

IF 2022 support – Task 2, Organisation of Innovation Fund events

Sub-task 2.3 Stakeholder Consultations

Summary of the Stakeholder Consultation Event on the next calls for proposals

1.1 Overview

On 13 June 2023, the European Commission held its first stakeholder consultation event since the EU ETS Directive was revised. The purpose of the all-day event was three-fold. First, to inform stakeholders about the main results and progress achieved by the Innovation Fund (IF) since it was launched in 2020. Second, to share the key developments of the Innovation Fund, including the introduction of auctions for hydrogen generation in late 2023 and the instrument extension to maritime and aviation sectors. Thirdly, it provided stakeholders with the opportunity to give their views on sectoral priorities, funding needs and challenges to achieve innovative decarbonisation across European industry, as well as sharing feedback on future IF calls/auctions design so they align well with industry needs and financing gaps.

The event was delivered in a hybrid format and structured with four breakout sessions, including parallel sectoral sessions, as shown in the following summary agenda:

1. **Morning session (Introduction)** by European Commission (Maria Velkova - Acting Head of Unit C2 for Low Carbon Solutions (II): Research & Low Carbon Technology Deployment at DG CLIMA, Roman Doubrava - Head of Unit for the Innovation Fund at CINEA and Samuel Verschraegen - Legal Officer at DG CLIMA Unit C2), split into three parts:
 - Overall presentation of the IF, its combination with other funding programmes, award criteria, financial instruments and project development assistance;
 - Insights into how the IF has evolved since 2020, including geographical distribution and ongoing portfolio of projects;
 - Summary of changes to the IF following the EU ETS Directive revision.

The session concluded with an implementation timeline outlining the 2023 dates for Grants and Auctions indicative planning. Stakeholders were also provided with a list of future events. A series of stakeholder questions, from online and in person, were answered by the panel – see a selection of questions in Table 1 below:

Table 1: Slido & discussion main questions

Question	Answer
Will relevant cost changes support 100% of the extra cost of the innovation or will continue being 60%?	There are no changes planned with regards to the funded share of the relevant cost.
Will green hydrogen production projects still be eligible under the IF grant scheme or should these projects rather target the hydrogen auction?	There is certainty that H2 will not be excluded in the general topic because H2 auctions are for technologies that are ready for rollout while Innovation will still exist in the sector and will still need support, particularly for lower TRL technologies.
What is the expected impact on absolute emissions savings from the shift to awarding on a relative emission avoidance?	Relative emissions avoidance through scalability will consequently bring absolute emission avoidance. That is why the emphasis is now in relative emission avoidance.
Can a project based completely on renewable energy other than electricity (e.g. mechanical energy) be funded?	Any renewable energy is eligible as long as it is innovative.
Will there be dedicated sectoral calls?	Is under consideration. For the moment the approach is sector neutral, so technologies that could be applied in different sectors.

2. **Sectoral sessions** – following the morning session, participants were split into two rooms for the working sessions covering aviation, maritime, industrial decarbonisation and cleantech manufacturing (featuring solar PV, wind and energy storage). All four working sessions were structured in the following format:

- Firstly an introduction part by the European Commission on the sector and trends (funding and financing instruments, EU pipeline of potential projects, technologies for climate neutrality, relevant EU ETS changes in the sector among others);
- Second part delivered by sector representatives who presented key project areas that could be suitable for IF support, the types and size of financial support that is most required (e.g. Grants, Auctions, Financial Instruments), as well as identifying key sector issues
- Finally, an open discussion, moderated by either ICF or Fraunhofer ISI, with the main aim to gather views from participants on three specific questions:
 - (a) what are the most promising technologies and strategies for reducing sectoral emissions?
 - (b) what are the main lessons learned from recent projects implemented in Europe, and how to avoid repeating mistakes in new projects?; and,
 - (c) which areas would benefit from auctions, either in addition or as an alternative to grants, and what additional funding measures are required?

