POSITION PAPER

BUSINESSEUROPE

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EU ETS REFORM: MAKING THE INNOVATION FUND FIT-FOR-PURPOSE

KEY MESSAGES

1 Innovation is crucial in order to support industrial decarbonisation, while simultaneously help in improving the competitiveness of European industries.

2 The Innovation Fund can be an important tool in this regard, provided that it is made fit-for-purpose by addressing the main obstacles that have proven to be unsuccessful under the NER300.

3 Given the scale of the challenges, the Innovation Fund needs to be complemented with other innovation-support schemes at EU and national level, in particular on the market deployment of innovation technologies.

WHAT DOES BUSINESSEUROPE AIM FOR?

- *The current reform is Europe's biggest opportunity to return the EU-ETS as the core policy tool to decarbonise industrial sectors. BusinessEurope firmly favours this market-based approach in order to allow Europe's industries to reduce by 2030 their emissions by 43% compared to 2005 levels while remaining internationally competitive.*

- *Funding innovation is a vital element in this approach, but the design of the current NER300 instrument is providing several financial risks and eligibility obstacles to address the scale of the challenge. This has to be improved. In particular, projects should be funded based on their technological excellence, risks should not solely be borne by the game changers, lessons should be taken from Horizon2020, and the Innovation Fund should be embedded into something bigger.*

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INTRODUCTION

BusinessEurope firmly favours a market-based approach such as the EU ETS as the best policy instrument to reach industrial emission reductions of -43% by 2030. The reform is essential to provide a meaningful signal to sectors to decarbonise. However, due to the long investment cycles of industrial sectors, Europe will only have one chance to make the EU-ETS reform work for all sectors involved. Innovation is crucial in this regard in order to support industrial decarbonisation, while at the same time assist in improving the competitiveness of European industries.

The Innovation Fund will be an important instrument in this regard, and that is why BusinessEurope through this position paper brings forward a set of proposals to make the Innovation Fund fit-for-purpose.

