

Communication on energy technologies and innovation

I. Characteristics of the respondent	
1. To which of the following categories do you belong? -single choice reply-(compulsory)	Non-governmental organisation (NGO)
II. BOOST THE DEVELOPMENT OF ENERGY TECHNOLOGIES IN SUPPORT OF ENERGY POLICY	
1. Energy systems -single choice reply-(compulsory)	5
a) Electricity networks and integration of renewable and distributed energy sources , active demand, storage (in general) -single choice reply-(compulsory)	5
b) Regional electricity networks in combination with supply energy technologies (in geographical boundaries of clusters of Member States) -single choice reply-(compulsory)	5
c) Pan European transmission electricity networks together with storage (including power to gas) -single choice reply-(compulsory)	3
d) Local energy networks(power/ heat-cool supply) in combination with supply technologies and local storage (in local/city conditions) -single choice reply-(compulsory)	4
2. Energy efficiency -single choice reply-(compulsory)	5
a) Through Smart Cities and Communities -single choice reply-(compulsory)	5
b) Through energy efficiency in buildings and /or industries -single choice reply-(compulsory)	5
3. Energy technologies as of SET Plan -single choice reply-(compulsory)	4
a) Wind -single choice reply-(compulsory)	4
i) Onshore -single choice reply-(compulsory)	4
ii) Offshore -single choice reply-(compulsory)	4
iii) Manufacturing techniques -single choice reply-(compulsory)	4
b) Solar -single choice reply-(compulsory)	4

i) Photovoltaics -single choice reply-(compulsory)	5
ii) Concentrated Solar Power -single choice reply-(compulsory)	4
iii) Manufacturing techniques -single choice reply-(compulsory)	5
c) Carbon Capture and Storage -single choice reply-(compulsory)	2
d) Bioenergy -single choice reply-(compulsory)	4
i) Biofuels -single choice reply-(compulsory)	4
ii) For electricity (CHP) -single choice reply-(compulsory)	4
e) Nuclear -single choice reply-(compulsory)	1
f) Hydrogen and fuel cells -single choice reply-(compulsory)	3
4. New emerging technologies – combinations of technologies -single choice reply-(compulsory)	5
a) Ocean -single choice reply-(compulsory)	5
b) Storage (not limited to Pumped Hydro, Hydrogen ,batteries, etc) -single choice reply-(compulsory)	5
c) Hybrid systems -single choice reply-(compulsory)	5
d) Geothermal (electricity) -single choice reply-(compulsory)	5
3. Please give the justification for your selected approach and your ranking regarding the R&D EU support in the areas listed above. -open reply-(optional)	
R&D support should aim to bring those technologies which can support the transformation to a low-carbon energy system, in line with the EU objectives of 80-95% GHG emissions reduction by 2050, limit dependency on fossil fuels, limit dependency of fuel imports. This will be best done by bringing to the market all technologies which have a high potential (incl. in the long term), either through a push in the early development phase (e.g. ocean energy), or ensuring large penetration of proven techs (PV, wind) by optimizing electricity grids and market functioning, for instance. While the power sector seems the focus in this survey, transport is only address by the inclusion of biofuels. And it does not specify which type of biofuels. CAN-E would support increase efforts on non land-base biofuels, and demonstration projects in the area of electrical vehicles, for instance. The building sector presents also high potential for both energy saving and integration of renewable energies.	
1. Lack of business models -single choice reply-(compulsory)	5
2. Public Procurement difficulties -single choice reply-(compulsory)	4

3. Permit/authorisation delays -single choice reply- (compulsory)	4
4. Public opposition -single choice reply-(compulsory)	4
5. Please specify for the obstacle(s) you rated highest to which technology(s) is linked. -open reply-(compulsory)	
<p>There is a need to put in place business models for the optimal use of decentralized energy technologies and storage systems. Business models that ensure market attractiveness of demand-side management technologies, that foster self-consumption through decentralized systems. The energy market needs to be designed in a way that rewards investments on technologies with high capital cost but low running cost. Today, the market is based on fuel marginal cost and this has a negative impact on the development of renewable energy technologies, which are fuel-free but need high initial capital. With respect to public opposition, there is a great need to accelerate the development of electricity infrastructure across Europe, which is often subject of public protests. In order to improve this situation, transparency and early involvement of general public (through municipalities, local groups and NGOs) is a key element for success. Many infrastructure projects lack clarity on the benefits t</p>	
6. Energy technology development can be also fostered by appropriate non technological measures, the "market pull" instruments. What are the key regulatory issues that impact on the deployment of these innovative technologies?" -open reply-(compulsory)	
<p>It is clear that the success development of renewable energy technologies in EU is thanks to regulatory intervention and market pull mechanisms. Feed-in-tariffs, beside deploying renewables, have been the drivers to increased research efforts from industry, applied research and optimization of products and services, etc. They also have a huge positive impact on other technologies, such as grid management, design and operation. Besides the common financial support mechanisms, other policy interventions such as mandatory targets for 2020 have great positive effects. Long-term policy stability and future market size certainty provide investor with the necessary signals to scale up production, thus reaping the benefits of economies of scale through the whole supply chain. This effect is clearly evident in the photovoltaic sector, where manufacturing cost have been reduced 3-fold in the last 5 to 7 years.</p>	
III. ENERGY TECHNOLOGIES AND THEIR IMPACT ON POLICIES	
1. Long term research -single choice reply- (compulsory)	3
2. Applied research -single choice reply-(compulsory)	4
3. Demonstration projects -single choice reply- (compulsory)	5
4. First of a kind industrial activities -single choice reply-(compulsory)	4
5. Market uptake measures to support technology deployment and policy developments -single choice reply-(compulsory)	5
8. Your individual arguments regarding the option you chose and the corresponding technologies for that choice. -open reply-(compulsory)	
<p>There are fewer gaps in long term research investment and applied research than there are for the other investment types highlighted. The most important question for demonstration projects and first of a kind activities is whether there will be a big enough market for the product under development. Therefore, any initial public support must be targeted at ensuring the uptake of a technology by private investors and/or customers; this support should principally be aimed at the minimisation of potential risk factors. Successful innovation policy is more about making markets than about providing funding.</p>	
1. Long term research -multiple choices reply- (optional)	Grants - Prizes
2. Applied research -multiple choices reply-(optional)	Grants - Procurement

