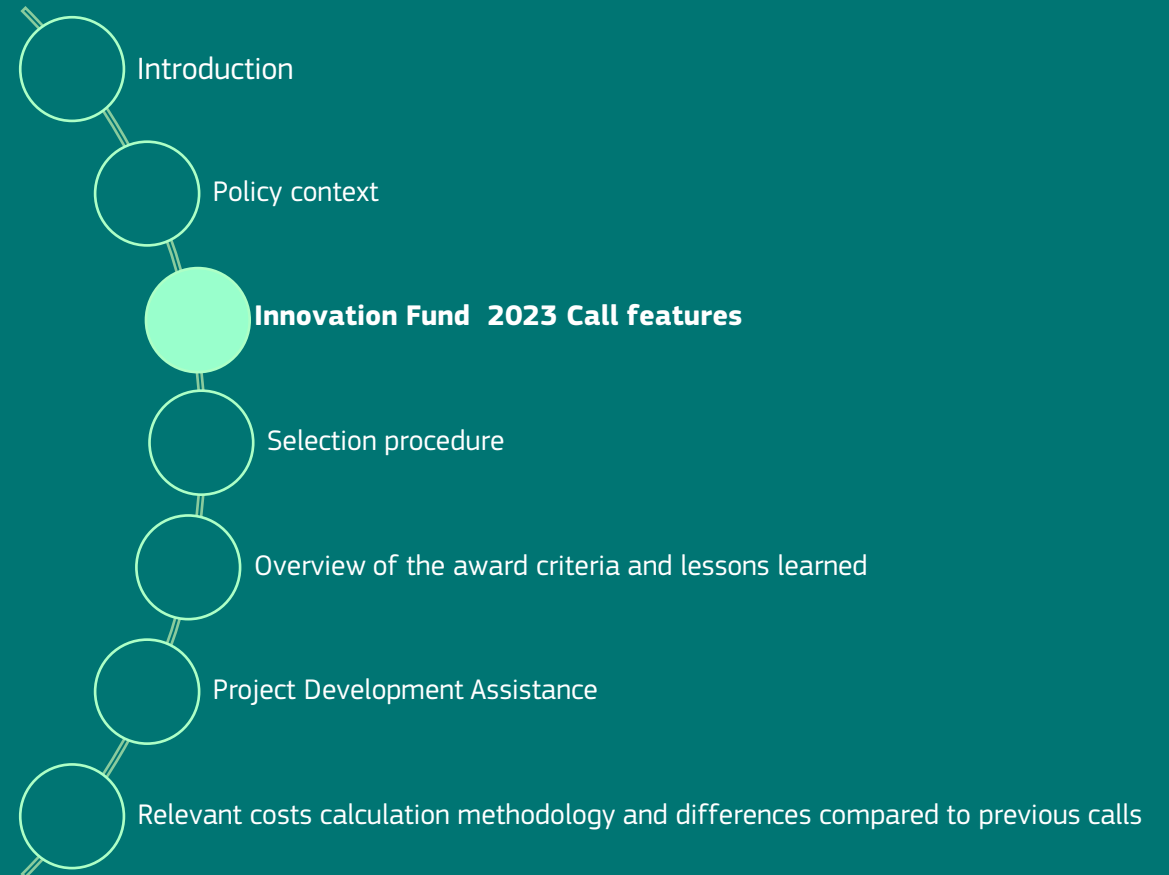


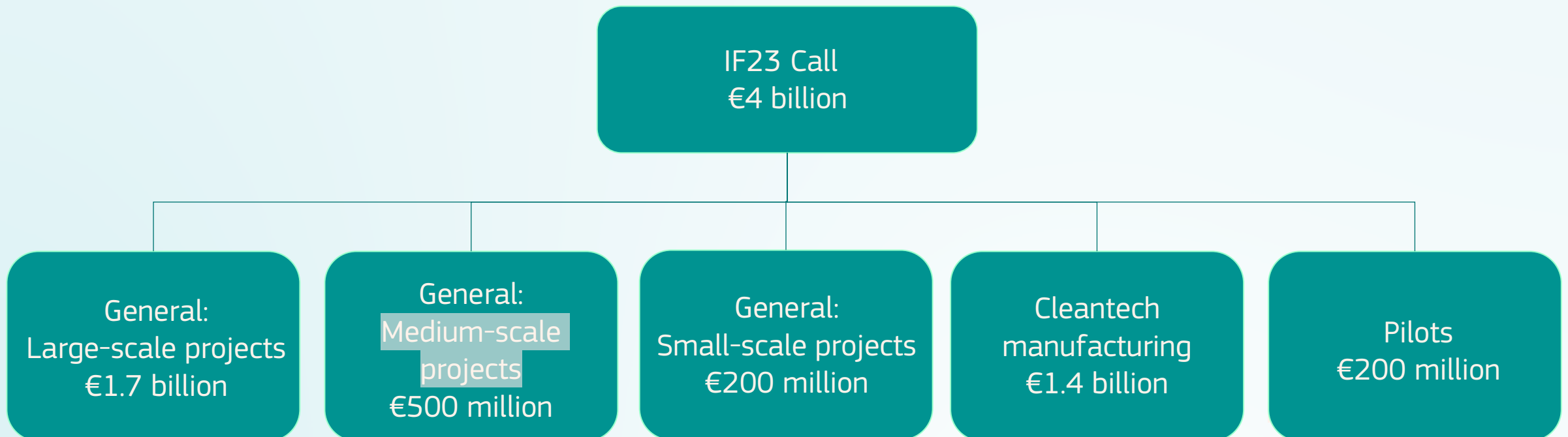
# Call features

**Joao SERRANO GOMES, Policy Officer**  
DG CLIMA C2, Low Carbon Solutions (II):  
Research & Low Carbon Technology Deployment



# Structure of the IF23 Call

- Overall budget: **€4 billion** + 20% flexibility reserve



# Structure of the IF23 Call

- Bottom-up approach covering all areas eligible in the **general decarbonisation** window(s) under **three topics by project size:**

	Small-scale projects	Medium-scale projects	Large-scale projects
Project size (by CAPEX)	Up to €20 million	Above €20 million and up to €100 million	Above €100 million

- EU Green Deal Industrial Plan, Net Zero Industry Act and Wind Energy Package key priorities reflected by the continuation of two focused topics:
  - Manufacturing topic on innovative cleantech manufacturing;
  - Pilot proposals that focus on validating, testing and optimising highly innovative solutions.

# Structure of the IF23 Call

The topics allow focus on key **policy priorities**.

The 'policy' topics benefit numerous sectors and **avoid 'parcelling'**.

The topics reserve a **dedicated budget envelope**.

The topics make competition among proposals more **focused**.

Manufacturing and Pilots topics apply weighting of award criteria to reflect policy priorities: **fast project maturity** and **higher degree of innovation**

**Maritime sector** is fully eligible and there are specific provisions on full climate impact, including black carbon.

Topics designed not to overlap - **one proposal application can only be made to one topic**.

# General Decarbonisation Topic(s)

The following **activities can be funded** under these topics:



- supporting innovation in low-carbon technologies and processes in sectors listed in **Annex I and Annex III to the EU ETS Directive**, including environmentally safe carbon capture and utilisation (**CCU**), as well as **products substituting carbon-intensive ones** produced in sectors listed in Annex I.
- construction and operation of projects that aim at the environmentally safe capture and geological storage of CO<sub>2</sub> (**CCS**).
