

Public consultation on the Establishment of the Innovation Fund

Fields marked with * are mandatory.

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The EU emissions trading system (ETS) [after 2020](#) foresees the establishment of the Innovation Fund to accelerate the commercialisation of low-carbon technologies. 400 million allowances will be reserved from 2021 onwards for this purpose. In addition, a further 50 million of unallocated allowances from 2013-2020 will be added, together with, as early as 2019; any possible un-used or remaining funds from the [NER 300 Programme](#). Further 50 million allowances could be added to the fund post 2025, if these are not used for free allocation to industry.

The Fund will support innovation in low-carbon technologies, processes and products in industrial sectors listed in Annex I of the EU ETS Directive. The Fund should stimulate the construction and operation of projects that aim at the environmentally safe capture, use of CO₂ (CCU) and its geological storage (CCS), as well as innovative renewable energy and energy storage technologies in the territory of the European Union. Technologies receiving support should not be commercially available yet, but shall be sufficiently mature to be ready for demonstration at pre-commercial scale.

Furthermore, the ETS Directive sets a number of key features of the Innovation Fund:

1. Up to 60% of the relevant costs of projects may be supported,
2. Project selection will be done based on objective and transparent criteria, including, among others, the potential for emission reductions, potential for wide application or significant lowering of transitioning costs towards a low-carbon economy in the concerned sectors,
3. Technologies to be supported are not yet commercially available, but represent breakthrough solutions or are sufficiently mature to be ready for demonstration at pre-commercial scale,
4. Up to 40% of the Innovation Fund's support for eligible projects (that is up to 24% of projects' relevant costs) may be pre-financed (may not depend on achieved reduction of greenhouse gas (GHG) emissions) provided that pre-determined project milestones are met,
5. Projects in all Member States, including small-scale projects, are eligible to apply.

During the first half of 2017, the European Commission hosted a series of stakeholder consultations with representatives from energy-intensive industries, the energy and finance sectors. The [resulting summary report](#) points to over 80 potential technologies, including cross-cutting innovations, such as CCUS, green hydrogen or energy storage.

This public consultation will gather the views of the wider public on additional, more detailed, design elements of the Innovation Fund, as an input to the Impact Assessment accompanying the Commission's proposal for a delegated act.

The questionnaire is divided into 6 sections. Section 1 relates to the identification of the respondent and is obligatory for all respondents. The following multiple choice questions in Sections 2-5 relate to key elements identified in the [Inception Impact Assessment](#) for the Establishment of the Innovation Fund. An open question

at the end of each Section allows complementing any of the previous answers. Section 6 allows providing additional comments and uploading supporting documents.

A short summary of the key design elements and the related problems identified is provided at the beginning of each section.

General information about respondent

***1. In what capacity are you completing this**

- questionnaire?** As an individual in your personal capacity
- In your professional capacity or on behalf of an organisation

***2. Please indicate your First name :** *Text*
of 3 to 200 characters will be accepted

***3. Please indicate your Last name :**
Text of 3 to 200 characters will be accepted

***4. Please indicate the name of your company, organisation, or institution (if your organisation is registered in the Transparency Register, please give your Register ID number) :**
Text of 3 to 200 characters will be accepted

Netherlands Ministry of Economic Affairs and Climate Policy

If your organisation is not registered, you can [register now](#). Please note that contributions from respondents who choose not to register will be processed as a separate category 'non-registered organisations/business'.

