Innovation and Modernisation Fund

Melina Boneva
DG CLIMA
European Commission

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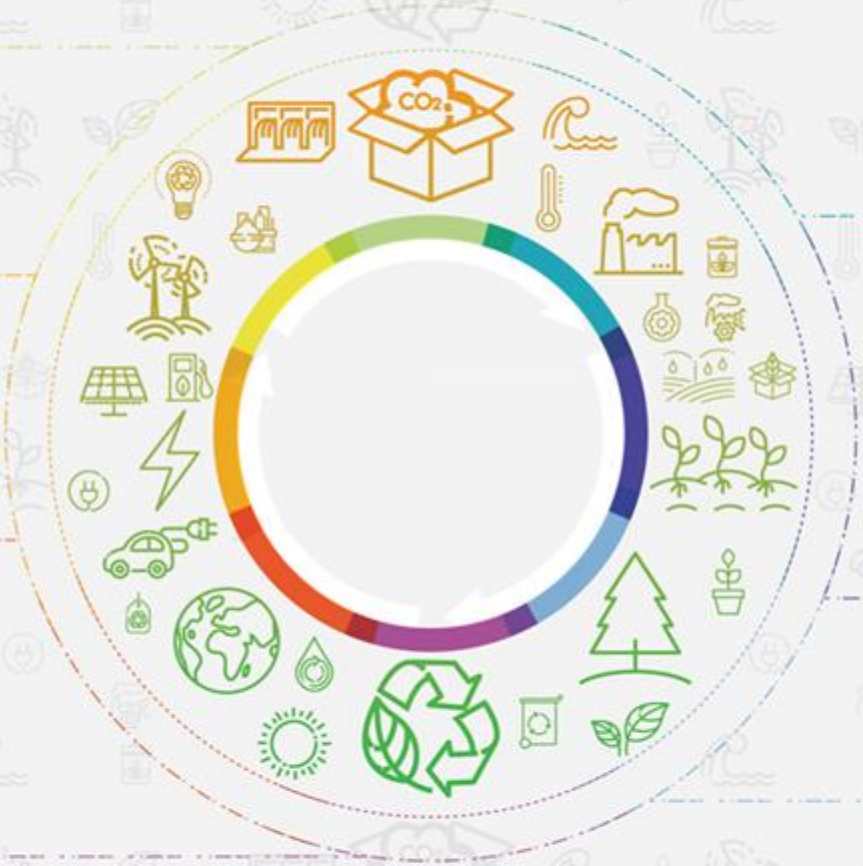
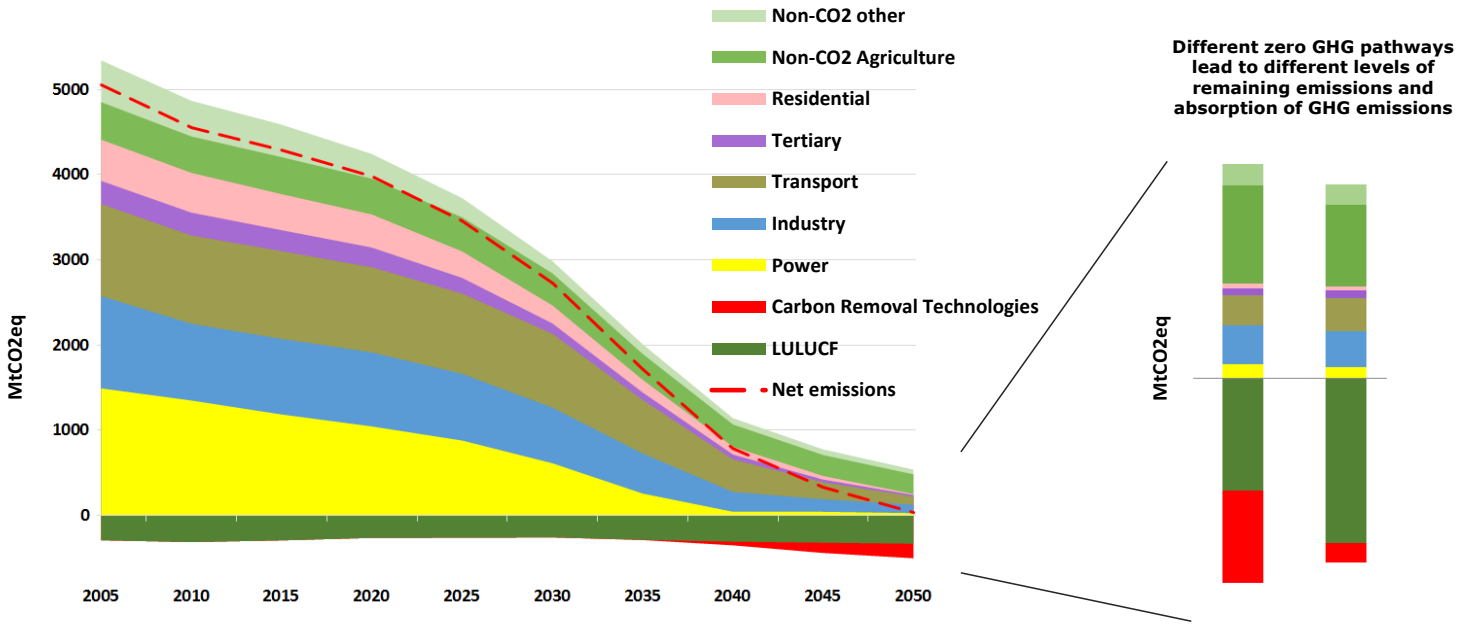
A Clean Planet for all

