

EPPSA Response to European Commission Public Consultation
Green Paper on a common strategic framework for EU research and innovation funding
Directorate General for Research & Innovation
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European Power Plant Suppliers Association – EPPSA a.i.s.b.l.

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EC Interest Representative Register ID number: 18146381379-29

Questionnaire

Your profile (please include in response document)

- I answer this questionnaire on behalf of **industry**
- Country: Belgium – EU level organisation
- Name of entity: European Power Plant Suppliers Association – EPPSA

❖ Question 1

How should the Common Strategic Framework make EU research and innovation funding more attractive and easy to access for participants? What is needed in addition to a single entry point with common IT tools, a one stop shop for support, a streamlined set of funding instruments covering the full innovation chain and further steps towards administrative simplification?

- Putting all separate programmes under one Common Strategic Framework (CSF) would bring coherence and make it more accessible to potential project participants.
- The CSF would help streamline a number of the EU research & innovation activities/programmes, which very often overlap or lack consistency. For instance, the Commission DG Research has proposed to launch a European Innovation Partnership on Smart Cities whereas the Commission DG Energy has already in its SET Plan Communication a Smart Cities Industrial Initiative (still to be launched). Therefore, having one CSF would definitely enhance the effectiveness of the European and avoid duplication of efforts at European and national levels.
- The simplification measures proposed by the Commission in 2010 will certainly help companies to access more easily the EU funding opportunities, accelerate the speed of the selection process and reduce transaction costs related to the current Research Framework Programme.
- The recent FP7 calls are already better structured and guarantee an objective selection of projects. Three evaluation criteria (Scientific and Technological Excellence, Implementation and Management, Impact) are being taken into account. However, very often the first criterion is far better defined than the two others. Given that the EU programme should focus more on demonstration/large scale projects rather than on pure R&D, the criterion of Impact should be given more weight and be clearly defined.
- Simplifying the current EU Financial Regulation (which is very opaque and complex) would certainly help attract more participants in the EU funded programme. In addition, the Staff Regulation should also be revised, in particular when it comes to the provisions on personal financial liability of the Commission's officials. Financial and Staff Regulations seem to have a paralysing effect on the smooth implementation of the EU funded projects.
- Past failures in EU funded energy projects have largely occurred due to the selection of technologies that were unlikely to deliver the promised results and/or an inability of the developers to secure matching finance. The UK has developed a robust selection process which uses acknowledged experts in the field to carry out

due diligence on all applicants including their ability to attract the necessary financial backing. Therefore, the EU selection/evaluation processes could be improved to ensure that the EU funds go to credible projects.

❖ Question 2

How should EU funding best cover the full innovation cycle from research to market uptake?

- So far, the EU research programmes were too much focused on pure R&D, theoretical and simulation activities. Those on their own won't bring innovative steps, won't deliver new technologies to the market and won't help build business models for new solutions. The CSF should cover the whole innovation cycle of the technologies, from research to early market take up, with the aim of driving down deployment costs.
- A mix of funding (grants) and financing (loan guarantees, project bond) sources is necessary to support demonstration of new technologies and address bankability issues. At the stage of demonstration, the high CAPEX pose high investment risks to investors and technology providers, making bankability impossible without government support. Given that the EU funding is limited, it would be better to focus on limited number of large scale projects in each technology (5–15) to ensure higher chance of success.
- Once the technology is proven (so it can be commercialised) and economies of scale are in place, market mechanisms (carbon pricing) or feed-in tariffs (FITs) would take over from the EU grant oriented funding.
- As large scale demonstration projects are substantially more expensive than R&D projects, the EU funding should either cover more than 50% of the relevant costs or be more flexible in terms of co-financing rules. In the latter case, it would imply the revision of the state aids regime to enable Member States to subsidise in addition to the EU more than 20% of the relevant costs. The Commission should also consider requiring Member States to co-fund projects from their ETS auction revenues.
- EU funding and financing mechanisms should cover technology risk. This would help attract private finance into the projects.
- To better cover the full chain of innovation cycle, the criteria for selection of projects should give more weight to the impact of the projects (as scientific excellence is not a suitable criterion to prove that the technology will be brought to the market).
- EU funding should cover period of 5–10 years – this would be more suitable for the life cycle of large scale demo projects.
- The current FP7 programme only allows for the financing of the equipment depreciation. The rules should be changed and allow the financing of CAPEX and OPEX.

❖ Question 3

What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?

