



## EASE Answers to Public Consultation on the development of a comprehensive, integrated Research, Innovation, and Competitiveness Strategy for the Energy Union

Please refer to the accompanying document “[R&I Consultation Questionnaire](#)”

The transition to an economy based on low-carbon technologies, products and services will only succeed if citizens are convinced of their purpose and use and will be ready to pay for such novel technologies [1] through upgrades to the energy system and the purchase of more energy efficient appliances, vehicles and buildings, also leading to energy and cost-savings in the long run. The questions below are aimed at identifying the priorities of citizens for the transition towards a low-carbon economy.

[1] The Communication on the Low Carbon Roadmap COM (2011)112 estimated the needs to an additional investment of around 1.5% of EU GDP per annum on top of the overall current investment representing 19% of GDP in 2009. It also found that unlocking the investment potential of the private sector and individual consumers presents a major challenge. While most of this extra investment would be paid back over time through lower energy bills and increased productivity, markets tend to discount future benefits, and disregard long-term risks. A key question is, therefore, how policy can create the framework conditions for such investments to happen, including through new financing models.

### 1. How important in your view is the role of the actors below in reducing societal impact on the climate?

Rank from most important role down to least important role

	Most important	Quite important	Partially important	Least important
Individual citizens	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research institutes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. Who should be the main financial contributor for investments into research, innovation and deployment of low-carbon energy solutions and services?**

- Everybody (via energy bills) should pay their share as we are all affected by climate change  
 Government (via taxation)  
 Industry

**3. Would you be willing to pay a temporary increase on your energy bill in order to support more research and development into clean energy and more efficient solutions to reduce greenhouse gas emissions?**

- Yes  
 No  
 No opinion

**4. Which of the measures below would you consider as priority to allow you as a citizen to contribute to the transition towards a low-carbon economy?**

Rank from most important priority= 6 down to least important priority = 1

	6 = Most important	5	4	3	2	1 = Least important
Being offered alternative public transport solutions for urban areas	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being offered the choice for a more energy efficient car, even if it might cost more	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being offered the choice for more efficient energy appliances, even if they cost slightly more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Being offered the opportunity to switch to a green energy provider for my home at the same price I pay today	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being offered an economically interesting opportunity to install solar panels, a geothermal system or another green energy source for my home at the next renovation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other, please specify:

Consumers can be motivated to contribute to the transition to a low-carbon economy through retail tariffs which give fair chances to 'smart' consumption and which enable

prosumers, i.e., consumers who engage in self-generation, Energy Storage, and self-consumption and who may also sell excess electricity back to the grid.

Electricity retail tariffs thus are a key driver for consumer engagement, as they can be used to alter behaviour through the automated response of thermal and electrical consumption and the use of Energy Storage. Properly rewarding consumer behaviour will encourage the deployment of small-scale renewable energy sources and Energy Storage technologies.

When encouraging prosumers into the market, indirect subsidies, such as non-market based net metering schemes and exemptions to the payment of network and system charges, should be avoided. Such indirect subsidies distort the market and create a burden for other consumers. On retail tariff issues, it is important that self-generation be treated on an equal footing with other generation technologies. If self-generated electricity that has been stored ends up constituting a service to the electricity grid, this service should be fairly compensated by the market.

Another barrier to encouraging and integrating prosumers of renewable energy is the slow rate of grid modernisation, including the deployment of smart meters, across Member States. Such network investment is key to enabling the full participation of consumers and prosumers in the market and to integrating all energy sources into the system.

## Questions on the broader EU Research and Innovation challenges

The Energy Union calls for the development and widespread deployment of innovative technologies and services to increase energy efficiency and reduce greenhouse gas emissions, and support the transition towards a competitive, low-carbon economy. This requires a strategic Research and Innovation agenda aimed at fostering innovative specific technologies, solutions and services, adequate infrastructure as well as converging policies and behavioural changes, across the different economic sectors, namely in the energy, transport, industrial processes, agriculture / bio economy sectors.

This part of the questionnaire aims to address the broader challenges regarding research, development and innovation and identify the aspects that are the most important ones for the transformation of the different sectors that are contributing to the Energy Union strategy.

You should indicate how urgent each of the proposed challenges are for your specific area/activity, as you have indicated in Part I – Question 2.