A European strategic long term vision for a prosperous, modern, competitive and climate neutral economy



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.



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Detailed assessment supported by scenario analysis

Long Term Strategy Options

	Electrification (ELEC)	Hydrogen (H2)	Power-to-X (P2X)	Energy Efficiency (EE)	Circular Economy (CIRC)	Combination (COMBO)	1.5°C Technical (1.5TECH)	1.5°C Sustainable Lifestyles (1.5LIFE)
Main Drivers	Electrification in all sectors	Hydrogen in industry, transport and buildings	E-fuels in industry, transport and buildings	Pursuing deep energy efficiency in all sectors	Increased resource and material efficiency	Cost-efficient combination of options from 2°C scenarios	Based on COMBO with more BECCS, CCS	Based on COMBO and CIRC with lifestyle changes
GHG target in 2050	-80% GHG (excluding sinks) ["well below 2°C" ambition]					-90% GHG (incl. sinks)	-100% GHG (incl. sinks) ["1.5°C" ambition]	
Major Common Assumptions	• Higher energy efficiency post 2030 • Deployment of sustainable, advanced biofuels • Moderate circular economy measures • Digitilisation					• Market coordination for infrastructure deployment • BECCS present only post-2050 in 2°C scenarios • Significant learning by doing for low carbon technologies • Significant improvements in the efficiency of the transport system.		
Power sector	Power is nearly decarbonised by 2050. Strong penetration of RES facilitated by system optimization (demand-side response, storage, interconnections, role of prosumers). Nuclear still plays a role in the power sector and CCS deployment faces limitations.							
Industry	Electrification of processes	Use of H2 in targeted applications	Use of e-gas in targeted applications	Reducing energy demand via Energy Efficiency	Higher recycling rates, material substitution, circular measures	Combination of most Cost-efficient options from "well below 2°C" scenarios with targeted application (excluding CIRC)	COMBO but stronger	CIRC+COMBO but stronger
Buildings	Increased deployment of heat pumps	Deployment of H2 for heating	Deployment of e-gas for heating	Increased renovation rates and depth	Sustainable buildings			CIRC+COMBO but stronger
Transport sector	Faster electrification for all transport modes	H2 deployment for HDVs and some for LDVs	E-fuels deployment for all modes	Increased modal shift	Mobility as a service			• CIRC+COMBO but stronger • Alternatives to air travel
Other Drivers		H2 in gas distribution grid	E-gas in gas distribution grid				Limited enhancement natural sink	• Dietary changes • Enhancement natural sink

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First tool to implement Long-Term Strategy