Characteristics of EU funding:

- Funding at EU level forces collaboration with actors who perform their role in a different way. Exposure to such differences can be very beneficial.
- EU funding should enable projects to bridge the gap between R&D and deployment/market uptake. Projects should be of European strategic importance and contribute to the delivery of the EU 2020 Strategy.
- EU funding should be made available upfront to the extent possible.
- EU funding should concentrate on a limited number of projects with real potential for technology deployment.
- Projects should have predominant industrial and demonstration elements and consortia should be limited to 10 partners (to avoid huge administrative costs and focus on real, physical results).
- EU funding should go to projects with the potential of building/strengthening European competitive industry/European know-how.
- The Commission could engage more pro-actively in supporting the public acceptance of the technologies involved. Such engagement would give more exposure/visibility to the EU funded projects.

- When appropriate and considering the differences between the technologies, the large scale projects should be one single site oriented.
- EU funding shouldn't require having partners from at least three different EU countries. This rule is too rigid and might lead to ineffective consortia which are set up artificially, without taking into consideration professional capacities.

Leveraging effect:

- EU funding should leverage private finance and attract potential investors. As large scale demonstration projects are substantially more expensive than R&D projects, the EU funding should either cover more than 50% of the relevant costs or be more flexible in terms of co-financing rules. In the latter case, it would imply the revision of the state aids regime to enable Member States to subsidise in addition to the EU more than 20% of the relevant costs.
- EU public funding in energy infrastructure is important to help unlock private investment in projects that do not have a commercial return yet or for which the business model doesn't exist yet (e.g. interconnectors, supergrid, smart cities).
- Grants are perfectly suitable for R&D projects but for demo projects, there should be a mix of EU funding and financing mechanisms (loans, risk sharing facility, project bonds).

EU funding should be flexible, able to adapt to the specificities of projects/technologies and to leverage the national / regional public funding (e.g. structural/cohesion funds). On the latter, the Commission could consider requiring Member States to co-fund projects from their ETS auction revenues.

❖ Question 4

How should EU research and innovation funding be used to pool Member States' research and innovation resources? Should Joint Programming Initiatives between groups of Member States be supported?

- Member States or groups of Member States should be encouraged to act as godfather for different technologies, with responsibilities for hosting, managing and financing projects, which receive EU funding.
- Joint Programming Initiatives (JPI) should be supported, as they tend to coordinate, integrate and introduce consistency in research activities among EU countries. Joint programming is a good way of avoiding duplication of efforts and dilution of national public money to too many similar projects.
- However, JPIs tend to focus on research undertaken by academia. Yet, industry can bring valuable input to the common research prioritisation exercise. Therefore, involvement of industry in JPIs should be strengthened.

❖ Question 5

What should be the balance between smaller, targeted projects and larger, strategic ones?

- The Energy component of the CSF must focus on demonstration and getting the different technologies to the market. It is still essential to support R&D in new technologies. But it became more important now to demonstrate developed technologies and support pre-market optimisation. Therefore, the balance for funding should be as follows: 25% for R&D projects and 75% for large, strategic projects. The current balance in the FP7 has improved in that direction but more needs to be done.
- The CSF shouldn't require a set up of big consortia involving more than 10 partners to get the EU funding. This isn't cost-productive, as the leading partners spend more time on coordinating the group than on executing the project itself.
- The projects with fewer partners (up to 6), structured in clusters (supplier, customer, market/research analysis) should be encouraged. This way more cooperation between direct competitors could be fostered for R&D projects. When it comes to large scale demo projects, 3-4 partners should be the principle with a predominant role of industry, in comparison to academic partners. And selection of project partners should be based on their qualification and their ability to contribute to the target and guarantee financial backing.

❖ Question 6

How could the Commission ensure the balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility and diversity to achieve objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs?

- The current rules on participation in EU funded projects are complex and confusing. Simplification of rules through harmonisation would ensure a level playing field for all potential participants.
- However, each sector has its own specificities and needs. The pharmaceutical sector might have a different RD&D approach to the energy sector. Therefore it is extremely important to keep certain degree of flexibility, in particular when it comes to funding rates, funding period (e. g. longer period for large energy demo projects), consortia set up, monitoring and reporting.

❖ Question 7

What should be the measures of success for EU research and innovation funding? Which performance indicators could be used?

