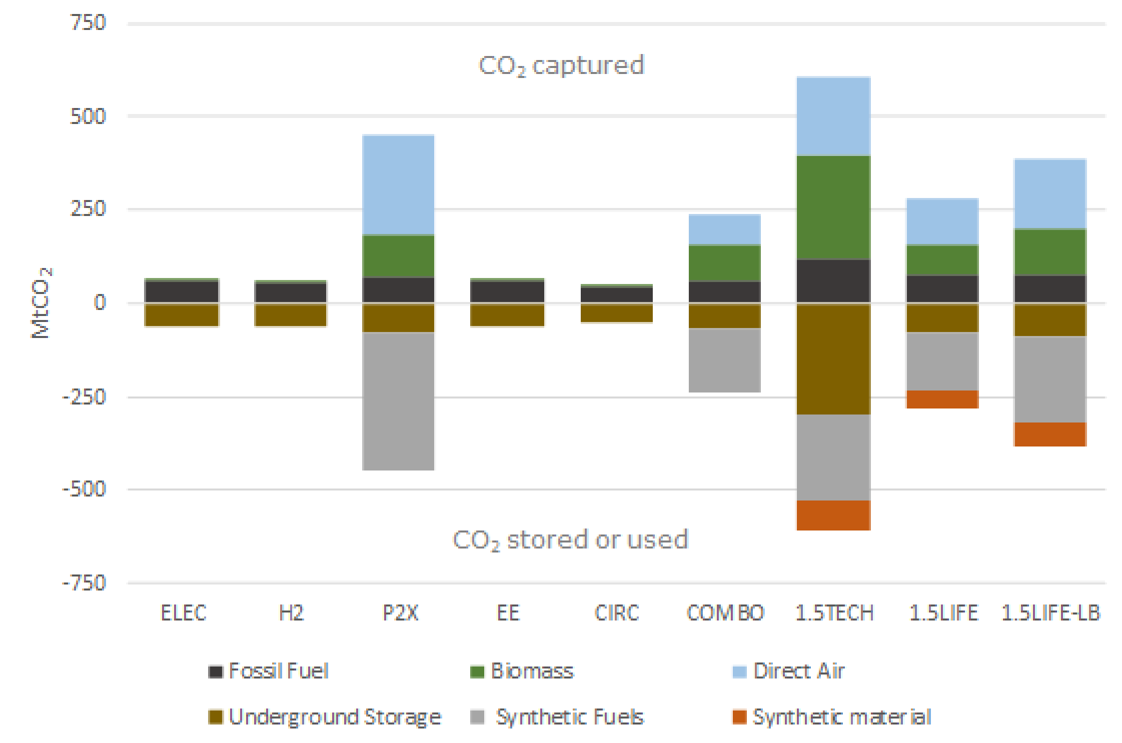


Climate Action

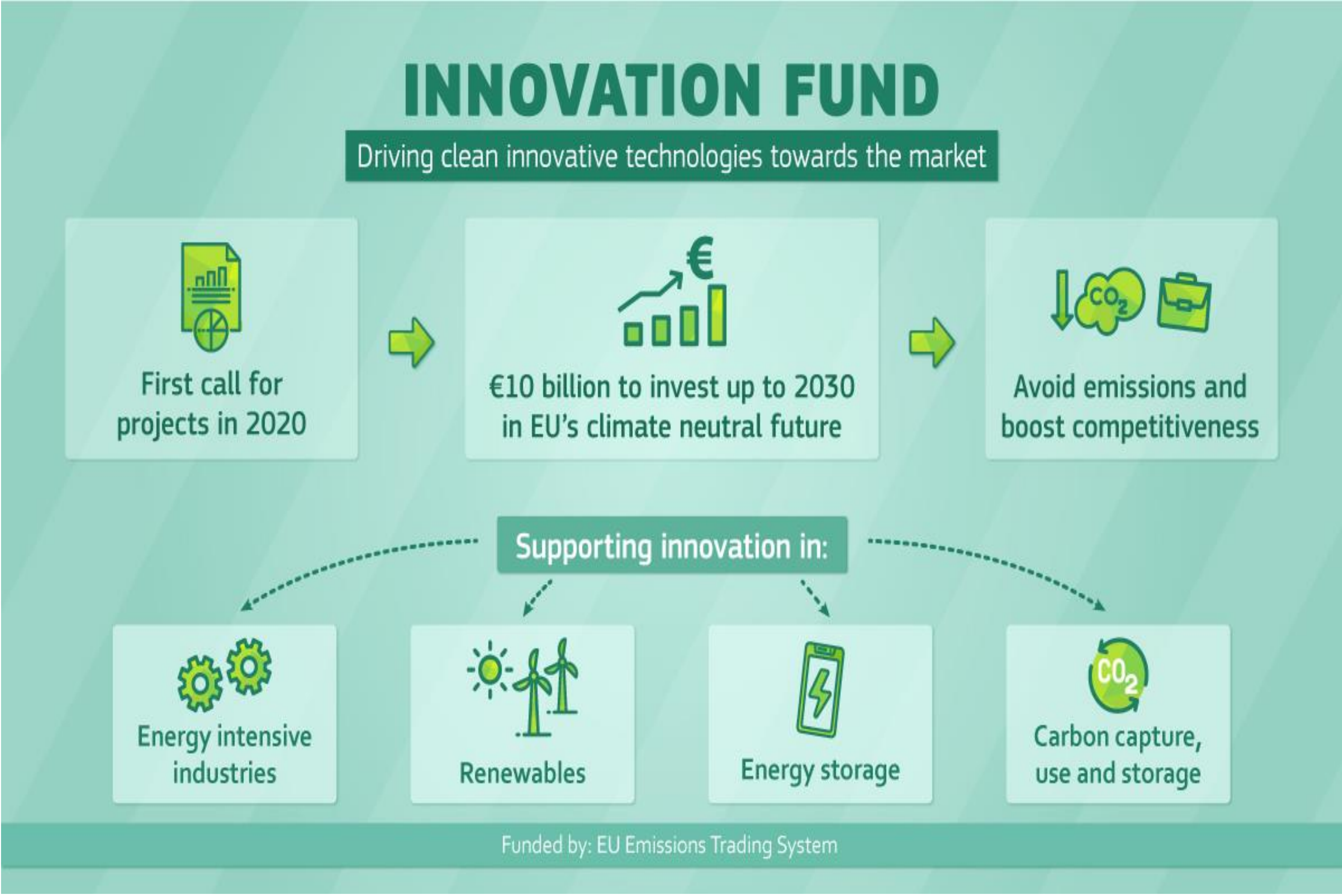
Clean Planet for All: CCS: 7th building block

- ✓ Rapid deployment of renewable energy and new options to decarbonize industry reduce the need for CCS
- ✓ Still, **CCS has a crucial role to close the circle for a net-zero economy**:
  - ✓ **Energy intensive industries** will require it where other alternatives do not exist
  - ✓ If combined with sustainable biomass it could create **negative emissions**
- ✓ CCS is facing barriers: lack of demonstration plant and proof of economic viability, regulatory barriers in some Member States, public opposition
- ✓ An enabling framework is needed to spur large-scale demonstration, scale up private investments, provide the right signals to the markets and reassure public opinion

Scenario Analysis Results for CCUS



- ✓ CCS will be required to reduce emissions of any remaining fossil fuels use (power sector, industry)
- ✓ In the case of higher ambition targets, CCS combined with biomass is required to generate negative emissions
- ✓ It also seems necessary for certain hard to decarbonize industrial processes
- ✓ Storage in materials (e.g. in plastics) is also seen as an option