### **1. What are the most urgent challenges regarding research and innovation that the EU has to face in the future to address the low carbon economy transformation?**

Please select maximum 2 very urgent and 2 quite urgent challenges.

	Very Urgent	Quite Urgent	Partially Urgent	Not so Urgent	No opinion
Dependency on fossil fuels	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of greenhouse gas emissions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of other pollutants emissions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infrastructure development	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe utilisation of innovative solutions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security (cybersecurity, protection from abuse)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Expertise and skills availability	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internalisation of external impacts/costs	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition from third countries	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technological advancement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of raw materials / competition over their access	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reduction of operating costs	O	O	X	O	O
Progress on enabling technologies	X	O	O	O	O
Solutions to cater for demographic changes	O	O	O	O	X
Societal transformation and acceptance of innovative solutions	O	O	O	O	X
User behaviour / awareness	O	O	X	O	O
Accessibility of innovative solutions	O	O	X	O	O
Availability and reliability of products and services	O	O	X	O	O
Affordability of innovative solutions	X	O	O	O	O
Better product design	O	O	X	O	O
Better manufacturing processes	O	O	O	O	X
Other	O	O	O	O	X

Please explain any of your choices above or specify your choice of "other"?

Decarbonising the energy system requires the integration of high levels of renewable energy sources (RES) into the energy mix. Wind and solar generation in particular will play a key role in the decarbonisation process. Thus integrating them into the power system in an efficient and cost-effective manner is one of the major challenges facing our society today.

Energy Storage is a valuable enabling technology for decarbonisation. To reach its full potential, however, two challenges must be addressed:

- technological challenge: continued cost reductions in new technologies needs to be pursued to make Energy Storage an increasingly important source of system flexibility.
- value challenge: Energy Storage can provide benefits at many levels of the energy systems; it is key to assess and monetise all of its benefits to society.

Research and innovation (R&I) programmes addressing these two key aspects will have a significant impact in supporting the further development of Energy Storage, which in turn will enable the EU to integrate an ever increasing share of RES into its energy mix.

The EU is on the path to becoming the world's leading actor in RES deployment in terms of quantity. However, the EU should also strive to become the leader in terms of the integration of RES into the grid. More research funds should be allocated to enabling technologies, such as Energy Storage, which can support this integration.

**2. What are the most urgent objectives for which innovative technologies should be urgently encouraged?**

Please select maximum 2 very urgent and 2 quite urgent challenges.

	Very Urgent	Quite Urgent	Partially Urgent	Not so Urgent	No opinion
Increasing efficiency of primary energy production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increasing efficiency of energy/fuel for transport (incl. smart grid)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reducing energy intensity in agriculture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reducing energy intensity in buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reducing energy intensity in heating/cooling/lightning systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reducing energy intensity in business and administrative buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reducing energy intensity in the overall transport system (including freight and passengers)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reducing energy intensity in use of individual means of transport (vehicles, vessels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reducing energy intensity in manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Minimising environmental footprint of energy production,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

notably of low-carbon producing energy sources					
Increasing storage capacity and performance	X	O	O	O	O
Increase general life cycle of products and recyclability	O	O	O	O	X
Increase specific life cycle of products and recyclability of energy-related products (solar panels, batteries, etc.)	X	O	O	O	O
Develop and deploy competitive new alternative fuels for transport (incl. hydrogen)	O	O	O	O	X
Develop more efficient / lighter / cheaper batteries for electrification of transport	O	X	O	O	O
Develop forests and other methods of carbon storage	O	O	O	O	X
Develop technologies for re-use of carbon	O	O	O	O	X
Other – please specify below	O	O	O	O	X

Please specify your choice of "other"

**4. Please rate the importance of the following elements for a future transport system that is environmentally friendly and responds to the needs and wishes of citizens and businesses.**

Please select maximum 3 very important and 4 quite important challenges.