- Some projects may not lead to successful results, even if successfully performed. This cannot be used in itself to deny funding. A negative outcome doesn't mean automatically that the project was unsuccessful.
- The challenge for the EU in the energy sector is to fund technologies which will be economically viable in the future, so to support emerging/new markets. Therefore the success of the EU funded projects can be measured by the existence of real industry; E.g. for ocean energy, the success of the EU funding would be to have 8 – 10 developers on the market, each with an installed capacity of 3 – 5MW by 2015 and 10 – 20MW by 2020.
- The success of EU research & innovation programme could also be measured by: increased private investment in R&D; share of national R&D programmes coordinated across the EU; accelerated innovation cycle; creation of new jobs, emissions reductions, energy savings, etc.

❖ Question 8

How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from the future Cohesion policy, designed to help the less developed regions of the EU, and the rural development funds?

- EU funding has the potential to leverage private and national/regional public funding. But it should be more flexible in terms of co-financing rules. The state aids regime should be revised to enable Member States to subsidise in addition to the EU more than 20% of the relevant costs of the projects.
- EU funding should be made available upfront to the extent possible. This would enable project operators to start realising project pending the approval procedures for additional funding at national/regional level.
- Project Sponsors should be allowed to combine EU funding with Cohesion funds and in general with any other funds at national and regional levels. Currently, the co-financing rules are too restrictive and their complexity undermines the execution of large but expensive demonstration projects such as energy infrastructure projects (electricity, gas, oil and CO₂ transport).
- Combination of EU and cohesion funds to finance the realisation of projects would help streamlining the Cohesion Policy towards more research & innovation activities which have a proven positive impact on the economy.
- Whatever funding is provided by EU and Member States, it is important that it shares the technology risk borne by private investors, especially in demonstration projects.

❖ Question 9

How should a stronger focus on societal challenges affect the balance between curiosity-driven research and

agenda-driven activities?

- By recognising that the standard of living experienced is directly related to ones access to electrical energy, anything that provides security of supply has a big impact on the well-being of society. For instance, while renewable energy technologies will not fully impact all EU countries (as the resources are not equally distributed), the wider aspects such as CO₂ reduction and manufacturing could do. This is all set against a background of austerity and this suggests that agenda driven research must have a higher priority than curiosity based research.
- A balance between agenda-driven activities and societal challenges could be strengthened by putting more emphasis/weight to Impact and Relevance of projects rather than to Scientific & Technology Excellence.

❖ Question 10

Should there be more room for bottom-up activities?

- Yes, there should be some flexibility allowing breakthrough technologies to get funding outside the planned work programme with fixed thematic areas.

❖ Question 11

How should EU research and innovation funding best support policy-making and forward-looking activities?

- EU funding for research & innovation should reflect EU policy priorities, namely the EU 2020 Strategy and the 2050 Low Carbon Economy Roadmap. EU funding should be one of the instruments to deliver those strategies.
- The results of the demonstration projects with EU funding should be taken into account in the different roadmap exercises, and in particular when developing EU energy scenarios up to 2050.
- Large scale projects can show whether costs of technology can be scaled down, its performance and economic viability achieved. All those elements are extremely important for policy makers when deciding on long term financial support for technologies (e.g. FITs), emission reduction targets, or energy mix. Therefore EU research & innovation priorities should be interlinked with the key EU policies, in particular energy, climate change, environment and industrial policies.

❖ Question 13

How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?

- The Commission should engage more pro-actively in public awareness exercise around the technologies involved in projects getting EU funds. This would help gain public acceptance for new innovative technologies/energy infrastructure and establish a basis for an open and transparent dialogue with citizens.

❖ Question 15

How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Programmes) or different forms of 'public private partnership' be supported? What should be the role of European Technology Platforms?

- Industry would engage more if the process of securing and operating the EU funds was simplified and streamlined. The present process is too slow and inflexible. It is this aspect and the rules that make IP ownership difficult or sending out documents for response with very short deadlines that discourage further industrial participation.
- The simplification measures proposed by the Commission in 2010 go into the right direction and may attract more industrial partners. Shifting the EU funding focus to more demonstration projects would certainly

be of greater interest to industry. In addition, a two-stage submission process, as already in place for some calls, could become the principle underlying all future calls. This 2-step procedure makes an earlier down-selection of proposals and thus avoids extensive preparatory work.