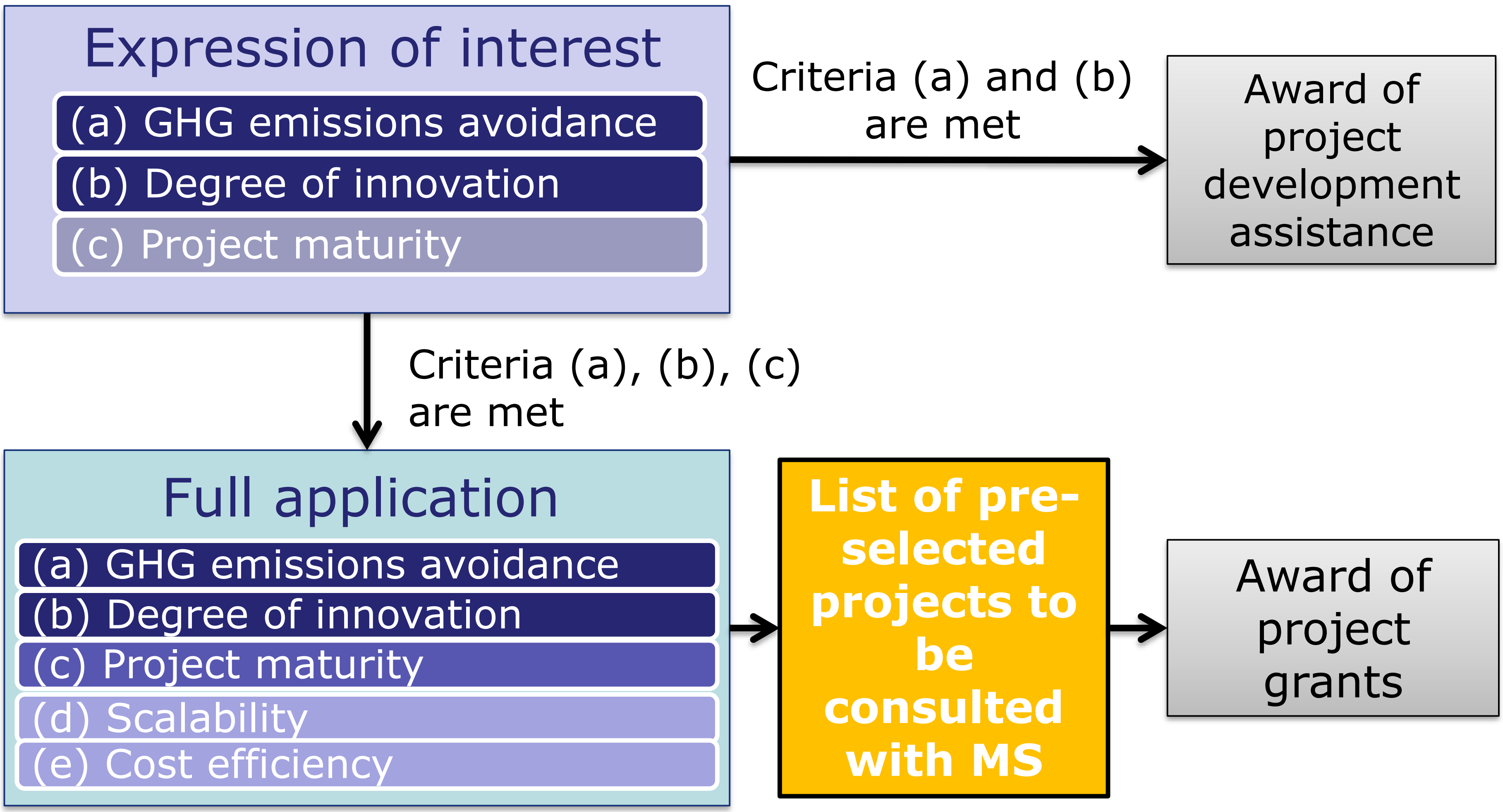
https://ec.europa.eu/clima/policies/innovation-fund_en

#InnovationFund

Comprehensive selection criteria

- Greenhouse gas emissions avoidance
- Degree of innovation
- Project maturity
- Scalability
- Cost efficiency