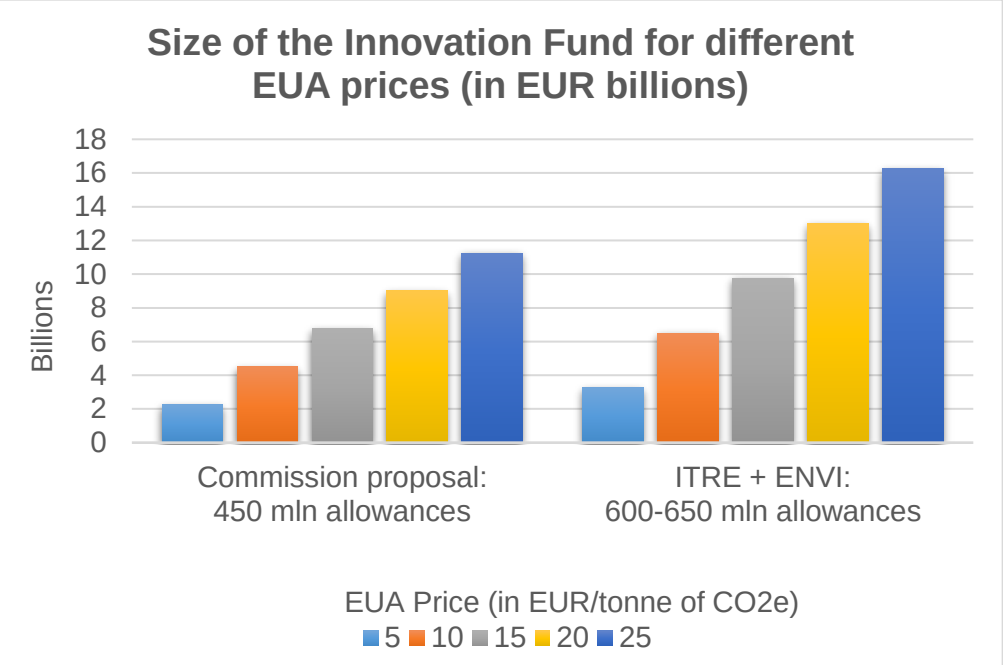
ASSESSMENT OF THE COMMISSION'S LEGISLATIVE PROPOSAL AND NER 300

What is going in the right direction: The Commission's legislative proposal

Increasing the funding available

The total size of the NER300 is estimated to have been around EUR 2.1 billion, and to have leveraged an additional EUR 2.7-2.8 billion in private investments. Under the proposals made by the Commission as well as the ITRE and ENVI Rapporteurs (see Figure 1), the size of the Innovation Fund could vary between EUR 2 to 16 billion, depending on what the average EU Allowance (EUA) price will be during the Phase IV period.

Figure 1



Sources: Commission proposal[1], ITRE adopted opinion, ENVI draft report

Broadening the scope of eligible projects

BusinessEurope welcomes the Commission's proposal to extend the support from CCS and renewable energy sources projects to the demonstration and commercialisation of innovative technologies in industrial sectors as well. The expansion of the scope to industrial projects is pivotal given the fact that:

- The increased competition allows for more opportunities to achieve cost effective decarbonisation of industrial sectors and avoids the risk of "picking winners and losers".

- The cost of decarbonizing Europe's industrial sectors would be far higher without allowing public funding of sector-specific technologies, such as cellulosic ethanol conversion in the chemical industry and ammonia fuel cells for energy storage [2], digital technology, but also more general technologies such as CCS and CCU (provided that GHG emissions are actually reduced rather than displaced). According to the International Energy Agency (IEA), such technologies are among the only large-scale mitigation options for most energy-intensive industries.[3] This is particularly relevant in the current time, where Europe's economy compared to its major competitors is still struggling to remain competitive (see Table 1) and where there are concerns surrounding Europe's future security of energy supply.

[1] COM (2015) 337 final.
[2] VU Brussels, 2016. The Final Frontier – Decarbonising Europe's energy intensive industries.
[3] IEA GHG, 2015. CCS and CCU – Their role in the mitigation of GHG emissions from energy-intensive industry

*Table 1 – **Median** Compounded Annual Growth Rates (CAGR)* for the Top 2,500 companies worldwide in 2013-2015 for selected countries and regions.*

Country / Region	R&D spending	Sales	Capex	Profits	Employee growth
China	16.43	8.47	0.07	6.94	4.84
EEA**	2.22	2.96	-1.27	0.98	1.37
India	12.34	6.78	3.18	10.18	1.52
South Korea	9.48	4.44	-0.82	3.87	6.19
US	6.97	3.95	5.82	5.65	2.93

Source: 2015 EU Industrial R&D Investment Scoreboard. URL: http://iri.jrc.ec.europa.eu/scoreboard15.html
* The Compound Annual Growth Rate (CAGR) is the mean annual growth rate of over a specified period of time longer than one year.
** The European Economic Area (EEA) in this regard is based on 22 European countries, as not all EEA countries have a company that is listed on the World 2500 League Tables.

What raises concerns: the current NER300 design

BusinessEurope remains concerned about the uncertainties on how policymakers will eventually shape the Innovation Fund. It is therefore important to point out some of the design features that have proven to be unsuccessful under the NER300 and therefore need to be revised:

Eligibility criteria

- **Geographical requirements**. Article 8.4 of the NER300 Decision[4] stipulates a geographical limit of three projects per Member State, which was reached by at least seven Member States so far. This may have added to the geographical spread of projects, but at the cost of technological excellence. It has also caused Member States to prefer larger sized projects to smaller ones, which puts grassroots initiatives at a significant disadvantage.

