sandbag
smarter climate policy

Innovation Fund – another chance to spend smarter

Response to public consultation – July 2025

The EU's Innovation Fund, launched in 2018, is the EU's programme for funding cutting-edge low-carbon technologies. To be eligible, projects must be, according to the European Commission, highly innovative, cost-efficient, mature, scalable, and have a significant emission reduction potential. The Innovation Fund is financed using revenues from the Emissions Trading System (ETS), under which certain sectors have to buy emission permits (allowances) in order to be allowed to pollute.
The Innovation Fund is currently being overhauled to reflect recent changes to the ETS.

This brief is Sandbag's response to the European Commission's public consultation on the Innovation Fund, open until 8 July 2025. It follows repeated communications Sandbag sent to the Commission:

- A report published in December 2022: Spend Smarter: a bit of advice on innovation financing, and presented in person to DG CLIMA and CINEA (the entity in charge of the IF)
- Feedback sent to the Innovation Fund Expert Group in May 2023, Fixing the Innovation Fixation
- Feedback sent to the Innovation Fund Expert Group in July 2024 (unpublished) on greenhouse gas emission accounting methodology

In this brief, we are repeating some of the concerns already expressed in the above communications, most of which are still valid today.

Stop counting all electricity use as emissions-free!

Projects applying for IF grants that use electricity can **ignore the carbon footprint of their electricity use**. This reflects an assumption that, by the time IF projects enter operation, there will be unlimited supply of (24-hour) zero-carbon electricity. This is not only unrealistic, but also contradicts a proposal made by DG CLIMA as part of its auction programme for industrial heat electrification under the Industrial Decarbonisation Bank. DG CLIMA's proposal is to only hand out subsidies during periods of lower electricity prices, because when prices are high, it is thermal power stations that supply the marginal demand, which creates **induced emissions**.

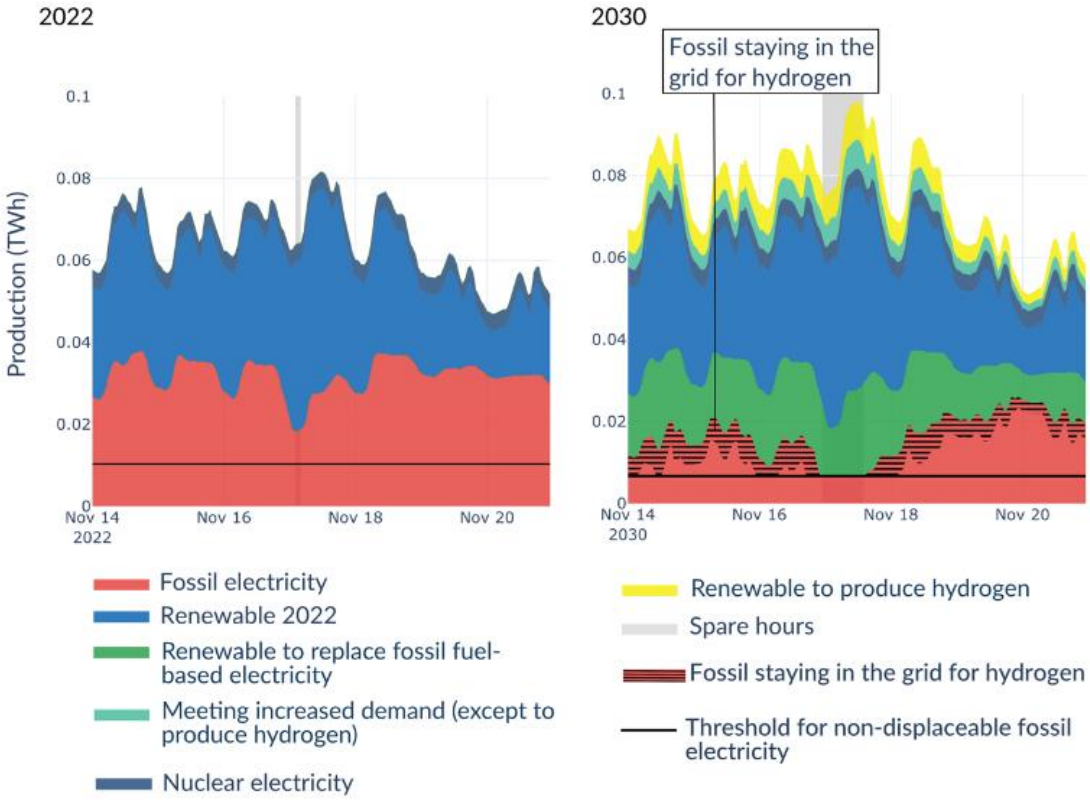
In fact, we have found that the carbon footprint of projects is highly dependent, even for projects using 100% renewable electricity. For example, in some cases RFNBO hydrogen (which is the "green" standard adopted by the EU) can create induced emissions about three times as large as "grey" hydrogen made from steam methane reforming. The Innovation Fund should **take induced emissions into account** in its assessment of emission avoidance.

