Innovation Fund

Main principles of the GHG emission calculations

Application of the methodology

- To support applicants quantifying GHG emissions avoidance potential over the first 10 years of operation

- To form the basis of the scoring for the "GHG emission avoidance potential" criterion and cost efficiency

- To serve as KPI for project monitoring and disbursements of grants

- To inform on requirements for knowledge-sharing purposes

Selection criteria

Projects will be selected based on:
1. Potential of greenhouse gas emissions avoidance
2. *Degree of innovation*
3. *Project viability and maturity*
4. *Scalability*
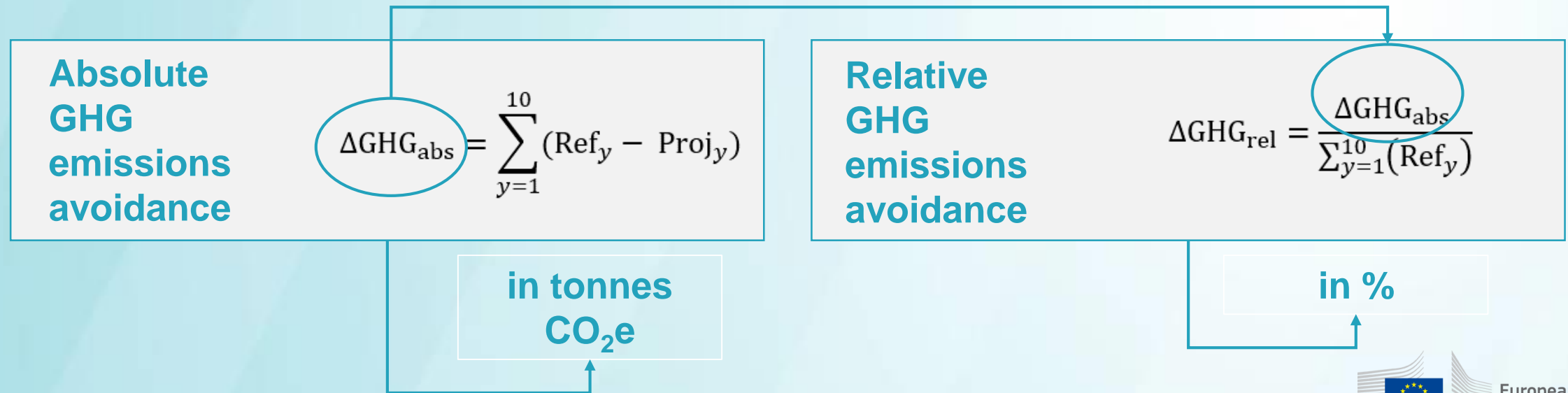5. *Cost efficiency (cost per unit of performance)*

European Commission

Absolute GHG emission avoidance
Main rationale and use in GHG criteria

Absolute GHG emission avoidance will be the difference between:
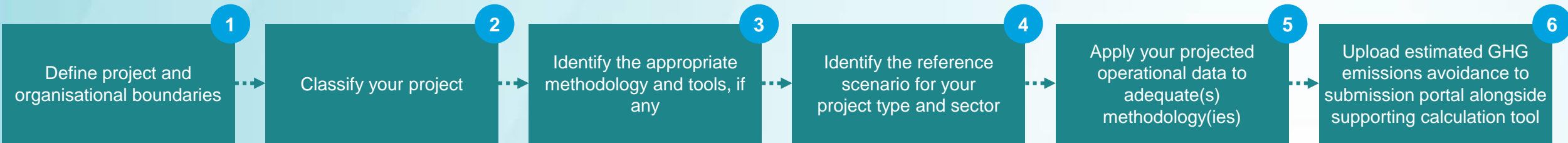
- the **emissions that would occur in the absence of the project** (*Ref*), and
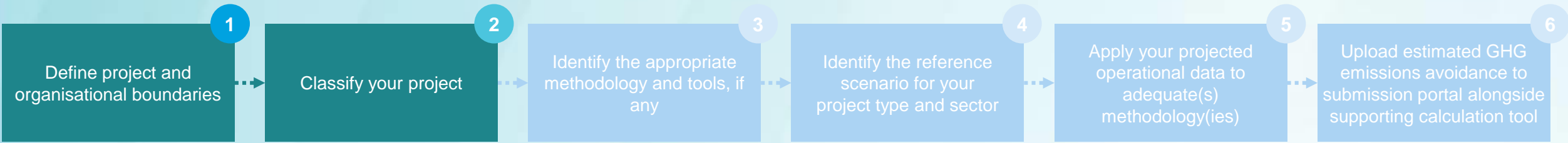- the **emissions from the project activity** (*Proj*)