- **Technological requirements**. Annex I and Article 6 of the NER300 Decision prescribe the categories and subcategories of CCS and renewable energy projects that are eligible for NER300 funding. Furthermore, DG Climate Action stipulates a maximum number of projects per low-carbon technology that would be eligible for funding, namely eight CCS and 34 renewable energy projects.[5] This is too prescriptive, constrains the type and number of eligible projects, doesn't allow for any considerable technological innovation throughout the lifetime of the NER300, and increases the economic challenges of developing large-scale projects to developers. It encourages a "picking winners and losers" mentality that prevents technologies with the most added value from being picked. This in the end risks not stimulating a system approach for the decarbonisation of the economy. Furthermore, setting such an arbitrary rule at the beginning of a Phase in the EU-ETS prevents new technologies that do not fall under such categories from being financed as they come about.

[4] Decision 2010/670/EU.
[5] Memo/10/549, DG Clima.

Financial risks

Innovative demonstration projects, especially those that are first-of-a-kind (FOAK) in low carbon innovation in the industrial sector, can face long development periods and a significant amount of financial risks before reaching their commercialisation phase. For example, CCS projects incur relatively high capital costs, as well as significant costs related to transport and storage.[6] It is therefore important that such projects are financed on a European scale as they can often not be easily financed by individual Member States. Furthermore, financing on a European scale also further integrates Europe's energy infrastructure and thereby further moves the continent closer to a European Energy Union, which 70% of Europe's population favours according to a recent Eurobarometer.[7]

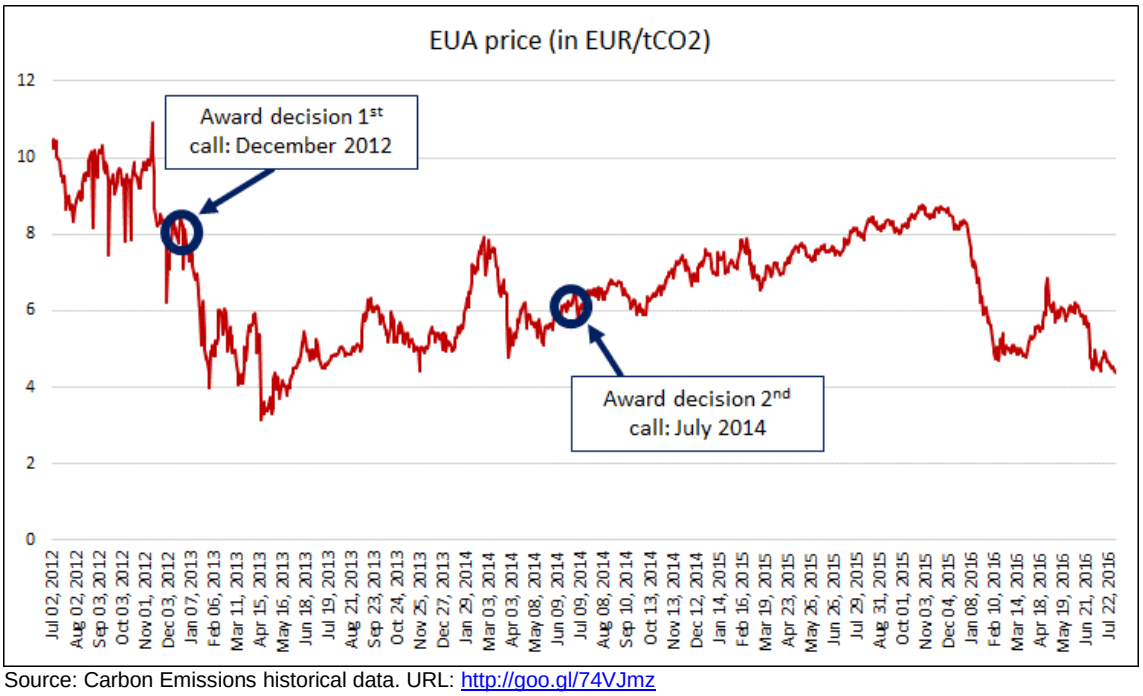
Yet, BusinessEurope sees a series of major concerns with the NER300 that need to be addressed by the IF in order to make it fit-for-purpose:

