Renewable Energy Strategy

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Palle Bendsen, NOAH Friends of the Earth Denmark - palle(at)noah.dk
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Denmark
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

The experience with non-binding targets and other voluntary agreements is poor. In the light of the climate urgency we need a fast transition from fossil fuels to RES.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

An expansion of local and regional interconnections that are necessary for the functioning of energy systems with increasing shares of renewable energy must be supported. Public participation and local ownership is important to ensure a broad support for the transition. We find it important not to waste investments on large electricity highways (supergrid) connecting Northern and Southern Europe. They risk prolonging the life of nuclear and coal-with-CCS as base load.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables	For selected technologies/circumstances/markets (please specify)

post 2020 given their expected greater penetration? -single choice reply-(optional)	

Please specify which technologies/circumstances/markets -open reply-(optional)

Emerging or expensive technologies will still need direct support, such as wave power and solar PV.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

For some of the renewable technologies support schemes has not yet been phased in. For this reason alone it is too early to say when support schemes for specific technologies can be phased out. In general: with increasing fossil fuel prices, the need for support for renewable energy will probably diminish over time.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	N/A
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Actually, all support schemes do distort competition. It is their purpose.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
In some EU countries small renewable energy plants are faced with same procedures as large power plants, this holds back development. There is a general lack of credible, independent information for small investors (households and SMEs) that can benefit from small renewables installed locally (solar, heat pumps, small biomass) In many EU-countries the available training courses are too few to meet the raising demand. In some EU countries there is a lack of funding, not the least for public buildings and common solutions with district heating.	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)
Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)	
More use of EU funds including structural funds for investments in local renewables, including at public buildings, to ensure that some parts of EU are not left behind in the transition to renewable energy.	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single	

choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)

Environmental costs are not integrated in energy costs. In some parts of EU funding is a key problem, even if the installations are cost-effective.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal - Solar thermal - Electrification together with higher share of renewables in electricity production - Other (please specify)

Please specify which other pathways -open reply-(optional)

Heat pumps using mainly renewable electricity (with heat storage capacity they can consume most when there is a higher share of renewables in the electricity mix)

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

As always energy savings and energy efficiency must have first priority. As heat demand is diminished with heat efficiency, more care should be taken to avoid over-sizing. The overall renewable energy supply must be subject to energy efficiency requirements via building regulation, Ecodesign regulation, green public procurement etc. . Low-temperature heat supply should be supported, in particular to increase the yield of heat pump systems and the direct use of geothermal energy in district heating.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Pace of technology development - Lack of infrastructure - Lack of awareness - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

The modal shift from individual motorised transportation to public transport and bicycling is prevented in many ways: mainly by lobbying from the automobile and oil industries; conservatism in urban planning; ideological proclivities among politicians and fear of reactions from their constituencies.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

Electrification of road transport can become a main consumer of renewable energy and help the integration of the intermittent wind and solar power. The use of biofuels is in our view not environmentally defensible. The biofuel target should be removed immediately. Railways and light rail can use electricity with high efficiency without need for batteries. This is the most efficient and environmentally benign way of shifting transportation to renewable energy - apart from bicycling.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period?	Yes, sustainability criteria should apply to both all biomass and fossil fuels - Yes, additional criteria should be introduced to

-multiple choices reply-(optional)	promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

Any import of biomass to EU should be banned. Each Member State should develop 100 percent renewable energy supply systems that use only a minimal share of sustainable, domestic biomass. Each Member State must secure that the use of biomass can happen simultaneously with a strengthening of the biodiversity and with a positive uptake of carbon.

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

Transition to renewable energy has two main objectives: reducing global warming and increasing security of supply. Both are global issues. In order to repay its climate debt EU in its cooperation with and support for other countries should promote and support renewable energy in these countries. We do not hereby endorse offsetting by CDM-projects.

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

Import of electricity from Africa is not a necessity to cover EU with renewable energy, and there is no need to favour it over other, more local, and probably cheaper solutions. Large-scale energy imports from Africa through centralised power lines will also reduce security of supply.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

Support via international organisations, such as IRENA and via NGO networks.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

EU can assist the countries in North Africa to increase generation of renewable energy - but not in order to benefit from the production through import. Focus should be on renewable energy solutions that can reduce energy poverty and poverty in general in these countries

caused by the increasing fossil fuel prices

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

For Europe as a whole it is important to recognize that the cost effective development of an electricity based renewable energy system can only happen with the instalment of a huge on shore capacity. We therefore recommend not to focus too much on offshore wind but also develop on shore capacity: it is cheaper, and if developed carefully it can become accepted and owned locally.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges -open reply-(optional)

The key challenge for renewables under the SET Plan is that they are grouped together with inherently unsustainable technologies like CCS and nuclear. Labelleing CCS and nuclear as Low Carbon is in our view misguiding because LCAs show large GHG emissions from both.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

Geothermal energy that has an important potential in many EU countries - particularly in connection with low temperature district heating. Wave power also has an important potential in several EU countries

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

In fact we DO NOT consider the measures sucessful, because the EU research programs (FP7 and earlier) have been biased in favour of unsustainable technologies, particularly nuclear, over renewables and energy efficiency.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	German Biogas Association (Fachverband Biogas e.V.) - Sebastian Stolpp (sebastian.stolpp@biogas.org)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Germany
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate - Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Mandatory targets for RES have been a successful policy measure and are still needed to help reducing greenhouse gas emissions, ensuring security of supply and improving the EU competitiveness. Due to the long investment cycles, it is important there is a binding overall RES target now for the time beyond 2020. A target at EU level needs to be ambitious enough (legally binding target of at least 45% by 2030 as proposed by the European Renewable Energy Associations) and underpinned with mandatory targets for all Members States. The Member States' choice of the appropriate support mechanism must be maintained according to the subsidiarity principle. The transport sector should receive larger attention in RE policy, including more challenging targets. In these targets, positive impacts on environmental problems should be credited, e.g. the impact of biogas technology in fertilizer recycling (incl. phosphorus) and improvement of local air quality.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

There is a need for comprehensive and stable policy and reliable regulatory framework. As the REPAP project showed, non-cost barriers need to be addressed: permitting procedures, grid access, land allocation and administrative issues are still the main bottlenecks for the development of renewable energies. Thus a policy is needed that allows distribution network operators to work better and closer together with renewable plant operators.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support is necessary as long as: - there is no level playing field and no well-functioning energy market - subsidies to fossil fuels and nuclear power remain - external costs are not internalized - the main barriers in Member States are not removed In addition, financial support is needed to promote environmentally most friendly RE technologies (such as waste based biogas). Member States should be free to design their financial support scheme and eventually to decide when a technology is competitive and no longer needs the financial support. However, financial support should not only mean direct payments. It also means stable framework conditions, such as in particular grid access: renewable energy should have priority access to the grid in all Member States – otherwise even cost-competitive technologies cannot develop their full potential. Fair framework conditions for all network users without distortive fees are needed (exemption from duties and taxes, e.g. biomethane or biomethane mixes with natural gas) for the injection of energy from renewable sources.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

RES support schemes could encourage greater market responsivness in form of an incentive for balancing electricity production and storage mechanisms (such as methanisation of RES to gas).

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

In some EU countries small renewable energy plants are faced with same procedures as large power plants holding back the development of distributed energy production. Sometimes it takes years to achieve all relevant permissions to build e.g. a biogas plant. The IEE BiogasIn project has clearly shown that policy support, administrative hurdles (permission procedures)and lack of financing are equally high burdens for biogas than lack of or low FiT. There is a general lack of credible, independent information for small investors (households and SMEs) that can benefit from small renewables installed locally. In many EU-countries the available training courses are too few to cover the raising demand for qualified installers of RES systems. In some Member States certain RES transport technologies are denied motor vehicle type approval. This is the case e.g. of dual-fuel biogas tractors and cars. In Example: A well performing agricultural biogas tractor prototype has been produced, but commercial production cannot begin due to this administrative barrier. In case of biomethane injection into the gas grid, there are specifications in only very few countries.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Priority access needs to be maintained after 2020 and grid connection rules also need to be made more transparent for renewables. Grid update costs should be shared by the large power plant developer and the distribution system operator (DSO). The majority of cost should be beard by the grid operator because a small scale RES operator cannot take the burden to co-finance long delayed electricity grid improvements.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit

consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)
Please specify which other measures -open reply-(optional)	
For Europe's new energy supply system, increasing the availability of demand response such as smart grids is very relevant for decentralized renewables plants. Some Back-up capacity is certainly needed, but it should not come from fossil but from renewable sources. Some kinds of renewable energies, e.g. Biogas could be applied for balancing due to a high flexibility and availability within the whole day or even over several days when injected into the natural gas grid.	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should bear greater responsibility for system costs - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
In addition to the introduction of smart grids and especially smart markets (with special market signals for shifting the demand) there could be penalties for inflexible power generation which caused further RES curtailment or higher negative prices at the power exchange.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

In biomass and geothermal heating, clear priority should be given to CHP use in all plant sizes.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure - Lack of awareness - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

Others: all transport fuels from renewable energy should at least be exempt of mineral oil and CO2 tax. If the energy tax (dominating the CO2 tax) is introduced as proposed then the renewables should also be exempt of energy tax. With the addition of biomethane to natural gas in the order of 20% and up 20% and the common use as a fuel in the transport sector the environmental impact will be reduced significantly because biogas belongs to the CO2-neutral energy sources. In the case of organic waste used as feedstock for the production of biogas, the greenhouse gas balance will be further improved because the greenhouse gas reductions will be double-weighted towards the European10% target. Bio-CNG and liquid biomethane (LBG) are effective solution for sustainable reducing emissions from road transport. The infrastructure needs some support e.g. for the installation of fuelling stations. Investment incentives for investment in production and upgrading facilities of biomethane (the treatment of biogas to natural gas quality) and grid injection are necessary unless reasonably high gas feed-in tariffs are created.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail - Water

G.2.1. Please explain your answer -open reply-(optional)

It is technically easy to move all transport sectors into sustainable RES based. E.g. waste based biogas (BG) and synthetic biogas (SBG) is suitable for all transport sectors and all engine types used in transport. Combined with wind and solar methane, the sustainable RES based methane resource can cover a substantial amount (> 20%) of today's transport energy needs. Exception is the airborne transport where definitively drop in fuels are recommended.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability criteria need to apply to all types of biomass use (energy, food, feed, material use), not only for biofuels in transport. It is necessary to include all biomass production and uses to avoid leakage effects. The compulsory sustainability requirements can only be the starting point to earn experience. To have a real impact on agricultural production and the use of biomass the main demand sectors have to be included in sustainability certification. Furthermore it is essential to define environment-associated criteria for the production of fossil fuels to have a level-playing field between fossil and renewable fuels and to tackle the growing negative impacts of – among others - greenhouse gas emissions of fossil sources like tar sands, deep sea or arctic oils.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate	No, the EU should first focus on developing its own renewable

cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

The target to stimulate solar from the south and wind from the north is wrong as a general rule. In priority local energy production and consumption has to be stimulated avoiding heavy electricity transport and massive needs for balancing energy. To some extend exchange of electricity is favorable but only as an additional measure. The goal should not be to satisfy the old strong electricity companies but to optimize technically and financially the entire energy network.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

The Renewables Directive (2009/28/EC) foresees “Joint projects” also for Member States and Third Countries to cooperate on a voluntary basis. These projects have to apply the limitation of the Directive in order to be counted towards their target. There is no need for additional measures to increase these projects. The main focus of the cooperation mechanisms should remain within the EU.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Potential of solar and wind power from third countries, like in Africa is large. However, Cost of grid infrastructure from there to the EU makes it highly unattractive against national increase of distributed RES Such a partnership could make sense for developing RE in that area for use in that area, not for export to the EU.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their

remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)
Crediting multiple environmental and social benefits, e.g. biogas technology has a very large potential for integrated solution of many environmental (both local and global) and social problems, but its diffusion has been very slow because financing decisions tend to focus on single issues ignoring the broader picture.
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)
The future energy system will have to be based on a broad mix of various renewable energy technologies and sources, especially on smaller and decentralized plants. Since there are so many differences in the market conditions in the Member States, prioritizing at the EU makes no sense. However, there should be focus given to the sector producing highest GHG emissions, thus a transport sector.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)
The existing measures caused some progress in the renewables sector, but support for fossil and nuclear energy still continues and lowers the competitiveness of renewables.
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)
No. Development decisions should be based on the potential of proposed technology for reducing environmental problems.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Helena Paul, EcoNexus h.paul@gn.apc.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case	

with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

I did not answer the question above because none of the choices are appropriate. We have a major problem with the definition of large-scale biofuels and biomass as renewables. we believe that they should not be included in the definition of renewable sources of energy because of the serious impacts their production and extraction are having on people and land, mainly in other countries. We feel that the policies of the EU are inadvertently leading to impacts that are surely not intended, including increased rather than reduced GHG emissions. We do not believe that sustainability criteria can help to resolve this. We worry about the ETS, the corruption issues, the free allowances and the distortions caused by ETS operation, because it has the effect of shifting the obligations to reduce emissions from the EU to other regions. we believe that the 10% biofuels target should be dropped and that the renewables target of 20% should not include biofuels or biomass.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Abolition of support mechanism or subsidies to other energy sources - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

We need policy elements that more directly encourage reduced consumption of energy overall, especially where beneficial synergies can be obtained. We need policy coherence as well, for example our food system across the EU is energy intensive and reducing this energy intensity could have a most beneficial impact on EU emissions generally, yet there is no clear policy-framework to enable this. Some genuine renewables other than biomass and biofuels are important for the EU, but reduced consumption is even more important at this point in time especially.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of	

a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

as noted above, our main problem is with the definition of biofuels and biomass as renewable sources of energy, particularly biomass for electricity. we see them as in some respects the easy option for industry. As such we believe they slow down the transformation we need to reduce energy consumption. we are quite aware that such a transformation demands considerable political will and this we find lacking at present.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

We believe this is the wrong question to ask here, because we need to look at the fact that biomass is not a suitable replacement for fossil and hence we need to look at insulation, capturing the heat of the sun effectively. if the question was: what are the barriers against stronger uptake of effective insulation, reduced heat loss, increased passive generation of heat, then we would be inclined to tick all the boxes in F.1! other barriers are public perceptions and the difficulty some people have in accepting that they may need to wear more clothes indoors and only warm part of the house etc

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Solar thermal - Other (please specify)

Please specify which other pathways -open reply-(optional)

we need more research to speed up the introduction of wave power and other possibilities, such as ever more efficient building practice, heat recycling, the use of human waste and other efforts.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

We are frankly worried about the first (further use of so-called renewable energy) having a detrimental effect on enhancing energy efficiency. As a crude example, biomass burning is highly inefficient. more to the point, we believe that energy efficiency needs far more encouragement than it currently receives. with so-called renewable biomass providing a serious distraction from what should be the main focus. in a few years, we will see very clearly that biomass electricity is simply not a viable alternative, but we will have used a lot of energy and funds to construct installations for biomass electricity. we should have a very serious rethink about energy efficiency and the reduction of consumption starting immediately.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

again we are very concerned that the focus on shifting to so-called renewables in transport is distracting us from the need to focus on reducing consumption as much as possible, through shared and public transport, using trains and buses, walking, rethinking the design

of our infrastructure etc. We suspect that biofuels are the easy option for governments and industries that prefer not to make the required transformations. unfortunately this is very short sighted. political decisions should go beyond short term convenience and pressure from powerful industries.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

Again we feel this is the wrong question, because we do not believe that sustainability criteria can prevent damage caused by biomass extraction. indeed we consider that they merely help to provide false reassurances to the public and help to delay the recognition that large-scale biomass and biofuels are not actually renewable and that their social and environmental impacts are completely unsustainable. a serious problem with any criteria is the quality of monitoring and oversight, but our concerns go far beyond this.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the

North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	CEZ Group (Jiri Horak, jiri.horak03@cez.cz)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Czech Republic

4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

The binding 2020 targets have been beneficial in providing increased support and a higher profile for renewable energy. No investments into renewable energy would have been done without binding targets and supporting schemes. However, they have also introduced conflicts with other EU policies, e.g. EU ETS and the internal market, which will become more pronounced as the renewables market share increases. There are some other barriers to renewable energy development, such as access to the grid, payment of imbalances, limitations into operation. They need to be overcome in order to meet the 2020 RES targets. To make this move as cost-effective as possible, cooperation mechanisms should be maximized towards the 2020 targets. After 2020, renewables should progress towards being fully integrated in the market, with a strong carbon target implemented over the entire energy system. Then, the carbon target can give a credible signal neutrilising the externalities from burning fossil fuel as well as drawbacks of the existing support schemes. RES should be welcome as any other generation technology, supported while it is more expensive and benefit out of strengthen electricity networks. However, the existence of an indicative (and non-legally binding) target is needed to motivate Member States to establish a legal framework for achieving such a defined goal.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Open up national support schemes to cross-border projects - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

All of them, as much as possible before 2020, in line with the evolution of the internal energy market. Meeting the following conditions is

needed: • Open up national support schemes to cross-border projects • Accelerate convergence of national support schemes • Making support schemes more market-oriented o Phase out support schemes over time in line with catching up to trajectories and when technologies reach competitiveness to market prices EU member states have developed different support schemes for RES. A European approach to market design is needed to ensure a European level playing field and to avoid negative consequences of the fragmented picture that exists for RES subsidies. A key is to keep investors' confidence into legal and regulatory frameworks via changing rules retrospectively. Making use of the cooperation mechanisms set by the RES directive is another important element to enhance cooperation as well as efficient development of RES in Europe.

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

With regard to questions B.4. we see a difference between the different sectors: electricity – yes but after 2030, as country conditions are different (country risks, targets level, intensity of RES, for example wind speed, etc) and by 2020 the unification in this field seems to be impossible to achieve, heating and cooling – no (local character depended on the climate), transport – yes.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)

-open reply-(optional)

Opening of the support schemes to renewable generation from other Member States and third countries require the unification schemes across the EU. A bottom-up convergence on the basis of the Norway-Sweden joint certificate scheme would be desirable for example.

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

YES, some support schemes are more compatible with the well-functioning of market dynamics than others. Regardless of the scheme applied, it is essential that RES generators contribute to balancing and grid connection costs. We believe that schemes based on feed-in premium – given the exposure to market dynamics that it allows – are preferable to Feed-In-Tariffs. We favour RES tradable certificates.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed

impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

We believe that the above listed aspects are all relevant and represent real barriers to investments in RES capacities. In general, we consider that the length of the administrative procedures is the most important issue to deal with.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

We believe that these relevant issues need to be addressed way before 2020. Especially the systemic risks connected with the existing infrastructure in the light of the already happening sharp increase of RES generation. Harmonisation of grid connection requirements should be pursued on the basis of the 3rd Energy Package (and should not go beyond).

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access

D.2.1. Please explain why -open reply-(optional)

We believe that these relevant issues need to be addressed way before 2020. However, the first two are of the utmost importance. We also believe that priority of dispatch and guaranteed network access for RESgeneration, set by the new RES Directive, should not exempt these generators from their scheduling and balancing obligations, otherwise full integration of wind and solar generation in the market will never be achieved and wind generation will never be able to compete with other types of generation.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

It seems that all the activities leading to the efficiency of electricity (smart grid) and the existence of peak energy sources for the rapid introduction of electricity to the grid, are essential for the sustainable development of RES The challenge of managing variability will require innovation and investments as well as a reliable regulatory framework that provides the right incentives for energy infrastructure investments in this new environment. Variability at unprecedented levels will therefore have to be managed, with major implications for all

generation technologies, transmission and distribution grids, energy markets and end-users. A large and growing share of renewable energy in the generation mix can only be delivered if all the elements are in place. Variability requires back-up capacity from dispatchable generation (thermal and hydro) and an extended transmission and distribution grid. Improved forecasting of wind and solar power, enhanced ability to regulate dispatch from the existing generation fleet, and improved balancing, also on the border, intra-day and day-ahead markets will also be key elements. Equally, a reinforced and upgraded European distribution grid is needed, able to absorb the majority of variable RES capacities. Demand side measures, smart grids and new interconnections will complete the effort to balance the electricity system. Research, development and deployment (RD&D) can speed up this development.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?

-open reply-(optional)

A level playing field in balancing responsibility for all producers needs to be ensured to incentivise market participants to improve scheduling and forecasting and thus limit system cost. It is necessary to ensure a level playing field for balancing responsibility which applies to all producers, including wind generators, in order to stimulate all market participants to carry out thorough and proper scheduling and forecasting and thus limit system costs. Reasonable balancing costs should be paid by RES generators. Though, regulators should introduce intra-day markets and encourage conventional generators and consumers participation on them.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand

-open reply-(optional)

We believe that a combination of measures B and C (storage and demand response) will bring about the right regulatory framework to deliver on these solutions.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of awareness - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

Lack of supportive tax policy – e.g. carbon taxes on heating fuels. Lack of incentives for Res heat commensurate with those for RES electricity Lack of operating system solutions and experiences in this area constitutes other major barrier to the development of RES in

heating.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Electrification together with higher share of renewables in electricity production - Other (please specify)

Please specify which other pathways -open reply-(optional)

Majority of existing CHP are running on biomass. New CHP using biomass and biogas can provide heating and cooling where and if demand is there. Heat pumps (not direct electrical heating). It remains the most efficient solution outside of distribution heat networks.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

More spread RES sources, close to heating and cooling demand, is solution for promotion. Better efficiency, both on RES generation and DSM, would answer to the question. The introduction of a support system for the heat from RES will facilitate the exchange of old inefficient heat sources (eg coal boiler) for energy efficient heat systems from RES (eg cogeneration).

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of standards
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Yes, but biomass criteria should be in place long before 2020 but could be further expanded in depth (e.g indirect land-use change) if on a predictable time framework. Also should be extended to non-energy uses of biomass post-2020. For fossil fuels by definition they are not sustainable environmentally but, social and economic sustainability could be considered e.g. see better coal initiative.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

As far as a European approach to RES development is concerned, we consider that the use of co-operation mechanisms (in the short term) and progressive convergence of support schemes for RES towards a market-based design (in a medium to long term) must be incentivised to ensure cost-effectiveness and to establish a European level playing field. A clearer framework for use of the mechanisms needs to be established as soon as possible. A regional approach makes sense, and nearby geographical regions should take

advantage of this in order to ensure maximum economic efficiency. In this regard, the common certificate scheme between Norway and Sweden can be considered as a promising development.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

No, in the first place, networks should be developed especially where RES potential and proper supporting schemes are in place. Depending on opportunity, it might be of interest to develop some networks to welcome cheaper green energy from third countries.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

Both the EU and bilateral agreements are important if the measure should be transparent and credible. Countries which will develop their networks to welcome cheaper green energy from their neighbours third countries should benefit, based on bilateral agreements.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Instruments promoting the import of renewable electricity from third countries to meet European RES/decarbonisation targets exist, but can be further exploited. Article 9 of the RES Directive already offers the opportunity to meet RES targets via imported electricity from third countries, and should quickly be transposed into national law by EU Member States. However, cooperation mechanisms within the EU should not be forgotten: they are even more important and should be used without delay.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Yes, such cooperation should be further fostered and a European approach should be pushed forward to encourage the smooth and swift development of offshore wind in Europe, subject of supportability though, after other options will be exhausted.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives?	Technology performance and cost-competitiveness - System integration

-multiple choices reply-(optional)	
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
Funding for R&D and smart grids.	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	
Biomass, small hydro, widely available on most EU countries.	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	
Yes, we believe results should be linked to deadlines.	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Joana Simões, EDP - Energias de Portugal, SA; <joana.simoes@edp.pt>
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Portugal
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need	

to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
• Reasons for supporting (binding) targets are still valid (market does not value all the RES benefits beyond CO2 abatement, namely regarding security of supply,diversification of the generation mix and job creation); • CO2 price is not reliable as the sole driver for the development of RES, in particular the less mature technologies; • CO2 price history fails to provide stable investment signals; • When deciding if targets should be mandatory or not, the timeframe is an important factor: - Mandatory EU-wide targets until 2030; - Beyond 2030 and up to 2050 indicative targets may be an option, depending on the verification of the underlying support for mandatory targets (see text); • Targets should take into account the maturity of the different technologies;	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Better financing possibilities

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)
Please specify which technologies/circumstances/markets -open reply-(optional)	
• Yes, particularly for selected technologies that in 2020 will not yet be fully mature and competitive in the market, but that are needed to accomplish presumable RES targets. • Financial support may not be necessary for renewable technologies that may already be competitive (possibly biomass and onshore wind). • In any case, the possibility of no financial support would obviously only apply to new installations, since existing contracts must be respected.	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)
Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)	
• To promote investments in RES, the support scheme must combine stability and long term visibility over returns with a market-based element to ensure competitive pressure in the investment decision. • Empirical evidence has suggested that FIT has been the most effective and efficient mechanism to promote RES: the majority of the cumulative wind installed capacity in 2010 was delivered under FiT mechanisms – this trend will be strengthened in the future according to NREAP targets. • The FiT mechanism is considered to be the remuneration option for renewables with the lowest cost (for the payer – governments) given that a developer demands a lower premium as the implied risk is also lower (as uncertainty is minimized). • To set the price, a market-based mechanism such as long term contracting (e..g, FIT) set through auctions could be used. • Alternatively, FIT may be administratively set and indexed to technological evolution and on the maturity of the technologies. In any case, any given project should be granted support for a sufficiently long amortization period. • In any case, it should be agreed that future support arrangements should not retroactively impact existing contracts.	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-	No

(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

• Support levels should be entirely up to Member States at least until sufficient interconnection capacity exists in the EU and the internal market is fully functioning; • Subsequently, there should be EU-wide benchmark values for financial support granted per Member State. Moreover it should be born in mind that investment in RES may present a set of benefits that spillover to the economy, such as local economy development, local jobs and regional development which are subject to different objectives.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

• Here it is important to distinguish between competition among MS and competition among technologies within a MS. • Regarding competition among MS, besides the specificities of RES supporting scheme, there are other factors (possibly even more important) that distort competition, such as tax regulation and labour laws. Therefore, if one is to be concerned about competition distortion, the efforts should probably be focused in other areas; • Regarding competition among technologies, the distortion exists in the first place due to the presence of binding target that imposes a restriction, and not due to the particularities of a supporting scheme. Thus, as there is consensus on the need to decarbonise the power sector thus supporting RES, the impacts must be acknowledged and, if relevant, mitigated by other policies.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

• Length and complexity of administrative procedures relating to authorisation/certification/licensing, in particular regarding environmental issues.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

• Strengthen rules to intrude more directly into Member States procedures. However it should be guaranteed that the rules are effective.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following	Balancing rules - Curtailment regime

national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

• All of the issues identified are important, and some may be more critical in some MS than others; • In general, balancing rules and the curtailment regimes are the least clear issues that require improvements of transparency, including those regarding compensation measures that should be implemented;

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access

D.2.1. Please explain why -open reply-(optional)

• The obligation for the network operator to develop the network is paramount in a post-2020 perspective; • Priority or guaranteed access is also very important; • Curtailment regimes are particularly relevant and transparency should be reinforced in the Member States including any compensation measures that should be implemented.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Other (please specify)

Please specify which other measures -open reply-(optional)

The merit of the measures to increase the flexibility reserve of the system may vary in time and depend on the maturity of certain technologies. The most important measures are (by merit order): • Increase interconnections is a structural measure and quite important, but it will take time to develop; • In the short-term, increase of flexible back-up capacity (capacity payments …) and increase of availability of storage (not possible in all MS), are the main measures; • Increase availability of demand response (smart grids …) are expected to take a long time to produce a material impact; • Also, in the short run (as a quick-win), market-based measures such as the better use of interconnectors (implicit auctions) or trading closer to real time are beneficial.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

• Given RES have typically low variable costs and high capital costs, it does not make sense to expose it to long term price risk, which can be achieved, as mentioned previously, through long term contracting (“aid”) within a competitive framework. • Still, marginal benefits can be achieved by exposing it to short term price signals in order to optimize scheduled maintenance • RES should be only exposed to some balancing risk in the sense that producers of renewable energy should bear balancing responsibility for the unbalances which they can wholly or at least partially control themselves. For example, backup costs and costs associated with the resource intermittency/volatility are not manageable by RES producers, which means that making them responsible for these costs will not work as an incentive to optimize them; • Renewable energy production should not be subject to price risk in the long term.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)

• Additionally, price caps and floors should be removed. • The most efficient measure would consist of dedicated arrangements to reward availability of generation capacity;

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)

Please specify which instruments incentivising investment -open reply-(optional)

• The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio. This can be achieved through long term contracting insulating those technologies from long term price risk, while simultaneously keeping an optimization signal for the short term - such as the contract-for-differences format which is being considered under the UK Market Reform initiative; • Simultaneously, since existing markets are not reflecting the full costs, additional mechanisms must be implemented such as the competitive based capacity payments.

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Electrification together with higher share of renewables in electricity production - Other (please specify)

Please specify which other pathways -open reply-(optional)

• There are country specific issues to be considered due to differing resource availabilities and societal needs for heating and cooling (both for residential and business consumers); • Overall, electrification together with a higher share of renewables in electricity production may be the most overarching policy avenue for the reasons highlighted in the previous question;

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

• Both initiatives require relevant upfront investments which present a hurdle concerning their adoption; • Approaching them in a coordinated manner will allow for this barrier to be addressed with integrated solutions that will promote both energy efficiency and renewable penetration;

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Pace of technology development - Lack of standards - Lack of infrastructure - Lack of awareness - Other (please specify)

Please specify which other barriers -open reply-(optional)

All of the above are relevant barriers. In general, a higher electrification of the transport system combined with a higher share of renewable power generation is, in our view, the most sustainable and cost effective way to achieve higher transport efficiency and energy independence. In addition, the barriers outlined would rank rank as follow by merit order: a) Lack of standards b) Costs / Pace of technology development c) Lack of infrastructure d) Lack of awareness / suitable information;

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

Generically, those sectors with a higher industrial policy coordination potential and those with a higher electrification potential could be considered to be the most promising. By order of merit, they would rank as follows: a) Rail – high electrification benefits / high policy coordination potential b) Road for passengers - high electrification benefits c) Road for goods d) Water – lower electrification/renewable energy benefits e) Air - lower electrification/renewable energy benefits;

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

If 2030 or 2050 targets are to be met, adequate incentives have to be put in place and should remain stable during that period. This should be accomplished without compromising the underlying incentives to existing contracts.

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added
-open reply-(optional)

• No. Cooperation between Member States in the way it is setup fails to consider the incentives that each Member State has to develop within its borders with respect to the RES capacity which is required to reach the agreed penetration targets. • Cooperation between Member States must also focus on other aspects in order to be effective, for instance, labour and tax law as well as industrial development policy. • Moreover, only when interconnection levels are reasonable can one aspire to a successful cooperation mechanism.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

Yes, cooperation with 3rd countries could be facilitated with respect to more mature technologies whenever there are advantages in doing so. This evaluation should be subject to a common European cost-benefit analysis framework which would have to be established

in the interest of a transparent and non-discriminatory cooperation mechanism with those countries. Notwithstanding, in order to capture the net benefits (considering the necessary interconnection capacity) created by the cooperation with 3rd countries, it should be ensured that the level of interconnection capacity within the European space is sufficient.