Timescale: 10-years. Forecasting: emission factor will be fixed for the 10 years of calculation

Absolute GHG emissions avoidance

$$\Delta GHG_{abs} = \sum_{y=1}^{10} (Ref_y - Proj_y)$$

in tonnes CO_2e

Relative GHG emissions avoidance

$$\Delta GHG_{rel} = \frac{\Delta GHG_{abs}}{\sum_{y=1}^{10}(Ref_y)}$$

in %

European Commission

Submitting an application
Step by step

1	2	3	4	5	6
Define project and organisational boundaries	Classify your project	Identify the appropriate methodology and tools, if any	Identify the reference scenario for your project type and sector	Apply your projected operational data to adequate(s) methodology(ies)	Upload estimated GHG emissions avoidance to submission portal alongside supporting calculation tool

Source: Adapted from INEA, 2020. *Innovation Fund First stage of the large scale call. Application procedure*

European Commission
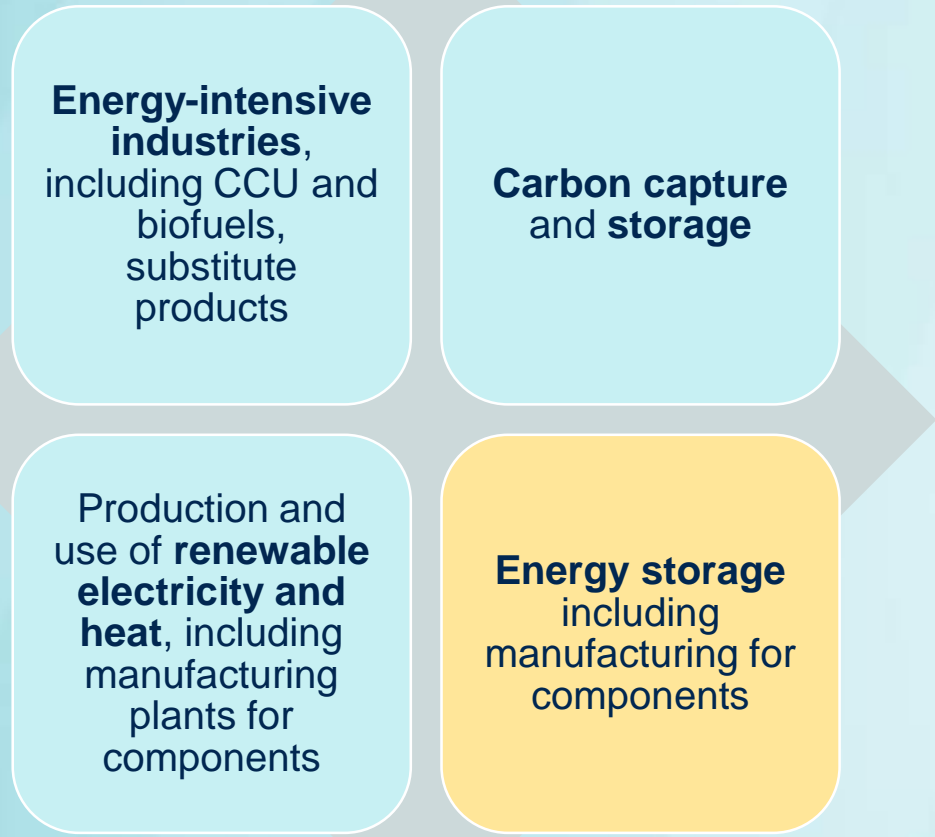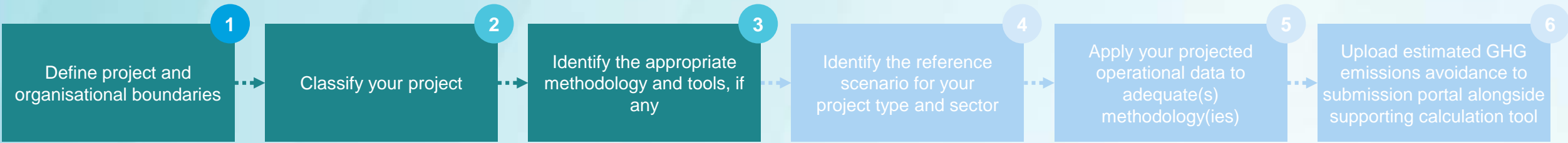
Category of the project (drop down list) *Annex C, Methodology for calculation of GHG emission avoidance, Appendix C1 Classification of projects into sectors*	[category name from list: (Energy storage, Renewable energy, Energy Intensive Industries, Energy intensive industries, CCS]
Sector of the project (drop down lists)	[sector name from list: (Intra-... storage, Other energy storage, ... Solar energy, Hydro/Oce... Geothermal energy, Bio-electrici... Heating/Cooling, Refineries, Bio... refineries, Iron & steel, Non-fe... Cement & lime, Glass, ... construction material, Pulp... Chemicals, Hydrogen, Other, C... and Storage)]
Products within sector	[product name from list: (if subs... indicate the product substituted)...

