



EASE Reply to European Commission's Public Consultation on "ETS INNOVATION FUND DESIGN"

April 2018



INTRODUCTION

The EC legislative proposal for a revised EU ETS reform involves the creation of an ETS Innovation Fund (IF). This fund is meant to support low-carbon innovative technologies, including energy storage technologies, by allocating funds to demonstration projects or projects between TRLs 6–9. It will be financed through the earmarking of revenues from the sale ETS allowances.

The European Commission has published a [public consultation](#) on the design elements of the ETS Innovation Fund.

Given the importance of the funding that could be available to energy storage projects in the future, EASE drafted a reply to the public consultation.

I. Eligibility criteria

The Innovation Fund will support deployment of innovative renewable energy technologies and industrial break-through innovation in low-carbon technologies and processes in the European Union. The energy intensive industries to be covered are those in the Annex 1 to the ETS Directive, concretely: ferrous metals, non-ferrous metals, cement and lime, glass and ceramics, chemicals, oil refining, pulp and paper, including potential application of environmentally safe CCU technologies in these industries, that would substantially contribute to climate change mitigation. The renewable energy sectors to be covered comprise innovative production from: wind, ocean, geothermal, biomass and solar sources. In addition, energy storage and CCS are also eligible.

The Innovation fund will be designed to help innovative projects to cross the "valley of death" and reach commercial viability.

Eligible projects should contribute substantially to climate change mitigation through a significant reduction of GHG emissions.



11. Which are the five most important highly innovative technologies in your view that will be key to decarbonise the industry and power sectors in the EU and therefore need to be demonstrated over the coming decade?

Text of 3 to 1000 characters will be accepted

Energy storage technologies are one of the key enablers of the energy transition, allowing us to integrate increasing shares of renewables and supporting sectoral integration. However, it is difficult to choose 5 energy storage technologies over the others: each energy storage technology has unique applications and use cases. The energy system will therefore benefit if there is a range of cost-effective storage technologies available (which EASE has classified into 5 families), which will allow users to select the most suitable technology (or hybrid system) for certain application(s). Overall, we believe that the EU should support the demonstration of product innovations focusing on:

- Both long-term/seasonal storage and short-term/fast responding storage
- Hybrid energy storage systems, combining two or more storage technologies
- Technologies supporting sectorial integration and the decarbonisation of the heating, cooling, and transport sectors

Please specify for your own sector (as indicated in the introduction above). Cross-sector technologies can also be included, if relevant:

Text of 3 to 200 characters will be accepted

Non-exhaustive list of storage concepts supporting the EU decarbonisation goals:

- Power-to-X technologies
- Batteries (classic and flow)
- Supercapacitors
- Compressed and liquid air energy storage
- Pumped hydro storage

12. To apply to the Innovation Fund funding, should eligible technologies be defined?

<input checked="" type="radio"/>	a) Yes: Based on a pre-defined detailed list of eligible technologies per sector (as described in the introduction above), with a possibility of regular update (e.g. every 5 years);
<input type="radio"/>	b) No: Eligible technologies should not be pre-defined allowing for competition between projects and across sectors
<input type="radio"/>	c) Other



13. To ensure that the Innovation Fund would support innovative but realistic projects (i.e. those that would effectively materialize and reach market maturity), should its eligibility criteria set deadlines for reaching specified milestones?

<input checked="" type="radio"/>	Yes
<input type="radio"/>	No

**If yes, should these deadlines related to :*

<input checked="" type="radio"/>	a) Investment process (such as a signature of Financial Close documents)
<input type="radio"/>	b) Construction steps (such as commissioning of the construction)
<input type="radio"/>	c) other

14. The revised ETS Directive agreement stipulates that small-scale projects can also be supported. To better define the scale of small-scale projects eligible for support of the Innovation Fund, should eligibility criteria set a minimum size for small-scale projects?

<input checked="" type="radio"/>	Yes
<input type="radio"/>	No

If yes, what would be the appropriate minimum size (in terms of total capital expenditure in EUR) in your area of expertise, which would allow funding of small-scale projects at EU-level? :

Text of 3 to 200 characters will be accepted

N/A



15. If you wish, please provide additional comment(s) in more detail, focusing on elements related to eligibility criteria not mentioned in the answers above.

Text of 3 to 500 characters will be accepted

The ETS Innovation Fund will deal with innovations. It means that it will be impossible to apply here standardised project finance mechanisms: there will be more uncertainty than in commercial projects on when milestones are to be achieved. The IF should:

- Support projects that are big enough to demonstrate the benefit of storage in optimising RES integration and in integrating different sectors.
- Look at the ability of the projects to decarbonise the system rather than the minimum size for small-scale projects: the technology potential matters most.