- support the construction and operation of innovative **renewable energy** and **energy storage technologies**.

# General Decarbonisation Topic(s)

- Carbon capture and utilisation: if the captured CO<sub>2</sub> is from activities in Annex I of the EU ETS Directive, or if the utilisation of CO<sub>2</sub> results in products substituting carbon-intensive ones from the sectors listed in Annex I to the EU ETS Directive.

New

- In infrastructure related projects, fair and **open access for other operators** needs to be ensured.

New

- Projects installing and operating mature electrolyser technologies without additional relevant innovation in the use of the produced hydrogen are advised to apply to the **IF23 Auction for RFNBO Hydrogen.**

New

- Support **to maritime** and **aviation** can be provided for breakthrough innovative technologies, including **innovative infrastructure** in the maritime sector, notably for EU container transshipment ports.

# General Decarbonisation Topic(s)

- The project must **operate at least five years** after entry into operation, **at least three years** for small-scale projects.



- Contribution to building EU industrial capacity, technology leadership, supply chain resilience, and strategic autonomy.

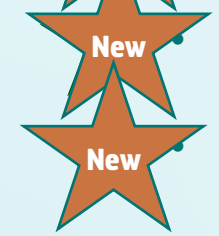
- To be assessed under Replicability award criterion



Only projects that have not started works at the time of grant application can be funded.

The **relative GHG emission avoidance** must be at least **50%**.

**Cost efficiency ratio** must be lower or equal than **200 €/t CO<sub>2</sub>-eq.**



- Simplifications kept for small-scale projects: knowledge sharing plan requirements; degree of innovation at national level.

# General Decarbonisation topic(s)

## 2022 (3<sup>rd</sup>) Large-scale call projects:

- **BioOstrand:** First commercial deployment of solid biomass-and-power-to-sustainable aviation fuels technology line-up.
- **GeZero:** First German inland cement plant Geseke aims to become net carbon negative by implementing a full CCS chain.
- **T-HYNET** first-of-a-kind large-scale electrolyser to produce renewable hydrogen with 150 MW capacity.