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

Yes, in order to capture the net benefits (considering the necessary interconnection capacity) created by the cooperation with 3rd countries, it should be ensured that the level of interconnection capacity within the European space is sufficient. Cooperation with 3rd countries could be pursued with respect to more mature technologies whenever there are advantages in doing so.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

Bilateral agreements between Member States and third countries may be appropriate. These may be facilitated by the setting of a reference framework for the cooperation with 3rd countries with respect to more mature technologies whenever there are advantages in doing so. This evaluation should be subject to a common European cost-benefit analysis framework which would have to be established in the interest of a transparent and non-discriminatory cooperation mechanism with those countries. Notwithstanding, in order to capture the net benefits (considering the necessary interconnection capacity) created by the cooperation with 3rd countries, it should be ensured that the level of interconnection capacity within the European space is sufficient.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

International cooperation may contribute to strengthen the security of supply in Europe. Therefore, it may be appropriate to pursue the cooperation with 3rd countries with respect to more mature technologies whenever there are advantages in doing so. This evaluation should be subject to a common European cost-benefit analysis framework which would have to be established in the interest of a transparent and non-discriminatory cooperation mechanism with those countries. Notwithstanding, in order to capture the net benefits (considering the necessary interconnection capacity) created by the cooperation with 3rd countries, it should be ensured that the level of interconnection capacity within the European space is sufficient.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

• In principle, support schemes should be freely adopted by Member States but should be granted on the basis of non-discriminatory and transparent principles regarding the allocation of costs and benefits • A greater share of RES in the EU's mix will require an expansion of the transmission grid. As such, the offshore grid initiative should be fostered as a way of easing the access to this shared renewable resource. The same could arise in the future for other regions and technologies; • Given the existing relatively low intra-EU interconnection, those benefits are still mostly local and/or regional. Therefore any associated costs should be born also by the countries directly affected by this project.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain - Other

cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	(please specify)

Please specify which other key challenges
-open reply-(optional)

• Technology performance and cost-competitiveness: a) Specific RES technologies should be evaluated in comparison with alternative RES technologies and with conventional generation (internalizing all its aspects and costs) with the objective of designing the adequate incentive schemes; b) Technology performance should be evaluated in a wider scope namely focusing on the overall sustainability of the referred technologies (looking at bottlenecks in the value chain); • System integration: There should be a strong focus on enabling technologies such as smart grids or energy storage with the objective of identifying what measures must be pursued namely on the electrical networks to allow or facilitate the massive integration of renewable energy (and using it as criteria to determine which are the less demanding alternatives in terms of grid adaptation). If the 2020 objectives are to be achieved this enabling feature of the smart grid has to be fully mastered and valued. One second objective would be to promote adequate parallel incentive schemes to support the development of the referred enabling technologies; • Industrial manufacturing and supply chain: Firstly, a detailed analysis of the value chain of RES technologies is required; Secondly, criteria to allocate incentives to specific technologies should take into account the economic impact in all relevant sectors (favouring R&D intensive areas, promotion of employment, integration between industry and academia)

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

• Measures, instruments and incentives should be put in place to match the maturity of the referred technologies, namely considering the usual definition of technology development phases that the industry uses: Design / Concept, Pilot / Demonstration, Pre-commercial and Commercial. Incentives should be in line with the referred phases: as we move towards later maturity stages, less public funding, less equity from private investors, more debt into projects and a shift to market driven incentives; • Incentives targeting the development of technologies should take the form of grants to support investments as much as possible. FITs or alternative remuneration schemes should continue to play a role in providing a long term perspective to investors; • Incentives should also target the entire value chain, for example, considering the offshore wind area, incentives should target not only turbine or foundation developers but also infrastructure such as the conversion of shipyards); • Finally, planning for RES deployment beyond 2020 should separate, at a clear cut moment (e.g. 2015), the technologies that have reached a pre-commercial phase and those that require further R&D. This should lead to different types and amounts of incentives for each kind of technology. There should be support for larger projects based on technologies that are already at a pre-commercial phase and also there should be support to smaller projects which are still at a Concept/Pilot phase.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

• Wind Energy, particularly onshore wind, has already a significant track record and has proven to be the most competitive renewable energy option. Incentives to the wind (namely onshore) sector should be maintained or put in place (where they are inexistent) to further consolidate Europe's leading position in the sector. Technologically, challenges such as developing bigger multi-MW turbines, improving the operating life of wind assets via application of condition monitoring and preventive maintenance techniques, adopting novel concepts that will drive down the costs of turbine and ancillary equipment (amongst other developments) will be key to consolidate wind energy leading position; • In the long run, wind energy development will eventually have to include offshore wind. Wind at sea is in general stronger and more stable and a significant number of European Nations are developing plans that envisage the exploration of the wind resource at sea; • In order to seize the medium/long term opportunity in offshore wind and to retain a leading position as an industrial cluster – to a great extent supported by its O&G industry –, Europe should promote the development of deep offshore wind projects.

J.4. How successful do you consider the existing measures have been and which have	Successful but some drawbacks (please specify which)

been the main drawbacks? -single choice reply-(optional)	
Please specify which drawbacks -open reply-(optional)	
• The significant amount of funds allocated to the promotion of clean energy technology has led to success in a number of areas; • Some improvements could be made in terms of re-defining the scope and the rules of some of the support mechanisms. Focus should be put in the development of products contrary to reports and a, sometimes, vague knowledge creation. Key performance indicators such as the number of products introduced in the market or the number of industrialized patents should be taken into account when re-defining policy and support mechanisms; • To the widest extent possible, a more practical and "less rules" based approach should be applied. In some cases certain rules such has the need to incorporate three different Nationalities in FP7 projects might not be necessary. Furthermore such rules may introduce a bias to the project scope and optimal consortium / structure; • Finally, there is sometimes an excessive administrative burden which leads to defocusing the project teams from their core focus (developing technology).	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	
• Yes. We are favourable to the introduction of project management discipline in technology development projects. This discipline should necessarily be balanced with a significant degree of risk taking and consideration for the fact that specific technologies have specific "maturation rates" and learning curves. Incentives should be aligned to make sure that the desired outcome (new products developed in a given time frame) is favoured. Questions 1, 2 and 4 also provide insights for this issue.	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Dr Gordon Edge, RenewableUK; gordon.edge@renewableuk.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
Experience from the UK has been that the 2020 objective has been a "game changer" in developing supportive policies and ambition. We	

need now to set ambitions for 2030 to ensure that momentum is maintained throughout the next 20 years. 2050 is only one investment cycle away in the power sector. At the moment, however, without renewable targets beyond 2020 there is not enough long-term certainty to encourage investment that will bring down costs of emerging renewable technologies such as offshore wind, wave and tidal stream. Manufacturers need assurance of a market stretching beyond 2020 to invest in the technology development and productive capacity, and that requires clear objectives to be set. A 2030 target will also allow investment in the new wave and tidal stream technologies that will be necessary to meet our 2030 and 2050 objectives. These will only be delivering at scale in the 2020s; clear and stretching targets for 2030 are needed to give industry the assurance that there will be the correct policy support. It is clear that a target for renewables will only have legitimacy if the costs of the leading technologies are seen to be competitive. If policy makers are unsure about setting targets for 2030 for fear of locking in high priced supply, then there should be leeway for linking volume targets to progress on cost reduction.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

- A properly functioning ETS. - Policies to internalise external cost of non-GHG pollutants such as NOx, SOx and fly-ash. - Offensive trade policies to open non-EU markets to allow European companies to participate in those markets free of restrictive trade policies. - An Emissions Performance Standard. - Creation of an EU-wide well functioning electricity market. - A successful renewable energy framework requires effective policies to remove barriers to grid access and barriers in the form of administrative procedures, while encouraging public support.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

The objective of the wind energy sector is to be competitive in a future level playing-field, fully liberalised electricity market, and to deliver the benefits of wind energy in the most cost-effective way. This is the long-term objective of the marine renewable sector also, but since it is at a much earlier stage in its technological development it will be longer before it can be directly competitive. The success of onshore wind in bringing down costs will be replicated offshore in the coming years unlocking the exploitation of Europe's largest indigenous and eternal energy source. Cost reduction objectives, such as the UK's target for the cost of offshore to be £100/MWh in 2020, are concentrating minds across the industry to focus on cost. In comparison with other power generating technologies, onshore wind energy is rapidly improving its competitiveness and is the lowest cost zero-carbon technology available. Lowering and eliminating barriers to RES deployment and long-term, stable investment conditions reduces risk and costs and therefore the need for support. We consider that some technologies that are still developing at present, notably offshore wind but also wave and tidal stream, will likely need support over the 2020s to develop the scale required to push costs down to competitive levels, but this will be considerably less than at present.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes

Please specify how to make support schemes more market-oriented -open reply-(optional)

An ambitious, yet credible, long term RES target of 45%, supplemented by legislation on grid access, planning and intermediate targets,

all overseen by the European Commission, is critical to ensure that the industry can develop a sustainable economic model and business case going forward. If “more market oriented” means responding to price signals, support mechanisms should be increasingly exposed and should encourage greater market responsiveness as RES technologies mature and penetration levels increase. The industry in the UK is supportive of the concept of cost reflectivity to promote economic efficiency, so long as the costs reflected are fair and realistic, and paid by all market participants. In particular, there needs to be transparency that balancing costs are fairly applied to variable renewable generators such as wind power. RES cannot and should not be seen in isolation from the rest of the power market, but it must be recognised – as it is in the introduction to this consultation – that renewable energy support mechanisms are “necessary due to a number of market failures and imperfections”. If these market failures could be addressed effectively, the need for support to newer, cleaner and smarter renewable energy technologies would significantly decrease. Market compatibility is not only something to aim for when it comes to mature renewable energy technologies – it should be an aim for the entire European power market, vigorously pursued by the European Union.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

The main issue with administrative procedures is not so much refusals, but the lack of binding deadlines and lack of clarity and guidance in the procedures. As stated in EWEA’s WindBarriers survey, the average total lead time in the EU is 54.8 months for onshore wind energy projects, and ranges from 25.88 months to 76.08 months. These lead times act as a serious impediment to the development of wind projects in the EU. But this is also the case for the lack of harmonised rules for grid codes. Currently the European wind industry has to contend with a high degree of diversity in technical requirements in more than 30 differing National Grid Codes. These requirements are often not sufficiently clear and are not always technically justified nor economically sound. Such a diverse range of requirements drives up costs. Finally, in most Member States, there is a lack of certified experts and of trained civil servants to handle

the expected applications. The current economic downturn is having a significant impact on the ability of Government agencies to fulfill their statutory duties as regulators and license providers. Within the UK there is significant need for additional training and resourcing of local authority planning departments, national consenting and appeals services, environmental agencies, grid and aviation regulators, for example. Dedicated EU funding to plug this current – and expanding – skills and resource gap in this area would be strongly welcomed.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

There remains a need for significant improvement in frameworks governing the deployment of renewable energy infrastructure. These should not place undue burdens on renewables, either in the creation of policy or in its implementation. RenewableUK supports initiatives to: 1 Minimise delays in achieving grid connections and planning consents. 2 Achieve a more proportionate and less onerous approach to assessing environmental impacts and compliance with environmental regulations. 3 Upskill and resource statutory authorities to better enable them to fulfill their duties in relation to renewable energy deployment. RenewableUK recommends that a case-by-case approach be taken, rather than the introduction of greater central regulation or EU harmonisation. While it may be beneficial to achieve greater harmonisation of policy and regulation in some areas including grid codes, RenewableUK would strongly caution against placing additional obligations on Member States, as we believe that this may prove counterproductive to achieving significant deployment in the longer term. We recommend a more nuanced approach to the removal of barriers across Member States, in order to help minimise unnecessary burdens, the creation of perverse incentives and conflict within the Union. By way of example, we do not support proposals to introduce specified timescales for either planning delivery or grid connections, requiring disruptive change across regulatory structures in all Member States.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Whether the above mentioned items still play a major role after 2020 depends on how EU legislation (RES Directive and 3rd Liberalisation Package) is implemented and applied in MS. It can be expected that grid connection requirements will still create problems by that timeframe as the ambiguity and diversity of grid connection requirements for RES does not seem to be properly tackled by the current Network Code on grid connection nor at national level by the TSOs. Our sister organisation EWEA has proposed a “structural harmonisation of grid connection requirements”, which we see as one of the essential preconditions to achieving high penetration levels of wind power in the most cost-effective way, with due regard to power system stability. With regards to balancing and curtailment regimes, best operation practices between TSOs must be further developed and properly shared at a European level. This effort will be complicated by differences in market arrangements across member states: in particular, the UK’s unique self-dispatching arrangements will require a quite different approach than in other countries, where more centralised solutions may be possible. We are hopeful that, by 2020, with two decades of policy development and experience with variable renewables, there should have been sufficient progress on these issues to provide the level playing field we seek. We should remain vigilant that this is the result gained, however.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

Obliging TSOs to develop grid infrastructure is not exclusively triggered by increased RES penetration levels, but also by the need to create an Internal Energy Market (IEM) to the benefit of consumers and for security of supply reasons. The grid is a common good and should continue being so, therefore shallow network connection charging regimes should continue to apply. It is important that grid connection regimes are not overly onerous, particularly for smaller renewable generators, including community-owned schemes.

Depending on how far the creation of a truly liberalised IEM will progress by 2020 priority access and dispatch for RES might still be necessary. Priority grid access and dispatch are a compensation to new entrants given there is no functioning internal energy market. They are necessary in the absence of effective competition and in view of the historical development of power generation. They are especially justified for non-dispatchable renewables like wind and solar. Charging for grid infrastructure also needs to be sensitive to the fact that developers cannot dictate where the high renewable resource areas are, and that in many cases grid investment is required to reach such areas. Charging should reflect that exploiting renewable resources is socially valuable and not be a deterrent to development.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

System operators should develop their systems for procuring short-term and flexible reserves in order to focus on the services needed to manage large volumes of variable renewable energy on their grids. In the UK, National Grid (acting as system operator) uses its Short Term Operating Reserve (STOR) system to manage some aspects of variability, and this could be extended to be a more complete solution to capacity issues on an intra-day bais.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

RenewableUK agrees that RES should respond to market price signals but is concerned that the premise of the question seems to imply that this is not the case today. Making all RES respond to market price signals at all times won't alter the decision for RES-E producers to produce or not, to any detectable degree. This ideological battle would change little in the merit-order: apart from extreme cases of negative prices, producers of RES electricity will always feed into the grid because fuel and carbon costs are zero, i.e. there is nothing to save from disconnecting your power plant. After 2020 RES producers will certainly be exposed to balancing responsibility towards TSOs. The extent to which wind farm operators can be in balance is affected by three factors: functioning and liquidity of wholesale markets, cross-border interconnectivity and forecast horizon. In future regimes where balancing costs must be borne by wind farm operators, regulators should ensure that these costs are transparent, representing only the real cost of balancing. The characteristic load variations, the pattern of demand compared with wind power variations, the operational routines of the power system (eg gate-closure times) and the accuracy, performance and quality of the forecast must be taken into account.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand) - Current market arrangements are sufficient to reward flexibility

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand
-open reply-(optional)

Only investments in new generating capacity which meet the key feature of flexibility will remain commercially sound investments in the future. While we support arrangements to reward availability in principle, this must be contingent on this capacity having the flexibility to support large volumes of variable renewable energy on the network, otherwise system operators will have to procure flexibility as well as “dumb” capacity. Besides that, enhanced market integration and a bigger market place in general will help alleviate economically unsustainable price variability. This should allow for energy-only market mechanisms to continue being a sustainable market form where investors can recuperate their capital costs. Any market arrangement to enhance flexibility must be technology neutral and should leave it to the market price signal to determine whether power generation, the demand side or storage provides the flexibility. To ensure investors’ interest in power generation, less market-distortive signals could be provided by new markets such as for ancillary services where all generators could participate. We note that while storage is desirable, at the moment it is limited in volume and more expensive than can currently be justified. However, as long as markets are well functioning and provide suitable price signals for operators of storage to gain sufficient arbitrage, then storage can take its place in the system management toolbox once costs have reduced.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

Cooperation with third countries is welcome but it must not undermine national and EU renewable energy targets. We support the approach taken in the current renewables directive that imports of renewable energy from non-EU countries can only count towards targets if those third countries have taken on board the requirements of the directive and set targets to be fulfilled. Beyond this particular scope for importing renewable energies, policy should focus on technology development in third countries, on the promotion of a stable regulatory framework for renewables, based on the positive experiences from the EU frameworks, as well as the development of renewables-friendly grids and market design. In its immediate neighbourhood the EU should push for the principles of the 2009 renewables directive (including ambitious targets) and the IEM legislation to be applied, notably by using the framework of the Energy Community. For emerging markets outside of the Energy Community, EU-led bilateral negotiations should be prioritised. Trade policies should be used to open non-EU markets to allow European companies to participate in those markets free of restrictive practices. Agreements between the EU and third countries should be prioritised as a tool to develop renewables in neighbouring countries and in emerging markets.

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

There should be a careful approach when assisting infrastructure projects outside the EU. Project support for transmission infrastructure between the EU Member States and third countries should be provided only with a clear added value for the European energy market. This is even more true for projects within EU Member States to facilitate imports of externally produced electricity. Indeed, these must be assessed in view of the vast and mostly still untapped wind and solar resources, as well as the very inefficient and insufficient conditions of electricity infrastructure networks, within the European Union.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Such cooperation with the Southern Mediterranean countries could represent an interesting opportunity for European renewable energy companies. This cooperation should not undermine EU and national renewable energy deployment and achievement of targets.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What

benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

The North Sea Countries Offshore Grid Initiative is a successful example of regional cooperation focusing on a common issue, the North Sea offshore grid, which cannot be solved at individual Member States' level. However, although effective, this working group remains ad hoc and cross-border cooperation is limited to a certain time frame. While it is good to have flexible and result-oriented working groups, it would be beneficial to include them in a more long term strategic vision of the sea basin. The European Commission should support fully such initiatives and promote them in regions where onshore and offshore wind energy development would benefit, such as in the Baltic or Mediterranean.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

The EU has renewable and climate targets for 2020 and the SET-Plan focuses on the development of selected number of technologies to address that. The Commission's Energy Roadmap 2050 highlights that wind energy is the key electricity generating technology in all scenarios in 2050. Since the 1st EU research framework programme in 1983, wind energy has received about €350 million compared with more than €12 billion for nuclear research. The Horizon 2020 proposal is also far from enough to fund non-nuclear SET-Plan technologies. The first and foremost issues therefore are clear European commitments in terms of regulatory stability post-2020 and financial support for research and innovation activities. The EU should develop the following measures: - An EU programme similar to the SET-Plan for post-2020. - Creation of a dedicated individual budget lines to address the public funding support for the development of the R&D activities of the key energy technologies, in particular wind energy. This would allow industrial initiatives to prioritise their implementation actions according to their different maturity levels, it would help avoiding competing priorities, would stimulate individual industries to actively participate and to co-finance and would improve transparency and accelerate the process towards concrete results. - Greater Involvement of the EIB and other public banks. - Optimised and stable national support schemes supporting development of energy technologies

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

The Energy Roadmap 2050 has indicated wind energy as a the key electricity source for the coming decades, however, there is no clear regulatory framework covering the period after 2020 which would sustain the viability of the wind industrial initiative and would stimulate the development of wind technology. RenewableUK calls first for a proper implementation of the existing industrial initiatives with appropriate levels of funding as well as certainty for funding in the form of budget lines. Beyond wind power, it is clear that the marine technologies of wave and tidal stream provide the next big opportunity for European industry to lead in renewable energy. Along our western seaboard, there is considerable resource, which can contribute significantly to future power needs. This has been demonstrated through atlases of wave and tidal resource for the UK in particular. Recent investments by significant players in the electricity industry such as Siemens, Alstom and ABB show that the marine renewables are attracting heavyweight support, and the experience of the UK shows that the industry is very willing to collaborate with the public sector to fulfil the potential of the sector.

J.4. How successful do you consider the existing measures have been and which have	Successful but some drawbacks (please specify which)

been the main drawbacks? -single choice reply-(optional)	

Please specify which drawbacks -open reply-(optional)
The launch of the European Energy Programme for Recovery (EEPR) in 2009 with dedicated EUR 0.5 billion for innovative offshore wind projects was a win-win situation: the Commission received more good project proposals from the wind industry than it was able to pay – this shows that the wind industry is ready to take huge steps in developing its technology and increasing market penetration. The launch of the SET-Plan in 2010 was a very successful measure in providing the wind industry a clear message to develop the technology. The Wind Industrial Initiative team has developed a 2010- 2012 work programme (in line with the SET-Plan Roadmap) highlighting the technological development needs which were only partially taken into consideration by the European Commission and published in several FP7 calls. However, the activities covered in the FP7 calls and the funding levels are far from enough to meet the wind energy potential. The main drawbacks for wind industry are the missing clear EU financial commitment to help in development the technology and the absence of the post-2020 regulatory framework. We are still awaiting the first results of the NER300 programme, which is important for the marine renewables sector. The structure of that programme, which directly pitted small technology development projects like marine directly against large carbon capture and storage initiatives, has not been conducive to providing the certainty that new technology sectors need.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)
Linking the results to be achieved with assistance in technology development is absolutely necessary for both the EU and the Industry. The EU's assistance in technology development could be best expressed through ensuring long term regulatory stability with concrete targets and dedicated public funding for research and innovation activities. From the industry perspective European targets and supporting measures would be extremely important in developing risky yet promising technologies, like offshore wind and marine. Such a commitment from both sides regarding the common target would make both sides responsible for the results. In addition, a 2030 European binding target for renewables is extremely important to attract the private capital to invest in development and deployment of the new technologies.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Elisabetta Bourla, Sorgenia S.p.A. e.mail: elisabetta.bourla@sorgenia.it
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Italy
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case	

with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Other (please specify)

provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

Riteniamo un serio ostacolo allo sviluppo delle FER-E la complessità (in termini di procedure e di tempo) per l'ottenimento delle autorizzazioni necessarie per l'entrata in esercizio di un impianto. Si segnala che la previsione italiana secondo cui i processi autorizzativi devono concludersi in un tempo massimo pari a 18 mesi non viene mai rispettata. A titolo di esempio, informiamo che la nostra società si trova attualmente congelate richieste di autorizzazione di progetti che risalgono a 5 anni fa.in impianti a FER-E. La frammentarietà dell'iter italiano di autorizzazione e dunque delle responsabilità coinvolte è una delle cause della dilatazione delle tempistiche e dell'amplificazione del rischio di accettazione dei progetti. In tal senso, si considera positivamente una eventuale armonizzazione a livello europeo delle procedure autorizzative. Particolarmente determinante nel ritardare l'integrazione e l'armonico sviluppo delle fonti rinnovabili è anche la discontinuità nella regolazione del settore. L'assenza di visioni lungimiranti e di continuità normativa impedisce una corretta analisi degli investimenti e contribuisce ad amplificare il rischio d'impresa.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Consideriamo attualmente e in prospettiva futura un fattore determinante per lo sviluppo e l'integrazione delle FER-E la semplificazione delle regole di connessione alla rete. In Italia la complessità legata alle procedure di connessione rappresenta certamente un deterrente per le decisioni di investimento. D'altro canto, tuttavia, risulta opportuno gestire la distribuzione e la proliferazione degli impianti a fonti rinnovabili non programmabili. Infatti, la rapida crescita di impianti di produzione allacciati in media e bassa tensione, sta facendo emergere esigenze di interventi di adeguamento delle reti di distribuzione e sta creando nuove esigenze di esercizio in sicurezza della rete di trasmissione, portando, da un lato, a sacrificare le risorse tradizionali e, dall'altro, a richiedere nuovi qualificati servizi di flessibilità. Riteniamo pertanto utile e corretto che anche la generazione FER contribuisca a coprire gli ulteriori oneri di rete e che concorra a garantire servizi di rete.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

Riteniamo opportuno che il TSO sviluppi la rete al fine di assicurare l'efficiente e adeguata integrazione delle risorse non programmabili e contemporaneamente il dispacciamento in sicurezza delle risorse programmabili. Attraverso interventi sulle linee di trasmissione è possibile raggiungere il duplice obiettivo di dispacciamento prioritario delle fonti rinnovabili e utilizzo delle necessarie e complementari risorse tradizionali flessibili.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the

post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	FERNANDO LASHERAS - IBERDROLA - fernando.lasheras@iberdrola.es
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Spain
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)
While it is generally agreed that binding targets for 2020 have helped to develop RES for electricity generation, there is a discussion on to what extent and in which form policy interventions on EU and national levels will continue to be needed after 2020. At Iberdrola, we believe that an EU framework beyond 2020 is needed to provide for longer term investment signals. The 2020 EU RES targets will only be met if significant cost reductions are achieved and that will be difficult for certain renewable technologies within that timeframe. EU targets for 2030 consistent with the 2050 Energy Roadmap decarbonisation scenarios would help to unlock the private investment in RES necessary to achieve such cost reductions. Cost reductions will imply that some technologies will reach cost parity with

conventional plants within the considered timeframe, which implies that no mandatory target should be imposed at first attempt. Indicative targets should be enough, but a close following of costs and introduction of renewables would need to be done in case these forecasts do not get materialized and a more prescriptive measure is required.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Better financing possibilities

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

RES technologies are capital intensive, requiring significant upfront investments and projects depend largely on financial availability and conditions. In a EU environment of fiscal austerity, the private sector will have to bear the bulk of the massive investments needed in RES. Investment will take place only if incentives are sufficient to guarantee a commercial return. The investments needs in RES energy required to decarbonise the EU energy mix EU are daunting. Most RES technologies are still not cost-competitive with conventional generation technologies (some of which also receive subsidies) and in the absence of an EU mechanism fully internalising environmental costs, support mechanisms are required. The key challenges facing future RES investment are on the one hand the need to reduce the cost of the different technologies and on the other to promote greater integration of RES generation into the market. It is a desirable practice to provide support to massive deployment of a technology only if it is clearly foreseen that it will become competitive in the near future, otherwise, the support should be in the form of R&D. This being the rule in general, under the current context of economic and financial crisis, all kinds of support are under a close scrutiny being difficult to justify many of them. Hence, the cost-effectiveness of RES support schemes is going to be crucial for the continued financing of low-carbon technologies in general and RES in particular.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

The Renewables Directive put on the Member States the burden to comply with the overall target, having each of them assigned a specific target compatible with the target at the European level. This is the reason why the final responsibility, and therefore, the means to fulfil the requirements, is given to each Member State. It seems difficult to foresee a change in this sharing of responsibilities, and in this sense, it is assumed that Member States will continue to have the final responsibility in the accomplishment of the agreed targets. Nevertheless, all national support systems should be coordinated and be subject to a EU wide approach in order to better reach the targets in a fairer and more coordinated way. The following requirements will be necessary: 1) Promote technology improvement and incentivise cost efficiency gains, adjusting level of support to different stages of technology development and penetration. 2) Encourage more market responsiveness by gradually fully integrating the RES energy into electricity markets. 3) Prioritise the most cost-effective renewable technologies while ensuring technology diversity. 4) Are formulated and implemented to provide long-term visibility and certainty and carefully designed to reduce regulatory risk in order to attract the cheapest possible financial resources.

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Regarding the discussion on whether the structure of financial support should be aligned EU-wide or not, we think that although the differences between national support schemes for RES obviously affect investment decisions and are an important part of the elements to determine the location of new RES generation within the EU, the conditions affecting the investment choices in RES depend on a much broader range of factors. The lack of an EU-wide uniform support mechanism imposed on all Member States (MS) so far has not been an obstacle for significant RES investment in those markets that provided the right underlying overall regulatory conditions. Any shift to a possible EU-wide mechanism must be well prepared and it should follow after effective competition in the Internal Electricity Market has been achieved. Yet, as mentioned above, the 2020 RES targets have been developed on a national basis and the allocation of cost and benefits between MS will be difficult to agree upon under a fully harmonised EU scheme (as it would be the case for a theoretical single TGC market across Europe). Furthermore, if not properly done, European harmonisation of MS support schemes will bring about substantial regulatory instability, with negative consequences on future investment, endangering and putting at risk the achievement of the 2020 targets.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

There is currently a cross-subsidy from electricity customers, who bear the bulk of the cost of meeting the EU 2020 renewable targets, to other energy consumers, mainly in transport, but also in other sectors as the heating and cooling. As a consequence, there is an inefficient price signal that encourages excessive fossil fuel consumption and puts the electricity system in a less competitive situation. There a number of proposals that will contribute to alleviate this disadvantage of electricity, most of them being compatible among them, such as: to create a new tax (or increase existing taxes) on fossil fuel consumption and earmark revenues to the support of renewable policies; to allocate in a proper manner part or all the CO2 revenues from the EU ETS auctions to RES-E technologies; etc.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Any debate on support schemes should be part of a broader discussion covering streamlining and harmonization of administrative and grid connection procedures which can in practice hinder renewable investment. Despite the level of economic support to renewables, there are a number of cases where the difficulties in the planning and permitting processes discourage many attempts to build renewable plants. Therefore, we put a great emphasis on those actions towards harmonizing, simplifying and facilitating all the administrative processes. It must be acknowledged that many RES technologies, including some of the main ones (namely wind and solar) have a variable production which besides, it is difficult to forecast. Therefore, this should be taken into account in designing the systems in order to have the right level of reliability. Since production from these sources is not as reliable as the production from conventional technologies, these should be accounted to contribute to provide a back-up to intermittent technologies. On the other hand, the variability and difficulty in predicting RES production will in turn suggest an electricity mix based on flexible capacity, able to operate with high penetration levels of RES. Electricity systems should be accommodated to reward and attract investments in these type of technologies: firm and flexible.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Other (please specify)

Please specify which other rules -open reply-(optional)

Making resources available from all places (countries) where they may be located, will favor RES deployment. So, cross-border intraday and balancing markets should be developed as soon as possible in order to gain access to the resources where they have been developed. These coordination and integration of markets will only be possible if the appropriate development of grid interconexions exist. So, it is of extraordinary importance that all the plans for upgrading transmission network be accomplished, those elements are considered under the Ten Year Network Plan from ENTSO-E and in particular those elelements that connect the periferial countries to the central Europe markets.

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to	

market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient	Yes

to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

Enhanced cooperation and greater coordination between MS are important intermediate steps towards a potential future harmonization and both mechanisms are already foreseen in the 2009 Renewables Directive. Gaining efficiency through the sharing of renewable resources among MS is a requisite to reach the targets at the minimum cost (something always desirable but now compelling), in that sense, MS should make use of the Flexible Mechanisms in the Directive to a maximum extent, trying not to spend too much money in developing indigenous resources when cheaper possibilities exist in another country.

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives?	Technology performance and cost-competitiveness - System integration

-multiple choices reply-(optional)	
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
Investments made possible by well designed support mechanisms help drive down costs and will enable lower support levels, reaching in the end the cost parity. Nevertheless, not all technologies are in the same situation. Some of them seem to be far from being competitive in short so it will be desirable that support to these technologies be done through well focused R&D, to bring down their costs and get them in the way to become competitive.	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Saft michael.lippert@saftbatteries.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	France
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy?	Yes, a combination of EU and sectoral level targets is appropriate

-multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

•To maintain EU's increasingly challenged industrial leadership in renewable energy technologies; •Only by setting sector- and technology-specific mandatory targets will industry gain the required certainty and confidence to invest for ensuring a smooth transition to a low carbon energy system; •EU binding targets post-2020 are needed as the market and price volatility are very frequently the result of shifting political targets and a their absence would lead to a patchwork of diverging national policies. This would prevent industry from focusing as needed. •Maturity level of certain RES technologies still requires clear binding targets to boost their development.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Enabling technologies must be explicitely included in the policy schemes (IT, Energy Storage, Grid integration in general, ...) Visibility and security for investors are of utmost importance during market introduction phase. No development will be possible if ROI remains at high risk for innovative (=non proven) solutions.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Some renewable technologies, as well as those technologies which enable renewable implementation and integration to the grid are in need of subsidies. The ones in need of subsidies are those that are expected to reach competitiveness at some point, but that are not yet at the necessary level of volume and industrial maturity. Subsidies are to be phased out when these technologies have gone down their learning curve and have reached parity with conventional generation.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

Renewable energy sources will have to compete in the market with other technologies. More market-oriented support schemes can help to bridge the cost gap due to the temporary lack of volume and maturity of many of these technologies. As an example, remuneration (per kWh) can be - supplemented by a remuneration of grid services - modulated depending on the true (market) value of energy and services to the whole system (example time dependent FIT)

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be	No

gradually aligned EU-wide? -single choice reply-(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes - Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

Global policies and targets should be set coherently at EU levels. However, member states must be able to decide on the most adequate support schemes in their respective countries, taking into account their national landscapes (economy, geography, energy, meteorology, industry, ...)