	Very important	Quite Important	Partially Important	Not so Important	No opinion
Environmentally friendly and user responsive road transport	O	X	O	O	O
Environmentally friendly and user responsive urban mobility	X	O	O	O	O
Environmentally friendly and user responsive aviation	O	O	O	O	X

Environmentally friendly and user responsive inland waterway transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Environmentally friendly and user responsive maritime transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Environmentally friendly and user responsive rail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Environmentally friendly and user responsive logistics	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connected and automated transport	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smart mobility services (e.g. shared cars rather than individual ownership)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Electrification of transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other alternative fuels for transport (such as hydrogen or biofuels)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe and secure transport	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better infrastructure for transport	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being ready for possible effects of climate change (weather phenomena, rising sea level)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
General social and behavioural aspects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Social innovation and achieving behavioural changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Cheap transport	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demographic changes in EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other – please specify below	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Please specify your choice of "other"

'Green hydrogen,' which is added to conventional diesel, could help decarbonise the transport sector. Green hydrogen is produced by electrolyzers with power from renewables and therefore has an extremely small CO2 footprint. The use of green hydrogen in fuel preparation and other alternative fuels should be supported and incentivised to achieve a future transport system that is environmentally friendly.

**4. How much importance should be given in the Research and Innovation strategy to technology development to pursue climate-related objectives?**

Please select maximum 2 very important and 2 quite important challenges.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Research on climate science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Risk management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Research on impact of climate change on agriculture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Research on adaptation to new climate conditions, notably for crops, (transport) infrastructure, spatial planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Research on impact of climate change on environment and biodiversity and health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Research on mitigation measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Research on economic modelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
International cooperation with and technology transfer to most affected countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other – please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Would you like to explain any of your choices above or specify your choice of "other"?

**5. In the field of your own specific activity / work area as indicated in Part I, Question 2, what are the most important trade-offs to be addressed to achieve the low carbon economy transformation?**

An important trade-off for the energy sector to address is the value versus the cost of pursuing decarbonisation. In many instances, RES technologies and those enabling their integration into the grid are not yet economically viable. Similarly, many Energy Storage technologies are not yet technologically viable, requiring improvements in terms of performance and efficiency. In this context, the integration RES into the grid is occurring but sometimes at high costs. There is thus a trade-off between bringing decarbonisation technologies 'to market' as soon as possible and deploying mature, efficient technologies.

The economic and technical viability of RES, Energy Storage and related technologies, however, could be improved by increased funding – both commercial and publicly-funded – for R&I and demonstration projects. Public support for R&I programmes, however, should be driven by a careful assessment of which technologies provide the greatest overall benefits in terms of decarbonising the energy system. Since Energy Storage can provide a variety of services to the grid -- from primary and secondary frequency control, to RES curtailment minimisation, to investment deferral – R&I funding targeted at Energy Storage will bring valuable benefits to many players in the energy sector. This should be taken into account when making choices about which technologies to support.

**6. In relation to the specificity of your own activity / work area, Research and Innovation at EU level should:**

Please select maximum 2 very important and 2 quite important challenges.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Mobilise significantly more public funding and investments	X	O	O	O	O
Mobilise significantly more private investments	O	X	O	O	O
Put greater emphasis on financial instruments such as risk capital, loans and guarantees	O	O	X	O	O
Support innovative projects so that they can achieve large scale deployment	O	X	O	O	O
Focus greater support to basic research	O	O	X	O	O

Focus greater support to innovation and bringing to the market innovative solutions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focus much more on social and behavioural aspects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other – please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain any of your choices above or specify your choice of "other"?

**7. At EU-level, support to Research and Innovation in the specific sector of your activity (please select only 1 option):**

**X needs to address all technological approaches/solutions, spreading the available financial support**

O needs to identify ways to focus on fewer specific technologies to ensure that most promising technologies can make it earlier to the market

O needs to be driven by political choices

O needs to focus more on addressing underlying societal needs and less on technologies/solutions

O other / no opinion

Please explain your choice above or specify your choice of "other":

Support to Research and Innovation should be driven by a careful assessment of which technologies provide the largest overall benefits in terms of decarbonising the energy system. However, support to technological approaches/solutions should not take the form of subsidies. Renewable subsidies for mature technologies should be eliminated and non-discriminatory access to technologies which can facilitate the economic growth of renewables (such as Energy Storage) should be facilitated through market-based regulation.

EU policymakers should keep in mind that support to Research and Innovation will not in itself lead to the full deployment of available technologies. Research and innovation efforts must be complemented by steps to tear down regulatory barriers to allow for the use of valuable and innovative technologies.

