



Proposed structure and coverage of the 3rd call for large-scale projects

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3LSC : budget and topics

- Considering the large pipeline and the higher carbon price an **increased budget** of EUR 3bn+20% flexibility is allocated to the 3LSC.
- Considering the urgency to decrease the dependency on imported fossil fuels, the IF will have **3 dedicated REPowerEU topics** for:
 - innovative **electrification and hydrogen applications in industry**
 - innovative **clean tech manufacturing** (such as electrolysers and fuel cells, innovative renewable equipment, energy storage or heat pumps for industrial uses)
 - **mid-sized pilot projects** that focus on validating, testing and optimising highly innovative solutions.
- These topics are in addition to the **general topic** → continuity and ease for resubmissions.
- Work continues on streamlining procedures, methodologies and application documents.

3LSC topics definition: key questions

1. Can topics reward applications that can have a **shorter time** to Financial Close and faster Entry into Operation?
2. How broadly should we set **boundaries of topics scope** (see take-aways from workshops)?
 - Smaller components that can serve multiple sectors
 - GHG and RC methodologies not fully suited to the components
3. Where can the IF **make most impact** within each window, i.e. what type of innovation should we reward?
4. Can we make **exhaustive list** of eligible activities/technologies/sectors or at least work with examples?

3LSC topics definition: key questions (cont'd)

5. For **electrification and hydrogen uptake** in industry topic:

- Do we target demand, supply or both?
- Can transport and storage be part of the project?

6. For **clean tech manufacturing** topic

- Main focus innovation in the end product but could also innovation in manufacturing processes be considered?
- Should GHG methodology propose standard input assumptions?

7. For **mid-size pilots** topic

- How can we target best “deep decarbonisation” technologies?
- Should there be a ceiling for project funding or on the project size?
- Is “No reference” Relevant Cost methodology most suitable?

3LSC topics definition (electrification and hydrogen uptake): initial ideas

- **Examples** of technologies and activities, where **innovative direct electrification** replaces conventional fossil fuel use :
- *Sector specific activities*
 - steam reforming and cracking for chemical industry
 - melting in glass furnaces
 - calcination of limestone or electrification of clinker production for cement production
 - (...)
- *Technologies used across a range of industrial activities*
 - electro-technologies for process heat, such as electromagnetic heating (infrared, induction, microwaves)
 - electric furnaces (resistance, arc and plasma)
 - mechanical vapour recompression that can provide higher temperature heat than what is currently practicable using state of the art industrial heat pumps
 - (...)