5. Contact email address:

The information you provide here is for administrative purposes only and will not be published

***6. For individuals, please indicate your country of residence, for professionals, please indicate your main country of operations/headquarters :**

The Netherlands

***If other, please specify:**

Text of 3 to 200 characters will be accepted

***7. Please indicate the type of organisation (please select the option that fits the best) :**

- Private enterprise
- Professional consultancy, law firm, self-employed consultant
- Trade, business or professional association
- Non-governmental organisation, platform or network
- Research and academia
- Social partners
- National, regional or local authority (mixed)
- Other

**If other, please specify:*

Text of 3 to 200 characters will be accepted

***8. Please indicate the size of your company, organisation or institution :**

- a) Micro or small enterprise (10-49 persons employed)
- b) Medium-sized enterprise (50-249 persons employed)
- c) Large enterprise (250 or more persons employed)

***9. To which category of stakeholders does your organisation belong?**

- a) Potentially directly benefiting from the initiative (energy intensive industries, in particular steel, iron, aluminium, copper, oil refining, chemicals & bio-based industries and pulp & paper, cement, lime, glass & ceramics, renewable energy generation and storage, and industries/power plants utilising CCS/CCU)
- b) Indirectly benefiting from the Initiative (EU/National Industry associations, Environmental NGOs, National/Regional authorities and EU institutions; European Investment Bank/international or national financial institutions; Member States)
- c) Other

**If other, please specify:*

Text of 3 to 200 characters will be accepted

***10. Please indicate your preference for the publication of your response on the Commission's website:**

(Please note that regardless of the option chosen, your contribution may be subject to a request for access to documents under [Regulation 1049/2001](#) on public access to European Parliament, Council and Commission documents. In this case the request will be assessed against the conditions set out in the Regulation and in accordance with applicable [data protection rules](#).)

- Under the name given:
I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication

Anonymously:

I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication

Eligibility criteria

The Innovation Fund will support deployment of innovative renewable energy technologies and industrial breakthrough 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

The Netherlands has set an ambitious CO₂-reduction target of 49% in 2030, with a view on increasing the EU target for CO₂-emission reduction to 55% in 2030. The Netherlands aims to set ambitious CO₂-reduction targets on a sectoral level within a Climate Agreement with all relevant stakeholders, including industrial stakeholders. For each sector, the Netherlands wants to agree on a balanced and future-oriented package of instruments and measures, in which pilots and demonstration projects play a crucial role. Different measures and technologies are promising in terms of CO₂-reduction and cost-effectiveness, but are currently not ready for large-scale commercialization and deployment. However, the Netherlands wants these technologies to contribute substantially to the CO₂-reduction target in 2030. The Netherlands considers the following five technologies as the most promising to contribute to the CO₂-reduction target in 2030 by facilitating pilot and demonstration projects (in random sequence):

1) Carbon capture and storage/use in industry

2) Energy and resource efficiency in industry (including electrification)

3) Ultradeep geothermal power, high temperature heat pumps and electrode boilers

4) Energy conversion & storage (including the potential of hydrogen and other derived resources)

5) Biofuels advanced fuels and biochemicals

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

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

- 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);
- b) No: Eligible technologies should not be pre-defined allowing for competition between projects and across sectors
- c) Other

**If other, please specify:*

Text of 3 to 200 characters will be accepted

The Netherlands wants to stimulate technologies that deliver most CO2-emission reductions in the most cost-effective way. On the one hand, the Netherlands wants to identify the most promising technologies for CO2-reduction in advance. Therefore, the Netherlands is in favour of a pre-defined list of eligible technologies that is regularly updated, with a significant open category for technologies that fosters competition between new technologies across different projects and sectors.

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?

- Yes
- No

Yes No

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

- a) Investment process (such as a signature of Financial Close documents)
- b) Construction steps (such as commissioning of the construction)
- c) other

Eligible projects should periodically report about their progress in terms of investments and actual progress in the construction phase. However, it is unclear how deadlines for milestones should become part of the eligibility criteria of the Innovation Fund, as it implies that applicants need to demonstrate beforehand how they are going to meet the required deadlines in the execution phase. This does not match intrinsically with the type of projects that the Innovation Fund seeks to stimulate. Innovative energy projects are by nature more risky and need more flexibility in their implementation as established energy technologies. Strict eligibility criteria and milestones related to the construction phase discourage innovative pilot and demonstration projects to be realized.