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

in some member states, regulatory landscape is unstable and keeps changing under pressure of various stakeholders

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	N/A

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

None of the existing rules takes into account the technical and economical potential of energy storage. In the best case, there is an

absence of rules, in the worst case; existing regulation prohibits implementation of effective solutions. All of them should be revised taking into account the capabilities of energy storage: o Grid connection rules: energy storage is either considered as a load or a generator. Both prohibit an effective use of energy storage by grid operators. - Priority grid access for RES is no longer feasible when RES generation exceeds the load. Direct competition of different RES could be alleviated or even avoided by energy storage if covered by a new grid access regulation. o Cost-sharing rules: should take into account specific capabilities of energy storage, and namely its ability to provide added value simultaneously to different stakeholders along the value chain. No rules exist today governing the operation of a storage device by one stakeholder (for example DSO), which supplies grid services to another stakeholder (for example TSO) o Balancing rules: need to take into account increasing importance and ability of balancing at local level (at level of distribution grids) o Curtailment regime: rules of curtailment can be totally changed when taking into account energy storage. Typically grid overload or other contingency situations can be limited if generators are coupled with storage systems allowing ancillary services

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

We believe it is necessary to re-assess the grid connection rules in the regulatory framework taking into account current technology developments at both the level of generation and the grid level. Technical solutions, including but not limited to energy storage, open new ways to effectively integrate increased amounts of (intermittent) renewable energies. They require new modes of regulation between the different stakeholders (production, transportation, distribution, sales, consumption…) going beyond the current scheme of either “grid extension” or “priority access”, both of them not being sufficient to reach the set targets. Regulation can refer to: o Conditions governing generators connection and energy injection to the grid o Investment of grid operators in MANIFOLD technologies to manage renewable integration, including smart infrastructures, grid extensions, storage, etc. Most importantly, regulation should remove any barrier of current stakeholders to invest into technology innovation and to operate and take advantage of such innovation.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increased availability of storage

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Producers of renewable energy should bear greater responsibility for system costs - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

The more intermittent RES will get into the system and replace fossil power stations, the more balancing need will occur and flexibilisation potentials will have to be activated within conventional generation sites, within the grid and on the demand side. The increasing need of flexibility induced by RES can be adressed, among others, by energy storage with is one of the most flexible tools. It seems reasonable that a part of this effort be borne by the RES genertors.

E.2. How can it be ensured that market	Dedicated arrangements to reward availability of generation

arrangements reward flexibility? -multiple choices reply-(optional)	capacity - Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)

Most important is certainly storage as a single system component. However, storage adds value to a smart grid or if directly assigned to a generator, too, since it will increase the flexibility of this specific component. Consequently also this has to be rewarded.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)

Please specify which instruments incentivising investment -open reply-(optional)

Supporting investments into storage devices is necessary due to its inherently long term ROI. Enabling and supporting remuneration of storage as a grid service (means of flexibility) will further enhance its implementation

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Electrification together with higher share of renewables in electricity production

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

it takes time to shift from existing, well established efficient transportation systems with hidden costs to innovative, still today less efficient transportation systems with hidden benefits

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

It is sensible to generate RES in parts of Europe where the potential harvest is largest (i.e. Spain Greece and Italy for solar power or the Northern Seas for offshore wind). However, in a European approach, these areas should deliver much more energy than locally needed. So this energy needs at least to be transported into neighbouring countries. If not it needs to be fed into a European Supergrid. This means investments into grids should not be limited to any region, but made wherever necessary. Likewise, as renewable sources are abundantly available throughout the territory, a well-balanced distributed approach involving numerous stakeholders (producers, installers, operators, users,…) in all countries seems to be preferable over a centralized approach. A well suited option to limit the need of grid extension is generation site located storage, which will help to firm the intermittent renewables for the sake of a better grid usage. One has to take into account that this is nevertheless only one application of storage. Thus there is still the need to globally optimise the location of storage in the system.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain - Other (please specify)

Please specify which other key challenges
-open reply-(optional)

All the items mentioned above are challenges to be addressed. Energy storage is necessary for system integration. However, it needs to be further enhanced and become cost-competitive with other technologies. For this to happen, additional research in serveral areas, such as battery chemistry, high temperature materials and high pressure materials is necessary.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

We believe Energy Storage should be given priority in the post-2020 perspective, although it does not have an EII up to now. By creating EASE, both industry and the research community passed a strong message of commitment regarding the further development of energy storage technologies. Demonstration projects are running, e.g. in Denmark, France. Energy storage is a common subject for several EIIs but it should have more support on its own.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

Technology development should be associated to deliverables. However, one should be careful in establishing deadlines. The immaturity of certain energy storage technologies lead to high risk investments that cannot be simply coupled with precise deadlines

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Alastair Kerr, The Wood Panel Industries Federation (WPIF). Please email: rebecca@ranelagh.info

2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

WPIF represents all UK wood panel manufacturers. There are 8700 FTE jobs dependent upon the industry and in 2010 it had a combined turnover of around £520m. The industry has evolved to process wood that historically had no alternative use. Over the past 5 years, standing timber prices have increased by 59%. As subsidised timber buyers enter the market, the wood processors are being priced out. Continued subsidy support for burning wood will ultimately see wood processors displaced. Wood is a finite resource: annual UK wood harvest is around 10m tonnes. Forecasts show that production of softwood will peak in 2020 at about 11.45m tonnes before declining. The UK cannot meet the projected demand for biomass feedstocks domestically. This level of demand, replicated across Europe, would seriously impact forest industries EU-wide. The Adam Smith Institute has shown that there is not enough biomass to burn and the UK will only be able to meet its demands for imported biomass feedstocks if other countries do not pursue bioenergy policies. We recommend that all EU nations remove subsidy for biomass electricity plant, and subsidise only the most efficient forms of CHP, to ensure that biomass generation expands to a scale appropriate for the available feedstock supply.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop	Yes, with EU-wide benchmark values for support level per

common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

The WPIF believes that the United Kingdom Renewables Obligation, as currently applied to biomass, is a blunt instrument which fails to take into account the unique nature of woody biomass as a source of renewable energy. Consequently, the RO is distorting the UK wood market. We would welcome an EU- wide approach to redress this distorting impact, to ensure that no other Member States introduce equally damaging legislation. The WPIF believes that targeting subsidy support at biomass electricity generation is: - Environmentally unsound – processing wood in the forest industries produces significantly less carbon emissions, and locks carbon into wood products - An inefficient use of a valuable resource – electricity-only plants operate at typical efficiency levels of only 30% (compared to c.75% for CHP) - Distorting the wood market and damaging existing green industries - Ignoring the Waste Hierarchy – the RO is encouraging the burning of wood before it has reached the end of its useable life. The WPIF recommends that EU Member States only provide support for the most efficient biomass technology, Combined Heat and Power.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Biomass is a unique energy generation technology amongst renewables but subsidy support for biomass is having a significant distorting impact on the wood market, and locking feedstocks into the energy market and away from wood processors. The AEA Report, commissioned by the UK, considers £6/GJ a “realistic estimate of the level that prices might rise to in the short to medium term”. This represents a biomass feedstock price of £114/odt. This is a realistic estimate but represents a doubling in the cost of wood, meaning the wood panel industry would be unable to compete for timber. The UK wood harvest cannot meet projected demand from biomass energy, be that conversions, co-firing, or dedicated biomass. The UK Government have stated that 90% of this wood will be supplied through imports. This figure is one of necessity not of desire. However, the WPIF expect that at current subsidy levels energy companies will source as much wood as possible from the UK, only switching to imports once domestic supplies have been exhausted. Even if only 10% of the 80-100 tonnes of biomass demand is UK sourced, that would represent the entire UK wood harvest. Subsidies for purchasing biomass, regardless of feedstock type, source, or alternative use, are already distorting wood markets. We recommend that the EU introduces measures to recognise the unique nature of biomass in renewable energy policy, and the impact that subsidies are having on wood processing industries.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk – producers of renewable energy should operate without any aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

Sustainability is of key concern to the UK wood sector, which submits to certification schemes such as FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification). As long term large wood buyers, we believe that biomass generators should be required to adhere to strict sustainability criteria. The WPIF strongly supports the mandatory inclusion of sustainable forestry management practices as part of the sustainability criteria for biomass energy generation. Forests must be carefully managed to prevent net deforestation. It is imperative that the finite woody biomass resource is used effectively. We believe that more attention must be paid to existing users of wood, the industries and processes involved, and the carbon balance of such wood use. We urge the European Commission to assess not only the immediate carbon balance of burning wood for electricity, but also what carbon sequestration is lost by removing that material from the traditional forest industries.

H.1.1. Please explain -open reply-(optional)

Wood panel production releases a fraction of the carbon of biomass energy generation. Per tonne of wood, wood panel production in the UK produces 378kg of CO2. When burning wood for electricity generation this is typically 1,905kg of CO2 per tonne of wood. Displacement of the wood panel industry in the UK (and its contribution to carbon sequestration) by wood fired electricity generation, would see a net increase in CO2 emissions by 6 million tonnes per annum – more than 1% of the UK's reported emissions in 2008. The wood panel industry has been identified by the European Commission as being "exposed to a significant risk of carbon leakage", under the EU ETS and pursuant to Directive 2003/87/EC of the European Parliament. The inclusion of policies which subsidise biomass burning for electricity generation, must take into account the wider environmental damage of doing so, in losing industries which sequestrate carbon in timber products.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of	

cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Janice Fenny, Scottish Land & Estates, Janice.Fenny@scottishlandandestates.co.uk
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, sectoral targets (e.g. electricity, transport, heating and cooling) are appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
It would be beneficial to have targets for individual sectors in order to ensure progress in all areas. An overall target could always be achieved by just one or two sectors but what is really required is development in all sectors.	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
No difference between the sectors.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, all support schemes distort competition to a similar extent

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
The length and complexity of administrative procedures often act as deterrents to potential developers. This can lead to people being put off developing renewables and merely sticking to technologies that they are already familiar with.	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	The approach of the current Directive to lay down a general framework for Member State action is fine

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY

SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
Grid connection issues are regarded by many as being major hold ups to renewable energy developments. Without a grid connection being available there is no chance of a new development coming on line.	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network
D.2.1. Please explain why -open reply-(optional)	
It is essential that the network operator adequately develops the network otherwise the full renewable energy potential of a country / area will not be realised.	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increased availability of storage

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing is appropriate

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Lack of awareness
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing	

energy efficiency in this sector? -open reply-(optional)
The Renewable Heat Incentive scheme in the UK should be used as an example of a scheme already in operation that takes into account both of these factors.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Pace of technology development - Lack of awareness
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	No, the existing binding sustainability criteria are sufficient

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on

electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

It is important that such cooperation is further fostered in order to ensure the successful development of the offshore wind energy industry.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Increased attention should be given to the promotion of these technologies.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

Hydropower – this technology fulfils both requirements of large-scale availability and willingness of industry to engage in public private partnerships.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

While this might seem like a good idea in theory, the reality might be quite different – technology development might take longer than expected and uptake of the technology might be slow.

IDENTIFICATION

	Arthur Wellinger; European Biogas Association; info@european-biogas.eu,

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	wellinger@european-biogas.eu
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	European organisation
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate - Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Mandatory targets for total RES and sectorial RES have been successful and are still needed. Due to long investment cycles, it is important there is a binding overall renewables target now for the time beyond 2020. EBA fully agrees with the discussed goals of 40, 60 and 80% for the years 2030, 2040 and 2050 respectively. The individual requirements are different for RE all sectors. Sectors that show larger emission problem development (especially transport) should receive larger attention in RE policy, including more challenging targets. In these targets, positive impacts on environmental problems should be credited, e.g. the impact of biogas technology in fertilizer recycling (incl. phosphorus) and improvement of local air quality. Of primordial importance is however, that the goals for 2020 remain binding and are not softened as discussed by the Presidency of Denmark.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

There is a need for comprehensive and stable policy and reliable regulatory framework. As the REPAP project showed, non-cost barriers need to be addressed: permitting procedures, grid access, land allocation and administrative issues are still the main bottlenecks for the development of renewable energies. Thus a policy is needed that allows distribution network operators to work better and closer together with renewable plant operators. Currently some parts of regulations (Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009) are not promoting all clean and energy-efficient road transport vehicles. The calculation method (Article 6 for

operational lifetime costs) strongly favours fossil diesel oil fueled vehicles due to higher efficinecy of diesel engine compared to otto engine. Although renewable biogas (biomethane) and renewable hydrogen offer much lower levels of all emission components than diesel oil, such regulation makes purchase of e.g. otto engine based biogas and hydrogen vehicles impossible (even if the fuel is available from the producer for free). The Commission calculation model emphisizes energy efficiency of diesel engine, instead of emphasizing lifetime emissions, as it should do. E.g. in the EU funded Biogasmax project a proper model for evaluating lifetime costs was described (model used in Sweden).

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support is necessary as long as non-renewable energy sources cover a large share of the energy market and fossil fuels (CCS) or nuclear power remain supported by local governments. In addition, financial support is needed to promote environmentally most friendly RE technologies. It should be free for the Member States to tailor their financial support scheme and eventually to decide when a technology is competitive in the national framework and no longer needs the financial support. However, financial support should not only mean direct payments. It also means stable framework conditions, such as in particular grid access: renewable energy should have priority access to the grid in all Member States – otherwise even cost-competitive technologies cannot develop their full potential. Fair framework conditions for all network users without distortive fees are needed (exemption from duties and taxes, e.g. biomethane or biomethane mixes with natural gas) for the injection of energy from renewable sources; or strengthening of binding regulations e.g. like the complete banning of organic waste from landfill (which is already required by a number of countries) and recycling.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

RES support is necessary as long as non-renewable energy sources have large share of the energy markets. The role of state budget based subsidies should be reduced in favor of market based instruments. The German model of a market oriented feed-in tariff system has proven successful and could be utilized in other EU Member States as well. Feed-in tariff (FIT) should be applied to electric power grids, natural gas pipelines and district heating networks as well as fixed duration of the FIT payment. Net metering for RES should be taken into use EU wide. Essential for RES development is seen in increase of fossil fuel taxes and removal of fossil fuel subsidies. As it is proposed in the Report of the European Expert Group on Future Transport Fuels (December 2011) the binding requirements for refueling infrastructure for alternative fuels with the best environmental impacts (such as biogas) should be implemented by each Member States.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

No, but introduction of bandwidth around a weighted average would be helpful

B.6. How do you see the relation between support schemes for renewable energy and the	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits

requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Schemes for supporting centrally produced and/or imported liquid fuels against locally and decentralized production of gaseous fuels.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

In some EU countries small renewable energy plants are faced with same procedures as large power plants holding back the development of distributed energy production. Sometimes it takes years to achieve all relevant permissions to build in eg.: a biogas plant. The IEE BiogasIn project has clearly shown that policy support, administrative hurdles (permission procedures) and lack of financing are equally high burdens for biogas than lack of or low FiT. There is a general lack of credible, independent information for small investors (households and SMEs) that can benefit from small renewables installed locally. In many EU-countries the available training courses are too few to cover the raising demand for qualified installers of RES systems. In some Member States certain RES transport technologies are denied motor vehicle type approval. This is the case e.g. of dual-fuel biogas tractors and cars. In Example: A well performing agricultural biogas tractor prototype has been produced, but commercial production cannot begin due to this administrative barrier. In case of biomethane injection into the gas grid, there are specifications in only very few countries.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Priority access needs to be maintained after 2020 and grid connection rules also need to be made more transparent for renewables. Grid update costs should be shared by the large power plant developer and the distribution system operator (DSO). The majority of cost should be beard by the grid operator because a small scale RES operator cannot take the burden to co-finance long delayed electricity grid improvements.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

For Europe's new energy supply system, increasing the availability of demand response such as smart grids is very relevant for decentralized renewables plants. Some Back-up capacity is certainly needed, but it should not come from fossil but from renewable sources. Some kinds of renewable energies, e.g. Biogas could be applied for balancing due to a high flexibility and availability within the whole day or even over several days when injected into the natural gas transportation grid.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand
-open reply-(optional)

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)

It is not only the financial support that hurdles development of renewable heating and cooling, but a whole package of obstacles. Member States need to be encouraged to become more proactive and to learn how to develop systems that work for their markets and consumers. Furthermore national or regional support schemes in the heating sector e.g. financial support for housing construction (reduction of energy consumption) and covering the remaining heat by renewables should be treated like Siamese twins and

correspondingly supported. This should not be restricted to pure renewables. For example, a mixture of 60% biomethane and 40% natural gas (based on the existing gas mains) CO2 emissions will be significantly reduced as well as heat from a co-fired combustion plant. In such cases financial incentives should be given for the renewable part, i.e. the ampunt of CO2eq reduction.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

In biomass and geothermal heating, clear priority should be given to CHP use in all plant sizes.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure - Lack of awareness - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

Others: all transport fuels from renewable energy should at least be exempt of mineral oil and CO2 tax. If the energy tax (dominating the CO2 tax) is introduced as proposed then the renewables should also be exempt of energy tax. With the addition of biomethane to natural gas in the order of 20% and up 20% and the common use as a fuel in the transport sector the environmental impact will be reduced significantly because biogas belongs to the CO2-neutral energy sources. In the case of organic waste used as feedstock for the production of biogas, the greenhouse gas balance will be further improved because the greenhouse gas reductions will be double-weighted towards the European10% target. Bio-CNG and liquid biomethane (LBG) are effective solution for sustainable reducing emissions from road transport. The infrastructure needs some support e.g. for the installation of fuelling stations. Investment incentives for investment in production and upgrading facilities of biomethane (the treatment of biogas to natural gas quality) and grid injection are necessary unless reasonably high gas feed-in tariffs are created .

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail - Water

G.2.1. Please explain your answer -open reply-(optional)

It is technically easy to move all transport sectors into sustainable RES based. E.g. waste based biogas (BG) and synthetic biogas (SBG) is suitable for all transport sectors and all engine types used in transport. Combined with wind and solar methane, the sustainable RES based methane resource can cover a substantial amount (> 20%) of today's transport energy needs. Exception is the airborne transport where definitively drop in fuels are recommended.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

But please, restrain from shaky iLUCs!

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient	No (please specify how they should be amended or which elements added)

to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	

Please specify how they should be amended or which elements added -open reply-(optional)

More focus on transfer of best practices from Member States and local administrations.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

Climate change is the global problem; therefore renewables development should be emphasized globally. Biomass as one of the important RES is already today a commodity and will increase in volume also for the merit of developing countries

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

The target to stimulate solar from the south and wind from the north is wrong as a general rule. In priority local energy production and consumption has to be stimulated avoiding heavy electricity transport and massive needs for balancing energy. To some extend exchange of electricity is favorable but only as an additional measure. The goal should not be to satisfy the old strong electricity companies but to optimize technically and financially the entire energy network.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

EU shouldn`t enter into agreements and impose them on their Member States.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Potential of solar and wind power from third countries, like in Africa is large. However, cost of grid infrastructure from there to the EU makes it highly unattractive against national increase of distributed RES. Such a partnership could make sense for developing RE in that area for use in that area, not for export to the EU. RES transfer, cooperation in RES support policies, demonstration projects, training and capacity building

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Yes. benefits: Potentially large share of EU power consumption could be covered by environmentally especially benign way. experience could be generalised and applied elsewhere: Yes, e.g. Barents sea, Baltic sea, North Africa.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	System integration

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Crediting multiple environmental and social benefits, e.g. biogas technology has a very large potential for integrated solution of many environmental (both local and global) and social problems, but its diffusion has been very slow because financing decisions tend to focus on single issues ignoring the broader picture.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

The future energy system will have to be based on a broad mix of various renewable energy technologies and sources, especially on smaller and decentralized plants. Since there are so many differences in the market conditions in the Member States, prioritizing at the EU makes no sense. However, there should be focus given to the sector producing highest GHG emissions, thus a transport sector.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

The existing measures caused some progress in the renewables sector, but support for fossil and nuclear energy still continues and lowers the competitiveness of renewables.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

No. Development decisions should be based on the potential of proposed technology for reducing environmental problems.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Juha Lindholm, Paikallisvoima ry (Local Power Association)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-	Finland

(optional)	
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Paikallisvoima regards all measures aiming to facilitate RES investments as necessary. The possibilities of local and regional energy companies to invest in RES should be taken specifically into account. These companies are in the frontline in advancing the spread of renewable energy because of the geographically diffuse nature of renewable energy production. Sectoral targets would be conflicting with each other.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Better financing possibilities

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

EU should consider drawing up guidelines for the renewable support schemes principles. In the first place it is most important to find common rules for how to build up support schemes and only after that discuss the possible harmonisation of support scheme levels. Harmonisation of support schemes should be done first in groups of countries which belong to the same power markets. The length of the support scheme's history or support provisions structure does not matter if the energy sector companies can rely on the support scheme stability. Without consistency in support schemes energy companies will not have the courage to invest in RES. A good example of the problems caused by inconsistent support scheme policy is the reform of woodchips' support scheme in Finland. The profitability of investments in power plants producing energy by combusting woodchips will decrease remarkably if the planned change to reduce the support level will take place in 2012. Some planned investments will be canceled and the objective to increase the share of renewables in the Finnish energy mix will be weakened. The support provision structures might work better if they were fixed rates over time. Again, it's a question of consistency. If the rates are variable over time, the variation should be predictable in order to eliminate surprises in the companies operational environment. In the long run the choice between different energy production technologies should be market-based.

Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)
Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)	
Please read the comment on B.2.	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
-	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States
Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other) -open reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)
Please specify which support schemes you consider most distorting -open reply-(optional)	
It is important that all the electricity in the market has a level playing-field. There should be no differing markets for renewable electricity. The price of electricity should be market-based.	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
There has been numerous problems in licensing wind farms in Finland because of co-operation and coordination problems between Finnish authorities (military, state and aviation authorities). In the future, small-scale generation of biofuels might become non-profitable	

due to heavy reporting and licensing procedures. For example, what is a “batch” in biofuels? A truckload?

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	The approach of the current Directive to lay down a general framework for Member State action is fine

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Balancing rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Grid connection rules can facilitate or hinder the development of RES. Thus, they should be harmonized in the long run. Differences in e.g. balancing may make it harder to develop renewable energy, so these factors need to considered also in addition to non-harmonised support schemes.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Accelerate infrastructure development and interconnection

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of public support

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Every Member State should have a possibility to make use of their biomass as long as it is sustainable. Thus, Finland has to be able to use peat at least for the amount that is renewed every year.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Paikallisvoima would like to point out that peat should be classified as a slowly renewable biomass fuel. The sustainability criteria should focus on the renewal of peat: using less peat than what is renewed every year should be considered as renewable energy use. Using more peat than is renewed every year could be considered as using fossil fuel.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area?	

-single choice reply-(optional)

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives?
-multiple choices reply-(optional)

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the	Anders Dahlbeck, ActionAid International, anders.dahlbeck@actionaid.org

name of the organisation you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	European organisation
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

- Yes, a mandatory target at EU level is appropriate but with the following provisons - Renewable energy targets need to be reviewed periodically in line with evidence of the expected and actual social and environmental impacts of these targets, and reflecting latest scientific evidence. - Renewable energy targets should be accompanied by targets to reduce energy consumption through for example, energy efficiency. - Renewable energy targets should also be accompanied by GHG savings targets. All current and future feedstocksshould be assessed, against the latest scientific evidence, for their GHG balance across their life cycle, and should include land use change. In the absence of scientific certainty, the precautionary principle should be applied. - Renewable energy policy, including bioenergy, must – as set out in Article 208 of the Lisbon Treaty - be consistent with other Union policies, including those relating to international development and poverty reduction (policy coherence for development). - Importantly, biofuels should not be encouraged through sector specific energy targets, such as the 10% renewable energy in transport target in the RED. Fuel policy in the transport is rightly governed by the performance-based, technology-neutral Fuel Quality Directive. This drives innovation towards the fuels that deliver the most carbon savings at the lowest cost.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	N/A
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a	

cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
Support to renewable must be seen together with reductions in energy demand and the waste management hierarchy which prioritises prevention, then reuse, recycling/composting above energy recovery. There is a requirement for member states to increase energy efficiency and reduce food waste for example, but these must be industry-led (ie, more fuel efficient vehicles), rather than necessarily funded through the public purse. Thereafter, ActionAid would support bioenergy policies and subsidies that deliver public goods; subsidies should be restricted to domestic feed stocks that deliver the greatest greenhouse savings and other clear environmental and social benefits (ie jobs), have few if any indirect negative impacts and would otherwise be disposed of.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	
D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES	
D.1. Do you consider that any of the following national rules and framework conditions will still	

create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Overall, it is important for available sustainable bioenergy to only be diverted to where it is best employed, i.e. offering greatest energy conversion and GHG savings and minimum negative impacts. Regardless of the sector, policies should be put in place to support this goal.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

The form of renewable energy most readily available and accessible to the transport sector has been bioliquid, and it is for this reason that the Member States in the NREAPs indicated intentions to meet the 10% transport target almost entirely through biofuels. There is however very strong and compelling evidence of negative social and environmental impacts of industrialbiofuels, including an overall increase of GHG emissions equivalent to putting as much as another 29 million cars on the EU's roads. Thus, in reality there is only a very small amount of truly sustainable biofuels (i.e. those produced locally and using genuine waste) available, compared to the amount needed to meet the 10% target. The further uptake of biofuels in the transport sector is therefore coming under intense scrutiny. The 'false miracle' promised by proponents of biofuels has effectively diverted attention and energy away from developing 'real' renewables for the sector. A clear policy on industrial biofuels, including removal of the 10% target and proper regulation of industrial biofuels, would serve to focus efforts on truly sustainable renewable transport energy solutions.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

It would be best for the EC to address current issues with sustainability criteria. The current criteria cannot guarantee the sustainability of bioenergy because: - Social issues are not even covered -There are no criteria in relation to food security, access to land and water, human rights, and right to free prior and informed consent of local communities in developing countries. Even if people are displaced by a biofuels plantation, against their wishes, the company is entirely within its rights to export feedstocks or biofuels to the EU. - Verification processes are not sufficiently robust – It is down to the company to prove the previous land use of the plantation; there are no guarantees that site-visits will be made by independent auditors in advance of a plantation being established. - Environmental criteria are inadequate. Impacts on soil and water levels are not considered. - Damage can take place even if the final product is not eligible for the EU market – valuable habitats can be destroyed and vulnerable people impacted as a result of companies investing in products they hope can be supplied to the EU market even if sustainability standards eventually prevent the biofuel product entering the EU. Under these circumstances, there is a place for some sort of sustainability criteria but these would have to be overhauled and strengthened, addressing social issues, extending to all forms of bioenergy, (i.e. biomass) and ensuring much stronger verification systems.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in	

some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

The consultation document itself highlights a major gap in developing and rolling out renewable energy technologies: its failure to fully address the social and international development dimensions. Measures need to be put in place to ensure that renewable technologies are developed and tested within the context also of poverty reduction and social sustainability. Where technologies have or risk having significant negative social, development and environmental impacts, as is the case for most industrial biofuels, they should not be developed for commercialisation.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-

(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	NORWEA (Norwegian Wind Energy Association), Contact: galaaen@norwea.no
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Other (please specify)
Which other country? -open reply-(optional)	Norway
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
Renewables play an important role in the decarbonization scenarios described in the Energy Roadmap 2050, and it is at least presently unclear whether GHG targets alone will be sufficient to yield the necessary increase in European RES-E production. Renewables targets have already proven to be highly successful in boosting production and technology development and reducing GHG-emissions while ensuring competitiveness and security of supply, thus also making the reductions more politically viable. Furthermore, a renewables target post 2020 will strengthen investor confidence also in the 2020-perspective. This is likely to apply for instance to investments and project development the Swedish-Norwegian joint certificate market.	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Other (please specify)

Please specify which other policy elements? -open reply-(optional)	
Removal of duties and non-tariff barriers that hinder utilization of necessary RES-technologies.	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)
Please specify which technologies/circumstances/markets -open reply-(optional)	
Even though at least the more mature RES-technologies are already increasing their competitiveness, the possibility of inter alia continued market failures makes it likely that support mechanisms will continue to be necessary post 2020. However, at least for the more mature technologies, such as onshore wind power, a shift towards market-oriented schemes will increase competition and reduce costs. (See B.2. below)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes
Please specify how to make support schemes more market-oriented -open reply-(optional)	
The Swedish-Norwegian certificate scheme provides one example of voluntary cost-efficient cooperation between two countries. This demonstrates that a certain degree of cost-efficient harmonization of schemes can arise "bottom-up" from the initiatives of two countries. In this case the cost-efficiency arises in part because RES-E producers have to respond to two market prices (the electricity price and the certificate price). Increased market responsiveness, and voluntary cooperation, could quite generally be key to reaching renewables targets in a cost-efficient manner.	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to	

administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area?
-single choice reply-(optional)

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives?
-multiple choices reply-(optional)

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Quercus - Associação Nacional de Conservação da Natureza
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Portugal
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

We support an ambitious renewable target set at the EU level combined with a drive for energy efficiency. However, we ssupport the structure of targets to be drastically changed for 2 reasons.The current setup lumps all renewables in one target, and sets one specific sectoral target (transport). This is leading to the situation that stronger sustainability criteria for bioenergy, including for example ILUC from biofuels are seen as a barrier to hitting 2020 targets, thereby threatening to derail the entire renewables policy, including solar and wind. Additionally, the current setup leads to bioenergy often crowding out other renewables because often it is the (economically and politically) 'easiest' compliance option to reach renewables targets. Given the rapidly evolving science and practice surrounding bioenergy sustainability, this interdependence between bioenergy and other renewables (or between 'carbon-based' and 'carbon free' renewables) needs to be ended as soon as possible. One straightforward way of achieving this is by decoupling policies for bioenergy and other renewables. Therefore we suggest that post 2020 strategy for renewable energy should consist of two laws instead of one: a specific directive on bioenergy that would include targets, sustainability criteria and carbon accounting rules, and a target for non-bioenergy renewables. That way bioenergy policy could be reviewed without changing targets of support for wind, solar and other carbon-free renewables.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

We suggest 2 separate laws: one on bioenergy (targets, criteria, carbon accounting), one on non-bioenergy renewables. The zero rating for bioenergy should also be ended in the ETS and in the carbon part of the energy taxation directive. We insist that the energy target for transport (currently 10% for 2020) should be scrapped so that fuels policy in transport is governed by the performance-based, technology-neutral Fuel Quality Directive. This would drive innovation towards the fuels that deliver the most carbon savings at the lowest cost and would also put an end to the confusing situation, where two directives govern the same issue. The EU should also abolish subsidies to non-renewables and ensure that subsidies go only to renewables that perform better than fossil fuels, for example by incorporating ILUC factors in the GHG calculation of biofuels. The EU must also internalise external costs of fossil fuels by introducing robust carbon taxation, strengthen the ETS and pricing. Market rules and grid access and development should remove the historical bias that favours centralised and inflexible power generation. The EU should try to ensure that electric cars run on renewable energy, so that electric car sales increase demand for renewable instead of fossil electricity. A strong regulatory framework for energy efficiency, including ambitious and legally binding targets, can facilitate the uptake of renewable energy and reduce the cost of energy supply.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

As environmental NGO we are primarily concerned about policies for renewables in transport. We oppose subsidies to biofuels; if governments set biofuel blending targets, they should do so by mandates, so that the motorists and not the general taxpayer will foot the bill. Taxation of liquid transport fuels is the first-best tool to improve the competitiveness of renewable electricity as a transport fuel. The EU also put in place smart metering of electricity consumption in electric cars, in order to maintain taxation for road transport users and to enable potential tax reductions for the use of renewable electricity.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Open up national support schemes to cross-border projects

Please specify how to make support schemes more market-oriented -open reply-(optional)

Some convergence of national support schemes would encourage investment where the resource is best and where suitable sites are available, rather than where the subsidies are most attractive. That means more output per solar panel or wind turbines, which means lower overall investment. This is more cost-effective, and with adequate strategic planning could also reduce ecological impacts overall. However Member States must be able to provide adequate support to stimulate investments in specific sectors, given their local circumstances. It is important to avoid a situation where all investment is concentrated in places where the resource (sunshine, wind) is best. This would increase cumulative environmental impacts and the necessity for grid expansion. Convergence should also ensure that national support schemes are linked to the same (interpretation of the) high standards of sustainability and actually deliver the emission reductions that the policy is meant to deliver. Usually feed-in tariffs have proven most effective – they give investors greatest confidence. There should be a requirement to move to FiTs unless Member States can demonstrate that other systems (e.g. quotas) are working well. However, while the level of support should converge, the structure of financial support schemes should be retained wherever they are working well to stimulate investment – it is better not to create instability and uncertainty by changing successful support schemes.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	N/A
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
Despite the different nature of the sector, important overlaps have to be considered. Biomass is a fuel that can be used in all different sectors, and since the available sustainable biomass resources are limited. Sectoral targets that we have at the moment are driving the use of unsustainable biofuels in the transport sector to meet the target. The guiding principle for the use of biomass should be efficiency, sustainability and GHG savings on the 20 year time scale. Overlaps also exist, as electricity will increasingly be required for electric vehicles in the transport sector, and to some extent also for geothermal heating. Support policies should encourage the mutual support of these sectors, e.g. by encouraging smart charging and smart metering of electric vehicles to fulfil a balancing function for renewable electricity.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Other (please specify)
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
Grid system operation and arrangements are currently still guided by the characteristics of a thermal-power based and centralised electricity system. Grid connection rules and grid codes have been developed to accommodate the requirements and abilities of fossil-fuel based and nuclear power stations. Renewables have different qualities and require different rules. Cost-sharing rules are often intransparent and responsibilities are not always clear. In some cases, cost-sharing rules are inappropriate if renewable energy suppliers	

have to bear the cost for grid system upgrades. Balancing rules do not sufficiently reflect the capabilities and needs of renewable energy technologies. A stronger focus on intra-day markets and gate closure times closer to real time would improve the integration of renewables. Also, renewable suppliers should be reimbursed for specific system services (ancillary services) they provide. Finally, curtailment decisions are often intransparent and can lead to uncertainty for renewable energy investors, especially if rules for reimbursement are insufficient.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - Other (please specify)