- **Financial requirements.**
    - Paragraph 14 at the beginning of the NER300 Decision states that financial disbursement under the NER300 is conditional on verified avoidance of CO2 emissions. Upfront financing was available under the NER300, but only if the Member State guaranteed that any funding not justified by performance will be returned, which several did not (see third bullet). Because of this, projects risk being burdened with carrying all the financial risks for most if not all of the development period.
    - Article 11.3 of the Decision establishes the principle that disbursement for a given year can only take place if knowledge sharing requirements for that year are fulfilled. Rectification in a subsequent year is not allowed. This is unnecessarily stringent.
    - Article 11.5 states that projects are not allowed to receive upfront funding under the NER300 if Member States do not provide a guarantee, for example because the project does not proceed or is unsuccessful in avoiding enough CO2 emissions. The European Investment Bank (EIB) is therefore shifting all financial risks associated with the upfront funding to the Member States. Several Member States, such as the UK[8], state that they will not provide such guarantees for NER-funded projects. This has basically rendered the possibility for projects in those countries to get upfront funding impossible. The EIB manages the so-called Risk-Sharing Finance Facility (RSFF) to which projects under the NER300 can apply, but so far none have done so, according to the Commission's Impact Assessment.

[6] Eurelectric, 2015. European Commission's legislative proposal to revise the EU Emissions Trading Scheme Directive – A Eurelectric position paper
[7] EC, 29 July 2016. Spring 2016 Standard Eurobarometer: Strong public support for Commission's political priorities
[8] DECC, 2013. DECC Guidance on EU Funding Mechanism "NER300" for Renewables Demonstration Projects – Second Call for Proposals.

- Finally, Article 10 of the NER300 Decision requires the EIB to sell allowances before the award decisions for each round of calls are adopted by the Commission. This inflexible requirement may have prevented the EIB from selling the 300 million EUAs at higher prices, which would have led to more funds becoming available under the NER300 (see Figure 2).

Figure 2 - EU Emission Allowances Intraday prices (in EUR/tCO2)



Source: Carbon Emissions historical data. URL: http://goo.gl/74VJmz

- **Timing requirements.** Article 9 and 11 in the NER300 Decision stipulate that the deadline for reaching a final investment decision is 2 years (3 years for CCS projects) and for commencing operations is 4 years. These deadlines can prove to be unrealistic for many first-of-a-kind (FOAK) technologies. For example, the time for CCS projects to select sites including storage and get the permitting, licenses and leases in place can take 3 to 5 years, after which construction and installation can take another 5 years.[9] Timing requirements may therefore inadequately address the risks of pre-commercialisation projects in energy-intensive industries. This is a worrisome factor, given that the International Energy Agency (IEA) estimated that such projects can achieve up to 14 percent of the GHG emissions reductions required by 2050 to limit global warming to 2 degrees Celsius.[10]

[9] The Committee on Climate Change (CCC), 2013. Infrastructure in a low-carbon energy system to 2030: Carbon Capture and Storage. & International Electricity Partnership (IEP), 2009. CCS: Timeline for development and commercial development.
[10] IEA, 2013. Technology Roadmap 2013. Also, see IEA, 2015. Energy technology perspectives 2015.

PROPOSALS TO MAKE THE INNOVATION FUND FIT-FOR-PURPOSE

IMPROVE THE ELIGIBILITY CRITERIA

Ideas should be funded based on their technological excellence
BusinessEurope agrees with the Commission when it states that the IF should enable innovative low-carbon first-of-a-kind (FOAK) projects related to low-carbon technologies and processes.