3. Demonstration projects -multiple choices reply- (optional)	Grants - Prizes - Procurement - Debt and equity
4. First of a kind industrial activities -multiple choices reply-(optional)	Debt and equity
5. Market uptake measures to support technology deployment and policy developments -multiple choices reply-(optional)	Debt and equity
10. The development of energy technologies under the Strategic Energy Technology Plan was mainly driven by EU 2020 energy and climate objectives. Further, the EU internal energy market creates the conditions for a market driven choice of the energy technologies coming from worldwide with positive effects on the competitiveness of EU industry in general (due to lower energy costs). Both cases show that industrial policy dimension should become more visible in the development of the new energy technology policy. What should EU favour as an industrial policy element in its energy technology policy? -multiple choices reply-(compulsory)	EU technologies leadership - Economic growth and jobs
1. Strategic partners for a portfolio of low carbon energy technologies -single choice reply-(compulsory)	3
a) United States of America -single choice reply- (compulsory)	3
b) Japan -single choice reply-(compulsory)	3
c) Korea -single choice reply-(compulsory)	3
d) China -single choice reply-(compulsory)	3
e) Russia -single choice reply-(compulsory)	3
f) Brazil -single choice reply-(compulsory)	3
g) India -single choice reply-(compulsory)	3
2. Sector based cooperation -single choice reply- (compulsory)	5
a) Wind -single choice reply-(compulsory)	4
b) Electricity networks and storage -single choice reply-(compulsory)	5
c) Solar (PV and Concentrated Solar Power) -single choice reply-(compulsory)	4

d) Nuclear -single choice reply-(compulsory)	3
e) Carbon Capture and Storage -single choice reply-(compulsory)	5
f) Biofuels -single choice reply-(compulsory)	3
g) Energy Efficiency -single choice reply- (compulsory)	5
h) Marine technologies -single choice reply- (compulsory)	5
i) Hydrogen and fuel cells -single choice reply- (compulsory)	5
3. Individual project based cooperation (bottom -up) -single choice reply-(compulsory)	3

12. If you gave high preference to the “sector based cooperation” in Question 9 please indicate the technology and corresponding country(s) of cooperation -open reply-(**optional**)

IV. STRUCTURE FOR IMPLEMENTING ENERGY TECHNOLOGY POLICY

13. Are you or your organisation a member of or working in collaboration with one of the European Industrial Initiatives (EII) or European Energy Research Alliance (EERA)? -single choice reply-(compulsory)	No
14. If you wish, please identify the EII/ERRA Joint Programme in which you take part. Also if you wish, please add further comments and views on the nature and method of the EII's/EERA and how this can be improved. -open reply-(optional)	
1. Types of cooperation -single choice reply-(compulsory)	2
1.1. Technology Platforms -single choice reply- (compulsory)	2
1.2. SET Plan European Industrial Initiatives -single choice reply-(compulsory)	3
1.3. Public Private Partnerships -single choice reply-(compulsory)	3
1.4. Joint Undertakings -single choice reply- (compulsory)	3
1.5. European Energy Research Alliance -single choice reply-(compulsory)	3
1.6. Collaborative projects -single choice reply- (compulsory)	2
2. Contractual arrangements -single choice reply- (compulsory)	2

16. If you stated 'disagree' to either part of Question 15, please specify what you believe should be improved. -open reply- (optional)

For instance, the work of the EU technology platforms to bring together a Strategic research agenda is underestimated. In the US and other regions, this does not exist, and it is the government, based on bi-lateral negotiations who put together the strategy. Beside the clear value, the EC has failed in several occasions to take direct recommendations from such useful documents (when drafting budget proposals in the FP, for instance). Besides ,there remains too great an emphasis on push support in the highlighted types of cooperation, as opposed to the potentially more effective pull mechanisms. Too many examples exist of technologies that have proven their viability, but which are still unable to take off in the open market. Policy makers should be focus on minimising the risks faced by new technologies so as to maximise private investment, and then to provide appropriate support to pull those technologies into the market. This may require a range of approached tailored to differen

17. The European Commission deployed the financial support towards the priorities set up by European Industrial Initiatives. Member States allocate their efforts to support research and innovation for energy technologies according to national priorities and conditions. In financial terms European Commission accounts for 20 % of the public investments for research and innovation in energy technologies while Member States for 80%. The European Commission should continue to focus the financial support to contribute to finance projects of EU added value and impact and answering solely to the "excellence" criteria. To what extent do you agree with this statement? -single choice reply-

(compulsory)

Agree

18. Please justify your answer in the question above -open reply-(optional)

We fully agree with this approach. The EU should actually make use of their limited financial contribution not to co-finance the individual member states R&D programs and projects, but rather to promote and pull private investment in areas where more than one Member states and one company could contribute and benefit from. It should seek to incentivize projects that will be providing a cross-country benefits. In this case, demonstration projects pulling a large range of sectors should be the priority. As an example, smart cities/regions combining distribution power generation, electrical vehicles with mobile storage, decentralize heating supply and high ICT system for system operation, would be a great case.