1.2 Key results from sectoral sessions

1.2.1 Aviation

The session started with a presentation from **Marcos González Álvarez (Deputy Head of DG CLIMA Unit B4 for Mobility (II): Air, Rail, Water and Intermodal Policy)** and **Niclas Dzikus (Policy Officer at DG RTD Unit C3 for Low Emission Future Industries)** who provided an overview of the implications of the revision to the EU ETS for the sector, as well as EU funding opportunities for the decarbonisation projects in the aviation sector, particularly the Clean Aviation initiative, main European R&I Programme supporting climate-neutral aviation.

Afterwards, the **A4E and ASD members François Collet (Head of Trading at Airbus)**, and **Laurent Donceel (Managing Director at ACT)** presented the “Destination 2050”, the net zero roadmap for the European aviation, with the mid- and long-term targets and pathways. The speakers also presented expected investments which are required to achieve such targets.

The moderated interactive group discussion showed that, with regards to the most promising technologies and strategies for reducing emissions in the sector, responses were aligned to the opportunities presented by the industry members as part of Destination 2050. However, overall, attendees agreed that the largest opportunities related to the use of Sustainable Aviation Fuels (SAF) in flights. In terms of main lessons learned from recent projects implemented in Europe, participants mostly shared their challenges in addressing the funding gap in technology development, the so-called “Valley of Death”, and claimed that support was required to ensure continuity in the financing of new technologies from early R&D stages to market commercialisation. Finally, attendees shared their views on areas that would benefit most from auctions. The overall opinion of the group was that auctions are most suitable for a certain type of projects, such as fuel production. The group also agreed that the use of other financing instruments such as Feed-in Tariffs (FiTs) and Contracts for Difference (CFD) would be beneficial for the sector.

All subsectors from aviation were represented by session participants, including R&D, SAF production, aircraft manufacturing, airlines and airport operations.

1.2.2 Industry decarbonisation, including substitute products

The session started with a presentation by **Pauline Sentis (Policy Officer at DG RTD Unit E1 for Industrial Research, Innovation & Investment Agendas)**, who provided an overview of the type and maturity of industry projects receiving European funding. Projects from all major sectors and across different TRLs were being funded and that there was a clear role for each of the instruments along the R&I pipeline, with the Horizon programmes mostly funding projects aiming for TRL 6-7, while IF funding was supporting projects as late as TRL 9.

Afterwards **Franz Hörzenberger (Co-chair of ASPIRE's committee on energy and climate)**, presented the activities of industry sectors that were paving the way for industry decarbonisation. It was highlighted that there is a strong project pipeline of projects in place which planned to demonstrate key technologies, as could be seen from the volume of projects applying for and receiving funding from the IF. Moreover, it was shown the main cornerstones for each major sector and mitigation technology along the timeline. Finally, it was emphasised that the small share of IF projects that had received a Horizon grant indicated a gap in the funding landscape between TRL 6-7 and TRL 9.

The moderated interactive group discussion started with a view on the most promising technologies and strategies for reducing emissions, where the broad set of technologies in the pipeline was considered valuable, while a few areas were possibly under-represented, namely circularity, material efficiency, hybrid industry and energy storage projects, as well as substitute carbonated raw materials. Regarding the main lessons learned from recent projects implemented, stakeholders mentioned that restrictions on design changes in the post-IF-award period had led to project management issues and that new applicants were unable to assess progress made by existing grant awardees. They also expressed the need for more clarity about the compatibility of EU and Member State funding streams. Moreover, the participants saw several areas which would benefit from an additional auction scheme, in particular hydrogen derivatives and CCS but also demand-side options, although there was no clear view on the most relevant areas. There was also no consensus whether low carbon hydrogen should also be funded via auctions. Finally, the gap between Horizon Europe and the IF was seen as a reason for additional public funding schemes.