Driving low-carbon technologies to the market

Regulatory Framework adopted on 26 February 2019

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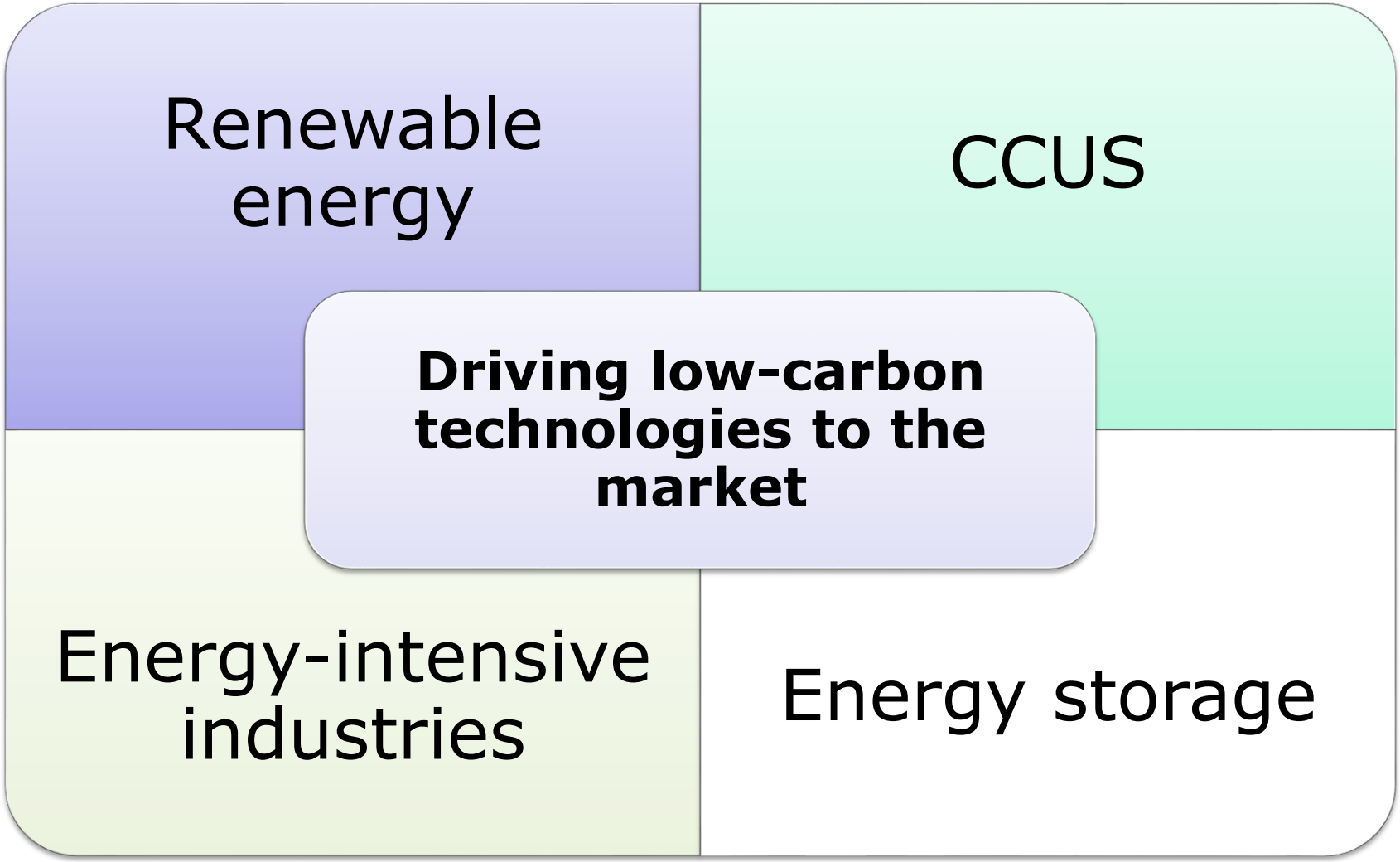

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Key features of the Innovation Fund