Therefore, the Netherlands is in favour of a deadline for final realization of the project in the eligibility criteria. However, there should be a degree of flexibility for the deadlines of intermediate milestones, because of the more unpredictable nature of innovation projects. This flexibility could be ensured by allowing the relevant Member State to set intermediate milestones for assessment of the project, taking into account potential changes to the project planning. Furthermore, Member States should also have a degree of flexibility in determining the details of the eligibility criteria and include this in the mandate of the Member States in the regulation of the Innovation Fund.

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?

- a) Yes
 b) 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

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

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:

- a) Variable depending on the stage of technology development (and related technology risks)
 b) Variable, based on a different approach, please specify
 c) The same for all eligible projects

**If option b), please specify :*

Text of 3 to 200 characters will be accepted

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).

	Pilot production and demonstration (TRL* 6-7)	Initial market introduction (TRL 8)	Market expansion (TRL9)
Investment subsidies (grants)	5	3	1
Risk guarantees	3	5	4
Loans	3	4	5
Equity	4	5	5
Other (specify)			

*TRL means Technology Readiness Level

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

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, the Netherlands is in favour of blending different types of financial instruments in order to facilitate different cycles of the project up to commercialization. For instance, investment subsidies may be granted in the pilot- and demonstration phase, when there is no viable business case yet to become eligible for equity investments or public and private loans. When the project is successful in the pilot- or demonstration phase, the project may be further supported in the form of risk guarantees/equity/low-interest loans in order to stimulate first-of-a-kind commercial projects or early commercialization.

17.2 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):

- [3] Technical pre-feasibility studies
- [4] Financial analysis and plans
- [2] Capacity building
- [1] Others

**If others, please specify:*

Text of 3 to 200 characters will be accepted

The Innovation Fund should primarily focus on financing the operational costs of the project. However, the quality of the projects may significantly benefit from additional assistance in developing the financial analyses and plans. Financial assistance to technical pre-feasibility studies should be limited as it is the primary financial responsibility of the applicants. Stimulating capacity building should be limited, as these types of assistance are mainly covered under KIC InnoEnergy.

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?

- a) According to the investment process (i.e. project launch, financial close, commissioning, operation);
- b) Linked to specific construction phases (i.e. first procurement for plant parts signed, physical construction finalised, operation);
- c) Other

**If other, please specify :*

Text of 3 to 200 characters will be accepted

As innovative energy projects are by nature more risky and need more flexibility in their execution as established energy technologies, the eligibility criteria should mainly focus on the investment process instead of the specific construction phase. However, a certain degree of flexibility should be maintained as too strictly defined milestones may discourage innovative pilot and demonstration projects to be realized. Applicants should be allowed to deviate from certain milestones, if they can demonstrate how the risk of non-realization will be mitigated.

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

According to the Netherlands, there are important lessons to be learned from the monetization of NER300 allowances:

1) the timing of the monetization of 300 million emission rights for NER 300 was decided on in the context of addressing the surplus of emission rights in the ETS market. This increased the necessity to identify projects, which came at the expense of thorough project identification and selection in the area of CO₂-reduction innovation.

2) National authorities were given a too limited mandate to properly execute the financing mechanism of the NER300. Member States were discouraged to provide state guarantees as they would become entirely financially responsible for the project. Member States were required to pay back the subsidy to the EIB if the project would not meet the criteria. Member States also had no authority to grant flexibility to the project in meeting the criteria. However, financing innovative projects always requires certain risk-preparedness, which Member States were not allowed to offer. This made a proper monetization of the allowances to innovative projects very difficult.

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.

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 organized?

- a) on a first-come, first-served basis
- b) through regular calls, at pre-defined dates
- c) other

**If other, please specify :*

Text of 3 to 200 characters will be accepted

The application process should allow applications throughout the entire period until 2030, and should not be organized on a first-come first-served basis. Secondly, funds that become available that were initially already dedicated to a certain project, should become available for all technologies that are eligible under the Fund, not only to the technology of the initial project.