Two-stage selection process



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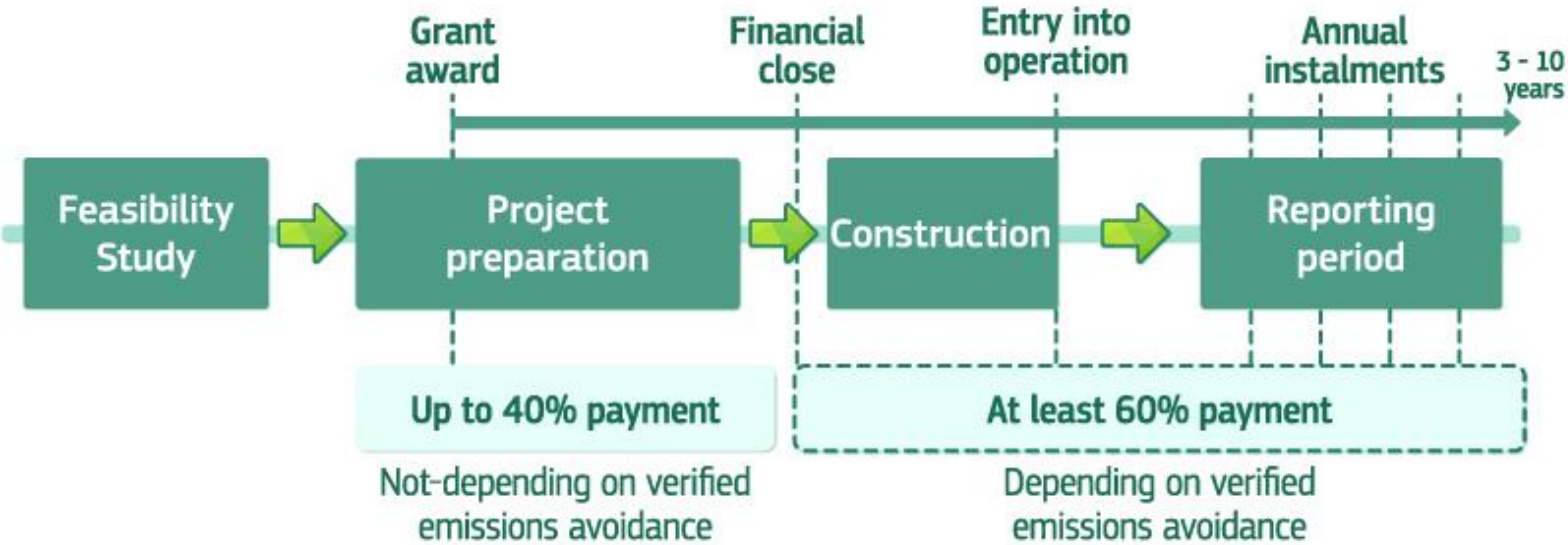
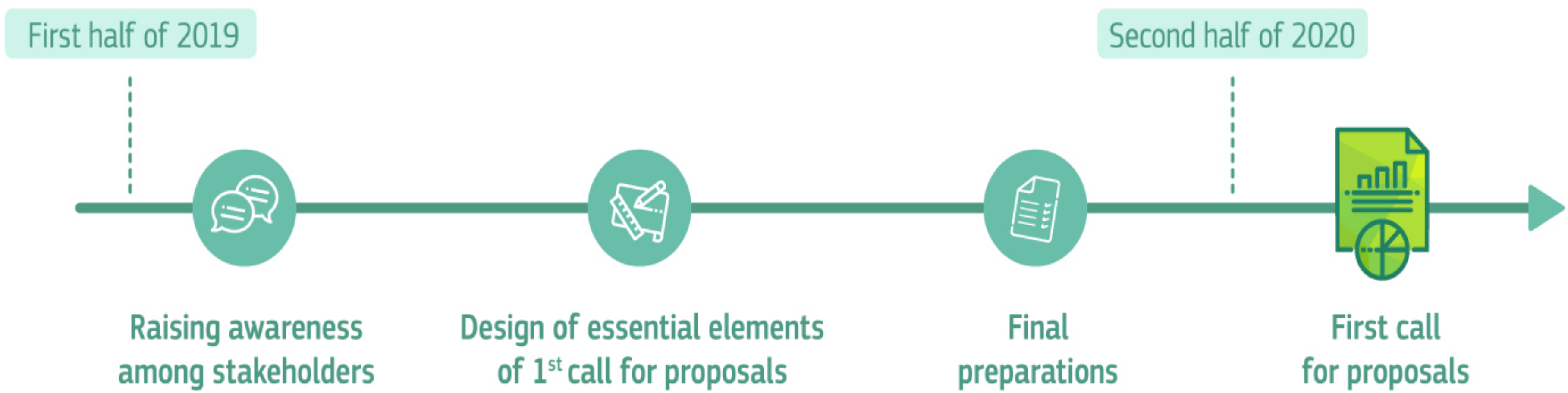
Support across project life-cycle



Timeline – Innovation Fund



Innovation Fund sector stakeholder workshops

- ***Steel***: *4 June, Brussels, Eurofer*
- ***Chemicals***: *5 June, Brussels, CEFIC*
- ***Cement***: *24 June, Brussels, Cembureau*
- ***CCS***: *6 September, Oslo, ZEP*
  - **part of the 5 September European High Level Conference on CCS**
- ***CCU***: *19 September, Brussels, CO2 value*