Volume of at least EUR 10 billion at current carbon prices

Support of up to 60% of additional costs related to innovative technology

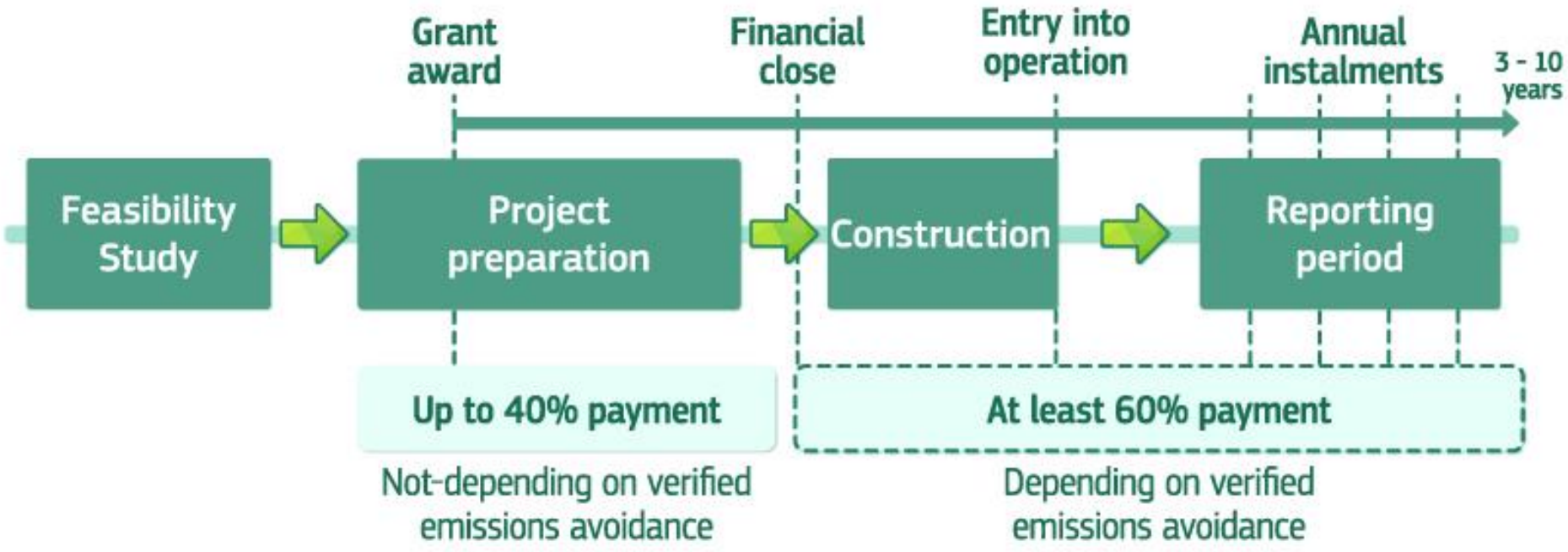
First call expected for 2020 and regular calls up to 2030

Financed from the revenues of the EU Emissions Trading System

Support of additional capital and operating costs (up to 10 years)