## Questions on the development of an integrated strategy for Research and Innovation

### 1. In relation to the development of an EU integrated strategy for Research and Innovation across sectors to address the low carbon economy transformation, what in your view are the most effective aspects to be promoted?

Please select maximum 2 very effective and 2 effective aspects

	Very Effective	Quite Effective	Partially Effective	Not so Effective	No opinion
Multidisciplinary R&I activities across sectors for new technologies / solutions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enabling technologies (ICT, materials, biotechnology, nanotechnology etc.) that can help all relevant sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Development of standards/interfaces that enable better deployment within the different sectors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Development of standards/interfaces for cross-sectorial applications	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feasibility studies & demo activities across sectors for integrated approaches	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cooperation among different stakeholders, public authorities, operators, users across sectors	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cooperation amongst different European regions to develop European value chains on the basis of complementarities between regional specialisation strategy	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preventing and limiting trade-offs between objectives / results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

**2. Please rate the importance of the following elements supporting the emergence of an EU integrated strategy for Research and Innovation to address the low carbon economy transformation?**

Please select maximum 2 very important and 2 important elements

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Shared long-term vision across different sectors activities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stakeholder engagement	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elimination of fossil fuel subsidies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public acceptance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Viable technologies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe and sustainable technologies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adequate regulatory framework	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of suitable infrastructure as enabler to the deployment of innovative solutions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of R&I funding	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong partnerships among private and public sector	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Questions regarding the means to seize as many business opportunities as possible from the deployment of innovative, affordable and low carbon solutions inside and outside the EU**

This part of the questionnaire will address the barriers and means to seize as many business opportunities as possible from the deployment of innovative and affordable low carbon solutions (technologies, products, services), inside and outside the EU. Estimations of the size of these global markets range from about €1,600 billion[1] to €4,400 billion[2], with high growth potentials in the main relevant sectors: power generation and distribution, industry (manufacturing and construction), residential and services (buildings or built environment), transport and agriculture.

Europe is still highly competitive with European businesses offering these products on the global market, in which the EU share can be estimated at around 28%. However, the EU risks losing its comparative advantage without a comprehensive strategy, which brings together supply, demand and regulatory aspects to allow the exploitation of innovation-based business cases. In addition, businesses are facing increasing challenges to invest in new low carbon solutions to modernise their installations and processes in Europe.

[1] *BMU (2012): GreenTech made in Germany 3.0 – Environmental Technology Atlas for Germany, Berlin: BMU.*

[2] *U.K. Department for Business Innovation and Skills (2013): Low carbon environmental goods and services (LCEGS) – Report for 2011/12, London: BIS.*

**1. How important are the following areas of actions to ease the deployment in EU of innovative and affordable low carbon solutions either provided by the EU or by the rest of the world?**

Rank from most important role = 6 down to least important role = 1

	6 = Most important	5	4	3	2	1 = Least important
Better regulatory framework	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better financial environment for new investments	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better technology development, including standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better market incentives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Higher public acceptance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

You have indicated Other as one of the most important areas of actions to ease the deployment in Europe of innovative and affordable low carbon solutions. Please specify:

You have indicated **Better regulatory framework** as one of the most important areas of actions to ease the deployment in Europe of innovative and affordable low carbon solutions. How important are the following actions in this area? Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
More stability and predictability of the regulatory framework	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of legal barriers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less administrative burden	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easier and faster construction and/or environmental permit procedures	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower overall regulatory costs in comparison with other regions in the world	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify your choice of "other"?

The regulatory framework for the energy sector, the 'Third Energy Package,' should be revised to create a separate asset category and rules for electricity Energy Storage systems. This is necessary due to their dual generation and demand nature. The new asset category should recognise the contribution of Energy Storage systems to system security, loss reduction, and the provision of other ancillary services on the transmission and distribution networks.

Under current legislation, generators and consumers are defined entities with defined rights, responsibilities and duties in the energy system. Energy Storage, however, can be viewed as both a consumer (charging) and a generator (discharging). This often leads to storage operators often having to pay double fees, levies, and taxes for both charging and discharging energy, hampering the economic viability of Energy Storage projects. It also prevents Energy Storage from being operated in line with system needs.