The session was wrapped up with polls open to all participants. The first polls showed that session participants of the session covered all major industries with highest shares from the chemicals and the refineries sectors and that the largest share of participants was planning to combine several mitigation pathways, while there was also a high share of hydrogen and CCS projects in the making. In the last poll, the majority expressed the need for public funding other than grants and auctions, while a substantial share acknowledged the relevance of auctions for certain industrial mitigation options.

1.2.3 Maritime

The session started with a presentation of the EU activities by **Marcos González Álvarez (Deputy Head of DG CLIMA Unit B4 for Mobility (II): Air, Rail, Water and Intermodal Policy)** and **Agnieszka Zaplatka (Policy Officer at DG RTD Unit C3 for Low Emission Future Industries)** making the connections between the Innovation Fund, Horizon 2021-27 and the EU Waterborne Technology Platform (EU WTP). The industry view was presented by **Sascha Gill (Cruise Lines International Association)**, and **Fanny Lossy (European Community Shipowners' Associations for five associations: CLIA, ECSA, ESPO, SEA Europe and EU WTP)**. Current projects and needs for CAPEX and OPEX support to enable technology development were summarised. Overall, an estimate of €9.9 Billion for sustainable fuels, ships and infrastructure/logistics was shown as a requirement to make significant progress.

The main discussion points raised during the moderated interactive session were:

Technologies and strategies:

- Different technologies are needed for different applications in different types of ships and trades;
- For deep-sea shipping, non-zero-emissions should also be considered;
- Supply of clean fuels and shore power is particularly important for all applications, but the maritime demand must be seen in the context of other sectors such as aviation, which will also have a high demand for biofuels and sustainable synthetic fuels; and,
- Funding opportunities should remain technology-agnostic.

Lessons learned:

- Carbon-neutral fuels are known, but the scalability and the price of the solutions is key;
- There is a risk that only production of fuels is funded (instead of fleets); and,

- Having the technologies is not sufficient. Having a business case for its application is also important.

Auctions vs. Grants in the IF:

- Auctions are a valuable option, at least to some areas in the sector. This applies particularly with Contracts for Difference to cover the funding gap;
- IF and Alternative Fuels Infrastructure Regulation (AFIR) need to be complementary; and,
- Conversion of making the fleet clean-fuel-ready may require additional funding schemes. Such projects will need to demonstrate how they will deliver actual emissions reductions i.e. how they will actually install the clean fuel drive train.

1.2.4 Cleantech manufacturing, including renewables and energy storage

The session started with a presentation by **Stefaan Vergote (Adviser for Innovation for a Low Carbon, Resilient Economy at DG CLIMA)**, on the recently adopted Net-Zero Industry Act, which aims to scale up net-zero technology manufacturing in the EU to provide at least 40% of the EU's annual deployment needs by 2030. Examples were then presented of awarded cleantech projects under the IF and the challenges faced by such projects across the different innovation stages towards commercialisation. Following this introduction, three sector representatives (covering energy storage, wind power and solar PV) provided insights on project pipelines, challenges faced by their industries and shared case studies.

The first presentation was from **Emin Selahattin Umdü, representing the European Association for Storage of Energy (EASE)**. An overview of innovative technologies for the sector and project pipeline was shared, along with details of the different types of financing support needed for specific technologies and TRLs. **Iván Pineda (Director of Innovation for Wind Europe)** then shared views from the wind power association on why Europe is not taking advantage of their potential to produce wind energy, and listed a number of recommendations for the IF to ensure the REPowerEU targets are met. Finally, **Mr Dries Acke (Policy Director at SPE)** shared figures on growth in recent years in the solar PV installed capacity in the EU and included future projections. Despite observed growth in the supply chain, Europe still remains far behind the scale that is required to be competitive. Examples of innovation in the sector were shared, as well as the main bottlenecks for such projects to reach pre-commercial status. SPE's position in relation to the Net-Zero Industry Act was also provided.