Comprehensive selection criteria and project development assistance

Support across project life-cycle



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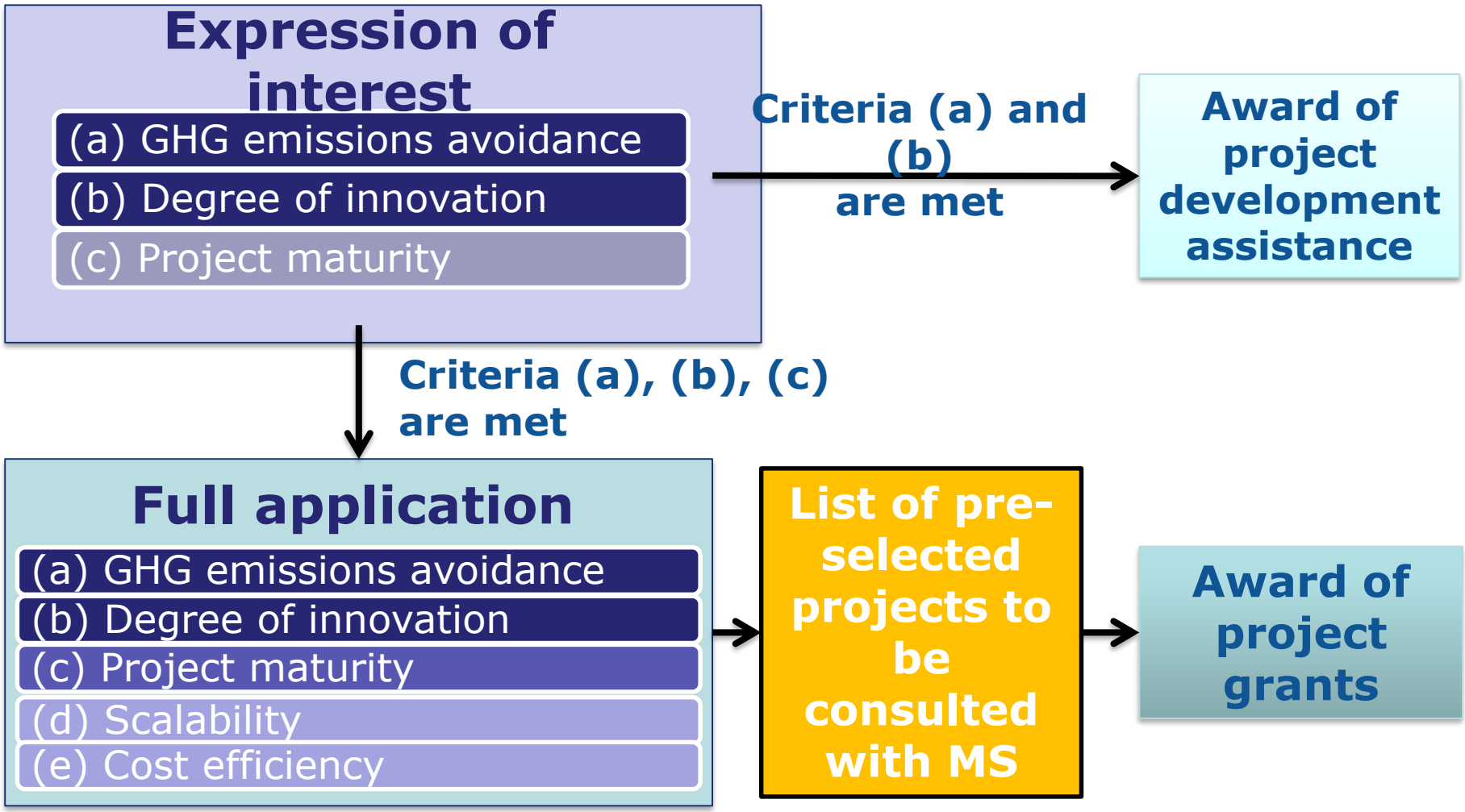
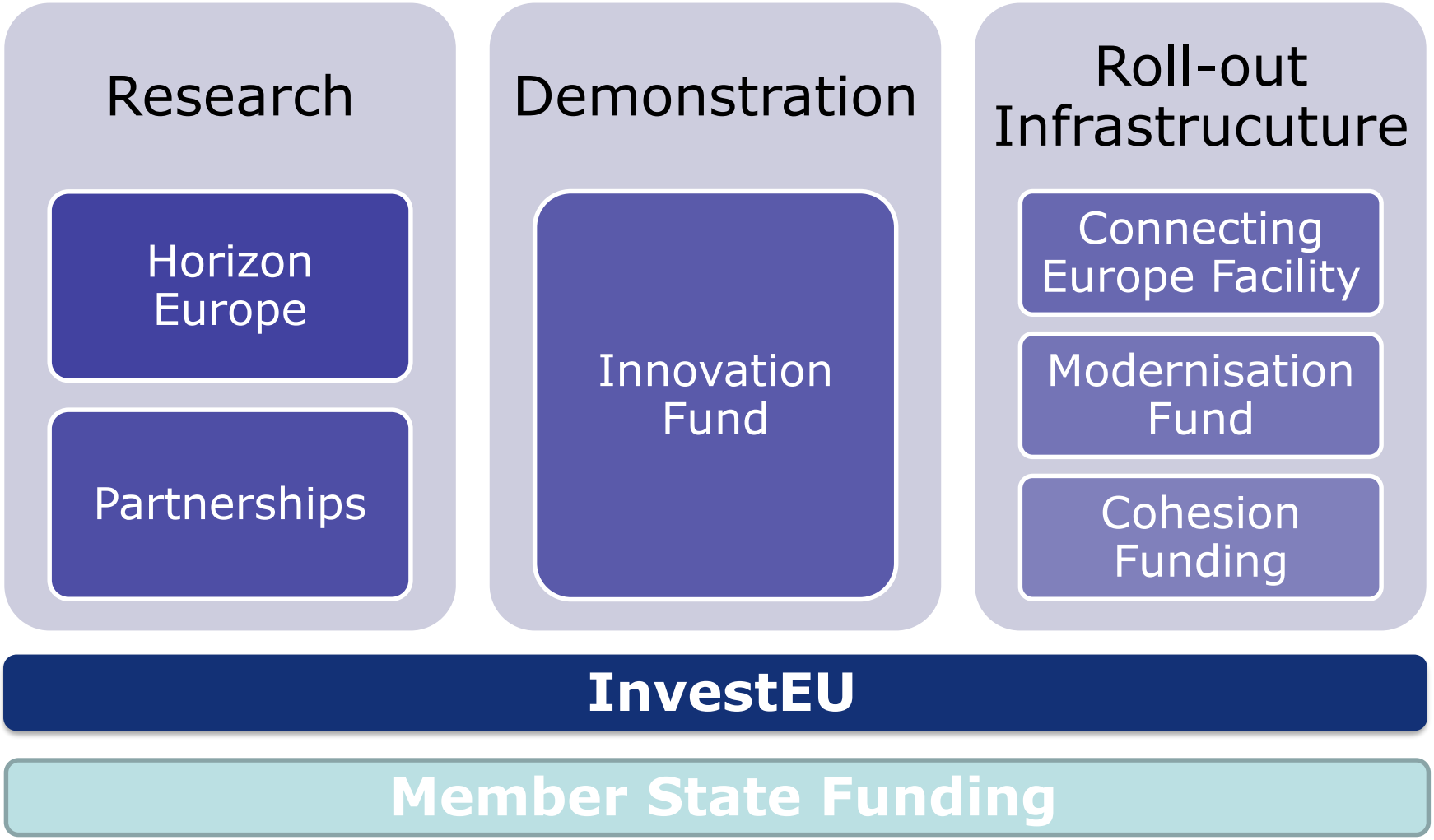
Comprehensive selection criteria