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Knowledge sharing in NER 300

- *Goals*

  (1) de-risking of CCS / RES with regard to scaling up to commercial size

  (2) acceleration of the deployment of CCS / RES

  (3) increasing the undertaking of, and confidence in CCS / RES by the wider public

  (4) maintenance of a competitive market for the post-demonstration deployment of CCS / RES technologies

- *Failure to comply means loss of entitlement for funding for disbursement period*

- *Standardized reporting – Annually during operation but not before*

  Level 1 – to share with NER 300 projects of same category and with any other project which has agreed to share information on equivalent terms

  – Where necessary, level 1 knowledge may be aggregated to be shared at level 2

  – No obligation to disclose if risk of reverse engineering/ability to obtain patent

  Level 2 – wider community

- *Intellectual Property Rights*

  Foreground: property of PS/ consortium member

  Member States may request foreground to be licensed

  » Unless this will prejudice ability to obtain patent or other IPR protection or Weak IPR laws and enforcement regime in respect to licensing to 3rd country

NER 300 Knowledge sharing requirements

Knowledge Category	Further detail of
Technical Set-up and Performance	Shared with any L - Cost Levels[1] S - Project Management - -

	- Lessons learned and experiences from storage site identification, assessment, exploration and monitoring - Lessons learned and experiences in consortium management (roles and governance model) - Lessons learned and experiences in integration of and interfaces between capture, transport and storage - Lessons learned and experiences in how to finance, insure and minimise risk for a full CCS project
	Shared beyond the Level 1 Recipients (Level 2): - aggregated information on good practices in the above areas
Environmental Impact	Shared with any Level 1 Recipient (Level 1) and beyond the Level 1 Recipients (Level 2): - electricity production and auto consumption with and without CCS (MWh) - Utilisation of plant with and without CCS (hours) - Fuel type used and CO_2 equivalent content - Plot sizes required per step in the CCS value chain (m^3) - Types of solvents and chemicals used and their environmental characteristics - Gaseous emissions (other than CO_2) (kg per MWh)

NER 300 Knowledge sharing observations

Preventing free-riding issue
- Strong IPR and sensitive information protection

Fostering interest in replication
- Insufficient number of public events, publication of projects & results

Improving skills and know-how
- Limited closed-door workshops / no formal exchange of reports

Social Capital Development
- Requires frequent Interactions: depends on an active network

Developing Expertise
- No info on graduate programmes, scientific contribution etc.

Prioritizing learning and tolerating failure
- Portfolio approach impaired by low number of projects. No knowledge from failures

Expanding the shared knowledge
- Limited aggregation of knowledge possible

Leveraging public support
- Impaired by the number of projects

Knowledge sharing aspects in Innovation Fund Regulation (1/2)

- *During selection of projects*
  - **Knowledge-sharing plan to be submitted during full application**
- *During project monitoring*
  - **Projects shall proactively and systematically make publicly available on their websites information relating to projects**
  - **Projects shall provide coherent, effective and targeted information on the Innovation Fund support received to multiple audiences, including the media and the public**

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Knowledge sharing aspects in Innovation Fund Regulation (2/2)

- *The implementing body shall*
  - **perform information, communication and promotion actions**
  - **organise specific seminars, workshops or, where appropriate, other types of activities to facilitate exchanges of experience, knowledge and best practices as regards the design, preparation and implementation of projects as well as on the effectiveness of the financing provided through project development assistance projects.**

Questions (1/2)

- ***What type of technical, economic, project management, regulatory and permitting information*** *will be useful to share with other projects from the sector in order to speed up the uptake of the innovative technologies and to advance the regulatory environment without at the same time compromising the legitimate intellectual property rights, the competitiveness and the first-mover advantage of the companies involved in the projects?*

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Questions (2/2)

- *What types of **knowledge-sharing activities** should the implementing body organize for projects benefiting from Innovation Fund (and other EU programmes) and for the general public?*
- *What should be the **form of knowledge sharing tools** that would be useful for the market?*
- *How can **synergies** be obtained from linking to other programmes and networks?*

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Thank you!

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