Please specify which other rules -open reply-(optional)

D.2.1. Please explain why -open reply-(optional)

The power grid is a natural monopoly. In the past, the grid system has been developed around centralised power stations, while costs have been socialised. Also today, grid operators have to accommodate the (changing) power supply structure to enable the integration of renewable energy sources. Today's power markets are not fully competitive, and market rules have been defined on the basis of fossil fuel- and nuclear power plants. As long as the electricity system and its rules are not sufficiently flexible to allow for the optimal integration of renewable energy sources, priority grid access and dispatch, as well as obligatory network developments are going to be necessary.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

An increased exposure to price risk for renewables should be implemented in particular for dispatchable renewable energy sources like biomass. But also other renewable energy suppliers, depending on the level of a technology's maturity, should be encouraged to adjust their power output to consumer demand if possible. At the same time, market rules should be adapted to increase the flexibility of the power system. As renewable energy technologies mature, suppliers should increasingly contribute to balancing the electricity system, e.g. through improved predictability and the technology-specific provision of ancillary services.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand
-open reply-(optional)

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of suitable information - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)

The continued high energy consumption of buildings acts as a barrier to an efficient and fully renewable energy based heat supply. As a fist priority, stronger energy efficiency standards and refurbishment programmes should be enforced for both new and existing buildings to promote the combined use of energy efficiency and renewable technologies. Stronger uptake of renewables in heating will in many cases require greater use of wood, and existing 2020 renewable energy targets will begin to push the limits of feasible sustainable wood supply. Effective sustainability standards are urgently needed, alongside targeted measures to increase wood fuel supplies from well-managed forests in the EU. In addition, much of the potential for sustainable and low carbon bioenergy is in waste streams such as: sewage, food waste, agricultural waste and post consumption wood. However, most of those potentially sustainable sources of biomass are dispersed and hence difficult and expensive to bring into the energy market and it won't be possible to tap into them without significant public policy intervention. Some useful policy interventions could be in the improvement and better reinforcement of the waste legislation in order to ensure a full recovery of useful biomass, and public investments in collection and processing.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal - Solar thermal - Other (please specify)

Please specify which other pathways -open reply-(optional)

Replacement of gas and electrical heating, and older inefficient wood-burning appliances, with efficient modern wood stoves can be part of the solution. Biomass CHP can be used, if effective sustainability criteria are in place and GHG balance is ensured through full accounting, taking into consideration both direct and indirect land use change and the carbon debt problem. Heat pumps can be a contribution to efficiency.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

This is a matter of increasing the energy efficiency of buildings themselves and also increasing the efficiency of fuel use in heating appliances. Significant efficiency gains from current biomass use are needed, particularly in households. Stronger incentives and/or regulation are needed to create a rapid switch to efficient biomass stoves for space heating, to replace inefficient open fires and older appliances. This could also have big effects for local air pollution, fuel poverty, fossil fuel import dependence and reducing pressure on overall biomass availability. Sustainability of biomass needs to be ensured.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Pace of technology development - Lack of standards - Lack of infrastructure - Limits of availability of sustainably produced biofuels - Other (please specify)

Please specify which other barriers -open reply-(optional)

One of the main barriers against a stronger uptake of renewables in the transport sector is the availability and the sustainability of biofuels. Current experience with the 10% transport target show that most of it will be met with the lowest cost biofuels, which lead to land use change, increased emissions and wider environmental and social concerns (i.e. water and chemical use). The debate over the inclusion of indirect land use change (ILUC) in the GHG emissions of biofuels has also resulted in the drying of investments in the sector. The experience with volume targets have shown that the emissions savings from these are questionable and that only the cheapest biofuels are promoted by member states, regardless of their sustainability.Therefore volume targets for renewable in transport should be scrapped and replaced by GHG based targets, while ensuring the correct carbon accounting for both fossil fuels and biofuels, including direct and indirect land use change. The Fuel Quality Directive should be one of the key tools for this purpose – also post 2020. Another key tool should be increasing efficiency and demand management by internalising external costs of transport. Electrification is already a workable solution for rail and passenger transport and must be further developed and incentivized, especially promoting the uptake of green electricity. Biofuels can be considered only when they reduce emissions and do not lead to other negative environmental and social impacts.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Rail

G.2.1. Please explain your answer -open reply-(optional)

The reduction of emissions from transport should first and foremost consist of efficiency measures and of pricing signals that incorporate external costs and lead to demand reduction. Aviation and shipping are areas where internalisation is very urgent too, and should not be forgotten. Promotion of alternative transport fuels and infrastructure should be based on their true carbon footprint (including ILUC in the case of biofuels) and not on names. As science shows some biofuels are worse for the climate than fossil fuels and they should not be promoted just because they are considered as renewable. Also biofuels should not be promoted just because some sectors cannot use other alternative fuels. Promotion of biofuels should be based on correct carbon accounting and be part of GHG footprint based targets, such as the ones in the Fuel Quality Directive. In road and rail transport, electrification seems the most viable low carbon solution in the mid and long term perspective. Electrifying transport and building infrastructure has to go hand in hand with the uptake of renewables in the grid. This will lead to truly sustainable and low carbon transport. The best way to promote the uptake of electric cars are ambitious fuel efficiency standards, such as the current 95 g CO2/km in the legislation and further ambitious target of 70 g by 2025.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels - Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

Correct carbon accounting, including emissions from indirect land use change, should be the basis of promotion and the key sustainability criteria for all biofuels. The science has evolved in the last five years and there is a scientific consensus emerging that the solution are ILUC factors. These are not a penalty, but a true incentive to promote low carbon investments and low ILUC biofuels, which are usually more expensive. Correct carbon accounting should also be translated into other EU policies (ETS, energy taxation, etc) and should also apply for fossil fuels. Given the urgency to cut emissions in the short-term, carbon debt from biomass should also be included in the LCA so that that we are not giving equal weight to savings that will only be achieved after many decades. All forms of biomass (fuel, liquid, solid and gaseous) should be subject to sustainability criteria. As we are moving towards a greener economy, we should be aware that the competition for biomaterials and biomass harvesting and the growing pressure on ecosystems. Policies should in the first place put more emphasis on the hierarchy of uses.

H.1.1. Please explain -open reply-(optional)

For sustainability and public acceptability reasons, all forms of renewable energy must cut carbon emissions and also be sustainable in terms of short-term ecological impacts on the ground. Biofuels need additional criteria, most notably to include ILUC, to ensure public

money is no longer used to promote renewables that increase emissions and damage the environment.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

The cooperation mechanisms foreseen in Renewable Energy Directive allow for a wide range of options and allow for sufficient flexibility. Given the level of the 2020 renewables targets, however, most Member States do not see a need to make use of the mechanisms until 2020. With higher renewable energy targets beyond 2020, Member States can be expected to be more inclined to make further use of the cooperation mechanisms. However, the cost-efficiency realisation of Europe's renewable energy potential is not and cannot be driven by a focus on the renewable resources conditions at specific sites only. An appropriate regional spread of renewable energy generation is desirable to facilitate the grid integration of renewables, enable the balancing of supplies and secure the political and public acceptability of renewable energy development. Assuming 'cooperation' means more than trading in green 'credentials', we support European initiatives to stimulate renewable energy production around the world. The EU should actively encourage countries all over the world to decarbonise their energy systems, and there is significant potential for some countries to export renewable electricity into the EU and to third countries. However great care is needed to ensure this really drives decarbonisation and benefits the host countries. Imports must not substitute for EU efforts, nor result in the EU exporting ecological impacts and carbon emissions to third countries.

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

Electricity network investments should generally be targeted towards integrating renewable energy technologies and making the power system more efficient. As a priority, grids should be upgraded to enable the integration of renewable energy supplies within in the EU. While renewable energy imports from North Africa may have a role to play in the future, this will rely on the completion of a strong electricity grid system inside the EU as a precondition and logical first step.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

The EU should focus first on becoming a world leader in clean, sustainable renewable energy production, aiming to meet or exceed its own needs domestically. Stimulating investments outside the EU that contribute to additional cuts in global emissions and benefit host countries and protect their natural environments should be the priority.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the

North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Other (please specify)

Please specify which other key challenges
-open reply-(optional)

For the sake of an effective European climate policy, serious research and support for sustainable forms of technology that bring down emissions with the lowest possible impact on the environment, is crucial. Sustainability consideration should be central to the SET plan. Low carbon technologies should be stimulated in their development and wide scale deployment if their overall sustainability can be ensured. Two issues should be looked at: (i) direct land use impacts - the avoidance of land use impact or the potential to limit this land use impact through proper planning should be put forward; (ii) GHG accounting: further research is needed on the full carbon cycle of renewables - minimizing indirect land use change and carbon debt should be key areas of research.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

The EU should be a frontrunner on the full understanding of the life cycle of renewable energy forms. Therefore, it should develop policies that properly incorporate the full carbon accounting for all forms of energy and finance research into technologies and management practices that avoid negative impacts. Specific attention should be given to direct and indirect land use change and carbon debt of different bioenergy forms.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

Quercus as a NGO favours technologies that deliver decarbonisation with the lowest possible impacts on the environment. These should be the main criteria to determine which additional measures and/or instruments should be developed.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

Assistance should be directed in an intelligent way to enable energy system-wide decarbonisation to 2050, while at the same time ensuring that subsidies for fossil fuels and dirty energies are phased out and that external costs are incorporated in the prices paid by the users of energy and transport. It will need to be tailored to the specific stage of development of the technologies in question, based on assessment of future potential as well as short term delivery and contribution to decarbonisation.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Eric Birksten, Swedish Wind Energy Association, eb@svenskvindenergi.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Sweden
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Since 1997 the EU has had a successful RES policy which has enabled significant progress towards the EU's objectives of reducing GHG emissions, ensuring security of supply and improving EU competitiveness while creating global leaders in renewable technology. Ambitious targets are at the core of the EU's policies to promote RES energy, and are vital for making the transition from a fuel importing EU to a technology exporting one. RES targets are the proven approach to develop a broad range of technologies reducing GHGs and should be continued to 2030. The EEA concluded in 2011 that reductions in 2009 GHG emissions was due to the recession and "sustained strong growth in renewable energy". 2050 is only one investment cycle away in the power sector. Due to the long lifetime of fossil fuel power plants, to avoid a costly emissions lock-in, no new carbonemitting power plant should be built after 2015. The most effective way to avoid this would be an ambitious 2030 RES target, supported by a sufficiently flexible EPS and sufficiently stringent ETS ensuring the polluter pays. Coal and gas will only have a role in a 2050 timeframe if CCS is commercialised and competitive, which is unlikely to happen before 2030, if ever. That makes promoting a broad range of renewable energy technologies, infrastructure and energy efficiency the three no-regret energy policy options for Europe. Wind power offers additional environmental benefits, compared to conventional fossil and nuclear plants.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public

	procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

- a properly functioning ETS - Policies to internalise external cost of non-GHG pollutants such as NOx, SOx and f ly-ash - Of fensive trade policies to open non-EU markets to allow European companies to participate in those markets f ree of restrcitive trade policies - an Emissions Performance Standard - creation of an EU-w ide w ell functioning electrciity market - A successful renew able energy f ramew ork requires ef fective policies to remove barriers to grids access and barriers in the form of administrative procedures, w hile encouraging public support.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes

Please specify how to make support schemes more market-oriented -open reply-(optional)

An ambitious, yet credible, long term RES target of 45%, supplemented by legislation on grid access, planning, intermediate targets, overseen by the European Commission, is critical to ensure that the industry can develop a sustainable economic model and business case going forward. RES financial support mechanisms should be designed to deliver more convergence, or made more compatible, as well as being highly effective and adapted to technology diversity and maturity. If “more market oriented” means responding to price signals, support mechanisms should be increasingly exposed and should encourage greater market responsiveness as RES technologies mature and penetration levels increase. In a well-designed and functioning market, producers should take an active part in making the market as efficient as possible, as is increasingly the case with wind energy in Denmark, Spain and Germany. RES cannot and should not be seen in isolation from the rest of the power market, but it must be recognised – as it is in the introduction to this consultation – that renewable energy support mechanisms are “necessary due to a number of market failures and imperfections”. If these market failures could be addressed effectively, the need for support to newer, cleaner and smarter renewable energy technologies would significantly decrease. Market compatibility is not only something to aim for when it comes to mature renewable energy technologies – it should be an aim for the entire European power

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

The objective of the wind energy sector is to be competitive in a future level playing-field fully liberalised electricity market, and to deliver the benefits of wind energy in the most cost-effective way. The industry is committed to bringing down the cost of wind energy and already has a positive track record in this respect, namely thanks to continuous R&D efforts. The trend toward larger and more cost-efficient turbines has led to a significant decrease in the costs of wind power onshore while increasing full load hours, turbine life time as well as improving grid stability. In addition, economies of scale – driven by stable investment frameworks in the European

markets - and improved concepts for transportation, operations and maintenance will play a major role in making wind energy more competitive towards 2020 and beyond. The success of onshore wind in bringing down costs will be replicated offshore in the coming years unlocking the exploitation of Europe's largest indigenous and eternal energy source. In comparison with other power generating technologies, particularly nuclear and fossil fuels, onshore wind energy is rapidly improving its competitiveness and is the lowest cost zero-carbon technology available. Lowering and eliminating barriers to RES deployment and long-term, stable investment conditions reduces risk and costs and therefore the need for support.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of credible and certified training and qualification

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

The main issue with administrative procedures is not so much definitive refusals, but the lack of binding deadlines, delays and lack of clarity and guidance in the procedures. Based on our WindBarriers survey, the average administrative lead time in the EU is 42.32 months for onshore wind energy projects, and ranges from 18.06 months to 58.03 months. The EU average for grid connection lead time is 25.8 months for onshore projects, and ranges from 2 months 46.6 months. The average total lead time in the EU is 54.8 months for onshore wind energy projects, and ranges from 25.88 months to 76.08 months. These lead times act as a serious impediment to the development of wind projects in the EU. But this is also the case for the lack of harmonised rules for grid codes. The way in which grid code requirements for wind power in Europe have developed has resulted in gross inefficiencies and additional costs for consumers, manufacturers and wind farm developers. Currently the European wind industry has to contend with a high degree of diversity in technical requirements in more than 30 differing National Grid Codes from a variety of countries. These requirements are often not sufficiently clear and are not always technically justified nor economically sound from the point of view of the power system. Such a diverse range of requirements drives up costs. Finally, in most Member States, there is a lack of certified experts and of trained civil servants to handle the expected applications

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Whether the above mentioned items still play a major role after 2020 depends on how EU legislation (RES Directive and 3rd Liberalisation Package) is implemented and applied in MS. It can be expected that grid connection requirements will still create problems by that timeframe as the ambiguity and diversity of grid connection requirements for RES does not seem to be properly tackled by the current Network Code on grid connection nor at national level by the TSOs. EWEA has proposed a “structural harmonisation of grid connection requirements”, which we see as one of the essential preconditions to achieving high penetration levels of wind power in the most cost-effective way, with due regard to power system stability. With regards to balancing and curtailment regimes, best operation practices between TSOs must be further developed and properly shared at a European level. The dedicated RES Control Centre CECRE in Spain is a good example: as well as relying on the most sophisticated forecast tools for wind power generation which help minimising the need of curtailments, the centre allows for reduced imbalances and a cost-efficient operation of the power system with high shares of variable RES like wind. It is well documented that pooling of generation units and shorter gate-closure times have significant system cost-reduction effects.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?

-open reply-(optional)

Swedish Wind Energy grees that RES should respond to market price signals but is concerned that the premise of the question seems to imply that this is not the case today. Making all RES respond to market price signals at all times won’t alter the decision for RES-E producers to produce or not, to any detectable degree. This ideological battle would change little in the merit-order: apart from extreme cases of negative prices, producers of RES electricity will always feed into the grid because fuel and carbon costs are zero, i.e. there is nothing to save from disconnecting your power plant. After 2020 RES producers will certainly be exposed to balancing responsibility towards TSOs. The extent to which wind farm operators can be in balance is affected by 3 factors: functioning and liquidity of wholesale markets, cross-border interconnectivity and forecast horizon. In future regimes where balancing costs must be borne by wind farm operators, regulators should ensure that these costs are transparent, representing only the real cost of balancing. The characteristic load variations, the pattern of demand compared with wind power variations, the operational routines of the power system (eg gate-closure

times) and the accuracy, performance and quality of the forecast must be taken into account. RES producers should not bear the costs of system operation and maintenance. That has never been the case in history and there is no reason why this should change in the future in the future	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand) - Current market arrangements are sufficient to reward flexibility
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
Only investments which meet the key feature of flexibility will remain commercially sound investments in the future. The business case for slow-ramping, inflexible power plants will continue to decrease as increased price fluctuations and lower average spot market prices will continue to dampen investors' appetite in such assets. But flexible power plants where investments can be recovered in a more variable system over fewer running hours, e.g. gas power plants, will remain. Besides that enhanced market integration and a bigger market place in general will help alleviate economically unsustainable price variability, such as negative prices or excessive price peaks. This should allow for energy-only market mechanisms to continue being a sustainable market form where investors can recuperate their capital costs for the foreseeable future. Secondly, it would avoid externalities (eg free riders) and additional market distortions with capacity payments. Any market arrangement to enhance flexibility must be technology neutral and should leave it to the market price signal to determine whether power generation (supply), the demand side or storage technology provides the flexibility. To ensure investor's interest in power generation and tackle a potential "missing money" problem in the energy sector, a less market-distortive solution capacity markets could be provided by new market forms like for ancillary services where all generators, including renewables could participate.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity
F. RENEWABLES IN HEATING AND COOLING	
F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	
G. RENEWABLES IN TRANSPORT	
G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing	

the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

There should be a careful approach when assisting infrastructure projects outside the EU. Project support for transmission infrastructure between the EU Member States and third countries should be provided only with a clear added value for the European energy market. This is even more true for projects within EU Member States to facilitate imports of externally produced electricity. Indeed, these must be assessed in view of the vast and mostly still untapped wind and solar resources, as well as the very inefficient and insufficient conditions of electricity infrastructure networks, within the European Union.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What

benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

The EU has renewable and climate targets for 2020 and the SET-Plan focuses on the development of selected number of technologies to address that. The Commission’s Energy Roadmap 2050 highlights that wind energy is the key electricity generating technology in all scenarios in 2050. Since the 1st EU research framework programme in 1983 wind energy received about €350 million, compared with more than €12 billion for nuclear research. The Horizon 2020 proposal is also far from enough to fund non-nuclear SET-Plan technologies. The first and foremost issues therefore are clear European commitments in terms of regulatory stability post-2020 and financial support for research and innovation activities. The EU should develop the following measures: - An EU programme similar to the SET-Plan for the post-2020. - Creation of a dedicated individual budget lines to address the public funding support for the development of the R&D activities of the key energy technologies, in particular wind energy. This would allow industrial initiatives to prioritise their implementation actions according to their different maturity levels, it would help avoiding competing priorities, would stimulate individual industries to actively participate and to co-finance and would improve transparency and accelerate the process towards concrete results. - Greater Involvement of the EIB and other public banks. - Optimised and stable national support schemes which are important in development of energy technologies

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please	EDF Polska:Thierry Deschaux Thierry.deschaux@edf.pl , Stanisław Błach Stanislaw.Blach@edf.pl.

include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Poland
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)
Generation from RES is today more costly than conventional generation but in the long run in a context of rising carbon prices it can be expected to be competitive. If an adequate carbon price signal is sent in the long run binding volume targets should not be necessary. However it makes sense today to subsidize the development of some renewable technologies

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)
Support mechanisms should be cost-efficient in order to minimise the impact on energy bills of consumers, households and companies. This is why Emerging technologies should be supported at R&D stage. Regarding more advanced technologies which are subsidized at production stage, revisable cost-efficient mechanisms are preferable.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)	
When RES production goal are achieved, it makes sense to subsidize renewable technologies which have not yet reached competitiveness but are expected to do so. Subsidies have to be phased out when they have gone down their learning curve, and have reached parity with conventional generation.	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
Yes, the efficiency of the same RES could be different for each application and the competition with carbon fuels also.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	The approach of the current Directive to lay down a general framework for Member State action is fine
D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES	
D.1. Do you consider that any of the following national rules and framework conditions will still	Balancing rules

create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
According to the European Commission Energy Roadmap intermittent generation is likely to have a very high market-share, and to be in the market since it is expected to become competitive. In this perspective priority of dispatch, which would trigger costly decisions contrary to the merit order principle, is clearly unsustainable. Networks should be developed on the basis of cost-benefit analyses. The impact of intermittent generation on distribution networks should be controlled.	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority dispatch and obligation on TSO to counteract curtailment
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs
E. MARKET INTEGRATION	
E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should bear greater responsibility for system costs - Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	N/A
F. RENEWABLES IN HEATING AND COOLING	
F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of awareness - Lack of suitable information
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	

As they contribute to CO2 reduction emission at reasonable cost, heat consumers should bear a fair part of the costs induced by the development of renewables. The development of renewable heat from biomass (including CHP) and of heat pumps should be incentivised. Awareness campaigns and public support are needed.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Pace of technology development
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

Flexibility mechanisms involving third countries should be developed building upon an assessment of the experience gathered so far, in particular as regards the cost and the impact of these mechanisms for the Internal Market. Removing the constraint of mandatory physical import should be considered

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Sune Strøm, sst@windpower.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Denmark
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Mandatory targets ensures confidence among investors in all parts of the value chain for RES-technologies and thus reducing the risk premium and the overall price for RES-development. The more RES-production the less risk of fuel supply challenges and less dependency on fluctuating fossil fuel prices.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Onshore wind will reach grid parity on good wind spots from 2020 and onwards due to the continuously improvement of the technology. Grid parity for both onshore and offshore wind can be realised earlier if: Support to non-RES are removed, physical and economic integration of a EU-wide power market for electricity and planning barriers for both new wind farms and grid are handled.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Open up national support schemes to cross-border projects - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

This can be done by using more power market based remuneration e.g. Feed-in-Premium and give no support, when the spot price on the market is negative. Convergence can be obtained by using the same support mechanism for the same technology. In Denmark the Government have introduce a ceiling for the sum of the market price and premium. If the market price exceeds a certain level, the level of premium will be cut, and if the market price exceeds the ceiling, they will be no support at all. This system ensures a kind of market based exit from the support scheme.

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

Both onshore and offshore wind will have decreasing need for support schemes due to technological development and thus lowering cost of energy. Grid parity for both onshore and offshore wind can be realised earlier if: support to non-RES are removed, physical and economic integration of a EU-wide power market for electricity and planning barriers for both new wind farms and grid are handled.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

In principle it will be efficient to have more aligned financial support in the EU, but for wind farms the wind resource differs substantially from site to site. Therefore as long as the production facilities have to spread out geographically the financial support has to be sufficient flexible to handle local desires to fulfil local RES-production.

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Electricity has to be the main power carrier and thus be the power input to all of the above mentioned sectors heating, cooling and transport. Heating, cooling and transport do all have a great potential for flexible consumption by using hot/cold water thermal stocks and batteries in EV's. District heating/cooling systems will enhance the socio economic benefits and flexibility potential compared to individual heating/cooling systems, at least in cities with a high concentration of residential, shopping and office areas. Electricity as the main energy carrier will ease the integration of wind, ensure higher energy efficiency and easier substitution/fuel switching in the power sector.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)

-open reply-(optional)

Use the cooperation mechanisms to perform a kind of market for certificates to fulfil the national targets in a cost efficient way.

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

All kinds of support mechanism where the market price is not a component of the overall remuneration will distort the competition on the power market. Feed-in-tariffs are e.g. distorting especially when it is also paid for production delivered, when the market price is below zero.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

In Denmark the process of obtaining the needed consents is constraint by the lack of deadlines in the administrative process. Throughout EU there is a widespread range of barriers representing all the above mentioned constraints.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

Focus on the individual consent processes in each country – use a LEAN-approach or alike to go through the process. Define needed material and not needed, in order keep focus on the important issues in the process. Use one-stop-shop and enhance inter-authority cooperation. Establish groups in each needed authority who has the competences and training in solving the planning issues. Centralize, if needed, some of the competences and let decentralized organisations require assistance from the central authorities when needed. Implement deadlines in all parts of the process, both the internal and external parts. Share knowledge by e.g. making already conducted environmental studies accessible for other stakeholders.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Cost-sharing rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

In Denmark the overall framework does not create significantly obstacles except for cost-sharing rules when the grid has to be enhanced on higher voltage level. But this can be solved by increased cooperation and accept of investing before all the expected wind farms are 100 % decided.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network

D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
Flexible consumption solutions in bigger scale such as boilers and heat pumps in district heating systems, cold stores and alike. For small scale consumers it is important with a framework that ensures a financial incentive to be flexible.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Electrification together with higher share of renewables in electricity production
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Rail

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

If there is made agreements with third party countries and the EU-zone will benefit from direct connections, the infrastructure should be adjusted to higher transportation levels.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the

North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

The NSCOGI should på promoted as it has the potential of unlocking a large wind resource in the north sea and making it able to develop wind farms at the most economical viable sites independent of national borders. It will also increase security of supply and improve the market function in the connected countries giving the consumers in general a lower price on electricity by removing physical borders for trade of electricity.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Ulf Gerder, Wacker Chemie AG (www.wacker.com)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry

3. Please indicate your country -single choice reply-(optional)	Germany
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

The EU regulatory framework should be designed as to ensure a level playing field for all energy technologies, while at the same time achieving the 2050 decarbonisation agenda agreed by the European Council. In the power sector, this agenda implies much higher share of renewable electricity – more than 50% already in 2030 in all scenarios (Energy Roadmap 2050). This would require major changes in the electricity market, where inadequate framework conditions currently prevent RES from competing on a level playing field. At the same time, further adjustments of the EU ETS will be needed in order to drive investments towards carbon-free generation and make a real difference in the electricity mix. The EU should agree on a legally binding minimum target of at least 45% RES for 2030. The Member States' choice of support mechanisms must not be affected. Such an approach would be in line with the Commissions position in the Energy Roadmap that it is primarily the Member States' responsibility to develop and implement strategies for achieving their RES targets for 2020 and beyond.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Better financing possibilities - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

PV and Wind Energy will be the two energy sources which will have to contribute the majority of the RES supply (due to their superior FUTURE cost position as well as due to their scalability). PV and wind energy have fundamental characteristics which are very different from traditional energy sources: - PV/Wind are volatile (but predictable with 48 h) - PV/Wind cannot be adjusted to match demand (rather PV/Wind energy needs to be consumed right away or stored for future use) - variable operating cost of PV/Wind are practically 0 The currently existing electricity market design is, however, made for energy sources which have significant provariable production cost and an energy output that can be tuned to match the demand. PV/Wind will reduce the spot market prices to 0. As PV/Wind cannot make FUTURE CONTRACTS for energy supply, PV/Wind cannot be integrated in the existing market design. The consequences are very fundamental: The future energy system will consist of - RES which cannot be tuned to demand and have only fixed cost (PV, Wind) - a small share of RES which can be tuned to match demand (Biogas, hydropower). Hydropower is essentially a fixed cost system. - reserve power plants which are needed when there is no sun and wind energy. Due to their fairly low operating hours, these plants are characterized by primarily fixed cost. - grids and storage (both fixed costs) So it doesn't make sense to demand that PV/Wind should be integrated into the current market!

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Open up national support schemes to cross-border projects

Please specify how to make support schemes more market-oriented -open reply-(optional)

As pointed out above under A.2, none of the suggested answers to this question makes sense. If the renewable energy supply would consist primarily of energy sources that can be tuned to match demand and that have significant variable operating cost, the regulation would need to focus on bringing down cost as fast as possible and then just let the market do the rest. But this is not the case: The majority of future energy supply will come from wind and PV which cannot be tuned to match supply and which have zero variable operating cost THEREFORE, A VERY DIFFERENT MARKET DESIGN IS NEEDED! Once such new market design will have been set up, then it will be appropriate to phase out support schemes and integrate the renewables into the new market design.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

As pointed out above, the majority of future energy supply will come from wind and PV which cannot be tuned to match supply and which have zero variable operating cost. THEREFORE, A VERY DIFFERENT MARKET DESIGN IS NEEDED! Once such new market design will have been set up, then it will be appropriate to phase out support schemes and integrate the renewables into the new market design. That's why it does not make any sense at all to enforce a mandatory roll-out of European rules to member states unless the European electricity regulation will have been adjusted to the requirements of a future energy supply which is dominated by volatile, non-tunable, zero variable-cost-wind and PV energy. The member states have very different political convinctions, in particular with respect to (i) the speed to build a fully renewable energy supply and (ii) the use of nuclear energy. As long as the member states cannot agree on these two fundamental questions, a pan-European energy policy will not be feasible. It seems that excess electricity stemming from variable PV/Wind supply could be used effectively also for the heating sector (to heat up steam reservoirs) as well as for the transport sector (to load batteries of e-vehicles or to generate H2 or CH4 to run gas-fired cars). Therefore the future energy market design needs to have rules that allow to make reasonable use of these technical opportunities.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to	

administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

The final report of the European project PV Legal (February 2011, http://www.pvlegal.eu/results/status-reports.html) shows that administrative barriers hampering PV development in Europe can be classified in four main areas: - Barriers in permitting procedures - Barriers related to grid connection rules and technical standards - Barriers in grid connection procedures - Barriers related to grid capacity issues For example, in Spain, legal-administrative costs represent up to 36% of the total development costs of a PV project in the residential segment, and up to 51% in the industrial ground-mounted segment.The report presents a series of recommendations that will result in reduced costs for PV developers. This, in turn, will reduce the overall cost for PV technology deployment and therefore the economic support needed by PV.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

grid connection rules: Above all, priority access to the grid for renewable energy sources should be maintained after 2020. Grid connection rules also need to be made more transparent for RES, especially regarding the procedure to determine the grid capacity for variable RES and the system flexibility. PV systems, in order to be allowed to connect to the electricity grid, need to meet certain criteria defined by grid operators and electricity market regulators. Often these criteria do not take into account the characteristics of PV systems and may then represent a barrier to their penetration. These barriers are characterised by lack of clarity, transparency and uniformity in rules and standards and by the insufficient participation of PV industry in their definition process. The current development by ENTSO-E of a network code on grid connection requirements for generators should take into account specificities of variable RES such as PV (provision of reactive power, synthetic inertia and black start capability). balancing rules: Current wholesale electricity market rules were designed at a time when centralised based-load generation was predominant. With a more decentralised, variable electricity portfolio, these rules will have to be adapted. Both the time-horizon (day-ahead and intraday markets) and the geographical scope of the balancing regime should better reflect the characteristics of RES. These evolutions should be fostered by the network codes of ENTSO-E.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - Other (please specify)

Please specify which other rules -open reply-(optional)

In addition to priority or guaranteed dispatch, the German “hardship clause” is recommended: the grid operator has to pay damages (income-losses) to the renewable energy plant owner, for the time and in case of the curtailment. As the grid operator is responsible for

the balancing in the grid, as well as for sufficiently strong and stable grid infrastructure, he is also held liable. As mentioned above, the priority grid access for RES is one of the key elements of the recent development of RES in most Member States. Therefore the priority access needs to be maintained.

D.2.1. Please explain why -open reply-(optional)

Smart deployment of support mechanisms, such as Feed-in-Tariffs (FiTs), has helped RES and PV in particular gain a market foothold in many European countries. Continued priority access and dispatch after 2020 should be seen as a way of maximizing the effect on the electricity system of investments done so far. In any case, in an electricity system with a very high penetration of RES, the right balance should be found between a systematic priority dispatch (that could lead to inefficient situations as shown in the high RES scenario of the Energy Roadmap 2050) and a complete non-differentiation between energy sources.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

Indeed, the fact that most of the future renewable energy will come from PV and Wind will have serious consequences for the technical set-up of the energy system as well as for the market design. However, we recommend not to jump to conclusion too quickly and to go for "capacity markets" to incentivise constructure of flexible fossile plants. Rather, the overall market design needs fundamental change (see above under A2, B2, B5). In general, capacity payments do not seem to be the appropriate instrument for an increase of flexible back-up capacities. Appropriate interconnection transmission capacities are necessary to ensure an efficient market coupling and a progressive convergence in the wholesale electricity price. But at the same time, grids should not be developed only with a highly centralised approach: deployment of smart distribution grids will as well be of crucial importance. The flexibility of the energy system should be fostered through a better use of demand response instruments (demand aggregation).