II. Type of support

The ETS Directive states that the Innovation Fund can provide support of up to 60% of the relevant costs of selected projects, out of which up to 40% may be pre-financed, provided that pre-determined milestones are attained. The majority of the Innovation Fund support (at least 60%) should be provided on the basis of verified (achieved) reduction of greenhouse gas (GHG) emissions, once projects are operational.

The Directive leaves room for modulation of maximum support rate (up to 60% of relevant costs) according to the project's technology risks, providing various forms of financial support such as grants, loans or equity, but also for covering specific type of costs (such as project development assistance along with the capital expenditure). This section therefore aims at collecting your views on the type of support the Innovation Fund should offer.

16. Should the maximum funding rate (i.e. up to 60% of relevant costs covered by the Innovation Fund as stipulated above) be:

<input type="radio"/>	a) Variable depending on the stage of technology development (and related technology risks)
<input checked="" type="radio"/>	b) Variable, based on a different approach, please specify
<input type="radio"/>	c) The same for all eligible projects

If option b), please specify:

The focus should be on financing the project as a whole but also on leveraging small parts of the project at a higher percentage. The Innovation Fund should also support



the participation of small and medium enterprises as well as research and technology organisations: a low funding rate could compromise their participation in the Innovation Fund. Additionally, it could be considered to fund projects based on high TRL technology with a lower funding rate, while projects with lower TRL receive up to 60% of the relevant costs.

17. Which form(s) of support should the Innovation Fund provide?

17.1 Which form of support do you consider most appropriate in relation to the stage of development? Please rank from 1–5 (5 being most appropriate).

	<i>Pilot production and demonstration (TRL* 6–7)</i>	<i>Initial market introduction (TRL 8)</i>	<i>Market expansion (TRL9)</i>
<i>Investment subsidies (grants)</i>	5	4	3
<i>Risk guarantees</i>	2	2	2
<i>Loans</i>	3	5	5
<i>Equity</i>	1	1	1
<i>Other (specify)</i>			More broadly, regulatory support from member states is needed: – Lower grid fees – Faster permitting

**TRL means Technology Readiness Level*

http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2016_2017/annexes/h2020-wp1617-annex-g-trl_en.pdf

17.2 Should eligible projects have a possibility to combine the above forms of support during the projects' lifecycle? Please specify and provide more detailed explanation for your answer above.

Text of 3 to 500 characters will be accepted

Yes. When a technology/project progressively reaches TRL 9, a combination of private–public funding would be adequate. If the project does not evolve as planned, the loan should be:

- First, converted to a zero–interest loan
- Second, partially converted into a grant
- Third, commuted integrally into a grant



17.3 Should the Innovation Fund also provide specific project development assistance? If so, please rank the relevance, according to your assessment, of pre-feasibility studies, cost-benefit analyses and related work-streams, human capacity building and others (4 being most important):

4	<i>Technical pre-feasibility studies</i>
3	<i>Financial analysis and plans</i>
2	<i>Capacity building</i>
	<i>Others</i>

18. Up to 40% of the Innovation Fund support may be pre-financed, provided that pre-determined milestones are attained. In your view, how should such milestones be defined?

<input type="radio"/>	a) According to the investment process (i.e. project launch, financial close, commissioning, operation);
<input type="radio"/>	b) Linked to specific construction phases (i.e. first procurement for plant parts signed, physical construction finalised, operation);
<input checked="" type="radio"/>	c) Other

The IF should provide ex-post (result-based) or milestone-based financing depending on the type of project. Pre-financing is key for the participation of SMEs.

19. What are in your view the most important lessons learned from the monetisation of NER300 allowances / key aspects to be considered when deciding about the modalities, in particular the timing, of monetising the allowances available for the Innovation Fund?

Text of 3 to 1000 characters will be accepted

The monetisation of the NER300 allowances depended, as for the Innovation Fund, on the carbon price, which turned out to be too low to meet the initial expectation of the EU institutions and project promoters alike. Another limitation of the NER 300 fund was the restrictive technologies and criteria applied. As such, we believe that the combination of funding from the IF with other private and/or EU and/or national public funding is a must to deliver concrete innovations.



20. If you wish, please provide additional comment(s) in more detail focusing on elements related to the type of support criteria not mentioned in the answers above.

Text of 3 to 1000 characters will be accepted

N/A

III. Application and Selection procedure

According to the ETS Directive on the selection procedure, "Projects shall be selected on the basis of objective and transparent criteria." In addition, projects should deliver material GHG emissions reductions, well below the ETS benchmarks (where applicable), and have potential for wide application and lowering the costs of transitioning towards a low carbon economy for the sectors covered.