During the moderated interactive section, attendees shared their perceptions on the three discussion questions. On the most promising technologies and strategies, the breadth of technologies identified in the presentations from IFEG members was reiterated. Additional areas for consideration include solar thermal, heat pumps, green hydrogen hybridization of gas-fired boilers, and direct hydrogen use in ICE vehicles. On lessons learned from recently implemented projects, one example of experience that could be useful for others planning to embark on this journey was the difficulty of having to comply with different regulators when one presents a hybrid project (i.e. combining two technologies), which is common in this sector. On types of funding, participants felt that auctions would be more suitable to cleantech manufacturing and energy storage facilities, although for the latter the design of the auctions would be crucial, given the different forms of storage now available. Participants also shared that double-sided auctions could be useful for solar PV; that auctions specific for hydrogen projects would help to reveal market prices; and, through Slido, the group indicated that public funding, other than grants and auctions, is required in the sector. A poll showed that session participants were from a broad range of sectors, including research institutions, with renewables generation being the most represented, followed by energy storage and cleantech manufacturing (including manufacturing of components for renewables, heat pumps, electrolyzers or fuel cells) and buildings.

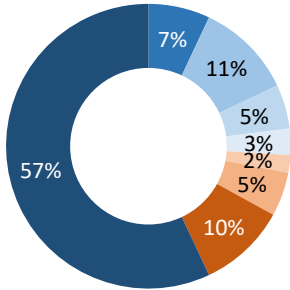
1.3 Closing remarks & next steps being taken by the European Commission

Maria Velkova (DG CLIMA) told stakeholders about ongoing opportunities for applicants and respective links where more information and assistance could be found. First, the 3rd Small-Scale Call for proposals under the IF is open until 19 September 2023 (with information on the virtual orientation session seminar being delivered on 4-5 July). Second, the EU Breakthrough Energy Catalyst Partnership has a continuously open call. Third, the NER300 financial advisory remains available until the end of 2023 and deals with queries on a first come, first served basis.

1.4 Annex: Slido questions & results across the four sector sessions

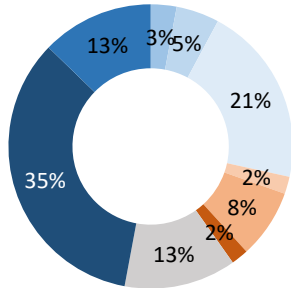
Industry decarbonisation, including substitute products

What subsector are you from?



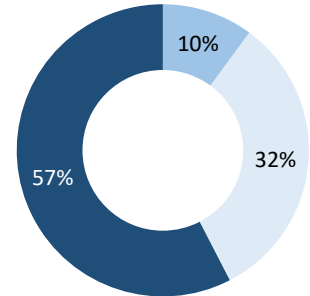
- Cement and lime
- Chemicals
- Ferrous metals
- Glass and cermaics
- Non-ferrous metals
- Pulp and paper
- Refineries
- Other

What kind of projects are you planning?



- Substitute products
- Direct electrification
- Hydrogen technologies
- Use of renewable fuels
- Energy efficiency
- CCU
- Digitalisation
- CCS
- Combination of the above
- Other

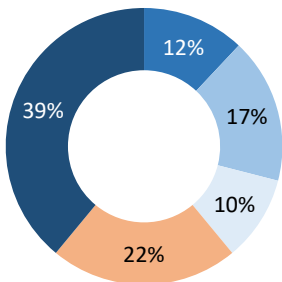
Which areas would benefit from auctions?
Other funding measures required?



- Auctions are useful for the whole sector
- Auctions are useful for certain sectoral techs
- Public funding other than grants and auctions is required

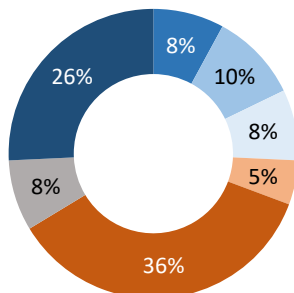
Aviation

What subsector are you from?