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?) - Producers of renewable energy should continue to be treated separately (no exposure to conventional market)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?

-open reply-(optional)

This questions shows that there are some significant misunderstandings. 1. PV/Wind energy cannot react to price signals – being a consequence of physics and the volatility of sun and wind 2. The producers of renewable energy are often not "energy companies" but rather investors into a single piece of equipment (e.g. a wind turbine or a PV system). The current owners of such systems are not capable to balance demand with supply! As a consequence, the two issues of (i) generating PV/Wind energy and (ii) balancing supply and demand will always be two separate technical and commercial steps. Obviously, it may be one option to demand that owners of renewable energy systems are obliged to balance supply and demand. However, this will lead to an immediate market consolidation where the large energy companies will take control of the whole system – because only they are technically and commercially capable to balance supply and demand. We believe that such development is not desirable because the market power of such monopoly providers will likely lead to price increase. A different topic is systems services such as frequency stability etc.: Producers of RES have started to bear responsibility for system costs by providing ancillary and other system services.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
In addition to the introduction of smart grids and especially smart markets (with special market signals for shifting the demand) there could be penalties for inflexible power generation which caused further RES curtailment or higher negative prices at the power exchange. Retail electricity market rules should foster self-consumption in various PV market segments (residential, commercial, industrial): availability of real-time production and consumption data (metering), clear and informative bills and time-of-use tariffs will therefore play a key role. In addition, aggregation strategies through, for instance, virtual combined power plants combining different RES on a large scale will also have to develop in order to facilitate market access for distributed generation.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal - Solar thermal - Electrification together with higher share of renewables in electricity production
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	
We need more action in the heating and cooling sector to reach our 2020-targets. Not only in Germany but all over Europe, this sector has huge but widely untapped potentials. In order to tackle the increasing energy demand, energy efficiency needs to be also in focus, e.g. heat pumps provide both: they make use of considerable share of RES and at the same time use the still necessary auxiliary energy most efficiently. They serve as amplifiers in case electricity is coming from green sources. In general, necessary allies with both – renewables and energy efficiency – needing to be fostered, jointly as well as independently.	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Pace of technology development - Lack of standards - Lack of infrastructure - Lack of awareness - Lack of suitable information - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Rail - Water
G.2.1. Please explain your answer -open reply-(optional)	
Biologically generated fuel will not be suitable to become the future "green fuel" for a variety of reasons (high cost, huge area consumption which is in competition to food production). Therefore, there will be two primary sources of energy for the transport sector: -	

Electricity generated fro PV and Wind which will then be stored in batteries of electrical vehicles - H2 or Methane generated by electrolysis using electrical energy from PV and Wind in order to operate gas-fired cars Wind and sun energy can play an important role in the development of a model based on electric vehicles using sustainable renewable energy. Electric vehicles, supported by an appropriate recharging infrastructure using wind and PV, could represent an interesting decentralised electricity storage network.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability criteria need to apply to all types of biomass use (energy, food, feed, material use). It is necessary to include all biomass production and uses to avoid leakage effects. Furthermore it is essential to define environment-associated criteria for the production of fossil fuels and gas to have a level-playing field between fossil and renewable fuels and to tackle the growing negative impacts of – among others – fracking, greenhouse gas emissions of fossil sources like tar sands, deep sea or arctic oils.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

The simple strategy "photovoltaic in Southern Europe and wind energy in Norway and Britain" is not appropriate for various reasons: - network costs for long distance transport will be very high. The cost of such additional networks will likely be higher than the cost advantage of "wind in Britain versus Wind in Bavaria" and "solar energy in Andalusia versus solar energy in Bavaria" - An energy generation structure which is (i) decentralised and is built around (ii) national self-supply will reduce the technical risks of supply interruptions As a consequence, in our opinion, the future energy system will be characterised by - decentralised generation where every region produced roughly the amount of energy it consumes and - pan-European coupling of networks in order to allow for cross-regional balancing of supply and demand (in view of regional wind and PV volatility) and in order to allow cross- country competition P.S.: Decentralized structures mobilize higher cost savings (from 2001 to 2030, up to 238 billion Euros can be saved in Europe with decentralized deployment in comparison to centralized structures) and reduce the need for transmission grid extension (cf. BEE´s position to "Best sites" for Renewable Deployment, June 2011).

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

The Renewables Directive (2009/28/EC) foresees "Joint projects" also for Member States and Third Countries to cooperate on a voluntary basis. These projects have to apply the limitation of the Directive in order to be counted towards their target. There is no need for additional measures to increase these projects. The main focus of the cooperation mechanisms should remain within the EU.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Imports from third countries is often referred to as a cost-efficient way of integrating RES, since energy would be produced "where it makes sense" from a resource point of view. While irradiation factor represents only one element of PV's competitiveness among others, such an approach could even lead to sub-optimal solutions in terms of overall systems costs. Cost of grid infrastructure from there to the EU makes it highly unattractive against national increase of distributed RES. As shown in the recent Greenpeace report Battle of the Grids, a more centralised deployment of RES leads to higher infrastructures costs, notably because of higher investments needs in transmission capacities. An energy partnership could make sense for developing RES in that area for use in that area, not for export to the EU. It can only be an add-on and it has to focus on RES development for national and regional deployment in these countries. Deploying PV – which is decentralised by nature - in only a limited number of regions would in addition neglect a series of important side-effects, especially in terms of transmission grid extension, failing local acceptance and reduced security of supply. Therefore, a real cost-optimal deployment of RES in Europe means that energy should be produced with competitive technologies, wherever the location of the installation is. The transition towards a sustainable energy future should build on a variety of complementary RES - in Germany wind onshore and PV.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges
-open reply-(optional)

There has been only very little positive outcome from the SET Plan for RES. The Commission has first to give a comprehensive and detailed report on the outcome reflected in concrete quantity of SET-Plan support. All in all there is a need for facilitating system transformation from current system to a renewable energy based system (paradigm shift). When moving to a future with renewable energy as the main source of supply, it can no longer be called a question of integration – this will have to be a transformation of the energy system towards the logic of a flexible and RES based system. Around this paradigm shift, research and innovation could be a great contribution. In addition, it would make sense to mobilize spinning effects of ancillary technology, such as power inverters for multiple use. Furthermore, newly arising questions, such as the availability and potential replacement of specific resources and raw materials (rare earth issue) could be included in the SET-Plan, focussing on the needs of RES.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

A dedicated budget line (within or outside Horizon 2020) for each of the SET-Plan renewable technologies would in addition give much

more visibility to the sector.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

A broad energy mix of all renewable energy sources (wind energy, solar energy, bioenergy, hydropower, geothermal and environmental thermal energy) is needed. With this energy mix in combination with a predominantly decentralized development, a sustainable, cost-effective and secure energy supply can be achieved.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

One particular drawback – if to be called so – would be continued significant support for fossil and nuclear energy. They are not only environmentally harmful. In addition, they are major obstacles for smooth and cost effective development of RES. Such support is reinforcing existing structural deficits of the energy system, which are counterproductive and undermining the necessary system changes.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

It is problematic to simply link results to a deadline, so the general answer is no. More important than a specific deadline is a stable and reliable (financial and political) framework. This will provide for investment and planning security and contribute significantly to the further development of RES. This development should be monitored regularly (as would be provided e.g. in the RES Directive). In this context a binding RES target for 2030 is indispensable for further investment security. However, such a target must be ambitious enough and following the systematic approach of the renewables Directive (2009/28/EC), i.e. it needs to be underpinned with binding targets for all Member States. As already mentioned above, the EU should agree on a legally binding minimum target of 45% RES for 2030.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Sian Davies, British Agriculture Bureau, sian.davies@nfu.org.uk
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable	Yes, a combination of EU and sectoral level targets is appropriate

energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

The UK Farming Unions agree with the concept of a combination of mandatory EU targets and sectoral targets. There is a need for targets to be ambitious and effective and ensure that the differing market conditions across Member States are taken into consideration.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

The UK Farming Unions would feel that attention should be paid to how sustainability and scalibility policies are applied throughout the EU. There is a need to avoid blanket application across the EU and consider varying geographic and economic conditions across member states. In Northern Ireland for example, scalability is a major issue, especially with the development and uptake of Anaerobic Digestion. Industry focus semms to be upon mainland Europe-sized solutions, where for the majority of farmers, smaller scale on-farm AD solutions would make much more financial and practical sense.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

As an addition to B3) Benchmarking values for support levels per technology per member state is a necessity, since in its absence, the UK Farming Unions would have reservations about the development of a common approach to Member States financial support whilst there would appear to be marked two-speed progress across the EU in terms of renewables development and support.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

Any alignment of financial support will be reliant upon addressing two-speed policies in EU Member States. Without this, any alignment of financial support would have a negative impact upon the renewables sector EU wide, with some having a vibrant renewables industry and others falling behind and inevitably targets may not be reached. We could support harmonising member states renewable energy support schemes over a period of years - as long as there was plenty of time for market adjustments to take place.

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B6: In addition, within the UK, renewables policy is devolved, and this situation should be maintained. B7: The renewables industry is still in its infancy in the UK, and the structure of the wider market is such that market distortion is not visible	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
These administrative procedures need to be flexible and simplified in how it is applied and translated to landowners and not impact on their day-to-day farming practices. Simplification should be extended to include the UK's concerns on planning policy in relation to renewable projects.	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	The approach of the current Directive to lay down a general framework for Member State action is fine

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
Grid connection rules often involve complex application procedures that discrimiate against small scale generators of electricity (and to some extent also biogas and biomethane). This is a major obstacle for renewables uptake in the UK. In Northern Ireland's case, Northern Ireland Energy in their submission to the Utility Regulator have not factored grid connection into their plan for capital investment (known as RP5). More allowance should have been made for simplification and the current proposals lean in favour of large scale renewable projects, leaving small scale to pick up the scraps. We are not convinced that the grid connection situation in the UK will be resolved for small scale generators before 2020, hence our plea that the new Renewable Energy Strategy takes this issue into account. Cost sharing rules is a major worry in the UK as grid connection is dominated by large scale generators. Cost sharing is preferable to teh "developer pays" principle which currently applies in most cases. Cost shring could be widely beneficial to energy generators and users alike.	

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access
D.2.1. Please explain why -open reply-(optional)	
Priority or guaranteed access for snall scale renewables.	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Accelerate infrastructure development and interconnection

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
Depending upon cost (the industry is not in a position to be able to afford higher expenditure at this stage) there could be moves to develop demand response to market signals (smart grids and smart meters would be possibilities in terms of short term measures). Demand aggregation might be considered, however, this would be considered in conjunction with the incorporation of small scale renewables on to the grid and longer term grid development.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	N/A

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of public support - Other (please specify)
Please specify which other barriers -open reply-(optional)	
Government policy: for example in Northern Ireland the Government is determined to push ahead with plans to extend natural gas throughout Northern Ireland despite the fact that this is 40 years behind mainland UK. This is being pursued at the expense of the Renewable Heat sector. Furthermore to be in a strong position post 2020, significant progress in the period leading up to this (2012 - 2019) is needed. This is currently not happening. The lack of financial support is low in some instances (Norther Irealnd made £25 million available for the RHI). Even with improved financing, the proposed structure of the RHI scheme in Northern Ireland was incorrect, meaning that the sector will find it difficult to grow. There is an avenue for support from new CAP Pillar II proposals. Currently this is not enough to provide much needed boost to the fledgling renewables sector.	
F.2. What pathways do you consider to be the	Biomass

most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

There may be some merit in linking renewable heating/cooling support to the attainment of minimum energy efficiency standards, but access to both energy efficiency and renewables support should be permitted without contravention of EU state aid rules. Investment in one often enables investment in the other.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Pace of technology development - Lack of infrastructure - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

There is a need for Member States to link biofuel incentives directly to carbon savings, rather than to the attainment of a minimum threshold. This would support more explicitly the deployment of higher biofuel blends and fuels offering greater greenhouse gas savings.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	No, the existing binding sustainability criteria are sufficient

H.1.1. Please explain -open reply-(optional)

Additional sustainability criteria is definitely not an option post 2020 since the existing criteria is being applied in a blank manner, making it both unfair and unworkable. Forests and woodlands today make up about 10% of UK land surface (England 7%, Scotland 15%, Wales 12%, Northern Ireland 6%) When compared to the EU average of 40% this highlights a difference in forest landscape between the UK and rest of the EU. Even so the sustainability criteria is being applied to member states with vastly different terrains and landscapes.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

More could be done to improve cooperation between Member States.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)
Please explain why -open reply-(optional)	
It is for TNO/DNOs in each member state to prioritise investment in conjunction with the Mmeber State government and regulatory body.	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries
I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)	
No opinion	
I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)	
No opinion	

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	
Other bioenergy technology developments would merit special mention - torrefaction and other densification of agricultural residues, and linking of bioenergy technologies to carbon capture and storage (ethanolic fermentation, anaerobic digestion, large-scale biomass combustion)	
J.4. How successful do you consider the	

existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Name: Frank Schoonacker - Organisation: EDF Luminus - Email: Frank.schoonacker@edfluminus.be
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Belgium
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Generation from RES is today more costly than conventional generation but in the long run in a context of rising carbon prices it can be expected to be competitive. If an adequate carbon price signal is sent in the long run binding volume targets should not be necessary anymore. However it makes sense today to subsidize some renewable technologies at R&D stage as long as they are relatively far from maturity at production stage to help them go down their learning curve when they are closer to maturity (see question 2).

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Environmental impact (e.g. birds for wind farms en fish for hydros) has to be assessed for each site. The precautionary principle should be used in an appropriate way, not hindering permits for RES sites with reasonable environmental impact.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)
Please specify which technologies/circumstances/markets -open reply-(optional)	
Right financial support, covering sufficiently the investment and regulatory risk, has to continue post 2020 to support those RES technologies that not have gone through their learning curve or reached competitiveness with conventional power generation.	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)
Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)	
Only those technologies that reached competitiveness with conventional power generation. For the technologies on their learning curve, support mechanisms should be cost-efficient (revisable cost-efficient mechanisms) in order to minimise the impact on energy bills of consumers, households and companies.	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
Financial support could be different for different sectors; cost per saved ton of CO2 should be equivalent.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the	Length and complexity of administrative procedures relating to authorisation/certification/licensing

provisions of the Directive? -multiple choices reply-(optional)	
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
The length and complexity of administrative procedures has a direct link to public acceptance. Furthermore, the precautionary principle should be used in an appropriate way, not hindering permits for RES sites with reasonable environmental impact.	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
If there are no clear rules for all of these issues, they may all represent an obstacle to the development RES both short term and beyond 2020. As the marketshare of intermittent RES is expected to be (very) high, priority dispatch will become unsustainable.	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network
D.2.1. Please explain why -open reply-(optional)	
RES are located in places where grid is not always developed. Investments are thus essential to ensure transport of renewable energy. Networks should be developed on the basis of cost-benefit analyses. The impact of intermittent generation on distribution networks should be controlled.	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
Same rules as for conventional power generation.	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)
Please specify which instruments incentivising investment -open reply-(optional)	
Capacity remuneration mechanisms have to be put in place to guarantee sufficient back-up and flexible generation capacity in order to compensate for intermittent renewable generation.	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of awareness
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Solar thermal - Electrification together with higher share of renewables in electricity production - Other (please specify)
Please specify which other pathways -open reply-(optional)	
Further insulation of buildings.	
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	
Electricity consumers are currently bearing a very high share of the overcosts of RES. Fossil fuel consumers and tax payers should also be involved in the use of RES and energy efficiency. As they also contribute to CO2emission, heat consumers should bear a fair part of the costs induced by the development of renewables.	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of awareness
G.2. What sectors of transport do you consider to be the most promising for further increasing	Road for passengers - Road for goods

the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

H.1.1. Please explain -open reply-(optional)

We need strong sustainability criteria regarding biomass and biofuels in order to maintain confidence and acceptability. These criteria should be established at least at EU level.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Development of the grid and storage capacity.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

Some technologies go more quickly through their learning curve than expected and may therefore (temporarily) have been supported to much.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Jussi Heikkinen, Vice President Power Plants, Wärtsilä Corporation , jussi.heikkinen@wartsila.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Finland

4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

The basis should be a single European electricity market. Financial support structures should be market based e.g. market price premium (feed-in tariff for difference).

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for	

the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Maximum utilisation of valuable RES should be the key priority (avoid wind curtailment). The EU should first define who should be responsible for balancing (TSO/ RES producer). Secondly balancing criteria needs to be clearly defined and harmonised. Finally balancing rules should be transparent so that the balancing cost can be evaluated and directed to the source of imbalance (avoid socialisation of balancing cost). Marginal imbalance prices together with liquid short term markets enable cost efficient and reliable balancing of future intermittent systems.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

To guarantee maximum utilisation of valuable RES.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) -

	Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Other (please specify)

Please specify which other measures -open reply-(optional)

All sources of flexibility are needed in the future. Firstly there is need for optimal balancing toolkit assessment (what sources are needed,how much, which time frames, costs, etc.). It should be noted that truly flexible capacity sources create most value to the system when not running, but are capable to provide power flexibly when called upon. If capacity mechanisms are introduced the focus shouldn't be only on capacity adequacy, but the system flexibility requirements need to be recognised. The existing capacity mechanism designs focuses on "missing money" - issue. In the future "missing flexibility" will be at least as important. The future capacity mechanism design should address both issues simultaneously when duplicate and unnecessary investments can be avoided, since investments in right type of capacity can tackle both issues. However, the design that focuses only on system adequacy cannot provide sufficient investments in necessary flexible balancing capacity. As important as right type of capacity design. Well functioning and liquid short term markets to balance the fluctuation of RES. This can be guaranteed by clarified balancing responsibilities, obligations to sell RES in the markets and sufficient and well designed products for balancing (e.g. liquid intra-day market, balancing market and introduction of day ahead reserve market).

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?

-open reply-(optional)

Wärtsilä supports placing the responsibility for RES balancing with the RES producers. If the RES producer is responsible for balancing there needs to be well functioning balancing possibilities in place. The bases for well functioning balancing are: - sufficient liquidity in short term markets (liquid intra-day market, balancing market) - potential introduction of new balancing instruments e.g. day ahead reserve market - transparent and pure (no system constraint included) imbalance prices - no sosialisation of balancing costs, the costs for imbalance should be borne by the source on imbalance

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand

-open reply-(optional)

The future energy system based on high level intermittent and distributed RES calls for increased flexibility within all segments of electricity value chain, including consumption. Simultaneously, adequate returns for flexible production capacity should be guaranteed. Capacity mechanism design should address flexibility and capacity adequacy at the same time. In addition to these liquid short term balancing markets, marginal imbalance prices and transparent balancing instrument procurement are prerequisites to well functioning high RES electricity systems.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy)	

be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Ari Lampinen, Finnish Biogas Association (lampinen@kaapeli.fi)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Finland
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate - Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Mandatory targets for total RES and sectoral RES have been successful and are still needed, because all sectors need to increase RES use, but their individual requirements are different. Sectors that show larger emission problem development (especially transport) should receive larger attention in RE policy, including more challenging targets. In these targets positive impacts on not only climate change mitigation but also other environmental problems should be credited, e.g. the impact of biogas technology in fertilizer recycling (incl. phosphorus) and improvement of local air quality.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Alignment of EU legislature to support RES. Currently some parts of regulations are not, e.g. in the Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles, the calculation method in Article 6 for operational lifetime costs strongly favours fossil diesel oil fueled vehicles (due to higher efficiency of

diesel engine compared to otto engine) making its use in procurement of e.g. otto engine based biogas (especially buses) and hydrogen vehicles impossible (even if fuel is free), although renewable biogas and renewable hydrogen offer much lower levels of all emission components than diesel oil. The Commission calculation model emphisizes energy efficiency of diesel engine, instead of emphasizing lifetime emissions, as it should do. E.g. in the EU funded Biogasmax project a proper calculation model was described (model used in Sweden) for evaluating lifetime costs, where impacts of emissions dominate the result, as they should.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support is necessary as long as non-renewable energy sources have large share of energy markets. In addition, financial support is needed to promote environmentally most benign RE technologies (such as waste based biogas, wind power and solar energy) and sources against the least sustainable ones.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

RES support is necessary as long as non-renewable energy sources have large share of the energy markets. The role of state budget based subsidies should be reduced in favor of market based instruments. The German model of a market oriented feed-in tariff system has proven successful and should be utilized in other EU Member States as well. Feed-in tariff should be applied to electric power grids, natural gas pipelines and district heating networks. Net metering for RES should be taken into use EU wide. Increase of fossil fuel taxes and removal of fossil fuel subsidies is very important. Binding requirements for minimum level of refueling infrastructure for alternative fuels with the best environmental impacts (such as biogas) should be enacted for each Member States as is proposed in the Report of the European Expert Group on Future Transport Fuels (December 2011).

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

The German feed-in tariff is the best basis, to be applied in electric power grids, natural gas pipelines and district heating networks. However, in transport sector this is not enough: separate instruments are necessary to apply similar support level for production of biogas outside of natural gas pipelines. Best practices in policies and methods found in individual Member States, including those utilized by local administrations, should be transferred to all Member States.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of	Member States need to open their support schemes to renewable generation from other Member States

a rising share of renewables? -multiple choices reply-(optional)	

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

Through convergence of national schemes.

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Schemes for supporting centrally produced and third country imported liquid fuels against locally and decentrally produced gaseous fuels. This distorting effect is strong e.g. in Finland. Finland even has tax subsidies in place for supporting gasoline against RES based traffic energy sources. Such schemes should be phased out.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

In some EU countries small renewable energy plants are faced with same procedures as large power plants holding back the development of distributed energy production. There is a general lack of credible, independent information for small investors (households and SMEs) that can benefit from small renewables installed locally. In many EU-countries the available training courses are too few to cover the raising demand for qualified installers of RES systems. In some Member States certain RES transport technologies are denied motor vehicle type approval. This is the case e.g. of dual-fuel diesel biogas tractors and cars. In Finland well performing agricultural biogas tractor prototypes have been produced, but commercial production cannot begin due to this administrative barrier.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and	Priority or guaranteed access

proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Enable renewable generators to offer balancing services to TSOs - Other (please specify)
Please specify which other measures -open reply-(optional)	
Enabling the use of natural gas networks as storage for wind and solar power via production of wind and solar methane and hydrogen.	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
Smart grids, demand side management practices.	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Building regulations etc. - Lack of capacity (installers, other) - Other (please specify)
Please specify which other barriers -open reply-(optional)	
District heating companies (that often are municipal companies) usually do not accept feeding in excess heat from buildings and other connected heat producers into their networks. Therefore, district heating networks cannot be used as virtual storage by RES heating systems, including building integrated systems.	

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

In biomass and geothermal heating, clear priority should be given to CHP use in all plant sizes, including building integrated (micro-CHP).

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of infrastructure - Lack of awareness - Lack of suitable information - Other (please specify)

Please specify which other barriers -open reply-(optional)

State and local administration policies, including state and municipal company ownership policies.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail - Water - Air

G.2.1. Please explain your answer -open reply-(optional)

It is technically easy to move all transport sectors into sustainable RES based. E.g. waste based biogas (BG) and synthetic biogas (SBG) are suitable for all transport sectors and all engine types used in transport. Combined with wind and solar methane, the sustainable RES based methane resource is larger than all traffic needs in all sectors.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria -open reply-(optional)

Only waste/residue based biofuels should be double-counted, i.e. energy crop based cellulosic and lignosellulosic biomass should be removed in article 21(2).

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

Transfer of best practices from Member States and local administrations should be focused on.

I.2. Do you think the EU should further facilitate	Yes, cooperation with third countries should be further promoted

cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	(please specify how and with whom, i.e. only neighbouring countries or more widely)
Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)	
Globally, since climate change is a global problem. Ecological sustainability must be more emphasized.	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)
Please explain why -open reply-(optional)	
It should not dominate international co-operation.	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)
Please specify which other measures -open reply-(optional)	
Via international organizations, such as IRENA, and via NGO networks.	
I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)	
Potential for importing solar and wind power from Africa to EU is very large. RES transfer, cooperation in RES support policies, demonstration projects, training and capacity building.	
I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)	
Yes. Potentially large share of EU power consumption could be covered by environmentally especially benign way. Yes, e.g. Barents sea, Baltic sea, N. Africa.	

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	System integration
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	

Crediting multiple environmental and social benefits. E.g. biogas technology has a very large potential for integrated solution of many environmental (both local and global) and social problems, but its diffusion has been very slow because financing decisions tend to focus on single issues ignoring the broader picture.
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)
As transport sector is the most challenging for GHG and other emissions, enhanced attention is needed there. E.g. wind methane and solar methane technologies should be developed as well as smart gas grids that can transfer RES based methane and hydrogen. This is one solution for the storage and balancing problem of intermittent power generation. Very high fossil carbon content of food should be addressed by promoting RES based food production, including using locally produced biogas and other RES fuels as agricultural engine fuels.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)
No. Development decisions should be based on the potential of proposed technology for reducing environmental problems.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Jacek Spendel, Globalization Institute, spendel@globalizacja.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Poland
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy	

efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables	

following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main

barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of suitable information
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	No, the existing criteria are already burdensome to implement

H.1.1. Please explain -open reply-(optional)

Globalization Institute is concerned about the EU's economy and believe that the natural environment needs to be protected. That is why there ought to be a reasonable balance between economic power and natural environment protection, and this balance, in developed countries, finds its best place under free market economy, Environmental Kuznets Curve shows us that. The starting point of any discussion about post 2020 period regulations, should be an analyze of the one that currently is in action. Unfortunately, there are significant problems regarding RED Directive, especially in the field of biofuels. The scientific study on the issue made by dr. G.Pehnelt and dr. Ch.Vietze from the University of Jena ("Recalculating Default Vlues for Palm Oil", Jena Economic Research Papers, 2011) indicates that the RED's default values for palm oil are inaccurate and therefore a subject to claims of trade commision. That is why Member States could be the targets of WTO complaints and their markets will suffer from trade retaliations. The study shows that in fact there are crops grown in non-EU countries (particularly Asian ones and Brazil) which are both more sustainable and cheaper. That is the case of palm oil which meets all the standards but for some reason it's deafult values in the Directive are innacurate. This eliminates chaper and environmentaly friendlier competition from EU market and could be seen as green protectionism. We call to repeal such practices in the new agenda.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate	

cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have	

been the main drawbacks? -single choice reply-(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Michael Carus, nova-Institut
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Germany
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
The most forward-looking solar energy is not fully competitive - targets will help!	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will	For selected technologies/circumstances/markets (please specify)

continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	

Please specify which technologies/circumstances/markets -open reply-(optional)
For bioenergy/biofuels all subsidies should be stopped, because we need the biomass for industrial material use. Some very interesting technologies with low environmental impacts might be no fully competitive and need support.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)
We need a more level playing field between different energy technologies and for biomass also industrial material use, based on GHG-emissionen, employment and innovation - and which final technology will be used should be the decision of the market.
Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)
Especially biomass and biofuels - phasing out as soon as possible, switching to solar, wind, solar thermal. Biomass is too inefficient for energy use, use it only for chemicals and plastics.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	N/A

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)
Yes - between biomass/biofuels and the others! Especially biomass and biofuels - phasing out as soon as possible, switching to solar, wind, solar thermal. Biomass is too inefficient for energy use, use it only for chemicals and plastics.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)
Yes the support schemes of biomass/biofuels are disturbing the biomass market. Bio-based chemicals and plastics save more GHG (per tones biomass), have 5 times higher employments effects and bring more innovation - but these sectors have no political and financial support (except R&R) and can not pay the prices for biomass, disturbed by the high subsidies for bioenergy/biofuels. See also www.bio-based.eu/policy

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	None of the above
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increased availability of storage

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Lack of awareness - Lack of suitable information - Lack of public support
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Solar thermal
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of suitable information - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail
G.2.1. Please explain your answer -open reply-(optional)	

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels - Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)
Please specify which criteria -open reply-(optional)	
Level playing field for biomass use as bioenergy/biofuels and industrial material use - to avoid market distortion.	
H.1.1. Please explain -open reply-(optional)	

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)
Please specify how they should be amended or which elements added -open reply-(optional)	
The potential for solar energy is not realized at all.	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)
Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)	
Solar energy	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)
Please explain in which way and to which degree -open reply-(optional)	
Yes, in the south for solar energy.	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries
I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)	
I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)	

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies	System integration

to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)
Level playing field for support of biomass use as bioenergy/biofuels and industrial material use - to avoid market distortion. Today only the use as bioenergy/biofuel is supported in commercial productions - but not the use for bio-based chemistry and plastics. This is a situation with bad impacts on environment and employment.
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Joost Gottmer on behalf of Alliander NV, joost.gottmer@alliander.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Netherlands
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy	Yes, a mandatory target at EU level is appropriate

efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Note that the response reflects the DSO perspective: It seems appropriate to have post 2020 targets, however it also seems that policies regarding energy efficiency and climate actions are sometimes conflicting with each other. However it is clear that to avoid over regulation and let local conditions and efforts contribute to the overall goals the details and perhaps even the means of reaching those targets should be left to the MS

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Note that the response reflects the DSO perspective: The current promotion of renewables lacks in our view momentum due to two issues: 1) Lack of information/uncertainty due to separations within the value chain, DSOs are not always in the position to hear upfront the plans of municipalities/provinces and member states neither are they involved in early stages of the decision making processes. Thus leaving DSOs long in the dark about developments and by doing so unnecessary lengthen the permitting fase of any project. 2) The progress of renewables is troubled by legislation/regulations that prevent DSOs from becoming active as a market facilitator. Leaving even the most promising projects and techniques that have not yet achieved fully market-maturity in a stand-still, resulting in the chicken and egg-problem (especially those techniques/markets that are aimed at local situations such as PV, biogas, etc.)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Yes, financial support will continue to be necessary to support specific renewable technologies in a post 2020 era. Support not only in the form of financial support to the RD&D. But for DSOs also in the form of legislative and regulatory processes that are easy to change.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

Seen from a DSO perspective, there is no “one solution fits all” for the development of renewables. First of all DSOs have a long term obligation for the grid (40 years or longer) this requires a long term vision on renewables, their effect on the grid and on the gridusers. Also the solution could depend on local situation and local rules regarding gridusers and their usage. Therefore all of the options mentioned above should be open.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	N/A
B.4. Should the structure of financial support be	Yes (please explain how this could be achieved and which

gradually aligned EU-wide? -single choice reply-(optional)	support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

To develop a single approach that not only fits across the EU, but also fits across different energy carriers, different grid users with different usages, seems ambitious. We advise that further study in this field is required.

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Seen from a DSO perspective, there is no “one solution fits all” for the development of renewables. First of all DSOs have a long term obligation for the grid (40 years or longer) this requires a long term vision on renewables, their effect on the grid and on the gridusers. Also the solution could depend on local situation and local rules regarding gridusers and their usage. Therefore all of the options mentioned above should be open.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

What is exactly meand with support schemes? Is it for the infrastructure, the market roles or the energy produced that receives support? A certain degree of alignment seems at this stage necessary, however renewables are sometimes still in there infancy on al aspects mentioned above. what is most distorting is depend on what is supported, the technique, the market role or the energy produced. Support schemes should not be designed in a way that it would distort competition. Support schemes should be focued on technologies until they are well established. Support schemes should be focused on technical RD&D and market facilitation tasks regarding local situations

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

All aspect mentioned above have a negative impact on the RD&D of the technique, the piloting and development of the market facilitating tasks and on the further introduction of renewables

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

There is no “one-size-fits-all” answer for this question, this depends on the technology used, local regulation and legislation in the member states and the maturity of the renewable. Flexibility is key.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

At this stage it is too early to tell. However, changing legislation and regulations takes time and can be a long and tough process.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Other (please specify)

Please specify which other rules -open reply-(optional)

For the grid operator a stable regulatory and financial system is necessary. To safeguard the in time grid propagation a transparent and clear permit procedure is essential.