21. How should the application process be organised?

<input type="radio"/>	a) on a first-come, first-served basis
<input checked="" type="radio"/>	b) through regular calls, at pre-defined dates
<input type="radio"/>	c) other

22. How many stages should the application process have?

<input type="radio"/>	a) a single-stage application process, requiring applicants to submit the full project documentation by a given deadline
<input checked="" type="radio"/>	b) two-stage process consisting of expression of interest (based on a less than 10 page concept note) followed by the screening of pre-selected applications (based on complete project proposals)
<input type="radio"/>	c) Other

23. What should be the optimal mix of project selection criteria, taking into account the key requirements set by the ETS directive? Please rank in the order of importance (0 being least important).

	<i>Ranking (0 - 6)</i>	<i>Comments (if non put N/A)</i>
Innovativeness	6	N/A
Decarbonisation potential / contribution to emission	6	A "CO ₂ emission impact vs. euro invested" criteria should



reductions		be implemented
Expected performance (i.e. Cost per unit of performance)	4	N/A
Project viability/ bankability/ robustness of the business model	5	N/A
Cross-sector spill-overs / cooperation	4	N/A
Scalability/ potential for widespread application	5	N/A
Other, please specify		Additional points could be given to projects: <ul style="list-style-type: none"> - Integrating small and medium enterprises - Promoting European industry development

24. Should there be a mechanism to ensure a balanced portfolio of projects?

<input type="radio"/>	a) yes, with regard to sectors
<input type="radio"/>	b) yes, with regard to technologies
<input checked="" type="radio"/>	c) yes, with regard to sectors and technologies
<input type="radio"/>	d) No

25. If you wish, please provide additional comment(s) in more detail focusing on elements related to the selection procedure not mentioned in the answers above.

The Innovation Fund should focus on process, product, and systemic innovations in different and across sectors and not promoting one technology over another or one sector over the other. What matters most is the technology, innovation and economics potential.



IV. Relation to the Other Funding Instruments

26. In your view, how should the Innovation Fund complement other funding mechanisms at the EU and national level? Such mechanisms are the for example EU Framework programme for research and innovation (Horizon 2020), European Structural and Investment Funds (e.g. ERDF) or Research fund for coal and steel.
Please specify.

A combination of different funds would be desirable and should be assessed on a case-by-case basis in order to get some parts of a project financed by the Innovation Fund and some others, not covered by the Innovation Fund scope, financed by other funds.

Considering that projects funded aim at being deployed at commercial/pre-commercial scale, the ETS Innovation Fund could follow as well the scheme and the spirit of the Project Flagships in the Bio-Based Industries Joint Undertaking (BBI JU).

27. In your view, could the Innovation Fund avoid overlaps with other funding instruments and if so, how this should be done?

1000 character(s) maximum

Considering that TRL in H2020 rarely reach 8, there should not be much overlap with H2020. However, there could be some with LIFE, but those in general are single-country projects.

28. In your view, how unnecessary administrative burden for applicants could be avoided? Please specify.

1000 character(s) maximum

The evaluation process must be short (1-year timeframe suggested) and the list of criteria transparent. In case of a two-stage call, it should be made sure that only a limited number of proposals make it to the second stage, so that there is at least a 33% success rate and greater chance to be selected.



29. If you wish, please provide additional comment(s) in more detail focusing on elements related to financing synergies not mentioned in the answers above.

1000 character(s) maximum

The European Investment Advisory Hub (EIB/EFSI) should be empowered to give support to the applicants and beneficiaries of the Innovation Fund. Such a project assistance office would help companies to find financing synergies as well as facilitate a smooth and efficient application process.

V. Final comments

30. If you wish to add further information, comments or suggestions – within the scope of this questionnaire – please feel free to do so here:

1000 character(s) maximum

N/A

In addition, you could also upload a document proving further information, comments or suggestions:

The below EASE papers explain how energy storage technologies contribute to the EU decarbonisation goals and support the energy transition :

- <http://ease-storage.eu/wp-content/uploads/2017/10/EASE-EERA-Storage-Technology-Development-Roadmap-2017-HR.pdf>
- http://ease-storage.eu/wp-content/uploads/2017/07/2017.07.10_EASE-Thermal-Storage-Position-Paper__for-distribution.pdf
- http://ease-storage.eu/wp-content/uploads/2017/05/2017.05.15_EASE-Recommendations-PtG-PtL_final.pdf



About EASE

The European Association for Storage of Energy (EASE) is the voice of the energy storage community, actively promoting the use of energy storage in Europe and worldwide. It supports the deployment of energy storage as an indispensable instrument within the framework of the European energy and climate policy to deliver services to, and improve the flexibility of, the European energy system. EASE seeks to build a European platform for sharing and disseminating energy storage-related information and supports the transition towards a sustainable, flexible and stable energy system in Europe.

For more information please visit www.ease-storage.eu

Disclaimer

This response was elaborated by EASE and reflects a consolidated view of its members from an energy storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.

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