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

Two-stage selection process



Synergies – Innovation Fund



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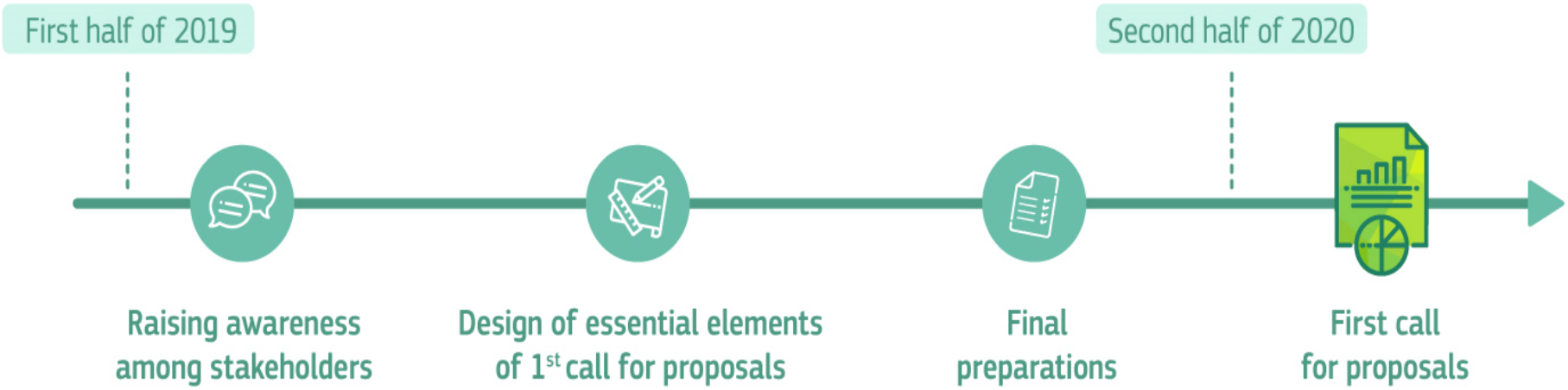
Timeline – Innovation Fund



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INNOVATION FUND

Driving clean innovative technologies towards the market

Supporting innovation in:

Funded by: EU Emissions Trading System

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

#InnovationFund

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Modernisation Fund
Basics – EU ETS Directive 2018/410

- Volume of at least 2% of the EU ETS cap for Modernisation Fund
- To be distributed among 10 beneficiary Member States according to preset allocation key:

Bulgaria	Czech Republic	Estonia	Croatia
Latvia	Lithuania	Hungary	Poland
	Romania	Slovakia	

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Priority investments
at least 70 % of Modernisation Fund

Modernisation of energy systems

- Renewables
- Networks (including district heating pipelines)
- Interconnectors
- Energy storage

Improvements in energy efficiency

- Energy generation (except solid fossil fuels)
- Transport, buildings, agriculture and waste

Just transition in carbon-dependent regions

- Re-deployment / up-skilling of workers
- Education and job-seeking
- Support to start-ups