D.2.1. Please explain why -open reply-(optional)

For the grid operator a stable regulatory and financial system is necessary. To safeguard the in time grid propagation a transparent and clear permit procedure is essential.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Other (please specify)

Please specify which other measures -open reply-(optional)

All measures mentioned above are helpful, for local situations storage and secondary services (balancing) are also beneficial. The growing uncertainties regarding production and consumption profiles make it increasingly difficult for the network operators to keep the energy supply system in balance. In order to tackle this challenge, next to the transmission network operators, the distribution network operators need to obtain an increased balancing task. At the distribution network level the necessary flexibility reserve for the balancing task can be achieved through enabling ancillary services from distributed generation, smart energy networks, demand response and the use of local storage. Enlarging the tasks of the distribution network operators with an increased balancing task will permit them to become veritable distribution system operators (DSO's). In this way they can contribute optimal to the transition towards a low-carbon economy.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

Regarding the balancing risk the responsibility should be the same as consumption balancing ie transferred to a balancing responsible

party.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

Important is that the infrastructure of E, G, H and C is planned, owned and controlled by grid operators who have integrated those techniques and that could also make the best balanced approached towards costs, sustainability and affordability.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Other (please specify)

Please specify which other pathways -open reply-(optional)

This depend heavily on local situations, there is no “one-size-fits-all” approach.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Yes, especially with E and G to make the best balanced approach towards costs, sustainability and affordability.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges
-open reply-(optional)

A review of issues that are at central/decentralized (local) levels and between energy carriers. Therefore the system integration of E, G, H and C is key.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Asociación de Productores de Energías Renovables (APPA); mbechberger@appa.es
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Spain
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Indeed, if the EU likes to keep its leading role in renewable energy (RES) and pave the way for its 2050 goal of a decarbonized energy system, a stable policy framework together with a binding EU minimum 45% target for 2030 is a vital prerequisite. Furthermore, on the other, a sectoral target for the share of renewable energy of at least 20% of the final energy consumption in transport in 2030 should be established. A specific mandatory target for transport is still necessary, given that this sector remains the largest end-use sector emitting CO2 and the reductions achieved so far have not been very significant. According to the European Environment Agency greenhouse gas emissions from transport (excluding international aviation and maritime transport) grew by 28 % between 1990 and 2007 in the EU. Furthermore, renewable energies penetration in transport has been rather modest so far, in comparison with the electricity sector for instance. The target proposed for transport is perfectly feasible, given that the use of renewable energy in this sector is highly likely to grow at a faster pace post-2020 than in the years up to 2020 and that the consumption of biofuels, for instance, will have increased already from 4,7% in 2010 to more than 8,8% in 2020. in order to remedy the relatively slow growth of RES in the Heating and Cooling and Transport sector, it will be crucial that Member States set national mandatory targets for each sector.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Comprehensive and stable policy and regulatory framework are needed. Retroactive policy steps, like those adopted in Spain in late 2010 for existing PV, wind and CSP promotion schemes as well as ad-hoc policy moratoria like the decision of the Spanish government of 27th of January 2012 to (temporarily) stop any further promotion of new RES-E installations thereby putting strongly in danger the fulfilment of the national targets set in the Renewables Directive 2009/28/EC, should be avoided in any case. In particular, non-cost barriers need to be addressed: permitting procedures, grid access, land allocation and administrative issues are still the main bottlenecks for the development of renewable energies. Articles 13 and 16 of Directive 2009/28/EC are not even properly implemented in all of the Member States, so that more work is clearly needed in this area. The phase-out of subsidies for other energy sources would be another important factor: renewables would be close to competitive, but for the subsidies paid to conventional fuels and to nuclear. Lack of internalisation of costs (e.g. environmental, social, health) makes those sources artificially cheap - meaning that if those costs had to be internalized, an important step would have been made for renewables to become more competitive. Other elements necessary: -Policy that allows distribution network operators to work better and closer together with RES plant operators & focused on DSM energy services and smarter grids.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Some renewable technologies, are already close to (or could be) competitive. Many technologies however, still have their way to go to become cost competitive, and they need further financial support and in particular investment security. Also, there are big differences between the Member States (MS) – as the respective markets are different and the conditions for the technologies. Experience with the Directive 2009/28/EC has shown, that financial support in fact is effective and MS have adopted various approaches. Some existing support schemes have proven very successful, for example Feed-In Tariff schemes in Germany or feed-in premiums for certain technologies in Spain, which are regularly adapted to the cost learning curves of the respective technologies. Others have not, and those MS considerably lag behind their targets. Thus, as technologies and markets are very different, while financial support to renewable energy should continue and be institutionally backed by the EU, it should be for the MS to tailor their financial support scheme, to adapt

to cost learning curves and to eventually decide when a technology is competitive and no longer needs the financial support. In this respect, financial support does not only mean direct payments. It also means stable framework conditions, such as in particular grid access: RES should have priority access in all MS, if not evencost-competitive technologies cannot develop their full potential.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes

Please specify how to make support schemes more market-oriented -open reply-(optional)

As mentioned above, there is no “one size fits all” solution to support schemes. Technologies are different, markets are different, conditions are different, Member States are different… An EU wide support scheme would in this context not make any sense, neither would blind convergence. Such decisions have to be left to the Member States, and while voluntary cooperation may (or may not) prove a good idea for some, it may as well be harmful for others. What does make sense is the application of common rules where the conditions are similar, e.g. the much referred to point of grid access. Having guaranteed access to the grid would allow renewables to participate in the market and to compete on it – directly or indirectly. Together with a well-tailored, technology-specific support, which can be gradually adapted to the respective learning curve of the technology in question, renewables would slowly but steadily become more market oriented, and will one day in the (not so far) future be able to compete without any support.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

In the transport sector, financial support will still be necessary for biofuels post 2020, given the extremely limited take up of higher blends (for instance B30, E85) in most Member States, as well as the modest penetration of advanced biofuels (such as cellulosic bioethanol or algae biodiesel) that is expected for 2020. The increasing feedstock prices are also driving up total production costs for existing biofuels, in comparison to the fossil fuels replaced. While the latter continue to receive generous subsidies from national governments despite being deployed at a very wide scale, renewable energy technologies will definitely need to benefit from financial support until they reach full technological and market maturity. In the case of biofuels, financial support should mainly consist of fiscal incentives and funding for R&D purposes. The current possibility for Member States to establish fiscal incentives for biofuels should be extended at least until the end of 2023 and then be phased-out gradually, after adequately assessing the market situation for the different types of biofuels. If these benefits could not be given to all biofuels, they should at least be applied to higher blends (e.g. B30, E85) and advanced biofuels. As regards the alignment of financial support schemes for biofuels at EU level, it would be preferable to allow each Member State to decide upon the level of support to renewable fuels in transport taking into account its specific market situation.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

Permitting for renewable energy plants can be challenging due to the complexity of procedures and long planning periods. Any measure helping the simplification of permit granting process is welcomed and needed. It is common in many European countries that for a single project, the project developer has to obtain several different permits and authorizations. Other obstacles are a lack of consistency of EU, national and regional legislation regarding nature conservation or building legislation, lack of tax incentives for local communities etc. For one project, a number of different public enquiries have to be carried out, using the same Environmental Impact Assessment. As every step takes several months/years, and cannot be done in parallel, it leads to an unnecessary repetition of efforts and to delays. A further difficulty is that while all those permits relate to the same project, their requestor is different. In the case of Spain, caused by highly complex authorization procedures even for small scale RES-E installations (i.e. to connect a small PV installations of 2 kW capacity currently requires nearly the same number of permits/documentation as for a 2 MW PV plant), according to the EU project “PV Legal”, Spain is the country (out of 12 EU Member States monitored within the PV-Legal project) with the longest waiting periods (160 weeks on average) regarding the answering of all the administrative bodies involved within the permit procedures.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Grid connection rules: Above all, priority access to the grid for renewable energy sources should be maintained until RES become the mainstream source of electricity. Therefore the priority access needs to be maintained after 2020. Grid connection rules also need to be made more transparent for RES, especially regarding the procedure to determine the grid capacity for variable RES and the system flexibility. Additionally, there is an urgent need for additional countries/regions interconnection capacity. Those additional capacities should be increased and made mandatory (as it is now). Cost-sharing rules. Grid update costs should be shared by the power plant developer and the distribution system operator (DSO). It should be clearly defined who has to pay for what kind of grid upgrade measures and what the associated remuneration is. The grid regulation procedures need to allow for multi-year planning in order to make well-informed and sustainable grid layout decisions by the operators. Balancing rules. Centralized dispatches are key to ensure a smooth renewable energy production and to maximize the integration of renewable into the grid. Curtailment regime. Although it is necessary to maximize the grid, it is in parallel necessary to approve a roadmap introducing flexibilityinto the electricity system (and therefore reducing the curtailment of renewables). Flexibility measures for based load facilities (coal and nuclear power plants) have to be implemented.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - None of the above

D.2.1. Please explain why -open reply-(optional)

In addition to priority or guaranteed dispatch, the German “hardship clause” is recommended: the grid operator has to pay damages to the RES plant owner, for the time and in case of the curtailment. Reducing curtailment of variable RES is the best way to maximize the contributions of RES, especially RES that are not easily dispatchable or have no opportunistic fuel costs, like wind and solar. Another key priority is to increase the grid interconnection capacity between countries and regions in order to make the EU system more flexible. Regarding the increase of grid interconnection the priority corridor approach of the EC defining priority interconnection zones (including the South-Western European corridor between Spain and France) is an appropriate one, which should be put into practise with the help of new financing tools for such interconnections (like principles for cost-allocation across borders, common principles in relation to cost-allocation of interconnection investments and related tariffs, development of long term forward markets for cross-border transmission capacity, equity participation and support to infrastructure funds, targeted facilities for project bonds, test option for advanced network related capacity payments mechanism, risk sharing facilities (notably for new technological risks) and public private partnerships loan guarantees, etc.).

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

Back-up capacity is certainly needed, however, it needs to be ascertained that this does not come from new fossil energy plants, otherwise it would undermine the idea of energy system transformation. It should be noted, that CCS is not an option to actually “clean” fossils, so that relying on fossils for back-up would mean that the EU will not reach its carbon targets for 2050. Increasing the availability of demand response such as smart grids is very relevant, especially for solar power. For instance, net metering/self-consumption would be particularly efficient in southern EU countries like Spain where solar photovoltaic will reach grid parity in the next few years. Accelerating infrastructure development and building new interconnection is especially needed between European countries and regions for ensure more flexibility of the EU system. The renewable energy industry continues to improve an efficient use of forecasting capabilities to adapt to the electricity trading.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand

-open reply-(optional)

Retail electricity market rules should foster self-consumption in various market segments (residential, commercial, industrial): availability of real-time production and consumption data (metering), clear and informative bills and time-of-use tariffs will therefore play a key role. In addition, aggregation strategies through, for instance, virtual power plants combining different renewable energy sources on a large scale will also have to develop in order to facilitate market access for distributed generation.

E.3. In how far do you think today's market	Electricity markets should evolve into energy services markets,

design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)

National H&C needs depend on specific market conditions and consumer behaviour, Member States need to be encouraged to become more proactive and to learn from each other and develop systems that work – nationally – for their respective H&C sector and for their markets and consumers. Besides, "bureaucratic" slowness with respect to technological progress in the integration of standards in building codes and technical regulations is a major barrier in this context (CTE and RITE) in the case of Spain). These documents are essential for a reasonable scale deployment of renewables in buildings. Regarding the lack of public support, the exemplary use of renewable energy installations in public buildings, at least new ones, is basic remedy. The inclusion of renewables in new public buildings for climatization purposes begins to be common in the specifications of any bid, but this point should be regulated and be mandatory, and should not depend solely on the judgement of local / regional administrations. Concerning the lack of capacity of installers etc, the lack of specialized training leads to defective installations and therefore reduces the social acceptance of these technologies. In general there are experts in all areas, the problem that occurs in technologies such as geothermal lies in the fact that it covers many different areas of knowledge: drilling, civil engineering, design and thermal simulation, etc. - which are necessary to group.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal - Electrification together with higher share of renewables in electricity production - Other (please specify)

Please specify which other pathways -open reply-(optional)

According to the report “Common Vision for the Renewable Heating and Cooling Sector in Europe”, published in 2011 by the European Technology Platform on Renewable Heating & Cooling (RHC-Platform), In 2020 over 25% of heat consumed in the EU could be generated with RES technologies. The large majority of renewable H&C will be produced from biomass sources, although solar thermal is expected to have the highest average growth among the RES technologies for H&C in the decade 2010-2020. Increasingly competitive geothermal, aerothermal and hydrothermal heat pumps will gain market shares as efficiencies rise. The first Enhanced Geothermal Systems (EGS) drillings will be realized, producing heat at temperature suitable for direct use. Improved thermally driven cooling systems (e.g. from solar or heat pump technologies) will make it possible to cover around 5% of cooling demand from the service and residential sectors by 2020. By 2030 RES H&C technologies could supply over half of the heat used in Europe. Improved compact and seasonal thermal energy storage systems will be crucial to meeting the heating and cooling requirements in buildings. In most of Europe, biomass will be used for small-scale heating as well as industrial processes; 2nd/3rd generation biofuels will also play an important role. Solar thermal will satisfy approx. 15% of the overall EU low temperature demand and it will be increasingly able to meet the heat demand of medium & higher temperature industrial processes

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Necessary allies with both of them needing to be fostered, together as well as independently. Heating accounts for a significant proportion of Europe’s energy demand. To achieve the abovementioned vision targets, efficiency gains are required in both residential heating and industrial processes, better use of thermal energy being crucial for meeting the 2020 renewable energy targets and Europe’s 2050 target of a 80-95% reduction in GHG emissions. Also, cooling demand is expected to rise significantly in the next years in spite of greater use of energy-saving measures like insulation.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable	Lack of standards - Lack of infrastructure - Lack of awareness - Lack of suitable information - Limits of availability of sustainably

energy in transport? -multiple choices reply-(optional)	produced biofuels - Other (please specify)

Please specify which other barriers -open reply-(optional)

The wider uptake of higher biofuels blends (e.g. B10, B30, E85) is impeded by the lack of comprehensive technical specifications at EU and national level. In the case of B10, for instance, although there is an EC mandate since 2006 requiring CEN to revise the EN 590 to allow 10% (v/v) of FAME, there has not been any progress so far in elaborating this standard. The EC should establish strict deadlines for the development of technical specifications at EU level. If this work is not completed within the deadline set, the Commission should adopt these technical specifications itself. The unwillingness of vehicle manufacturers to put on the market vehicles that are guaranteed for the use of higher biofuel blends is also an important barrier. This is further complicated by the lack of information to consumers in all Member States on the vehicles that can use higher blends. Car manufacturers should thus be incentivised/obliged to introduce these vehicles in the European market (just like they did in other markets like Brazil, for instance) and adequately inform consumers. Another crucial barrier is the lack of coherence in EU policy when promoting renewables in transport: direct ethanol-gasoline blends are limited by the Fuel Quality Directive vapour pressure provisions, biofuel producers may be sanctioned for indirect land use change, while the reformed Common Agricultural Policy plans to set-aside 7% of EU agricultural land as “ecological focus areas”.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

Road passenger and freight transport –which currently account for more than 90% of all transport emissions in the EU- represent the most promising sectors for significantly increasing the share of renewable energy. It is expected that the majority of engines available in 2030 will require liquid fuels, although their molecular composition might have evolved from today’s fuels. Biofuels are readily available and compatible with existing technologies and infrastructures. Higher biofuel blends can already be used in passenger and goods transport, however, a combination of administrative barriers and lack of fiscal incentives prevents their wider use. There is great potential in the introduction of B30 and E85 in road passenger transport, while the generalized use of B100 in long-distance freight transport would not only ensure significant greenhouse gas emissions, but also significant savings for the sector. The aviation sector also presents an enormous potential for the increased use of renewable fuels. According to leading aircraft manufacturer Airbus, second-generation bio-jet could provide up to 30% of all commercial aviation jet fuel by 2030, with the help of effective policy incentives and significant R&D investments. The "European Advanced Biofuels Flight path" initiative is a good step in the right direction, although the roadmap included therein should also be extended to 2030, by establishing ambitious consumption targets for sustainably produced drop-in biofuels.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability criteria are important for the correct development of the bioenergy sector, but must not be a barrier for its progress. Sustainble biomass availability in Spain is not a foreseen problem in the coming future. Spain is the third EU country by biomass potential. As a reference, an annual 88 million tons of agricultural and forest biomass existing in Spain, with a consumption of over 8 million tons in 2006. New additional sustainability criteria may further hinder needed mobilization of biomass for energy within the EU. This would be an impediment to reaching the 2020-2050 target for RES and could increase imports of biomass from non-EU countries where the sustainability risks are much higher than within the EU. No additional sustainability criteria (including requirements related to emissions from indirect land use change) should be adopted for biofuels without firstly monitoring and assessing the effects of other land-use products and industries. The focus in the post-2020 period should be on the consolidation of the existing sustainability scheme for biofuels and bioliquids, and on applying the same stringent mandatory requirements to all uses of biomass (both energy and non-energy) and to fossil fuels. The EU energy policy should be based on a coherent life-cycle and land-use approach tobe applied in a non-discriminative manner to all fuels (from biofuels to conventional fuels, electricity and hydrogen) and biomass-based products.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for	Yes

cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Such a policy can only be an add-on and it has to focus on RES development for national and regional deployment in the Third countries. Cost of grid infrastructure from there to the EU makes it highly unattractive against national increase of distributed RES Such a partnership could make sense for developing RE in that area for use in that area, not for export to the EU.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

This is in line with established cooperation between EU neighbours such as happening in road and rail links it is part of the national policies and is good to have, but does not need any specific attention since it is based on established cooperation mechanisms. Whether it works out, will depend on the Member States, thus has to be also within their decision competence.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges -open reply-(optional)

There has so far been only very little positive outcome from the SET Plan for renewables. The Commission first will have to give a

comprehensive and detailed report on the outcome and direct positive signal reflected in concrete quantity from SET support, before any assessment can be made. However, what can definitely already be added is that there is a need for facilitating not so much system integration and the like, but rather for a system transformation. When moving to a future with renewable energy as the main source of supply, it can no longer be called a question of integration – this will be a transformation. Around this paradigm shift, research and innovation could be a great contribution. The report 'RE-thinking 2050' published by the European Renewable Energy Council –EREC- in 2010, presents a pathway towards a 100% renewable energy system for the EU in 2050, examining the effects on Europe's energy supply system and on CO2 emissions, while at the same time portraying the economic, environmental and social benefits of such a system.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Regional structural funds priorities, EIB priorities Intelligent Energy for Europe further TRTD As the mentioned 'RE-thinking 2050' report clearly outlines, Europe should lead the way with a clear commitment to a 100% RES future by 2050. It is not a matter of availability of technologies. It is a matter of political will and of setting the course today for a sustainable energy future tomorrow. A 100% renewable energy supply for Europe will require paramount changes both in terms of energy production and consumption as well as concerted efforts at all levels – local, regional, national and European. In order to achieve a 100 % renewable energy supply, a clear-cut and consistent mix of measures must be put in place along the following lines: - Supporting the transition towards a 100% renewable energy economy through all EU policy areas. - Less is more – an ambitious energy efficiency and energy savings framework. - Effective and full implementation of the RES Directive (2009) in all EU-27 Member States. - Binding renewable energy targets for 2030. - Full liberalisation of the energy market. - Phasing out all subsidies for fossil and nuclear energy and introducing an EU-wide carbon tax. - Electricity infrastructure – moving towards SuperSmartGrids. - Hybrid energy solutions and virtual power plants. - Heating and cooling – measures to awaken the sleeping giant. - New transport solutions. - Smart-Energy Cities 2050. - Smart-Energy Buildings 2050 – constructing a better climate.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

Other promising RES technologies like marine technologies with a strong potential to cover larger parts of Europe's future power supply (according to the marine energy roadmap elaborated by the EU-OEA, marine energy (technologies) could cover up to 15% of EU´s energy demand by 2050?) should be integrated in current and future energy technology initiatives like the SET-Plan ASAP. The development of future biorefineries as alternatives to the massive present deployment of fossil resources in the production processes of a wide range of products (from energy to fine added-value products –e.g. chemicals and pharmaceutical bioproducts) will be of major importance. The main challenge for this development is to design it as integrative from the very beginning. A special case of biorefineries would be the CO2 algae biorefinery. Algae represent a alternative to convert CO2 (e.g. from the atmosphere of capture in industrial processes) into high added-value products and biofuels. Algae biorefineries can thus alleviate food versus fuel conflicts and may become particularly advantageous for regions with limited biomass availability. Geothermal energy: There is no EU industrial initiative for geothermal energy. This technology has great benefits, one of the biggest is that it is manageable, allowing security of supply and stability to the system when used for electricity production. Furthermore, it is characterized by low production costs, counting with a high capacity factor-production.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

One particular drawback – if to be called so – would be that while indeed some progress was made in the renewables sector, there continues to exist support for fossil and nuclear energy. Rather than being a drawback these subsidies for fossil and nuclear energy simply undermine the system. Further barriers are - sometimes, the lack of market orientation and the implementation of the results. Besides, there exists a high level of administrative bureaucracy to access the programs.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

-open reply-(optional)

Yes, but the specificities of each technology and its stage of development have to be taken into account. Therefore a 'deadline' applied cannot be the same in all cases (meaning that 'assistance in technology' refers to public financial support). Besides, some success criteria, good indicators and realistic time planning from the beginning could avoid worst case examples such as the continued financing for ITER, where over 50 years money has been wasted, now waiting for another 50 years. Burning money does not – but for the bit of heat – produce energy and cannot be the interest.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Tomislav Tkalec; Focus, association for sustainable development; tomi@focus.si
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Slovenia
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

The mandatory target at EU level would be the most efficient way of achieving the goals set for the post 2020 era.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables	Yes

post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Accelerate convergence of national support schemes
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	N/A
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States should open their support schemes to renewable generation from third countries
Please explain how it could be achieved for third countries -open reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	N/A

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Balancing rules - Curtailment regime
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Increased availability of storage

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Michael Gallagher, Green Alternatives to Incineration in Scotland, contact@gainscotland.org.uk
2. Are you responding to this questionnaire on behalf of /as:	NGO

-single choice reply-(optional)	
3. Please indicate your country -single choice reply-(optional)	United Kingdom
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Other (please specify)

Please specify which other policy elements? -open reply-(optional)

The problem with the current system of subisidies for renewable energy is that it only covers energy generated, not energy saved. If we really want to tackle global warming recycling must received the same level of subsidies for the energy it saves. We are told by Friends of the Earth that on a weight-for-weight basis recycling waste saves 4 times more energy than can be generated by burning it.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you	

consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Jan Stambasky, Czech Biogas Association, jan.stambasky@czba.cz
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Czech Republic
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)
We see the EU-wide, mandatory target to be the only efficient tool to achieve long term strategies in climate mitigation and energy policy.

A.2. Are other policy elements necessary to	Enhanced focus on R&D to bring down the costs of renewables

promote renewable energy post-2020, such as: -multiple choices reply-(optional)	technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Accelerate convergence of national support schemes - Open up national support schemes to cross-border projects
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	N/A

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, all support schemes distort competition to a similar extent

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables	Length and complexity of administrative procedures relating to authorisation/certification/licensing

following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
Smart grids	
E.3. In how far do you think today's market	Electricity markets should evolve into energy services markets,

design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Lack of public support
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Rail - Water

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

Well, yes. But the prioritization should go in hand of technology needs and not be limited to some specific regions only.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-	N/A

(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Lucie Tesniere - European Renewable Energy Council- tesniere@erec.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	European organisation
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

According to the impact assessment of the low carbon economy roadmap, with current policies projected to reduce greenhouse gas emissions (GHG) by 40% in 2050, the EU will fail to meet the Heads of State's commitment to reduce 80-95% GHG by 2050. Further policy measures are needed. So far, targets have been a key policy measure in the EU energy and climate policies and have successfully helped reducing greenhouse gas emissions, ensuring security of supply and improving the EU competitiveness. 2020 energy and climate targets drive the decarbonisation agenda. Given that 2050 is only one-investment cycle away, similar targets should be defined: 2030 is the first step on that road. Climate and energy targets are interlinked and mutually reinforcing. It is therefore appropriate to establish a target for renewable energy sources (RES) together with post-2020 targets for energy efficiency and climate mitigation. Member States can define their energy mix having a large choice with more than 12 RES technologies covering 3 energy sectors: heating and cooling, electricity and transport. To deliver on the European Union's long-term climate commitment, EREC believes a legally binding EU target of at least 45% renewable energy by 2030 is necessary. A renewable energy target for 2030 is one of the most efficient and effective means of reducing GHG emissions, stimulating innovation, creating new job opportunities and maintaining Europe's first mover advantage in this industry.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as:	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting,

-multiple choices reply-(optional)	improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

- A strengthened EU Emission Trading Scheme: If well designed, the Emission Trading Scheme could be an effective tool for reducing carbon emissions. It should be strengthened and prolonged to 2030 with an ambitious cap taking into account renewable energy and efficiency policies. - Full energy market liberalisation - Financial support mechanisms (see our answers below) - Continuation of removal of administrative barriers to renewable energy and obstacles to grid access across the EU - Introduction of an EU carbon tax - Building obligation in the renewable heat sector & Increasing the buildings 'renovation rate in the EU - Energy efficiency targets should be combined with renewable energy targets. They can indirectly promote RES technologies, which have higher levels of efficiency. - Policies to encourage demand side management and smarter grids.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Within less than two decades, renewable energy has achieved great levels of market penetration, developing from a niche market to an important market share worldwide and a driving force for a sustainable economy. According to latest EurObserv'er data, the EU has reached an overall RES share of 12.4% in 2010. The objective of the renewable energy industry is to become competitive on a fully liberalised energy market. However, financial support will continue to be necessary to support individual renewable technologies post-2020 if: - there is no well-functioning internal electricity market and no level playing field - subsidies to fossil fuel and nuclear are not removed and the "polluter pays principle" is not applied. - external costs are not internalised, including through an efficient EU Emission Trading Scheme - If key barriers to RES-E development in each Member State are not removed.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

If full market liberalisation is achieved, and market design and system operations are improved to adequately integrate RES, then the following options would be possible, based on an ambitious 2030 RES target: RES support schemes could encourage greater market responsiveness. In a well-designed and functioning electricity market, producers should be better exposed to price signals. This should be introduced gradually and on a voluntary basis. The design of support schemes is already getting increasingly similar across the 27 Member States. Post-2020 renewable energy support mechanisms could be designed to deliver more convergence via minimum design criteria/principles e.g. technology specific support, digression rate to take into account the learning-curve of a technology. A deeper regional coordination of RES-E markets could be envisaged via the joint support schemes as in the 2009/28/EC RES-Directive. There could be voluntary guidelines for Member States to coordinate and harmonise their national support schemes.

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

The phasing out of support schemes (in the sense of financial support) should be a national decision, to be made once a technology has

achieved grid-parity and market maturity: Some technologies may not need support any more in a given national market at an earlier point in time compared to other national markets (e.g. depending on the electricity price, the administrative barriers etc...).	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
The alignment of the structure of financial support on a European scale does not seem necessary in the renewable heating and cooling sector: This market is much more based on local markets and supply. Several tools are available to Member States to develop the sector: EREC believes that instruments adopted by the Member States should as much as possible be independent from annual budget decisions to provide more investor certainty. As in the electricity sector, the design of support scheme in the heating and cooling sector tends to be increasingly similar: some Member States have adopted building obligation. It is worth noting that in order to be successful, this obligation should always be accompanied by financing measures as well as certification measures. Regarding transport sector, there is a need for a harmonised implementation of mandatory sustainability rules in the EU to avoid distortion of the fuel market.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
The 2009/28/EC Directive comprises provisions regarding the streamlining of administrative barriers. Following this, Member States have taken steps to remove non-economic barriers. But more progress is needed. The examples below – which are focused on specific technologies - emphasise how administrative barriers can significantly slow down the adoption of a project while at the same time increasing its overall costs: In Spain, legal-administrative costs represent up to 36% of the total development costs of a photovoltaic (PV) project in the residential segment, and up to 51% of the industrial ground-mounted segment. The lack of credible and certified training and qualification is an issue for geothermal heat pump installers as very few training courses and certification are available for this technology. In the wind sector, the total time to get the building consent and grid connection permits is called the total “lead time” of a wind farm. Based on the Wind Barriers survey, the average lead time in the EU is 54.8 months for onshore wind projects which is too long. Strengthening rules – as emphasised in question C2 will most likely remain necessary.	
C.2. Which policy response to the problems	Strengthen rules to intrude more directly into Member States

identified above do you consider appropriate? -single choice reply-(optional)	procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

The nature and degree of each of these obstacles post-2020 will depend how current existing legislation is being implemented. However, grid connection requirement will most likely still be an issue after 2020 as the diversity of grid connection requirements for generators does not seem to be adequately addressed by the current Network Code on grid connection nor at national level by the TSOs. The way in which grid code requirements in Europe have developed has resulted in inefficiencies and additional costs for consumers, manufacturers and developers. They are more than 30 different national grid codes resulting in lack of clarity, transparency and uniformity. Grid connection rules do not always take into account the characteristics of certain RES technologies. There is an increasing need to develop a harmonised set of grid code requirements to reduce the time and costs for preparing connection agreements. Cost-sharing rules: Grid costs should be shared between all relevant stakeholders (including TSOs and DSOs) and according to objective, transparent and non-discriminatory rules. Current wholesale electricity market rules were designed at a time when centralised based-load generation was predominant. With a more decentralised and variable European electricity portfolio, these rules will have to be adapted. Both the time-horizon (day-ahead and intraday markets) and the geographical scope of the balancing regime should better reflect the characteristics of RES.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - Other (please specify)

Please specify which other rules -open reply-(optional)

Policy framework should evolve to enable distributed sources of generation to move towards a sustainable energy future. Enabling electricity consumers to produce and consume their own electricity (through e.g. self consumption and net-metering) is necessary.

D.2.1. Please explain why -open reply-(optional)

Support mechanisms have helped renewables gain a market foothold in European Member States. Priority access and dispatch after 2020 will maximize the investments made so far. As long as the electricity markets remain distorted via regulated prices, high market concentration and vertical foreclosure by large national incumbents, priority dispatch should remain. It should be seen as a compensation for new entrants in the absence of a functioning electricity market. However, in an electricity system with a very high penetration of renewables, the right balance should be found between a systematic priority dispatch (that could lead to inefficient situations as shown in the high RES scenario of the Energy Roadmap 2050) and a complete non-differentiation between energy sources. There should be an obligation for the network operator to develop the network. This obligation results from the need to create an Internal Energy Market and from the obligation to ensure the security of our energy supply. The grid is a common good and should remain so. Hence, shallow network connections should continue to apply.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

There is a complementarity between variable and flexible RES technologies that can help balancing the grid locally and regionally. Flexible RES technologies such as hydropower, geothermal or biomass can cover the variability of the grid. A flexible renewable-based power system should contain a broad range of renewable electricity technologies. The deployment of smart distribution grids will also be of crucial importance. The flexibility of the energy system should be fostered through a better use of demand response instruments (demand aggregation).

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?