# General Decarbonisation Topic(s)

Award criteria	Minimum pass score	Maximum score
<b>Degree of innovation</b>	9	15
<b>GHG emission avoidance potential</b>		
Absolute GHG emission avoidance	n/a	2
Relative GHG emission avoidance	n/a	5
Quality of the GHG emission avoidance calculation and minimum requirements	3	5
<b>Total GHG emission avoidance potential</b>	n/a	12
<b>Project maturity</b>		
Technical maturity	3	5
Financial maturity	3	5
Operational maturity	3	5
Total Project maturity	n/a	15
<b>Replicability</b>	9	15
<b>Cost efficiency</b>		
Cost efficiency ratio	n/a	12
Quality of the cost calculation and minimum requirements	1.5	3
<b>Total Cost efficiency</b>	n/a	15
<b>Total (without bonus)</b>	n/a	72
Bonus point 1	n/a	1
Bonus point 2	n/a	1
Bonus point 3	n/a	1
Bonus point 4	n/a	1
<b>Total (with bonus)</b>	n/a	76

# Cleantech Manufacturing Topic

Objectives:

- Foster **innovative manufacturing in cleantech** for hydrogen production/consumption, renewable energy, and energy storage.
- Build industrial capacity, technology leadership, and supply chain resilience within the EU.

The following **activities can be funded** under this topic:

- Develop facilities for producing **components** in:
  - **Renewable energy** installations (e.g., wind, solar, geothermal).
  - **Electrolysers** and **fuel cells**.
  - **Energy storage** solutions for stationary and mobile use for intra-day and long duration storage.
  - **Heat pumps** for various uses.

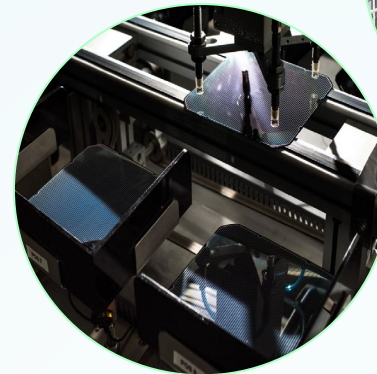
# Cleantech Manufacturing Topic

- Components definition also **includes the final equipment** such as wind turbines, solar panels, batteries, heat pumps or electrolysers, as well as sub-components like nacelles or blades for wind turbines
- Topic is targeting those **components and materials (except mining activities) that are a significant factor** in the performance and/or cost of the final equipment.
- Scope includes **recycling or reusing critical materials** used in the mentioned equipment or components.
- Equipment and components can be sold on the EU market and in third countries.
- Promote innovation in **cleantech manufacturing/production processes** and **final product improvements**.
- Emphasis on factors like **cost reduction, performance improvement, efficiency, and sustainability**.

# Innovative Clean-tech manufacturing

## 2022 (3<sup>rd</sup>) Large-scale call projects:

- **TopSOEC:** Topsoe solid oxide electrolyser cell modules factory.
- **HyNCREASE:** Manufacturing lines of hydrogen-related components for electrolysers and fuel cells
- **DAWN:** Production of lightweight and flexible copper indium gallium selenide thin-film solar cells and panels.



# Cleantech Manufacturing Topic

- Innovation can concern one or several steps of the manufacturing process or the production of an innovative component.
- Projects achieving **financial close within two years** and **entry into operation within four years** after grant agreement signature may earn a higher score in project maturity evaluation.
  - To be assessed under the Financial and Operational Maturity award criterion
- **Excluded activities:** demonstration of use of innovative components (including the final equipment) in power/heat generation/energy storage/production & consumption of hydrogen (submit those in General or Pilot topics).

Only projects that have not started works at the time of grant application can be funded.

The relative **GHG emission avoidance** must be at least **50%**.

**Cost efficiency ratio** must be lower or equal than **200 €/t CO<sub>2</sub>-eq.**



# Cleantech Manufacturing Topic

Award criteria	Minimum pass score	Maximum score	Weight
<b>Degree of innovation</b>	9	15	2
<b>GHG emission avoidance potential</b>			
Absolute GHG emission avoidance	n/a	2	1
Relative GHG emission avoidance	n/a	5	1
Quality of the GHG emission avoidance calculation and minimum requirements	3	5	1
<b>Total GHG emission avoidance potential</b>	n/a	12	1
<b>Project maturity</b>			
Technical maturity	3	5	2
Financial maturity	3	5	2
Operational maturity	3	5	2
<b>Total Project maturity</b>	n/a	15	2
<b>Replicability</b>	9	15	1
<b>Cost efficiency</b>			
Cost efficiency ratio	n/a	12	1
Quality of the cost calculation and minimum requirements	1.5	3	1
<b>Total Cost efficiency</b>	n/a	15	1
<b>Total (without bonus points)</b>	n/a	102	n/a
Bonus point 1	n/a	1	1
Bonus point 2	n/a	1	1
Bonus point 3	n/a	1	1
Bonus point 4	n/a	1	1
<b>Total (with bonus points)</b>	n/a	106	n/a

# Pilot Projects Topic

Objectives:

- Support **highly innovative, disruptive or breakthrough technologies** in deep decarbonisation needed for achieving the climate neutrality goal.