Therefore, BusinessEurope strongly believes that:

- Projects should be judged based on their **technological excellence**. For industry, this could be in terms of their potential for cost-efficient greenhouse gas (GHG) reduction and medium-term market viability. For the power sector, this could be based on the generation of clean electricity. Projects should not be based on artificial factors such as regional criteria, in which the situation can arise that scarce resources are not spent simply because there are no projects to fund in a certain Member State. Neither should projects be assessed on benchmarks that ignore the specific competences of technologies, such as benchmarks based on the Levelised Cost of Energy (LCOE). Such criteria could limit access to funding for projects that offer the most potential added value to the decarbonisation of Europe's industries. For the purpose of assessing proposals, the required level of cost analysis should be determined, so that projects can be compared in a fair and transparent manner. It is important that the EIB and other relevant stakeholders are consulted as part of the discussions on the new ranking criteria.

- Furthermore, the IF should be **technology neutral**. All types of FOAK projects across the whole value chain should be considered, taking into account the specific needs and constraints of the power sector and different industrial sectors (iron and steel, cement, chemical, etc.). In addition to CCS and renewable energy projects, these should include industry-specific low carbon technologies, such as advanced biomass conversion and process intensification (PI) in the chemical industry[11], and digital technology aimed at improving plant efficiency. It should also include more general technologies such as carbon capture and utilisation (CCU, provided that GHG emissions are actually reduced rather than displaced), and CO2 transport and storage (T&S) infrastructure projects. The categories and thresholds in Annex 1 of the NER300 Decision should not be copied as-is in the Innovation Fund, as they are too prescriptive and do not take into account technological innovation throughout the IF's operational period. Rather, Annex 1 should be replaced with a more flexible framework, based on the individual needs and constraints of each of the relevant sectors (i.e. the power sector, steel producers, cement producers, renewables, etc.). Furthermore, caps to the number of projects financed per sub-category of low-carbon technology should be removed.

[11] Cefic and Ecofys, 2013. European chemistry for growth Unlocking a competitive, low carbon and energy efficient future.

PROMOTE RISK-SHARING

Risks should not solely be borne by the game changers

The Commission in its 2015 Impact Assessment acknowledges that innovative technologies face significant risks in order to bring them to commercialisation and overcome the so-called "valley of death". It therefore earmarks the IF to help bridge the financial gap specifically targeted at the risk profile of such technologies.

In order to really do so, BusinessEurope proposes that policymakers take into account the following in order to better promote risk-sharing under the IF:

- Continue to **allow upfront funding** and make it transparent to applicants on what grounds their application to upfront funding is approved or denied.

- Award at least part of the **funding on the basis of achieving milestones** in the design, permitting and/or construction phase. BusinessEurope welcomes this option as proposed in the 2015 Impact Assessment. Nevertheless, the milestones may very much depend per energy-intensive industry due to a range of factors, which needs to be taken into account. For example, some technologies might currently be at low technology readiness levels (TRLs) but be demonstrated during the period 2021-2030 to contribute significantly to the industrial transition towards a low-carbon economy.

- Allow for a **longer time period for the final investment decision** than the 2 to 3 years currently stipulated under the NER300, for example 5 years and possibly longer for exceptional circumstances. This would take into account factors that are beyond the control of project developers, such as licensing approvals and permits for storage sites granted by Member States.

- **Increase the project funding rate cap** of 50% of the total project cost under the original NER300 to 60-75% as suggested by the Impact Assessment. The cap could even be aligned to the new State Aid Guidelines for environmental protection and energy 2014-2020 that allow up to 100% of eligible cost for CCS projects or renewables (through a competitive bidding process) to be subsidised.[12] A low funding cap could have a detrimental impact on the viability of innovative industrial projects that have a high financial risk. The Commission's Impact Assessment states that a lack of sufficient funding was found to be one of the reasons why not a single CCS project was successfully developed under the NER300.[13]

- **Increase the Innovation Fund funding rate cap** of 15% of the total funding available under the Innovation Fund for projects that can offer a significant added value the EU's GHG emissions reduction potential. BusinessEurope understands that the Commission wants to fund a certain minimum number of projects, but urges it to consider adding flexibility to projects with, say, a more regional character. Increasing

[12] Annex 1 in 2014/C 200/01
[13] 10 out of 11 CCS project applications were rejected during the selection procedure. The only one who passed, the White Rose CCS project in the UK, has stalled developments because the UK Government announced in November 2015 that it would no longer provide the GBP 1 billion promised to the project. Source: https://goo.gl/4wfA5j

the 15% cap can be judged on a project-by-project basis through a qualitative assessment.