-open reply-(optional)

Post 2020, producers of renewable energy are likely to be exposed to balancing responsibility towards TSOs. Should this be case, regulators should ensure that these costs are transparent and represent the real cost of balancing. A number of factors must be taken into account when estimating the balancing costs.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand

-open reply-(optional)

If an energy system transformation is to be envisaged, it is important to adapt the market to the characteristics of renewable energy technologies: Retail electricity market rules should foster self-consumption: availability of real-time production and consumption data (metering), clear and informative bills and time-of-use tariffs will in this regard play a key role. In addition to that, aggregation strategies through for example virtual power plants combining different renewable energy technologies on a large scale will facilitate market access for distributed generation.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)
Both renewable energy in heating and cooling as well as energy efficiency must be fostered, together as well as independently. Regarding biomass specifically, high conversion efficiency from primary to final bioenergy should be promoted in order to consume less biomass for more energy. Electrification of the heating sector should not be encouraged when other renewable heat technologies are available and deliver more efficient solutions. Thermal needs should be primarily supplied by thermal sources and decentralized energy demand should also primarily be supplied by decentralized energy supply. As a result lower costs and better efficiency will be achieved. Therefore, reducing the electrification of heating and cooling will relieve the stress on the power system and shave peak loads.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of infrastructure - Lack of awareness - Lack of suitable information - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)
Roads and rail are certainly most promising. The share of electric cars run on renewable energy should be increased as well as larger rail tracks provided. Electric vehicles, supported by an appropriate recharging infrastructure, could represent an interesting electricity storage network for renewable energy. Methane gas CH4 as biogas should be mentioned as these are good solution for transport in road vehicles and public transport, while biofuels in transport would in future cover heavy good vehicles, aviation and maritime sectors. Biofuels including biogas and renewable electricity should all be considered in the transport sector.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)
There should be a level playing field regarding the sustainability of biomass and fossil fuels. The unconventional fossil fuels (shale gas, tar sands, deep water etc...) should as well be evaluated in terms of indirect land use change effects and full life cycle assessment developed and incorporated into the Fuel quality Directive. Sustainability criteria, in an ideal case, should be applicable to all uses: energy, food, wood material and feed. Biomass for energy is only one path of forestry and agricultural uses. Forestry, for example, is also used to produce timber and paper and it is difficult to apply different criteria for different parts of the same tree (one tree can be a source for timber and biomass simultaneously). Sustainability criteria should be extended to biomass and -later on - to the whole forestry and agricultural sectors.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

If one or more Member State would like to cooperate with a third country and physically import electricity via electricity networks, the 2009/28/EC Directive provides the possibility for that. Member States should retain sovereignty over the projects they would like to support or not. Only the Member State concerned can decide on this issue. There are sufficient grid bottlenecks within Member States and within the EU, for investments purely directed towards imports not to be given priority.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Such cooperation with Southern Mediterranean countries could represent an interesting opportunity. However, this cooperation should by no means undermine the EU and national achievement of the renewable energy targets. It is also worth noting, if one considers possible electricity imports from third countries towards the EU, that this would be a sub-optimal solution in terms of overall system costs because of high investments in transmission capacities and considerable public acceptance issues.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

The North Sea Countries Offshore Grid Initiative is a successful example of regional cooperation. However, although effective, this working group remain ad-hoc and cross-border cooperation is limited to a certain time frame. While it is good to have flexible and result-oriented working groups, it would be beneficial to include them in a more long term strategic vision of the sea basin. The European Commission should support fully such initiatives and promote them in regions where onshore and offshore wind energy development would benefit, such as in the Baltic or Mediterranean Sea.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

In the Energy Roadmap 2050, all decarbonisation scenarios feature a share of renewable energy in overall final energy consumption

between 55% and 75%: There is a need to facilitate a system transformation towards a renewable-energy based system, to achieve a real paradigm shift. For a number of renewable energy technologies, European Industrial initiatives (EIIs) have been set up in the framework of the SET plan. In this regard, and as a first step on the road towards 2050, it is important to: - include in the EU budget a dedicated budget line for each of these SET-Plan renewable energy technologies. - to clarify and increase the EU financial contribution in the framework of EIIs to mobilize private investments and push the industry to develop ambitious project proposals. In a post-2020 framework, setting a 2030 mandatory renewable energy target would go a long way to stimulate innovation in the renewable energy sector. However, an EU programme similar to the SET Plan covering the period 2020-2030 will be needed entailing a research agenda for each renewable energy technologies as well as a stable regulatory framework and financial support for research and innovation.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

The future energy system will have to be based on a broad mix of renewable energy technologies combining both variable and flexible RES. Hence, we would not “prioritise” one or the other technology, but rather ensure that the potential of each of them is tapped. In this perspective, European Industry Initiatives are needed for the RES technologies currently outside the SET Plan - geothermal electricity, marine energy and hydropower- and dedicated budget lines, to ensure their development. EREC projects in its publication “45% by 2030: Towards a truly sustainable energy system in the EU” a contribution by 2030 of geothermal electricity amounting to 6.4 Mtoe to 17 Mtoe (respectively in the baseline and in the advanced scenario), for ocean a contribution of 2 to 6 Mtoe, and for hydropower 33 to 34.2 Mtoe. According to EREC, renewable heating and cooling technologies could cover about half of the heat demand in 2030.The Renewable Heating and Cooling Platform is actively committed to start a European Industry Initiative. In a post-2020 framework, setting a 2030 mandatory renewable energy target would go a long way to stimulate innovation in the renewable energy sector. However, an EU programme similar to the SET Plan covering the period 2020-2050will be needed comprised of a research agenda for each renewable energy technologies as well as a stable regulatory framework and financial support for research and innovation.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

-open reply-(optional)

At a macro-level, it is not relevant to be too prescriptive about the action that should be taken if a technology succeeds or fails in reaching a target by a particular date. What is important is to create a permanent, frequently updated database to track Key Performance Indicators. SETIS will be useful in this regard to monitor where Member States are concentrating their resources. This will ensure that responses to success or failure are well informed, are seen in a wider context and have a greater chance of being appropriate to the situation. A stable framework based on success criteria, good indicators and realistictime planning from the beginning could contribute to a successful monitoring and stimulate innovation.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Sarah Keane, European Geothermal Energy Council, s.keane@egec.org
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-	Belgium

(optional)	
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for	

the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could	

renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of	

cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	EHI - Association of the European Heating Industry; Contact: Dana POPP, dana.popp@ehi.eu
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	European organisation
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
The positive response is based on the condition that the 20/20/20 is being achieved in the three areas: fewer emissions, more renewables and more energy efficiency. If this would not be the case, the 2020 targets as well as the 2050 Energy Roadmap would need to be re-evaluated in order to have a robust policy in which Member States, industry and citizens may have confidence. The (changing) economic boundary conditions may focus on the affordability of policies.	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Other (please specify)

Please specify which other policy elements? -open reply-(optional)
The need to continue or for new policies to promote renewable energy post 2020 depends very much on the results obtained between 2009 and 2020. The past promotion policy would require a cost-benefit analysis, preferably already by 2015-2016. This analysis would need to identify if the costs of renewable technologies did come down and calculate the real impact on employment, environment as well as at society level (costs or benefits being handed down to end-users).

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	No
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)

Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)
The financial support to renewable energy sources in Member States has been extensive, in part to allow Member States to reach the targets. Due to the current economic climate, incentives are scaled back. It would be appropriate to review those technologies that have not managed to become affordable or accepted even with the help of support schemes. It would be appropriate to ensure a close monitoring (in Member States) as to which technologies are gaining acceptance, as well as the barriers that might hinder acceptance (access to the grid, requirement on energy performance of buildings...). If RES are to benefit from support schemes post 2020, phase out of schemes over time would be the best approach. The phasing out of support schemes should be conditional to the achievements up to 2020. Technologies which have not managed to get accepted by the market between 2009 and 2020, especially if they have not become affordable would need to seriously consider as to whether future support would be useful. The different approaches in Member States may possibly justify extension of schemes to achieve a common European approach. The guiding principle should be affordability and return on investment for Member States and their citizens.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	N/A
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	N/A

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)
There is indeed a difference between the sectors. EHI will comment on heating and cooling: see Section F of this consultation.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort	

competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Building regulations etc. - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)

During the past years incentives have been used to introduce and make renewable technologies not just cost-competitive but also affordable compared to (more) traditional energy efficient technologies. If by 2020 these technologies have not become affordable without incentives, they will lose or will have lost market acceptance with the public at large (and authorities providing incentives). Two main barriers do exist: the lack of competent (qualified or certified) staff to install and maintain renewable technologies and building regulations. This is being reinforced by the requirements under the Energy Performance of Buildings Directive where Member States do not use a common calculation methodology to deal with renewable (or other) technologies. Depending on the country or regions various sorts of deviations or additional approvals need to be obtained to bring renewable technologies into the calculation methods. The lack of a coherent calculation framework does not allow for the development of competent staff in sufficient numbers.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Other (please specify)

Please specify which other pathways -open reply-(optional)

The setting of correct, preferably European wide, boundary conditions for mainly the building regulations so that all renewable technologies (biomass, geothermal, solar...) can be dealt with in an adequate way. It means that both harmonised calculation method under EPBD and fair product requirements under Ecodesign would be required. To allow for fair competition and to reach policy objectives the requirements for buildings should be set in kWh/m²/yr rather than advocate a specific share of renewable technologies.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Renewable and energy efficient technologies are equally important and cannot be considered separately. Both technologies find their use in buildings and hence a coherent policy is required. The promotion of both renewable and energy efficient technologies depend on the development of coherent European wide harmonised calculation models that take into account objective parameters (climate, location...). Given a level playing field, the penetration rate of renewable technologies will very much depend on their affordability and reliability. Incentives originally were intended to get market acceptance for new technologies. Meanwhile the focus has shifted from getting market acceptance for new products to fulfil policy objectives defined in EU legislation. It would be appropriate to assess the objectives of support mechanisms: support technologies or policies.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added
-open reply-(optional)

Within the manufacturing industry there is a concern that cost-efficiency of renewable technologies has not been an issue with Member States.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - Other (please specify)

Please specify which other key challenges -open reply-(optional)

The core issue remains the affordability and reliability of the technologies.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

It is possibly too early to consider the effectiveness of the existing measures. In general the support mechanisms have not yet rendered the renewable products sufficiently affordable. In addition some incentive schemes have created adverse reaction from the public especially in the field of photovoltaics.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

Any assistance should be carefully evaluated and conclusions should be drawn and implemented.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	German Renewable Energy Federation (BEE), Katrin Düning, Policy Advisor (katrin.duening@bee-ev.de)
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry

3. Please indicate your country -single choice reply-(optional)	Germany
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Such a target must be ambitious enough and following the systematic approach of the Renewables Directive (2009/28/EC) it needs to be underpinned with binding targets for all Member States. A share of 30% - as envisaged by the Commission in the Energy 2050 Roadmap – definitely is not ambitious. In contrast, the proposal of the European Renewable Energy Associations should be adopted to agree on a legally binding minimum target of 45% for 2030. In this context, the Member States' choice of support mechanisms must not be affected. Such an approach would be in line with the Commissions position in the Energy Roadmap that it is primarily the Member States' responsibility to develop and implement strategies for achieving their renewable energy targets for 2020 and beyond. And most importantly, a coordinated approach to energy policies in full compliance with the subsidiarity principle could thus be further maintained after 2020. Like this, the different potentials of various renewable energy technologies could be used and exchanged efficiently among the Member States. At the same time, supply security could be granted through regional deployment of renewable energy.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

There is no “one size fits all” solution to support schemes because of differences between MS (e.g. markets, political consitions, consumer acceptance) and technologies. An EU-wide support scheme would in this context not make any sense, neither would blind convergence. In contrast, a closer voluntary cooperation could make sense for some issues (e.g. exchange of best practice among MS, learning from each other and from various studies/ projects) but such decisions have to be left to the MS. What does make sense is the application of common rules where the conditions are similar, e.g. the much referred to point of grid access. Having guaranteed access to the grid – like in Germany – would allow renewables to participate in the market and to compete on it – directly or indirectly. Together with a well-tailored, technology-specific support, which can be gradually adapted to the respective learning curve of the technology in question, renewables would steadily become more competitive with conventional power production all over Europe. Thus, renewables - “integrated” into properly functioning energy markets - could compete without financial support in the future (time will vary depending on technology). However, an indispensable precondition for such “integration” would be successful adjustment of the design of existing energy/electricity markets, in a way that is appropriate for dealing with the specific characteristics of RES (high CAPEX, nearly-zero OPEX).

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

There are differences between the electricity and heating/ cooling sector on the one side and the transport sector on the other. For the first sectors the support levels and structures of financial support should be completely up to the Member States. As far as the transport sector is concerned, a harmonized implementation of the RED (in particular regarding the sustainability regime) would be necessary to avoid severe distortions of the internal fuel market in the EU. Especially the double-counting mechanism for biofuels made from residues and wastes should be implemented in the same way in all member states. Because of the already effective implementation of double-counting schemes in some member states, a change in trade flows and prices for such biofuels can be noticed. So in the fuel sector the implementation of EU-targets and support mechanisms, especially the transposition of the RED in the EU member states, should be carried out in a coordinated way.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification

C.1.1. Please provide explanations and specific examples where available

-open reply-(optional)

/

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

- Grid connection rules: Above all, priority access to the grid for renewable energy sources should be maintained until renewables have become the clearly dominant source of electricity. Therefore the priority access needs to be maintained after 2020. Grid connection rules also need to be made more transparent for renewables, especially regarding the procedure to determine the grid capacity for variable renewables and the system flexibility. Additionally, there is an urgent need for additional countries/regions interconnection capacity. - Balancing rules: Centralized dispatches are key to ensure a smooth renewable energy production and to maximize the integration of renewable into the grid. - Curtailment regime: Although it is necessary to optimize the grid, it is in parallel necessary to approve a roadmap introducing flexibility into the electricity system (and therefore reducing the curtailment of renewables). Flexibility measures for base-load facilities (coal and nuclear power plants) have to be implemented.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

In addition to priority or guaranteed dispatch, the German “hardship clause” is recommended: the grid operator has to pay damages (income-losses) to the renewable energy plant owner, for the time and in case of the curtailment. As the grid operator is responsible for the balancing in the grid, as well as for sufficiently strong and stable grid infrastructure, he is also held liable. As mentioned above, the priority grid access for renewables is one of the key elements of the recent development of RES in most Member States. Therefore the priority access needs to be maintained.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

If there should be a need for an increase of flexible back-up capacities (like storage capacities, virtual power plants on basis of different RES-technologies or renewable energy combined-cycle power plants) capacity payments could be an appropriate instrument to ensure investments in these technologies.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should bear greater responsibility for system costs - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

Producers of renewables have started to bear responsibility for system costs by providing ancillary and other system services. As a consequence and further development of this, renewable energy producers should have accesses to balancing energy markets, which would further increase their responsibility for the system as a whole.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand
-open reply-(optional)

In addition to the introduction of smart grids and especially smart markets (with special market signals for shifting the demand) there could be penalties for inflexible power generation which caused further RES curtailment or higher negative prices at the power exchange.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal - Electrification together with higher share of renewables in electricity production

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

We need more action in the heating and cooling sector to reach our 2020-targets. Not only in Germany but all over Europe, this sector has huge but widely untapped potentials. In order to tackle the increasing energy demand, energy efficiency needs to be also in focus, e.g. heat pumps provide both: they make use of considerable share of RES and at the same time use the still necessary auxiliary energy most efficiently. They serve as amplifiers in case electricity is coming from green sources. In general, necessary allies with both – renewables and energy efficiency – needing to be fostered, jointly as well as independently.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure - Lack of awareness - Lack of suitable information - Limits of availability of sustainably produced biofuels - Other (please specify)

Please specify which other barriers -open reply-(optional)

Regarding the main barriers one has to differentiate between biofuels and electric mobility. In the biofuels sector costs of the fuels are a main barrier. Fossil fuels are still so that biofuels cannot compete without a support scheme. The price for biofuels feedstock is also coupled to the oil price which leads to the fact that with rising oil prices also biofuels prices may start to rise. In e-mobility also the lack of standards and infrastructure are still main barriers. The development to change the system to renewable energies always needs the awareness and acceptance of the general public, especially in the transport sector. Therefore suitable information is needed.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail - Water - Air

G.2.1. Please explain your answer -open reply-(optional)

To change the transport sector completely towards renewable energies all sectors have to contribute. Again on the long run differentiation is needed. Because of the limited availability of biofuels, especially sectors depending on liquid fuels will have to be their main area of application. That includes road transport for goods and also transport in water and air. In road transport the use of higher biodiesel blends like B30 gives the opportunity to increase in the short and medium term renewable energy sources in the main demand sector without technical barriers. In passenger transport also electric cars combined with high shares of renewable electricity are an additional opportunity.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability criteria need to apply to all types of biomass use (energy, food, feed, material use), not only for biofuels in transport. It is necessary to include all biomass production and uses to avoid leakage effects. The compulsory sustainability requirements can only be the starting point to earn experience. To have a real impact on agricultural production and the use of biomass the main demand sectors have to be included in sustainability certification. Generally it is also important to strengthen the implementation and enforcement of laws for the protection of the environment in biomass producing countries (e.g. forest protection). Furthermore it is essential to define environment-associated criteria for the production of fossil fuels to have a level-playing field between fossil and renewable fuels and to tackle the growing negative impacts of – among others - greenhouse gas emissions of fossil sources like tar sands, deep sea or arctic oils.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

New or additional grid infrastructure is needed all over Europe, not only in the South. The priority of investments in infrastructure only by regions would follow the approach on “best sites”. Hugh potentials of other sites are not taken into account, nor are the economic, social and political advantages of predominately decentralized structures. Decentralized structures mobilize higher cost savings (from 2001 to 2030, up to 238 billion Euros can be saved in Europe with decentralized deployment in comparison to centralized structures) and reduce the need for transmission grid extension (cf. BEE´s position to “Best sites” for Renewable Deployment, June 2011).

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

The Renewables Directive (2009/28/EC) foresees “Joint projects” also for Member States and Third Countries to cooperate on a voluntary basis. These projects have to apply the limitation of the Directive in order to be counted towards their target. There is no need for additional measures to increase these projects. The main focus of the cooperation mechanisms should remain within the EU.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

It can only be an add-on and it has to focus on RES development for national and regional deployment in these countries. Cost of grid infrastructure from there to the EU makes it highly unattractive against national increase of distributed RES. Such a partnership could make sense for developing renewables in that area for use in that area, not for export to the EU.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

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J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges -open reply-(optional)

There has been only very little positive outcome from the SET Plan for renewable energy. The Commission has first to give a

comprehensive and detailed report on the outcome reflected in concrete quantity of SET-Plan support. All in all there is a need for facilitating system transformation from current system to a renewable energy based system (paradigm shift). When moving to a future with renewable energy as the main source of supply, it can no longer be called a question of integration – this will have to be a transformation of the energy system towards the logic of a flexible and renewables based system. Around this paradigm shift, research and innovation could be a great contribution (especially in the context of smart grids and demand side management). In addition, it would make sense to mobilize spinning effects of ancillary technology, such as power inverters for multiple use. Furthermore, newly arising questions, such as the availability and potential replacement of specific resources ("rare earth" issue) could be included in the SET-Plan, focussing on the needs of Renewable Energies.

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

A dedicated budget line (within or outside Horizon 2020) for each of the SET-Plan renewable technologies would in addition give much more visibility to the sector

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

From our point of view, it is necessary to get a broad energy mix of all renewable energy sources (wind energy, solar energy, bioenergy, hydropower, geothermal and environmental thermal energy). With this energy mix in combination with a predominantly decentralized development, a sustainable, cost-effective and secure energy supply can be achieved.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

One particular drawback – if to be called so – would be continued significant support for fossil and nuclear energy. They are not only environmentally harmful, but they are major obstacles for smooth and cost effective development of renewables. Such support is reinforcing existing structural deficits of the energy system, which are counterproductive and undermining the necessary system changes.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

-open reply-(optional)

It is problematic to simply link results to a deadline, so the general answer is no. More important than a specific deadline is a stable and reliable (financial and political) framework. This will provide for investment and planning security and contribute significantly to the further development of renewable energy. This development should be monitored regularly (as would be provided e.g. in the Renewables Directive). In this context a binding renewables target for 2030 could be important for further investment security. However, such a target must be ambitious enough and following the systematic approach of the renewables Directive (2009/28/EC), i.e. it needs to be underpinned with binding targets for all Member States.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Philippe DUMAS Consultant: phdumas_consultant|@yahoo.fr
2. Are you responding to this questionnaire on behalf	Industry

of /as: -single choice reply-(optional)	
3. Please indicate your country -single choice reply-(optional)	Belgium
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, sectoral targets (e.g. electricity, transport, heating and cooling) are appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A combination of EU and sectoral level targets is appropriate, but only if targets are mandatory. Renewable energy is crucial to achieve the EU's objective of reducing GHG emissions by 80-95% by 2050. It is also key to re-launch job growth and local competitiveness, with geothermal requiring local labour force (more than 80% of the value chain is European), with no risk of relocation. The 20% target set in the RES Directive is paving the way for new investments in green technologies, including innovative geothermal systems. Binding targets for 2030, however, are of utmost importance to give more certainty to investors and to ensure a level-playing field with other, highly-subsidised, energy sources, e.g. nuclear, fossil fuels. A combination of EU and sectoral targets in a post-2020 framework should be mandatory and complemented by GHG emission reduction targets as they are interlinked and mutually reinforcing. Furthermore, they should not be limited to a 30% share, as envisaged in the Commission's Energy Roadmap 2050. Such a 30% would actually correspond to business as usual. All sectors are critical to achieve the EU's energy and climate goals. Nevertheless, it is clear that the potential contribution of renewable heating and cooling has been underestimated in the NREAPs. This is also reflected in the poor financial incentives put in place at national and local level. Sectoral targets would be intended to improve the climate for investments for renewable H&C technologie

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

● Building obligation ● Energy Efficiency Targets ● A strengthened EU Emission Trading Scheme ● Increasing the renovation rate in the EU

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables	For selected technologies/circumstances/markets (please specify)

post 2020 given their expected greater penetration? -single choice reply-(optional)	

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support for geothermal will still be needed in order to reduce costs of innovative technologies such as EGS and low temperature power plants. In addition, a support for Geothermal heating will be needed as long as external costs of fossil fuels are not internalised and other market distortions are not removed. It is also worth noting that the financial support to geothermal energy is currently very low, with the exception of Germany and France. Moreover, such a support is in place in only eleven EU member states. NB: EGS (Enhanced Geothermal Systems), uses the high temperature of rocks with artificial water injection and, generally, with enhancement of permeability of the hot reservoir. An Enhanced Geothermal System is an underground reservoir that has been created or improved artificially. -

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

If full market distortions are removed, it is appropriate a switch from feed-in tariffs to feed-in premiums as the specific technology progresses down the learning curve and increases its share on the market. This should be followed by a gradual phase-out of financial support schemes over time but only on a voluntary base and for those technologies achieving grid parity and a larger market share.

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

There is a great difference between electricity and heating and cooling. Electricity may have a wider European market. In this regard, geothermal electricity should be supported by all EU member states whereas today only 11 EU countries have support schemes (e.g. feed-in tariffs or green certificates) in place for this technology. Similarly, an EU geothermal risk insurance scheme should be developed in order to minimise the geological risk. On the other hand, the market for heating is based on local markets and supply. Even though an EU heating and cooling policy is necessary to provide a consistent framework, the development of renewable heating and cooling should be driven by stable national or local incentives. This is also to create a level-playing field with fossil fuels, still receiving considerable government subsidies. In this regard, the UK “Renewable Heat Incentive” is an interesting example, but only to a certain extent. It has actually reproduced the same delay and gap typical of feed-in tariff schemes in the electricity sector. In addition, it is not independent from the state’s budget. Hence, it is not providing much more investor certainty.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

This is the case when only certain technologies (e.g. Nuclear, Gas, PV, Wind, etc.) are highly supported in nearly all member states and, for instance, geothermal support schemes are in place in just a few countries, with a lower level of support. The slow development of some RES in certain areas with good resources is mainly due to the complete absence of support schemes. For instance, feed-in tariffs for geothermal are in place in only eleven EU member states. Feed-in tariff systems in all member states would contribute to a more balanced development of renewable energy in Europe and to the further development of new geothermal technologies, primarily EGS, as it is happening in Germany where such a support mechanism is in place and where 41 new geothermal power plants are currently being developed (Source: EGEC Deep Market Report 2011).

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

• Lack of regulatory framework for shallow and deep geothermal, drilling and ownership of resources (see GTRH (www.gtrh.eu) and Geoelec (www.geoelec.eu) projects) • length and complexity of administrative procedures: simplification is key in order to speed-up the timing. The “One stop-shop principle” should be applied everywhere. Furthermore, public authorities should be trained on geothermal as to have some technical background; • lack of information on support schemes: Geothermal is not supported everywhere so that stakeholders continually investigate for alternative sources of funding; transparency should be applied over support schemes for both conventional and non-conventional sources of energy in order to contribute to create the already mentioned fair level-laying field. For the heating sector the problem is that often only stop & go measures are put in place. The diversity of the support schemes in place represents an additional problem; • Lack of credible and certified training and qualification: Few training courses and certifications are available for geothermal (see Geotrainet project for further information) in order to have a quality and sustainable market

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

The integration of external costs such as those for gas and electricity infrastructures and new electricity generation, into the overall energy cost would remove many of the obstacles and contribute to create a level-playing field.

D.2. Which renewables-specific grid related	Priority or guaranteed access - Priority dispatch and obligation on

rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)
Priority or guaranteed access and priority dispatch are sufficient renewables-specific grid related rules if a better management and balance of flexible and variable renewable energy sources will be undertaken.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Other (please specify)

Please specify which other measures -open reply-(optional)
None of the above as the least costly option is to increase the share of flexible renewable sources. Providing renewable base load, flexible renewable energy sources do not have external costs associated with traditional fossil fuels such as storage, grid and supply infrastructures or waste management (CO2, nuclear). In this regard, geothermal is a renewable electricity source providing flexible and renewable baseload that can operate around the clock, anywhere in Europe, with the best load factor of all energy technologies (more than 80%). Geothermal can therefore ensure system stability while reducing grid management costs.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)
Geothermal, being renewable baseload, is a flexible renewable energy source running around the clock, and available anywhere in Europe. Geothermal is providing electricity to the grid according to the demand. Hence, it should be rewarded for its features.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other) - Other (please specify)

Please specify which other barriers -open reply-(optional)
• Lack of fair competition with conventional sources of energy in heating and cooling. The internalization of external costs is of utmost importance in this regard.

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Meeting Europe's 20% energy saving target is an extraordinary opportunity to re-launch sustainable growth in a time of economic crisis. In the long-term period, more and more energy efficiency improvements are needed. To this end, geothermal and other renewable heating and cooling technologies will be contributing to dramatic reductions in primary energy consumption. Renewable heating technologies provide market ready, efficient and completely carbon-free energy. Electrification of the heating sector should not be encouraged when other truly renewable heat technologies are available and deliver better and more efficient solutions, notably deep and shallow geothermal. Thermal needs should be primarily supplied by thermal sources and decentralised energy demand should also primarily supplied by decentralized energy supply. As a result lower costs and better efficiency will be achieved. Therefore, reducing the electrification of heating and cooling will relieve the stress on the power system and shave peak loads.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

Geothermal can be developed anywhere in the EU. For its development two additional cooperation mechanisms are needed: ● The cooperation mechanism should include a mechanism to develop a European geothermal risk insurance scheme. ● More cooperation in increasing awareness about geothermal and its potential as well as for R&D should be promoted.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes	No, the EU should first focus on developing its own renewable potential

to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)
Please explain why -open reply-(optional)	
Investments in electricity network in some member states in order to facilitate imports of electricity from third countries should not be encouraged and eventually the costs should be taken into account. What should be prioritised is the development of local flexible renewable energy sources, notably geothermal which is a baseload renewable energy source that can operate around the clock, anywhere in Europe, therefore ensuring system stability.	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries
I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)	
It can only be an add-on and it has to focus on RES development for national and regional deployment in third countries. Such a partnership could make sense for developing renewables in that area for use in that area, not for export to the EU. When the EU undertakes joint projects and cooperation with a third country regarding the generation of electricity or heat from renewable sources, the EU should facilitate the concerned country or countries' domestic use of part of the production from the installations covered by the joint project. Furthermore, the third countries involved in joint projects should be encouraged by the EU to develop a renewable energy policy including ambitious targets.	
I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)	
No, the EU should focus its efforts in developing RES technologies that do not need large infrastructure costs.	

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)
Please specify which other key challenges -open reply-(optional)	
Although geothermal is included in the SET plan, it is not fully integrated and a propoer Indusyry initiative for geothermal must be	

developed for ● Deploying EGS all over Europe ● Developing smart cities initiative towards a 100% share of renewables in heating and cooling, by also promoting smart electricity and thermal grids
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)
The challenge is to have a renewable energy mix in the future combining both variable and flexible RES. The objective should be to establish instruments and to adopt measures going into this direction by supporting more R&D for geothermal.
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)
Geothermal - Geothermal electricity, notably for the development of EGS (Geothermal Enhanced Systems). This technology is not only available in all EU member states, but it also produces electricity 24 hours a day. The first research projects have to be replicated. Moreover, as it is a capital intensive technology PPPs represent a viable option. - Geothermal heating and cooling, in order to promote smart cities, including smart thermal grids

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)
Successful results: ● EERA - European Energy Research Alliance - Joint Programme on geothermal energy is rather successful as it is mobilizing large resources for R&D in geothermal. it now starts also to cooperate with the industry, which is a great signal ● The European Technology Platform on renewable heating and cooling (RHC TP) which brings together stakeholders from the biomass, geothermal and solar thermal sector - including the related industries - to define a common strategy for the use of renewable energy technologies for heating and cooling and achieving a 100% share in 2050. The work of the platform is successful, but needs implementation as well Industry Initiatives.
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)
I believe that this is a pre-requisite in order to stimulate innovation. This is the reason why energy technologies not fulfilling these two criteria (i.e. tangible results such as new tools and technologies and within consistent timeframes) should not be prioritised.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	george makris - agpe energy hellas ltd - info@agpeenergyhellas.gr
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Greece
4. How would you prefer your contribution to be published on the Commission website, if at all?	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is

-single choice reply-(optional)	under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

I believe that a general mandatory target must be set. It is for all best interest to elaborate this target per sector with a detail policy and incentives to succed that.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	No
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Accelerate convergence of national support schemes
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of	Member States need to open their support schemes to renewable generation from other Member States

a rising share of renewables? -multiple choices reply-(optional)	

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, all support schemes distort competition to a similar extent

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority or guaranteed access

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increased availability of storage

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should bear greater responsibility for system costs
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Lack of suitable information
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period?	Yes, sustainability criteria should apply to both all biomass and fossil fuels

-multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be	Technology performance and cost-competitiveness

the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)
Please specify which drawbacks -open reply-(optional)	
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Umberto Puppini ESI Italia Via G.B. Pirelli, 26 IT20124 Milano umbertopuppini@esinternational.it
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Italy
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy	Yes, a combination of EU and sectoral level targets is appropriate

efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Renewable energy is crucial to achieve EU's objective of reducing our GHG emissions by 80% in 2050. The 20% renewable energy target set in the RES Directive 2009/28/EC is paving the way for new investments in green technologies, including innovative geothermal systems.However, binding targets for 2030 are of utmost importance to give more certainty to investors and to ensure a fair level-playing field with other, highly subsidised, energy sources, e.g. nuclear, fossil fuels.All sectors (electricity, heating and cooling and transport) are key to the above-mentioned decarbonisation's goal. Nevertheless, the potential contribution of renewable heating and cooling to achieving the 2020 targets has been underestimated, as confirmed by the NREAPs as well as by the poor incentives put in place at national and local level.The combination of mandatory EU and sectoral targets in a post-2020 framework should follow the systematic approach of RES Directive and should not be limited to a 30% share, as envisaged in the Commission's Energy Roadmap 2050. Such a 30% would actually correspond to business as usual and does not include renewable heating and cooling, largely neglected in the EU Executive's exercise.Indeed, the contribution of RES heat in 2030 will substantially increase the overall RES share in final energy demand. EREC, in its 2030 45% document, assumes a 284Mtoe production of heating and cooling in 2030, compared with 104.9 Mtoe in the high RES scenario of the Energy Roadmap.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

● Building obligation ● Energy efficiency targets ● Increasing the renovation rate in the EU ● Sustaining project validation practices

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

For geothermal, financial support will still be key in order to reduce costs of innovative technologies such as EGS and low temperature power plants. Moreover, a support for Geothermal heating will be needed until when fossil fuels are also supported. Support to Geothermal is currently very low in nearly all EU Member States.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Phase out support schemes over time (please specify for which technologies if applicable)

Please specify how to make support schemes more market-oriented -open reply-(optional)

Switching from feed-in tariff to feed-in premiums as the specific technology progress down the learning curve and increase its share on the market (as it is happening for PV in some member states)

Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)	
Those technologies achieving grid-parity	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
There is a great difference between electricity and heating and cooling. Electricity may have a wider European market. In this regard, geothermal electricity should be supported by all EU member states whereas today only 11 EU countries have support schemes (e.g. feed-in tariffs or green certificates) in place for this technology. Similarly an EU geothermal risk insurance scheme should be developped in order to minimise the financial costs of the geological risk. On the other hand the market for heating and cooling depends on local conditions. Therefore, national or local incentives should drive the development of renewable heating and cooling.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)
Please specify which support schemes you consider most distorting -open reply-(optional)	
This is the case when only certain technologies (e.g. Nuclear, Gas, PV, Wind, etc.) are highly supported in nearly all member states and, for instance, geothermal support schemes are in place in just a few countries, with a lower level of support. The slow development of some RES in certain areas with good resources is mainly due to the complete absence of support schemes. For instance, feed-in tariffs for geothermal are in place in only eleven EU member states. Feed-in tariff systems in all member states would contribute to a more balanced development of renewable energy in Europe and to the further development of new geothermal technologies, primarily EGS, as it is happening in Germany where such a support mechanism is in place and where 41 new geothermal power plants are currently being developed (Source: EGEC Deep Market Report 2011).	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of information on support schemes or other - Lack of credible and certified training and qualification - Other (please specify)
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
● Lack of regulatory framework for shallow and deep geothermal, drilling and ownership of resources (see GTRH (www.gtrh.eu) and	

Geoelec (www.geoelec.eu) projects) Explanations and specific examples: ● length and complexity of administrative procedures: simplification is key in order to speed-up the timing. The “One stop-shop principle” should be applied everywhere. Furthermore, public authorities should be trained on geothermal as to have some technical background; ● lack of information on support schemes: Geothermal is not supported everywhere so that stakeholders continually investigate for alternative sources of funding; transparency should be applied over support schemes for both conventional and non-conventional sources of energy in order to contribute to create the already mentioned fair level-laying field. For the heating sector the problem is that often only stop & go measures are put in place. The diversity of the support schemes in place represents an additional problem; ● Lack of credible and certified training and qualification: Few training courses and certifications are available for geothermal (see Geotrainet project (www.geotrainet.eu) for further information) in order to have a quality and sustainable market

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

The integration of external costs such as those for gas and electricity infrastructures and new electricity generation, into the overall energy cost would remove many of the obstacles and contribute to create a level-playing field.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment

D.2.1. Please explain why -open reply-(optional)

Priority or guaranteed access and priority dispatch are sufficient renewables-specific grid related rules if a better management and balance of flexible and variable renewable energy sources will be undertaken.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Other (please specify)

Please specify which other measures -open reply-(optional)

None of the above as the least costly option is to Increase the share of flexible renewable sources. Providing renewable base load, flexible renewable energy sources do not have external costs associated with traditional fossil fuels such as storage, grid and supply infrastructures or waste management (CO2, nuclear). In this regard, geothermal is a renewable electricity source providing flexible and renewable baseload that can operate around the clock, anywhere in Europe, with the best load factor of all energy technologies (more than 80%). Geothermal can therefore ensure system stability while reducing grid management costs.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how:

	responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
Responsibility on individual operator Specific rules for variable generation	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Favourable regulatory treatment of storage operators
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information - Lack of public support - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal - Other (please specify)
Please specify which other pathways -open reply-(optional)	
Integrated energy production (e.g. cogeneration, biomass+geothermal, PV+geothermal)	
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)	
Meeting Europe's 20% energy saving target is an extraordinary opportunity to re-launch sustainable growth in a time of economic crisis. In the long-term period, more and more energy efficiency improvements are needed. To this end, geothermal and other renewable heating and cooling technologies will be contributing to dramatic reductions in primary energy consumption. Renewable heating technologies provide market ready, efficient and completely carbon-free energy. Electrification of the heating sector should not be encouraged when other truly renewable heat technologies are available and deliver better and more efficient solutions, notably deep and shallow geothermal. Thermal needs should be primarily supplied by thermal sources and decentralised energy demand should also primarily supplied by decentralized energy supply. As a result lower costs and better efficiency will be achieved. Therefore, reducing the electrification of heating and cooling will relieve the stress on the power system and shave peak loads.	