The issue is linked to the fact that a regulatory definition of storage is lacking -- especially on an EU level. Storage is treated differently across the different Member States, which leads to further distortions in the deployment of Energy Storage.

You have indicated **Better market incentives** as one of the most important areas of actions to ease the deployment in Europe of innovative and affordable low carbon solutions. How important are the following actions in this area? Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
More use of public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
More use of price-based instruments (e.g. taxes, fees, subsidies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
More use of quantity-based instruments (e.g. tradable permits, carbon offset schemes, energy certificates)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
More use of information-based instruments (e.g. CE marking, energy labelling, ecolabels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please specify your choice of "other"?

**2. How important are the following areas of actions that would unlock the potential for growth and jobs in Europe through the domestic supply of EU low carbon solutions?**

Rank from most important role =5 down to least important role =1

	5= Most important	4	3	2	1= Least important
Better regulatory framework	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better financial environment for new investments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better technology development, including standards	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better market incentives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

You have indicated Other as one of the most important areas of actions that would unlock the potential for growth and jobs in Europe through the domestic supply of EU low carbon solutions. Please specify:



You have indicated **Better regulatory framework** as one of the most important areas of actions that would unlock the potential for growth and jobs in Europe through the domestic supply of EU low carbon solutions. How important are the following actions in this area?

Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
More stability and predictability of the regulatory framework	X	O	O	O	O
Reduction of legal barriers	X	O	O	O	O
Less administrative burden	O	X	O	O	O
Better use of EU (unitary) patents	O	O	O	X	O
Stronger use of the Eco-design instrument	O	X	O	O	O
Other	O	O	O	O	X

Please specify your choice of "other"?

You have indicated **Better market incentives** as one of the most important areas of actions that would unlock the potential for growth and jobs in Europe through the domestic supply of EU low carbon solutions. How important are the following actions in this area?

Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Public procurement that could define technical criteria in favour of low carbon solutions	O	O	O	X	O
More use of fiscal instruments in favour of decarbonised solutions (e.g. taxes, subsidies)	X	O	O	O	O
Other	O	O	O	O	O

Please specify your choice of "other"?

**3. How important are the following areas of actions to reinforce the exports of EU low carbon solutions?**

Rank from most important role =5 down to least important role =1

	5 = Most important	4	3	2	1 = Least important
Better regulatory framework	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better international cooperation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Better technology development, including standards	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better promotion of EU exports	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

You have indicated Other as one of the most important areas of actions to reinforce the exports of EU low carbon solutions. Please specify:

You have indicated **Better technology development, including standards** as one of the most important areas of actions to reinforce the exports of EU low carbon solutions. How important are the following actions in this area?

Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Coherence between EU and international technical standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitate and reinforce EU business partnerships targeting access to third-country markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify your choice of "other"?

You have indicated **Better promotion of EU exports** as one of the most important areas of actions to reinforce the exports of EU low carbon solutions. How important are the following actions in this area? Please select maximum 2 very important and 2 quite important answers.

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Better use of free trade agreement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Increased awareness of enterprises, especially SMEs, for export opportunities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set of tools for the promotion of EU exports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please specify your choice of "other"?

**4. To strengthen the competitiveness of EU low carbon solutions, how important is it to reinforce synergies between the Energy Union and other EU initiatives/policies? Please select maximum 2 very important and 2 quite important answers.**

	Very Important	Quite Important	Partially Important	Not so Important	No opinion
Synergies with the Investment Plan for Europe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synergies with the Single Market	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synergies with the Digital Market	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synergies with the Circular Economy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synergies with other sustainable policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synergies with Trade policies	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synergies with industrial policy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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The European Association for Storage of Energy (EASE) is the voice of the energy storage community, actively promoting the use of energy storage in Europe and worldwide. EASE actively supports the deployment of energy storage as an indispensable instrument to improve the flexibility of and deliver services to the energy system with respect to European energy and climate policy. EASE seeks to build a European platform for sharing and disseminating energy storage-related information. EASE ultimately aims to support the transition towards a sustainable, flexible and stable energy system in Europe.

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Disclaimer:

This response was elaborated by EASE and reflects a consolidated view of its members from an Energy Storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.