- **Reduce the 50% co-financing requirement**, or remove it altogether. According to the 2015 Impact Assessment, such a high requirement may have prevented projects from participating to the NER300 or to secure enough funding to go ahead.

- **Ensure cost-effective timing for allowance monetisation** by the EIB in order to maximise revenues. A gradual auctioning of the allowances over phase 4 would also limit the interference with market dynamics while ensuring regulatory certainty and predictable revenues flows.

- Allow for **risk-sharing** by introducing additional financial instruments apart from the traditional grant-based scheme (discussed further in next section).

TAKE LESSONS FROM HORIZON2020

Do not change a winning strategy
Europe's flagship research and innovation programme, Horizon2020, has brought a number of novelties compared to previous framework programmes to make it better fit for innovation. The design of the Innovation Fund should learn from this evolution and adjust its design accordingly.

Some important design features that the Innovation Fund could adopt from Horizon2020 are the following:

- **Shorter timelines** for the proposal approval process to 8 months, or even shorter if possible. Furthermore, the **frequency of calls** and the **timeline for awards** needs to be more in line with that of Horizon2020 as well as other funds such as the Connecting Europe Facility.

- Option of a **two-stage proposal evaluation process** next to a one-stage evaluation process. A short proposal evaluation is performed in the first stage, and the complete proposal evaluation in the second stage. The benefit of such a two-stage approach is that applicants have to spend less time on a short proposal than on a full proposal. If their proposal is rejected, the time lost would be less than if they were obliged to fill in a full proposal at the beginning. It is important however that all applicants should be given transparency as to why their application is or is not proceeding to the second evaluation stage, and to provide possible suggestions for future applications. Currently this transparency is also missing in the Horizon2020 application process.

- **Fast Track to Innovation (FTI) Pilot** in order to reduce to time to commercialise innovative ideas, encourage first-time applicants to EU funds, and to stimulate further private sector investments in low-carbon innovative technologies. Some of the eligibility criteria of the FTI Pilot under Horizon2020 need to be loosened in the

Innovation Fund design order to prevent the FTI Pilot from being too stringent for industrial projects (see footnote for examples).[14]

- Expert Advisory Groups that include evaluation **experts with an industry background** in addition to those from public research and civil society in order to provide a widely supported evaluation.

- A diverse set of **financial instruments** in addition to the traditional grant-based scheme. The Horizon2020 budget in part offers debt-financing (i.e. risk-sharing for loans and guarantees) as well as risk financing (equity). This is especially relevant for the first-of-a-kind (FOAK) demonstration projects funded under the Innovation Fund, which are implicitly at a high risk and/or require private sector funding in addition to public sector funding. For example, having a guarantee for the first loss of a project could trigger additional funds from the private sector by providing loans to such projects that they would not have funded otherwise. Such guarantees can prove vital: The inability to receive loan guarantees has been one of the main reasons why the NER300's Maajberg Energy Concept (Denmark's first integrated bio-refinery) announced in October 2016 that it would seize development.[15]

- **Minimise administrative overhead** by simplifying the IF in a similar fashion as done under Horizon2020. Examples include a simpler programme architecture that makes it easy for applicants to identify where funding opportunities exist, having a single set of rules on eligibility and evaluation for all applicants (with room for deviation for specific needs), simpler funding rules that take stakeholder preferences into account on how they want to be reimbursed, as well as a revised control strategy that strikes a better balance between control and trust.[16]

- **Seals of Excellence** that are given to projects that have passed a stringent selection process and award criteria, but could not be funded due to a lack of budget. Having an SoE under the IF could improve the chances of innovative projects to receive funding from alternative sources.