The following **activities can be funded** under this topic:



sectors listed in **Annex I and Annex III** to the EU ETS Directive 2003/87, including environmentally safe carbon capture and utilisation (**CCU**).

- **products substituting carbon-intensive ones** produced in sectors listed in Annex I to the EU ETS.
- construction and operation of innovative **energy storage, CO<sub>2</sub> storage** and **renewable energy installations**, including electricity/heat grid connections.

# Pilot Projects Topic

- Topic is targeting a **higher degree of innovation** with respect to other topics
  - Points under Degree of Innovation award criterion are doubled.
- Emphasis on addressing technical risks linked to the innovative technologies, such as **optimising process and operational parameters**, and **enhance final product characteristics**.
- Pilot projects should prove an **innovative technology** in an operational environment, i.e., include pilot manufacturing lines, but are not expected yet to reach large-scale demonstration or commercial production.
- The projects can entail **limited production/operation** for testing purposes, including delivery to/from potential customers for validation.



# Pilot Projects Topic

- **Project viability** rather than project profitability is to be demonstrated.
  - To be assessed under the Financial Maturity award criterion.
- Typically projects with **limited life-time (3-5 years)** and the technology should then move to large-scale demonstration or first-of-a-kind commercial production.
  - To be demonstrated under replicability award criterion.
- Potential to be fully compatible with a 2050 climate neutrality objective and pilot installations should exhibit minimal residual emissions or result in net carbon removals.
  - The **relative emission avoidance must be at least 75%**.
- Contribution to building EU industrial capacity, technology leadership, supply chain resilience, and strategic autonomy.
  - To be assessed under replicability award criterion.



# Pilot Projects Topic



- Projects achieving **financial close within two years** and **entry into operation within four years** after grant agreement signature may earn a higher score in project maturity evaluation.

- To be assessed under the Financial and Operational Maturity award criterion.

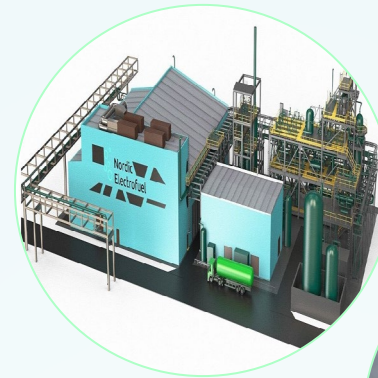


- Maximum grant is limited to **€40 million per project**.
- Only projects that have not started works at the time of grant application can be funded.
- The project must operate **for at least three years after entry into operation**.
- It is expected that projects will be more costly and thus less stringent formula **for cost-efficiency criterion** is applied:  $12 - (12 \times (\text{cost efficiency ratio}/2000))$

# Pilot Projects Topic

## 2022 (3<sup>rd</sup>) Large-scale call projects:

- **E-fuel pilot:** Innovative and cost-efficient production process for syncrude using industrial off-gases, renewable energy and water.
- **Hippow:** testing a highly innovative prototype of powerful offshore wind turbine generator.
- **Volta Project:** Hybrid mid-sized pilot furnace for flat glass



# Pilot Projects Topic

Award criteria	Minimum pass score	Maximum score	Weight
Degree of innovation	9	15	2
<b>GHG emission avoidance potential</b>			
Absolute GHG emission avoidance	n/a	2	1
Relative GHG emission avoidance	n/a	5	1
Quality of the GHG emission avoidance calculation and minimum requirements	3	5	1
<b>Total GHG emission avoidance potential</b>	n/a	12	1
<b>Project maturity</b>			
Technical maturity	3	5	1
Financial maturity	3	5	1
Operational maturity	3	5	1
<b>Total Project maturity</b>	n/a	15	1
<b>Replicability</b>	9	15	1
<b>Cost efficiency</b>			
Cost efficiency ratio	n/a	12	1
Quality of the cost calculation and minimum requirements	1.5	3	1
<b>Total Cost efficiency</b>	n/a	15	1
<b>Total (without bonus points)</b>	n/a	87	
Bonus point 1	n/a	1	1
Bonus point 2	n/a	1	1
Bonus point 3	n/a	1	1
Bonus point 4	n/a	1	1
<b>Total (with bonus points)</b>	n/a	91	n/a

# Q&A session

**Go to [Slido.com](https://www.slido.com)**

Or scan me



**Enter the code `#IF23Call`**

**Ask your question or vote for an existing one!**