- Giving more weight to Impact and Relevance of projects as opposed to Scientific/Technology Excellence would attract more market-oriented projects and so more industrial partners. Theory and simulation undertaken by academic partners are of course very important steps in the innovation cycle. However, industry won't take any commercial risk on technology, which hasn't been demonstrated in a real/physical environment.
- The European Technology Platforms (ETPs) substantially contributed to the development of Technology Roadmaps, RD&D strategic priorities and provided input to the FP7 work programmes. They should continue in that role but put more focus on public awareness activities to get the citizens understand better the innovation cycles, research needs and future technology developments. The ETPs could also facilitate development of PPPs and/or JTIs.
- PPPs could be further supported as they can help deliver: better understanding of risks and risk sharing between public and private sector, and the development of mechanisms to address "valley of death" issues for newer technologies and market barriers; helping regional authorities access multinationals' expertise and helping local firms compete for contracts in consortia and supply chains; exchange of information and experience between centres including the development/refinement of key supporting mechanisms.

❖ Question 18

How should EU-level financial instruments (equity and debt based) be used more extensively?

- Each technology is different. For some, substantial CAPEX grants and FITs are the only useful incentives that industry requires to commercialise the technology. For other technologies/projects, loans could be sufficient. Therefore, we need a mix of different financing instruments that is made available to projects.
- The EIB financing (loans, risk sharing facility) would certainly attract other private investments.
- The EU Project Bond Initiative also looks promising here. But such an initiative should not focus only on the mature, economically viable projects, which will happen anyway. The real need for EU financing is among projects involving new, risky technologies.
- Any EU financial instruments need to be as innovative and as flexible as possible and to cover the technology risk in demonstration projects. Otherwise, the technologies won't be brought to the market.

❖ Question 19

Should there be more room for bottom-up activities? Should new approaches to supporting research and innovation be introduced, in particular through public procurement, including through rules on pre-commercial procurement, and/or inducement prizes?

- Lessons could be drawn from the scheme initiated by the energy regulator in the UK, Ofgem. In response to a collapse of innovation in the UK electricity network following privatisation, the regulator mandated that (initially) DNOs could reclaim (most of) the cost of innovative R&D for their network (up to 0.5% of turnover) by an augmentation of the tariff. This led to a successful and productive growth in innovative projects that has now been built upon with the introduction of the Low-Carbon Investment Fund mechanism.

❖ Question 20

How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?

- In order to encourage industry partners to participate in EU RD&D funding programmes, IPR rules have to be clearly defined and allow protection of IPR created by the project, as well as usage of this IPR in associated companies worldwide. This is not in contradiction with the requirement for cooperation, information

exchange and dissemination of scientific results that industry complies with.

- Knowledge sharing is a crucial part of the collaborative RD&D activities. The well known and accepted IPR rules, as they are applied under the current FP7 programme, balance well public and industry interests. Therefore, when it comes to future EU funding programmes, it is highly recommended to keep the existing IPR regime as it stands today.

❖ **Question 26**

How should international cooperation with non-EU countries be supported e.g. in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States?

- Industry partners would be discouraged from taking part in EU funded projects if there is an obligation to license its IPR or to deploy the developed technology in a third country which doesn't have an IPR regime in place.
- Therefore before engaging in any RD&D cooperation agreements with non-EU countries, it is crucial to ensure that reciprocity in terms of IPR, access to the national funding schemes and the future market is guaranteed.
- For industry partners, it is hard to have a clear overview of potential opportunities in EU international cooperation activities. The programmes and calls are not well explained and difficult to access. Some strategic prioritisation would be welcomed.

❖ **Closing question**

Are there any other ideas of comments which you believe are important for future EU research and innovation funding and are not covered in the Green Paper?

- The future EU Budget 2014–2020 should reflect EU policy priorities and therefore increase the share of EU funding for energy projects (ranging from research up to early market take-up). Amounts currently invested in low carbon technologies and infrastructure do not reflect the policy priority given to them. E.g. only 5% of the current FP spending goes to energy RD&D – this is not enough to support the realisation of the excellent SET Plan.

The European Power Plant Suppliers Association (EPPSA) is the voice, at European level, of companies supplying power plants, components and services. EPPSA members, located throughout Europe, represent a leading sector of technology with more than 100 000 employees and annual revenue of over €20 billion. EPPSA actively promotes technologies for highly efficient and sustainable power generation in a carbon constrained world. EPPSA believes increased investment in Research, Development and Demonstration is a key factor in driving EU competitiveness as well as ensuring affordable near zero emission power supplies.

Virtually all power plants in the EU are built by members of EPPSA, or equipped with their components.

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