- **EU Technology Platforms** are stakeholder forums led by industry players and that the European Commission recognises as drivers of innovation, knowledge sharing and competitiveness in Europe. Among other things, such forums can encourage industry players to participate in the Innovation Fund, as well as foster network opportunities and set strategic agendas.

- **Mid-term evaluation** of the Innovation Fund covering the implementation of the Fund and that aims to report on the relevance, effectiveness, efficiency, coherence and EU added value of the Fund.

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[14] Some of the eligibility criteria are that consortia need to exist of 3 to 5 legal entities from at least 3 different Member States, a minimum of 60% budget involvement by industry participants, and a maximum of 3 years after the start of the FTI-action.
[15] Maskinbladet, 6 October 2016. Stort bioraffinaderi droppes. Available at https://goo.gl/HNhInW (in Danish).
[16] For more details on the types of simplifications possible, please consult the Commission's "Factsheet, Rules under Horizon 2020" from 23 October 2013: http://goo.gl/goMKBw

COMPLEMENTARITY WITH OTHER SUPPORT SCHEMES

The Innovation Fund must be embedded in something bigger

According to REN21 and Bloomberg New Energy Finance, Investments in low-carbon technologies in Europe totalled about EUR 54.6 billion in 2014 and EUR 43 billion in 2015. Under the current proposals by the Commission as well as the ITRE and ENVI Rapporteurs, the size of the Innovation Fund could vary between EUR 2 to 16 billion. This large range is due to the unpredictability of the EUA price, which varied between EUR 2.81 and EUR 32 in the past decade.

This alone, given the scale of the challenges, will not be adequate to support innovation to achieve Europe's commonly shared emissions reduction efforts. Additional funding will therefore be needed. The European Investment Bank (EIB) during its due diligence found that almost all projects receiving NER300 funding were still suffering from a lack of finance.[17]

At the same time, differences between EU funds (for example in terms of timing, decision-making, and rules) must not overcomplicate the application process when combining financing from those funds. Neither should a combining of different EU funds lead to distortions within the EU's level playing field due to uneven availability of European funds within a single project. Instead of trying to achieve synergies at the level of individual projects, synergies between the Innovation Fund and other EU funds should therefore be sought at the programmatic and strategic level. The aforementioned Seal of Excellence used in Horizon2020 should also be used in the Innovation Fund's design for achieving synergies and efficiency.

Furthermore, the Innovation Fund should be seen as "seed money" to leverage more private investments. This was also the reasoning behind the NER300, as well as the European Structural and Investment Fund (ESI) and the EUR 315 billion European Fund for Strategic Investments (EFSI) under the Juncker Plan.

BusinessEurope therefore proposes that:

- The Innovation Fund is to be **complemented with other innovation-support schemes** at EU and national level, in particular on the market deployment of innovation technologies. Examples include but are not limited to the Modernisation Fund, the Connecting Europe Facility, the ESI and EFSI funds.

- Major initiatives should be allowed to be rewarded with funding from **different sources of EU funding**. This is particularly relevant for large initiatives such as those related to CCS and CCU, which single-handedly can outstrip the budget of the Innovation Fund as they cost billions of Euros. Such initiatives would then consist of several coherent projects, some funded from the Innovation Fund and other projects from other EU funds.

- Beneficiaries should be allowed **more flexibility** to make use of their own usual **accounting principles** (as is allowed under FP7), in order to simplify cost

[17] See section 4.1.5.1. in the Commission's 2015 impact assessment.

calculations and reduce the administrative burden. Alternatively, the Commission can choose to harmonise accounting principles across all EU funds.

- The Innovation Fund should be designed to **leverage much more private investments**. Several avenues have been proposed in this position paper to make the IF more interesting for private investments than the NER300.