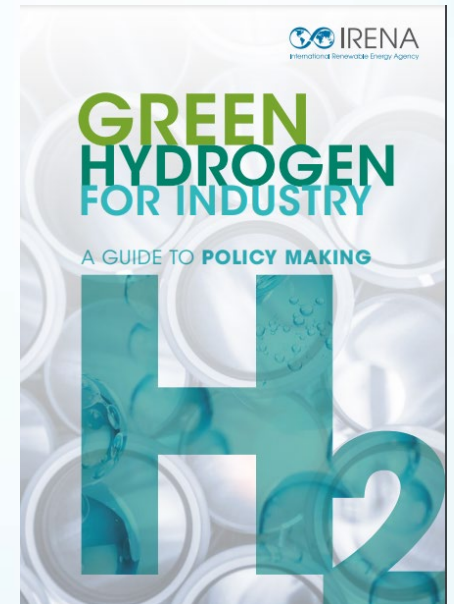
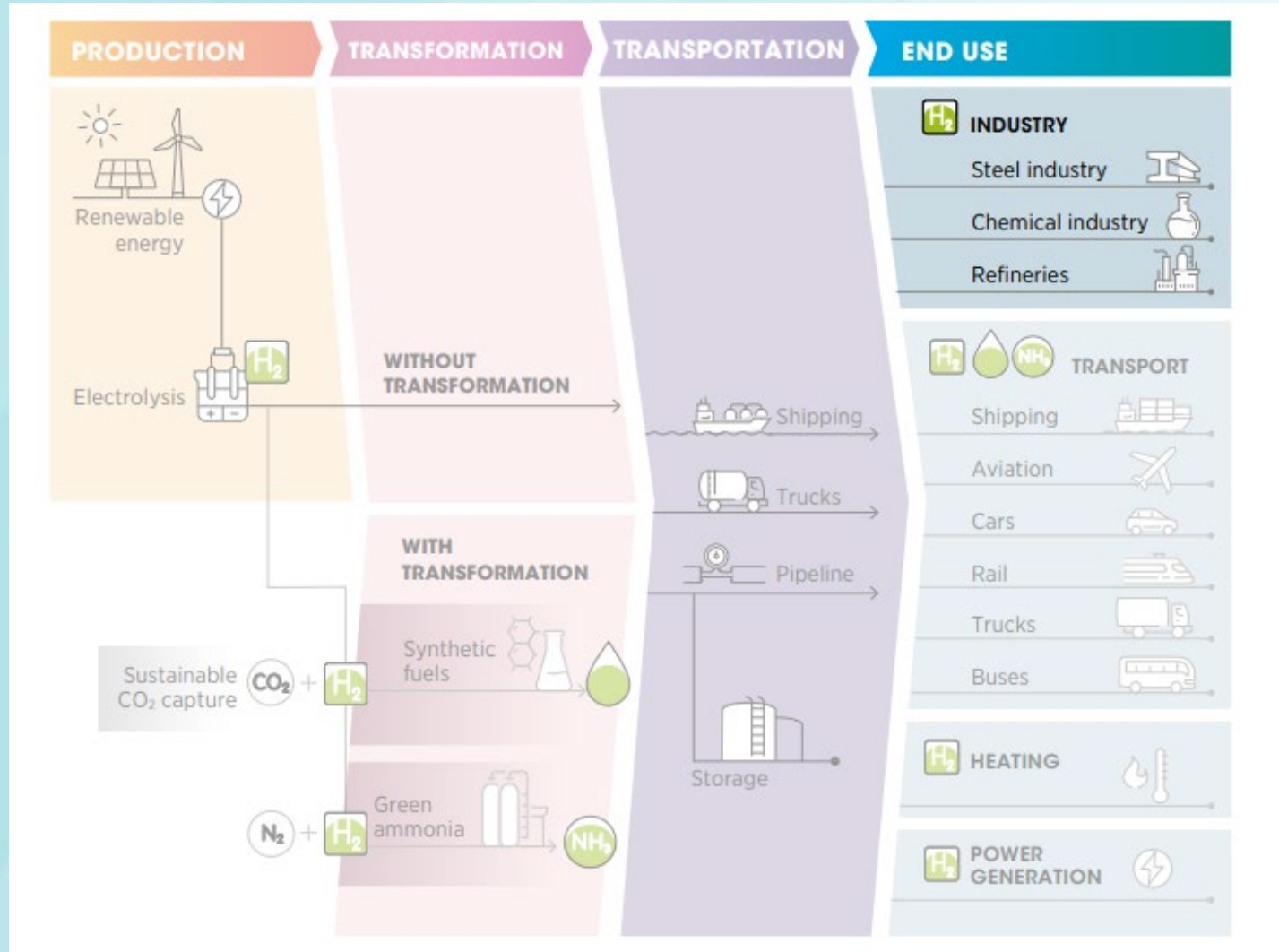
Conversely, the topic would not target the use of state-of-the art industrial heat pumps, or other currently commercially available electrification technologies such as conventional aluminium smelting.

3LSC topics definition (electrification and hydrogen uptake): initial ideas

- **Examples** of technologies and activities that support **hydrogen applications** (i.e. hydrogen as an energy carrier, or as a reduction agent, or as a feed-stock) in the industry, replacing the fossil fuels use:
 - replacing the use of carbon-intensive hydrogen in refineries,
 - replacing the use of carbon-intensive hydrogen in the production of ammonia, methanol and other chemicals
 - replacing the use of fossil fuels used as feedstock in chemical industry
 - replacing fossil fuels in zero-carbon steel making processes
 - replacing fossil fuels for high-temperature heat in the industry
 - captive or by-product or merchant production of renewable hydrogen for industrial applications but also for mobility or buildings or mix of different applications
 - production of hydrogen derived renewable fuels
 - (...)

Conversely, hydrogen applications in final energy demand sectors other than industry (e.g. buildings, transport) and other energy use (power generation, combined power and heat, storage) as the main part of the activity would not be targeted under this topic.

3LSC topics definition (electrification and hydrogen uptake): initial ideas



3LSC topics definition (manufacturing): initial ideas

Objectives:

- Accelerate deployment in accordance with Fit for 55, REPowerEU
- Develop resilient supply chains, establish industrial capacity and technology leadership
- Develop future-proof growth and jobs in the EU
- Address dependence on critical materials (substituting, reducing, recycling...)