Figure 1: Emission factors for applications involving production and use of grid electricity

Context	Net electricity exported	EF	Electricity consumed	EF
Energy intensive industry: general	Net amount of electricity exported from the project to the grid	48.8 tCO_2e/TJ [0.176 tCO_2e/MWh] $EF_{electricity,ref}$	Amount of electricity fed from the grid to the project in both the reference and project scenario	0.00 tCO_2e/TJ
Energy intensive industry: electricity-saving projects (see section 2.2.6)	Net amount of electricity saved (i.e. no longer fed from the grid to the system)	48.8 tCO_2e/TJ [0.176 tCO_2e/MWh] $EF_{electricity,ref}$	Amount of electricity fed from the grid to the project in both the reference and project scenario	0.00 tCO_2e/TJ

(source: Innovation Fund[1])

Figure 2: Induced emissions expected from RFNBO production



Source: Sandbag.[2] This illustration is derived from Germany's grid mix in November 2022

[1] Innovation Fund (2025) Methodology for GHG Emission Avoidance Calculation, version 4.2
[2] See Sandbag (2025) Getting Electrification Right: The broader challenge of induced emissions

Use grants to cover technology risk

Although the IF has introduced a concept of fixed premia rewarding projects on the basis of their performance (with the Hydrogen Bank and the auction for industrial heat electrification), this is not the approach used in its granting calls. Up to 90% of Innovation Fund grant payments are made before a project even starts operating, which is only appropriate for projects facing high technology risk. Otherwise, providing upfront funding has many drawbacks:

- It crowds out private investment.
- It doesn't incentivise performance;
- It creates more risk of projects closing down (if their profits become negative)
- It makes the grantor (EU taxpayers) bear all the risks other than technological as well. This includes bad management, construction errors, offtake issues, supply issues, counterparty risk, failing operator, commercial strategy, legal, HR etc.

See illustrated by the different payment schedules of contracts vs. grants in figures 3 and 4.

Figure 3: Payment schedule of a contract for difference

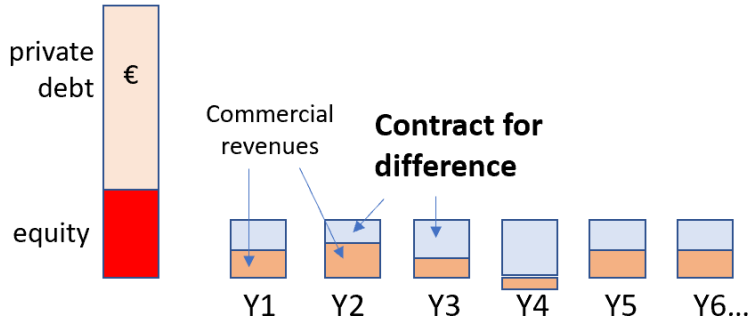
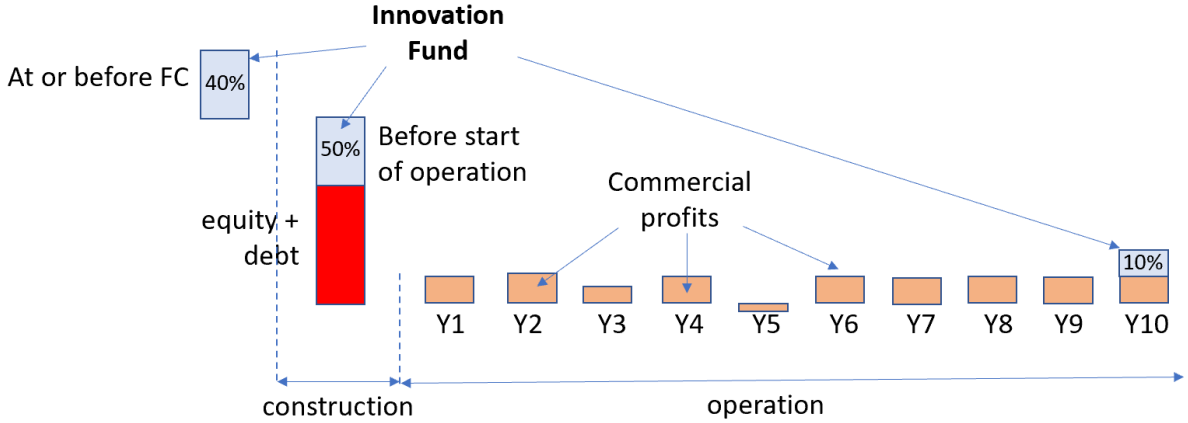


Figure 4: Payment schedule of Innovation Fund grants



Reserving IF grant to technology risk means that, a number of criteria currently used to test the "degree of innovation" of projects should not apply to grants, such as:

- **Just being first of a kind:** for example, a windfarm using secondary steel, which may be innovative, but not risky for the project.
- **Cost:** a project that was never done before simply because it is too expensive, but not risky.
- **Geography:** for example, a technology never used in Austria, but already used in Germany

In the above cases, subsidies should be paid on the basis of performance (contracts, fixed premia…) instead of upfront.

Reserve scale-up subsidies to deprived sectors

The ETS is a technology-neutral instrument that aims to achieve emission reductions that are the most cost-effective. Using its revenues to subsidise the scale-up of specific abatement measures would distort that role.

Exceptions to this rule could include innovative technologies for which there are no big players who could afford R&D, or sectors penalised by not receiving free ETS allowances, such as activities linked to circularity, alternative building materials or organic fertilisers.

But it is not the case of maritime transport, which is very profitable (CMA-CGM posted in 2022 the second highest profit ever recorded by a French company in a year) and the production of e-fuels such as ammonia is not innovative anymore. Legislation mandating the use of e-fuels at Union or Member State level, should instead be imposed at company level.

In addition, the carbon footprint of e-fuels often ignores induced emissions (see Sandbag (2025) Getting Electrification Right: The broader challenge of induced emissions). This is the case with RFNBO standard, which can create significant induced emissions and should therefore not be subsidised.