Annex C, Methodology for calculation of GHG emission avoidance, Appendix C1 Classification of projects into sectors

Category	Sector	Product
Energy storage, incl. manufacturing plants for components	Intra-day electricity storage	electricity
	Other energy storage	electricity, heating/cooling, e-fuels, hydrogen
Renewable energy, incl. manufacturing plants for components	Wind energy	electricity
	Solar energy	electricity
	Hydro/Ocean energy	electricity
	Geothermal energy	electricity, CHP
	Bio-electricity	electricity, CHP
	Renewable Heating/Cooling	heating/cooling
Energy Intensive Industries, incl. CCU, incl. substitute products, incl. CCS (CO2 capture and full scale)	Refineries	fuels (incl. e-fuels)
	Biofuels and bio-refineries	biofuel, bio-based products
	Iron & steel	coke, iron ore, iron, steel, cast ferrous metals products, other
	Non-ferrous metals	aluminium, precious metals, copper, cast non-ferrous metal products, other
	Cement & lime	cement, lime, dolime, sintered dolime, other
	Glass, ceramics & construction material	flat & container glass, glass fibres, tiles, plates, refractory products, bricks, houseware, sanitary ware, mineral wool, gypsum, other
	Pulp & paper	chemical pulp, mechanical pulp, paper and paperboard, sanitary and tissue paper, other
	Chemicals	organic basic chemicals, inorganic basic chemicals, nitrogen compounds, plastics in primary forms, synthetic rubber, other
	Hydrogen	hydrogen
	Other	electricity, heat, other
CCS (CO2 transport and/or storage)	CO2 transport and/or storage	CO2 transport and/or storage

European Commission

Source: Adapted from INEA, 2020. *Innovation Fund First stage of the large scale call. Application procedure*

Hybrid projects

- **Absolute GHG emission avoidance**: calculate separately using respective methodologies and add them up. Remove double counting of avoidance and/or emissions, if any.

- **Relative GHG emission avoidance**: calculate based on the cumulated emission avoidance and the cumulated project emissions