Scope: manufacturing of equipment (and components thereof) such as: heat pumps, electrolysers / fuel cells, innovative renewable equipment, energy storage (short and long term)

Examples clean-tech manufacturing projects in 1LSC and 1SSC

1st LSC: TANGO Project

- Industrial-scale pilot line in the south of Italy to manufacture bifacial heterojunction PV cells
- Scaling production capacity from 200 MW to 3 GW per year

1st SSC:

- **Helexio line:** Demonstrating manufacturing for innovative BIPV roof components
- **CarBatteryReFactory:** Assembly plant for serial production of industrial energy storage systems based on second-life car batteries and disruptive full-pack technology
- **Green Foil project:** Low CO₂ footprint battery foil/current collector for Li-ion batteries production



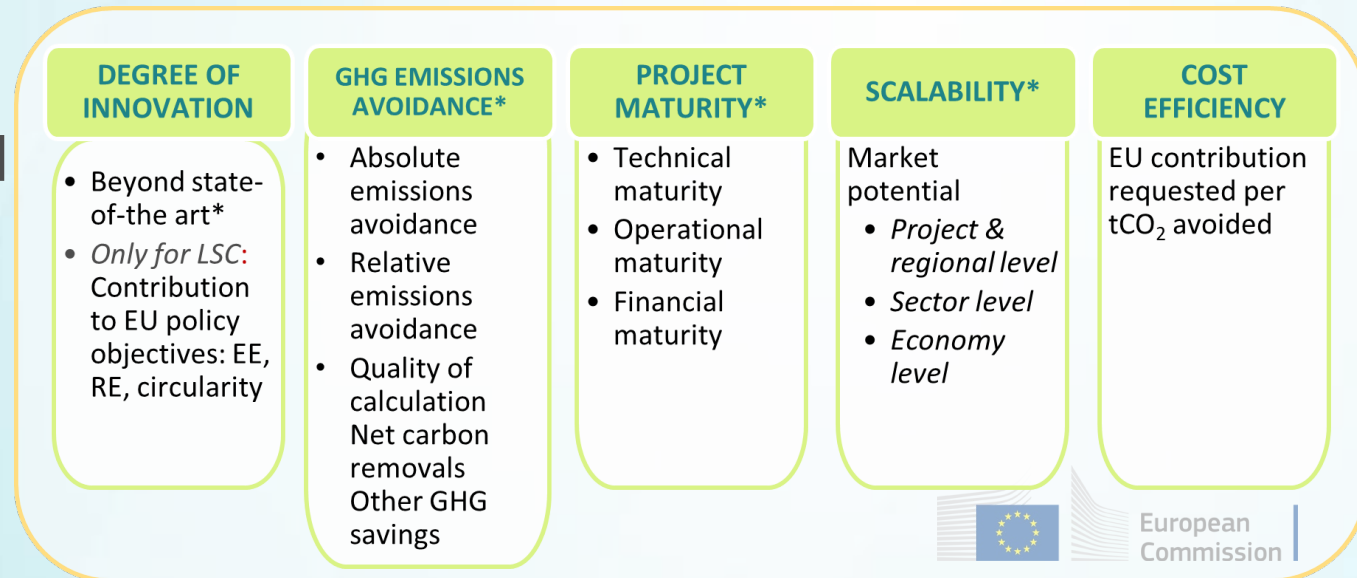
3LSC topics definition (pilots): initial ideas

Objectives:

- Targeting innovation **upstream of large-scale demo** (limited operation time, limited revenues are expected)
- Validate, **test and optimise** breakthrough solutions
- Focus on **highly innovative**, game-changing/disruptive/breakthrough solutions in **deep decarbonisation**
- Reach out more to innovative start-ups, scale-up companies that do not have yet the means to finance projects
- **Zero or near zero solutions**, but open to all areas eligible under IF
- Supporting key development stage where the pilots are too big for **Horizon Europe** or other EU funding programmes (seeking **synergies and complementarities** between the programmes)

3LSC topics definition: award criteria & weighting

- In the light of DR of the IF we have to apply the **same five award criteria**.
- Good feedback from workshop on difficult award criteria and those that are decisive for certain projects.
- Considering **streamlining** some aspects of GHG and Relevant Costs **methodologies** and, if possible use of default values based on input we received from workshops.
- Considering in-depth review of **scalability criterion** and **role of absolute GHG savings** criterion.
- Considering **weighting of award criteria**.



3LSC: next steps for Innovation Fund

1. Survey of project pipeline, dedicated workshops on manufacturing (summer 2022)
2. Written feed-back from IFEG (ideally 31 July 2022)
3. Consultation of Member States on Financing Decision (Sept 2022)
4. Launch of 3rd Large Scale call (November 2022, deadline March 2023)
5. Lessons learned from past calls and Info-day for 3rd Large Scale call (November 2022)
6. Workshop on synergies between Horizon Europe and Innovation Fund (end of 2022)
7. Launch of 3rd SSC (April 2023, deadline Sept 2023)

Where to find more information?



All (past) call documents available on the **Funding and Tenders Portal** including:

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

<https://europa.eu/!QB67by>



Further info, planning of new calls, recorded webinars and videos available on the IF Website:

<https://europa.eu/!rx34Dt>



Innovation Fund - YouTube

<https://bit.ly/2WxK8w7>