22. How many stages should the application process have?

- a) a single-stage application process, requiring applicants to submit the full project documentation by a given deadline
- 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)
- c) Other

**If other, please specify :*

Text of 3 to 200 characters will be accepted

The Netherlands prefers a two-stage process, because it may prevent the administrative costs of preparing a unsuccessful full proposal. If however the way this will be organised requires a formal national legal decision in the first stage, it may also imply extra administrative costs, as applicants may also object to a rejection in the first stage. A possible alternative is to invite project applicants to submit a concept note on a voluntary basis, to be able to inform them whether their project fits the selection criteria.

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	2	Innovativeness is partly derived from the potential to reduce CO2-emissions against the lowest price.
Decarbonisation potential / contribution to emission reductions	6	N/A
Expected performance (i.e. Cost per unit of performance)	5	N/A
Project viability/ bankability/ robustness of the business	3	Focus on technological, organizational and financial criteria for success
Cross-sector spill-overs / cooperation	1	N/A
Scalability/ potential for widespread application	4	N/A
Other, please specify * Subsidy effectiveness	0	N/A

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

- a) yes, with regard to sectors
- b) yes, with regard to technologies
- c) yes, with regard to sectors and technologies
- d) No

**If yes, please provide suggestions on how this should be done.*

Text of 3 to 200 characters will be accepted

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.

Text of 3 to 500 characters will be accepted

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.**

1000 character(s) maximum

The Innovation Fund should cover (without limitation) the priorities of the European Commission and the EU Member States in the EU Strategic Energy Technology (SET-Plan), that sets out the main innovation priorities in the area of clean energy. Especially the key objectives on energy-efficiency in industry, advanced- and biofuels, CCS and renewable energy technologies (Offshore wind, Deep Geothermal, Solar-PV, Concentrated Solar Power and Ocean Energy) are relevant. The Innovation Fund is complementary to the EU framework programs for research and innovation and could cover more large-scale energy innovation projects than the EU framework program. It could also be complementary national funds in these areas, by for instance facilitating the blending of EU- and national instruments.

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

As the Innovation Fund will mainly focus on large-scale demonstration projects that require a significant amount of funding, the scope of the fund is rather unique and overlap with other EU programs will be limited. Overlap could be avoided by allowing for blending of instruments, in which the funding percentage under the Innovation Fund could be dependent on the level of other funding already received. Also, the Innovation Fund may limit its funding in the form of grants to the demonstration phase and lower the amount of funding for higher TRLs, for instance by changing the support in the forms of loans and equity.

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

1000 character(s) maximum

The eligibility requirements of projects should be simplified. Especially the requirement under NER300 for knowledge sharing adds nothing but costs. It requires a lot of attention and time for project applicants, discouraging the execution of viable projects. Generally, the administrative burden under the NER300 is very high and requires a lot of administrative actions for both national authorities and project applicants. The administrative burden can be reduced by giving a stronger mandate to Member States in the eligibility criteria and the execution of the projects. This allows the national authorities to avoid an unnecessary high administrative burden and to provide better guidance to innovative projects.

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

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

The Netherlands would like to draw attention to the following lessons learned from the NER 300 and suggests improvements on these points in the Innovation Fund:

- The Netherlands wishes more transparency in the selection procedure for new projects and better insight in the criteria that have been applied to the projects. Also, there should be a better definition of a final investment decision to applicants.
- The Netherlands would like more flexibility in the application procedure and the execution phase of the projects, as this better matches the innovative nature of pilot and demonstration projects. This means that future deadlines of the projects may be subject to alterations. Member States should be allowed more flexibility to meet changing circumstances in eligible projects by having a larger mandate in the execution phase. This may enable Member States to provide state guarantees without bearing the full financial risk.

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

Please note that the uploaded document will be published alongside your response to the questionnaire which is the essential input to this open public consultation. The document is an optional complement and serves as additional background reading to better understand your position.

The maximum file size is 1 MB