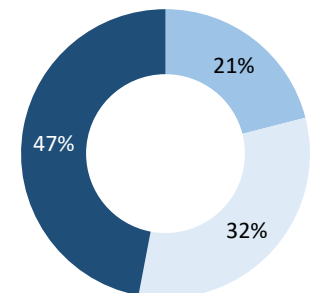
- Airline industry (incl. cargo)
- Aircraft manufacturing
- Airport operation
- SAF production
- Other

What kind of projects are you planning?



- Design changes
- Production of electric/hydrogen-based aircrafts
- Use of electric/hydrogen-based aircrafts
- Engine efficiency
- Use of SAFs
- Operational measures
- Other

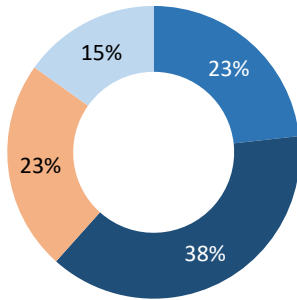
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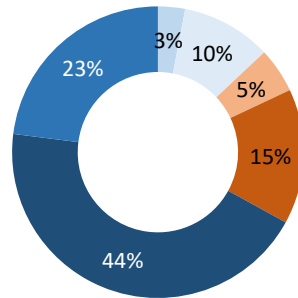
Maritime

What size of projects are you planning?



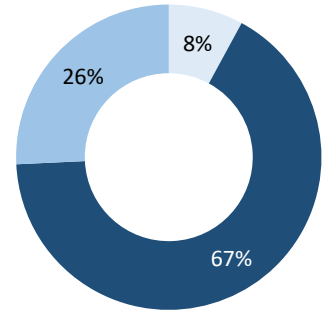
- EUR 0-20 million
- EUR 20-100 million
- Above EUR 100 million

What kind of projects are you planning?



- Wind energy and re-routing
- Deep sea and cruise zero-emission retrofit/replacement
- Ferry and tugs zero-emission retrofit/replacement
- Shore power
- RFNBO fuel supply and associated bunkering
- Other

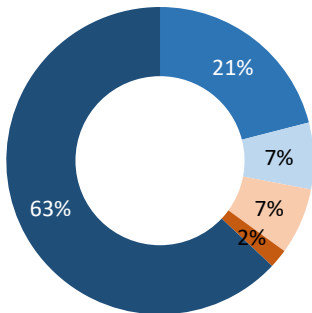
Which areas would benefit from auctions?
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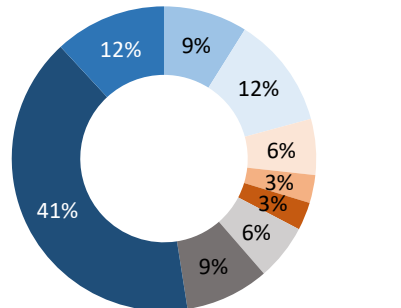
Cleantech manufacturing, including renewables and energy storage

What subsector are you from?



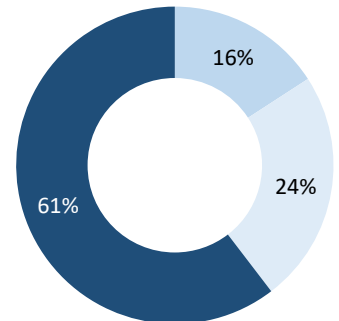
- Renewables (RES)
- Energy storage (ES)
- Clean tech manufacturing
- Buildings
- Road transportation
- Other

What kind of projects are you planning?



- Innovative RES generation
- Energy storage
- Manufacturing of components for RES generation
- Manufacturing of components for heat pumps
- Manufacturing of components for electrolysers or fuel cel
- Other clean-tech manufacturing
- Fuel use for road transport
- Energy use in buildings
- Combinations of the above
- Other

Which areas would benefit from auctions?
Other funding measures required?



- Auctions are useful for the whole sector
- Auctions are useful for certain sectoral techs
- Public funding other than grants and auctions is required