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of standards - Lack of suitable information
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for goods - Water

G.2.1. Please explain your answer -open reply-(optional)

Using shallow geothermal energy to unfreeze road pavements Using water taken from canals for heating and colling needs

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability should be addressed not just in terms of energy production and emission savings but also in terms of measuring saving parameters for environmental resources.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

● The cooperation mechanism should include a mechanism to develop a European geothermal risk insurance scheme. ● More cooperation in increasing awareness about geothermal and its potential as well as for R&D should be put in place

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

Investments in electricity network in some member states in order to facilitate imports of electricity from third countries should not be encouraged and eventually the costs should be taken into account. What should be prioritised is the development of local flexible renewable energy sources, notably geothermal which is a baseload renewable energy source that can operate around the clock, anywhere in Europe, therefore ensuring system stability.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

It can only be an add-on and it has to focus on RES development for national and regional deployment in third countries. Such a partnership could make sense for developing renewables in that area for use in that area, not for export to the EU. When the EU undertakes joint projects and cooperation with a third country regarding the generation of electricity or heat from renewable sources, the

EU should facilitate the concerned country or countries' domestic use of part of the production from the installations covered by the joint project. Furthermore, the third countries involved in joint projects should be encouraged by the EU to develop a renewable energy policy including ambitious targets.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

No, the EU should focus its efforts in developing RES technologies that do not need large infrastructure costs.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges -open reply-(optional)

● By developing System management combining these technologies with flexible renewable energy technologies, such as geothermal ● By promoting Smart electricity and thermal grids ● By promoting heat/cold storage/dispersion within geothermal reservoir ● By promoting heat recovery from industrial facilities

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

The challenge is to have a renewable energy mix in the future combining both variable and flexible RES. The objective should be to establish instruments and to adopt measures going into this direction.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

● Geothermal electricity, notably for the development of EGS (Geothermal Enhanced Systems) and other systems. EGS (Enhanced Geothermal Systems), uses the high temperature of rocks with artificial water injection and, generally, with enhancement of permeability of the hot reservoir. An Enhanced Geothermal System is an underground reservoir that has been created or improved artificially. Other systems are based on medium/high temperatures sources existing in depth to be exploited directly or indirectly and produce both electricity and thermal energy. ● Geothermal heating and cooling, in order to promote smart cities with also smart thermal grids

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

Successful results: ● EERA - European Energy Research Alliance - Joint Programme on geothermal energy is rather successful as it is mobilizing large resources for R&D in geothermal. it now starts also to cooperate with the industry, which is a great signal ● The European Technology Platform on renewable heating and cooling (RHC TP) which brings together stakeholders from the biomass,

geothermal and solar thermal sector - including the related industries - to define a common strategy for the use of renewable energy technologies for heating and cooling and achieving a 100% share in 2050. The work of the platform is successful, but needs implementation as well Industry Initiatives.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

-open reply-(optional)

Yes, to a certain extent it could stimulate innovation.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	JAVIER AREITIO TOLEDO. SUN EDISON . javier_areitio@telefonica.net and Tgarcia@sunedison.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Spain
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

In the power sector, the 2050 decarbonasation agenda implies much higher share of renewable electricity – more than 50% already in 2030 in all scenarios (Energy Roadmap 2050). This would require major changes in the electricity market, where inadequate framework conditions currently prevent renewables from competing on a level playing field. At the same time, the EU ETS is not delivering at its full potential: further adjustments will be needed in order to drive investments towards carbon-free generation and make a real difference in the electricity mix. These remaining challenges show that a purely market-based approach would not, alone, deliver the politically driven transition. Market mechanisms should be combined with a binding renewable target that will allow “dynamic efficiency” i.e. that will develop technologies complementing each other in the medium to long-term and reduce overall system costs. A 45% binding renewable target for 2030 would deliver the right signal and avoid engaging into stranded investments.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Better financing possibilities - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Policy frameworks should evolve so as to allow distributed sources of generation to better contribute to the transition towards a more sustainable energy future. Enabling electricity consumers to produce and consume their own renewable electricity, using net-metering schemes will be particularly important. The right of the consumer to choose this option should be guaranteed at EU level in 2014, if there is a real liberalised electricity market

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support mechanisms, has helped PV gain a market foothold in many countries, compensating for the difference in cost competitiveness between PV electricity and that of conventional sources. As that competitiveness gap narrows, PV will be able to rely progressively less on dedicated financial support, leading to the phasing out of such support schemes. Current financial support mechanisms could, depending on the segment considered, be replaced progresively by more indirect sustainable support schemes, like generalized net metering practice in PV self consumption. Anyhow, PV competitiveness is likely to come first to specific market segments and specific locations, not necessarily to whole countries. However, the creation of a level playing field among all electricity generating technologies is a clear prerequisite for the phase-out of financial support for solar PV electricity. This implies ensuring a strong CO2 price signal, a phasing out of subsidies for non-RES technologies, an adequate market design and a fully liberalized electricity market

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

There is a big difference between the different sectors. Future deployment of PV relies on the effective liberalization of the electricity market, mainly at retail level. With no national financial support, PV penetration will depend on the possibility of electricity consumers to choose a renewable competitive source. The existing regulatory framework, and the lack of a real electricity market for consumers (minimum switching rate) will prevent PV with “dynamic grid parity” to be a real choice for consumers. (See SUN EDISON report: “ Enabling the European consumer to generate power for self-consumption”. www.sunedison.com/newsroom/pressreleases/PV_Self_Consumption_Study_Europe). Also, national support schemes reflect country-dependent RES generation costs. For the PV technology, these costs depend on a series of parameters varying from one Member State to another: national installation and operation prices, administrative and grid connection costs, costs of financing, level of VAT (for the residential segment) and irradiation factor.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

The final report of the European project PV Legal (February 2011) shows that administrative barriers hampering PV development in Europe can be classified in four main areas: - Barriers in permitting procedures - Barriers related to grid connection rules and technical standards - Barriers in grid connection procedures - Barriers related to grid capacity issues For example, in Spain, legal-administrative costs represent up to 36% of the total development costs of a PV project in the residential segment, and up to 51% in the industrial ground-mounted segment. The report presents a series of recommendations that will result in reduced costs for PV developers. This, in turn, will reduce the overall cost for PV technology deployment and therefore the economic support needed by PV. It can be downloaded here: http://www.pvlegal.eu/results/status-reports.html

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Obstacles related to grid connection rules: PV systems, in order to be allowed to connect to the electricity grid, need to meet certain criteria defined by grid operators and electricity market regulators. Often these criteria do not take into account the characteristics of PV systems and may then represent a barrier to their penetration. These barriers are characterised by lack of clarity, transparency and uniformity in rules and standards and by the insufficient participation of PV industry in their definition process. The current development by ENTSO-E of a network code on grid connection requirements for generators, by neglecting too much the standardization process currently undertaken in CENELEC, will not deliver enough guidance so as to reduce the variety of requirements observed today. In addition, specificities of variable energy sources such as PV are not enough taken into account (provision of reactive power, synthetic inertia and black start capability). Obstacles related to balancing rules: current wholesale electricity market rules were designed at a time when centralised based-load generation was predominant. With a more decentralised, variable European electricity portfolio, these rules will have to be adapted. Both the time-horizon (day-ahead and intraday markets) and the geographical scope of the balancing regime should better reflect the characteristics of RES. These evolutions should be fostered by the network codes currently being developed by the E

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - Other (please specify)

Please specify which other rules -open reply-(optional)

Consumer right to choose: Policy frameworks should evolve so as to allow distributed sources of generation to better contribute to the transition towards a more sustainable energy future. Enabling electricity consumers to produce and consume their own renewable electricity under a net-metering scheme will be particularly important.(seeSUNEDISONreport:www.sunedison.com/newsroom/pressreleases/PV_Self_Consumption_Study_Europe)

D.2.1. Please explain why -open reply-(optional)

Smart deployment of support mechanisms, such as Feed-in-Tariffs (FiTs), has helped renewables and PV in particular gain a market foothold in many European countries. Continued priority access and dispatch after 2020 should be seen as a way of maximizing the effect on the electricity system of investments done so far. In any case, in an electricity system with a very high penetration of renewables, the right balance should be found between a systematic priority dispatch (that could lead to inefficient situations as shown in the high RES scenario of the Energy Roadmap 2050) and a complete non-differentiation between energy sources.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs - Other (please specify)

Please specify which other measures -open reply-(optional)

Appropriate interconnections transmission capacities are necessary to ensure an efficient market coupling and a progressive convergence in the wholesale electricity price. But at the same time, grids should not be developed only with a highly centralised approach: deployment of smart distribution grids will as well be of crucial importance. The flexibility of the energy system should be fostered through a better use of demand response instruments (demand aggregation). EPIA is currently developing a new vision for PV grid integration that will be published in the coming months, identifying a portfolio of solutions as well as short to medium and long-term needs.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)

Retail electricity market rules should foster self-consumption and net metering schemes in various PV market segments (residential, commercial, industrial): availability of real-time production and consumption data (metering), clear and informative bills and time-of-use tariffs will therefore play a key role.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

PV can play an important role in the development of a model based on electric vehicles using sustainable renewable energy. Electric vehicles, supported by an appropriate recharging infrastructure using PV, could represent an interesting decentralised electricity storage network.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

EU Cooperation Agrements with third countries (ie LATAM) , not only with neighbours, are good tools to foster PV european industry and know- how

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Imports from third countries is often referred to as a cost-efficient way of integrating RES, since energy would be produced “where it makes sense” from a resource point of view. While irradiation factor represents only one element of PV’s competitiveness among others, such an approach could even lead to sub-optimal solutions in terms of overall systems costs. As shown in the recent Greenpeace report Battle of the Grids, a more centralised deployment of renewables leads to higher infrastructures costs, notably because of higher investments needs in transmission capacities. Deploying PV – which is decentralised by nature - in only a limited number of regions would in addition neglect a series of important side-effects, especially in terms of transmission grid extension, failing local acceptance and reduced security of supply. A real cost-optimal deployment of renewables in Europe means that energy should be produced with competitive technologies, wherever the location of the installation is. The transition towards a sustainable energy future should build on a variety of complementary renewable technologies, both centralised and decentralised.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	System integration

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

The R&D Roadmap for PV which is elaborated within the SET Plan defines all the necessary technology improvements needed to ensure that PV is a mainstream energy source by 2020. Concretely, the Solar Europe Industry Initiative (SEII) identifies all the needs in terms of R&D that can contribute to achieving a high level penetration rate for PV. However, the financial commitment from the EU budget through FP7 calls is far below the needs identified in the SEII Implementation Plan 2010-2012 (1235 million €). This should for instance be compared to the 2012 FP7 calls, in which €16 million have been dedicated to PV technologies (in addition to an ERANET project of 2 million €). A dedicated budget line (within or outside Horizon 2020) for each of the SET-Plan renewable technologies would in addition give much more visibility to the sector.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Association of Large Energy Consumers, Ludek Piskac, svse@aem.cz
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Czech Republic
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

In general: The EU Climate policy costs have become the cardinal part of the total electricity price and they represent more than 1/3 now. In addition there is a huge risk that this part of the price will arise rapidly in the future. And this is exactly the part which our worldwide competitors do not have to pay in their bills. If we want to preserve some remains of competitiveness, European industry needs the same conditions as its world competitors do have. This can be achieved in two ways: The European Union must quickly convince other countries about the correctness of the path and the cost of climate change policy will apply to industries in all countries of the world. Till this time this effort has completely failed and has resulted in a sharp harm of the interests of European industry and citizens. Until this succeeds, it is necessary to reassess EU climate change policy and to suspend any action that has brought a disadvantage for European industry against its global competitors. It is necessary to keep in mind that the EU's share is only less than 15% of global emissions. Even if all of Europe has disappeared from the map of the world view it does not solve anything.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

R&D is the most effective way because it may decrease costs. The influence of RES support on the electricity price: The price has risen by 22% till 2012 and the share of RES support is 18% from the total price. This situation very negatively affects the European industry competitiveness.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

The operation of RES with non-competitive prices should not be supported at all. The money should be given to R&D. Only when the costs for certain kind of RES are competitive this RES should be installed and operated.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

For all RES with non-competitive prices.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

There is no doubt the EU climate change policy very negatively affects the European industry competitiveness as a whole. In addition, non-harmonisation of support schemes significantly affects the competitiveness of industry in particular countries within EU. There are various models for surcharge paid by industrial consumers. Czech industry is in the worst situation: The consumer´s surcharge is at least twice higher than in other countries (except Germany) and there is no protection for industrial consumers in Czech Republic (Germany has its own system of protection for energy intensive industry). For the reason of fair competition we suggest: - The costs of climate change policy (EU ETS, RES surcharge, ecological taxes, investments to the transmition and distribution grids, biofuels, etc.) should be clearly quantified in each country. The reasonable amount of this costs should be recommend, or as a percentage of national GDP or better as percentage of national GDP per inhabitant. - The harmonisation of RES support schemes, their total costs in each country, and the surcharge paid by industrial consumers should be the first step. Potential harmonization could be as follows: 1. Total costs of RES support as percentage of national GDP per inhabitant 2. The surcharge paid by industrial consumers 3. Level of support (reasonable amount of support provided)

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Till this time, the most of measures are oriented to electricity. Industry sector have to pay the most costs and this situation has strongly undermined its competitiveness. This is the worst way we could chose: it have negative influence to the EU economy competitiveness and living standard. This approach is one of the reasons of today economical crisis. Transport sector has approximately the same share (40%) of emissions, and there are almost no measures in it. And air transport can be taken more as a luxury then economical necessity.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Massive support of RES with non-competitive high prices to unreasonable costs: The boom of photovoltaic plants in cloudy Czech Republic in 2010 is the sad example. We can mention the case of large international company. The announced they have to dismiss 600 employees because they are not competitive. They would be able to decrease their costs by 640 million CZK/year. But in the same time they have to pay 629 million CZK/year for RES support. Both amounts are approximately the same. That means if there is no RES support the company would have not to dismiss people.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules - Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

The RES brings the additional costs beside the RES support: Balancing, necessary investments to the grids, backup, ... These costs should be transparently assigned to the total RES costs. RES effectiveness should be evaluated from the point of view of their total costs.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Other (please specify)
Please specify which other rules -open reply-(optional)	
Economical effectiveness should be a basic approach.	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk – producers of renewable energy should operate without any aid - Producers of renewable energy should bear greater responsibility for system costs - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
The same rules for all kind of generation would be most effective.	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of suitable information
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Solar thermal - Other (please specify)

Please specify which other pathways -open reply-(optional)
Everything which is economically effective.
F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)
Energy efficiency of transport should be preferred to RES. For example, the railway transport is 10 time energy effective then road transport, but there are no incentives to prefer it.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for goods

G.2.1. Please explain your answer -open reply-(optional)
Reverse the goods transport from road to railway.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)
The land should be preferably used for growing food and only the rests for RES production. If the potential of biomass is not realistic it could be dangerous.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area?	N/A

-single choice reply-(optional)

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Economical effectiveness should be a basic approach.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Germany should quickly invest to its transmition grid from north to south. The great amount of wind generation have brought troubles to the other national TSOs. This situation does not bring benefit but the real risk of black out.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

Nuclear. If we like it or not, this is reliable and cost effective source for at least next 100 years.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Successful but some drawbacks (please specify which)

Please specify which drawbacks -open reply-(optional)

The answer depends on point of view: If we evaluate the situation from the aims and targets, there is a great success of ideology. But if we do the same from economical point of view, we must see that the competitiveness of industry rapidly decreases.

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Pavol SIROKY, ZA MATKU ZEM (NGO For Mother Earth Slovakia), siroky@zmz.sk
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Slovakia
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can	Making support schemes more market-oriented (please specify how)

best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	
Please specify how to make support schemes more market-oriented -open reply-(optional)	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with benchmark values for support level per technology per Member State
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)
Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of information on support schemes or other - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other
D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES	

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase flexible back-up capacity (capacity payments …) - Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs
E. MARKET INTEGRATION	
E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Producers of renewable energy should continue to be treated separately (no exposure to conventional market)
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Electricity markets should evolve into energy services markets, earning revenues from more than just electricity
F. RENEWABLES IN HEATING AND COOLING	
F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of awareness - Lack of suitable information

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added
-open reply-(optional)

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	Yes (explain in which way and to which degree)

Please explain in which way and to which degree -open reply-(optional)

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-	Successful but some drawbacks (please specify which)

(optional)	

Please specify which drawbacks -open reply-(optional)
Support of bio-fuels
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	APAG/CEFIC, Klaus H. Nottinger/Chantal de Cooman, klaus.nottinger@web.de
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	European organisation
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, an indicative and non-legally binding target at EU level is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)
APAG does in principle not oppose legally binding targets but they should by no means disturbe the level playing field in the natural, renewable raw material markets in Europe resulting in competitive disadvantages e.g. for the European Oleochemicals Industry. The current legally binding targets, combined with special incentives for their use, such as double counting, resulted in serious damages for the European Oleochemical industry due to the diversion of rendered animal fats (an important raw material for the EU Oleochemistry) into biofuels production, forcing the European industry to use more palm oil and resulting in increased imports of oleochemical products based on palm out of South East Asea. Such situations should be avoided, before legally binding targets could be accepted.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)
Please specify for which technologies (if applicable) to phase out support schemes over time -open reply-(optional)	
Support Schemes lead to unintended collateral damages such as double counting for rendered animal fats would result in higher use of their exclusive subsitutes palm oil.	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)
Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)	
From the start should be set up as an EU wide scheme	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
Start with the highest potential.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States
Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other) -open reply-(optional)	
Some areas are better for sun others for wind others for crops. So a EU grid will balance easier	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)
Please specify which support schemes you consider most distorting -open reply-(optional)	
RED support for double counting on poorly defined "waste streams" e.g. rendered aimal fats Likely the poor definition of residues creates more problems and solutions and contribute to the reduction of public acceptance of biofuels.	
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to	Length and complexity of administrative procedures relating to

administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	authorisation/certification/licensing
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
The heterogenious practices in Member States results in trade distortion, fraud and unfair competition	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk – producers of renewable energy should operate without any aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Rail - Water

G.2.1. Please explain your answer -open reply-(optional)

All others are too big in demand for biofuels based of first on second generation

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)

Please specify which criteria
-open reply-(optional)

No definition as waste or residue for rendered animal fats and other useful industrial raw materials

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added
-open reply-(optional)

DG ENERGY leaves definition of waste and residue to MS, that should be EU level definition and agreed between the different DGs like ENVI, ENTERPRISE et al

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)
Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)	
Important to keep competitiveness for EU industry	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries
I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)	
I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)	
J. TECHNOLOGY DEVELOPMENT	
J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	

Hydrogen	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Ahto OJa, CEO Mõnus Minek Ltd, chairman oh Estonian Biogas Association, Head of Commission of Saue
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Estonia
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
Environment is universal, its ecosystems form the basis for human life. Human being carry responsibility towards environment. As clean air doesn't belong to any state, person or company, the responsibility to keep it clean (to pollute less) has to be equal with human rights. The international convention on Human Responsibilities and EU can and must show the example here. The ultimate objective has to become carbon neutral, internationally. Carbon neutrality means, that human being has grown mentally to the same level of wisdom as nature, because in natural pure ecosystem there isn't waste and pollution. And once the voluntary understanding of simple principles of power and existance of the Law of Nature, the obligation to act within the limits of ecosystem has to be written into international agreements, with EU leadership and carbon neutrality is one very clear and simple ultimate objective of this international convention of Human Responsibilities.	
A.2. Are other policy elements necessary to	Enhanced focus on R&D to bring down the costs of renewables

promote renewable energy post-2020, such as: -multiple choices reply-(optional)	technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Public procurement obligations in support of renewables - Better financing possibilities

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

• Reduced taxation schemes for NG/biomethane. Fixation of long term commitments. • Feed-in tariff programmes for biomethane• Establishment of subsidies for the purchase and substitution of conventional fuelled vehicles by NGVs (Natural GAs and Biomethane Vehicles). • Reduced income tax schemes on the assessed benefit of the private use of a NGV as company car. • Reduced road taxes for vehicles running on NG/biomethane due to their local pollutant advantages (less PM and NOx). • Purchase obligation of clean fuelled vehicles (not only based on GHG emission criteria) from public authorities and/ or services. • Special permits for night delivery of NG fuelled heavy duty vehicles inside the cities due to their better noise behaviour.• Specific subsidies for the development/ build-up of NG refuelling infrastructure. • Support of investments for biomethane production plants, especially in areas with limited access to the Natural Gas grid subsidies for construction of CNG/CBM filling stations and investment subsidies for biogas purification facilities, conversion of vehicles to CNG or compressed biomethane. • Labelling of NGVs regarding fuel consumption and CO2 emissions. • Priority lanes for NGV taxis, buses at airports, train stations or ferry terminals. • Total or partial VAT relief for methane fuels. • Training for car dealers to increase the willingness to sell NGVs.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

support to the development of renewable energy production, delivery and consumption infrastructure up the ultimate objective has been achieved

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

no, EU wide I do not see the difference, measure however can be member state specific, e.g. in Estonia the most urgent need is to promote renewables in transport, to achieve 92 ktoes in transport by 2020 (current level is 1 ktoe), the option is biomethane, which applicable potential allows to substitute half of fossil vehicle fuels

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of	Member States need to open their support schemes to renewable generation from other Member States

a rising share of renewables? -multiple choices reply-(optional)	

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

To adopt the obligation for public institutions to include methane fuel vehicles into public procurement procedure; To introduce the tax for fossil fuel vehicles (either on purchase or annually) which is differentiated according to the level of emissions; the methane fuel vehicles should be excempted from vehicle tax; To introduce the investment support to public passanger transport fleets for conversion to methane fuels and to establishment of corporate methane fuel filling stations; To introduce the pre-condition to use methane fuel buses in passanger transport public procurement, when applying public subsidies and to work out additional measures to promote alternative fuels on public transport; to introduce measures (incentives, taxes) for influence to the structure of public transport; To work out the proposal for methane fuel testing, production, refining, supply, storage, refueling, and safety techniques to the Development Fund, Environmental Fund, Agricultural Register and Information Board via setting up partial financing of the biomethane pilot plant; the economic indicators, risks and risk management measures of this pilot plant should be publicly available to encourage other companies to invest in the market of methane fuels; To support the creation and activities of the bioenergy cooperatives which produce and sell biogas and biomethane to the local community to reduce dependence from central energy supply.

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of commonly agreed technical specifications - Lack of credible and certified training and qualification

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

VII. The strategic objective in public awarenss building on biogas is to achieve the common knowledge that biogas is as well know as logs or pellet in Estonia. To achieve this: 7.1 To inform public on public benefits and positive impact to society of biogas and biomethane; 7.2 To collect and merge the results, outcomes and information of all biogas related projects into Estonian Biogas Portal and to support Estonian Biogas Association to manage this portal; 7.3 To investigate and to inform public on positive impact of digastate as organic fertilizer; 7.4 To ensure the availability of biogas related easy understandable knowledge to large public; 7.5 To implement campaigns to promote methane fuels as alternative, clean, local renewable energy source and solution for Estonia; 7.6 To support the biogas related, research, development and training on management and technology of biogas production and consumption.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Push for more standardisation and harmonisation on EU level or mutual recognition

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Cost-sharing rules - Balancing rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)
Please specify which instruments incentivising investment -open reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Lack of awareness
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Geothermal - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Lack of standards - Lack of infrastructure - Lack of awareness
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers

G.2.1. Please explain your answer -open reply-(optional)

1. technical standards for biomethane; sales conditions for gas network; fixed feed-in-tariffs; obligation to buy the produced biogas and set quantities (similar to renewable electricity); 2. in case an entrepreneur is applying for subsidies for building a manure storage facility, a precondition for the construction of methane collection facility has to be set; 3. subsidies (financial support for investments) for using biofuel in public transport and developing necessary infrastructure, e.g. construction of filling stations; 4. making use of biofuel as a condition in public procurements for passenger transport; developing and implementing incentives for increasing the use of vehicles running on other alternative renewable energy sources; developing incentives (e.g. taxation,) that would influence the structure of vehicle use.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	Yes, cooperation with third countries should be further promoted (please specify how and with whom, i.e. only neighbouring countries or more widely)

Please specify how and with whom, i.e. only neighbouring countries or more widely -open reply-(optional)

I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Bilateral agreements between Member States and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Organisation: 100 prozent erneuerbar stiftung; Stefan Haug; Mail: haug@100-prozent-erneuerbar.de
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Germany
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Vorbemerkung: Die Annahme, dass die 20/20/20-Ziele in sich konsistent seien, teilen wir nur bedingt. Die Interdependenzen der klimaschonenden Wirkungen der Erneuerbaren Energie-Ausbaus und der Erhöhung der Energieeffizienz auf die CO2-Einsparung sind nur oberflächlich berücksichtigt. Zu bemängeln ist die Inflexibilität in der Festlegung der CO2-Obergrenze, die auch in der dritten Handelsperiode nicht grundsätzlich korrigiert wird. Begründung: Im Rahmen bisheriger internationaler Umweltschutzabkommen hat sich gezeigt, dass nicht-bindende Zielvorgaben häufig nicht eingehalten werden. Als Grund hierfür werden zumeist wirtschaftliche Belastungen durch erforderliche Anpassungsleistungen angeführt. Spätestens seit dem Stern-Bericht ist die (langfristige) wirtschaftliche Unsinnigkeit eines solchen Handelns bekannt. Vor diesem Hintergrund sollte die EU im Sinne des langfristigen Gemeinwohls unverbindliche und ungenaue Zielvorgaben ablehnen. Weiterhin sind verbindliche Zielvorgaben Voraussetzung dafür, dass eine Gefangenen-Dilemma-Situation von vornherein ausgeschlossen werden kann. Sie erlauben es den nationalen Regierungen weiterhin,

die eventuell unpopuläre Anpassungsmaßnahmen innenpolitisch durchzusetzen. Daher wären sowohl Zielvorgaben für die Nationalstaaten als auch für die einzelnen Sektoren begrüßenswert. Eine gesamteuropäische Zielvorgabe dient als Grundlage der Festlegung der nationalen Zielvorgaben und hat zudem Ausstrahlungswirkung auf andere nichteuropäische Staaten.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Public procurement obligations in support of renewables - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

* Entwicklung eines neuen Strommarktdesigns, dass den Spezifika der erneuerbaren Energien (insbesondere: Grenzkosten nahe Null) Rechnung trägt und gleichzeitig eine regionale Ausrichtung der Stromproduktion und –Vermarktung fördert. (Details siehe Section E Frage 3) * Entwicklung eines europaweiten Fördersystems für erneuerbare Energien: Es sollen europaweit geltende Einspeisetarife eingeführt werden, die jedoch nach Technologie und Standorteigenschaften (Windhöffigkeit, Globalstrahlung etc) differenzieren. (Details siehe Sektion B Frage 4) * Entwicklung eines Systems der räumlichen Steuerung des weiteren Ausbaus von erneuerbare Energieanlagen: Das System soll eine ausreichende Flächenausweisung für erneuerbare Energieanlagen sicherstellen und gleichzeitig die Externalitäten der Standortwahl (insbesondere: ungleichmäßige räumliche Verteilung der Anlagen, ertragsoptimierende Standortwahl, Kosten der Netzintegration) berücksichtigt und soweit möglich in die privatwirtschaftlichen Entscheidungsprozesse internalisieren. * Förderung von R & D im Bereich Netzintegration sowie entsprechender Modellprojekte. Entwicklung von Fördermodellen für Speichereinsatz. * Klare Politik und Vorgaben für eine Beendigung der fossilen Energieerzeugung und Aufgabe der risikobehafteten und teuren CCS-Strategie und der Kernkraft.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how) - Accelerate convergence of national support schemes - Open up national support schemes to cross-border projects

Please specify how to make support schemes more market-oriented -open reply-(optional)

Fördersysteme sollten insbesondere die bedarfsgerechte Bereitstellung von regenerativem Strom fördern. Entsprechend ist eine verstärkte Kopplung der Anreizsysteme an Preissignale des Marktes anzustreben. Ziel ist es dabei nicht, die Förderhöhe an den Marktpreis (Börsenpreis) anzupassen (vielmehr sollten die Einspeisetariffe als Mindestpreise dienen), sondern die Preissignale als Information hinsichtlich der Nachfragesituation (hoch oder niedrig) zu übernehmen / nutzen. – Dabei muss klar sein, dass sich die Bereitstellung von regenerativem Strom langfristig nicht primär an der stark schwankenden Börsennachfrage orientieren kann, sondern eher an der Schwankung der Gesamtnachfrage. Die Orientierung von Anreizsystemen am Börsenpreis ist damit also nur eine Übergangslösung, die jedoch Hinweise über eine angemessene Höhe der Mindestpreise geben kann.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)

Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)

Europaweites Fördersystem für erneuerbare Energien: Europaweit geltende Einspeisetarife, die jedoch differenzieren nach (a) Technologie und (b) Standorteigenschaften d.h. Windhöffigkeit bei Windkraft; Globalstrahlung bei Solarenergie; Tiefe bei Geothermieprojekten; Flächenkonkurrenzaspekten bei Biomasse. Das Fördersystem erlaubt eine Vermarktung in ganz Europa, ist also nicht wie bisher an Nationalstaatsgrenzen gebunden. Das Fördersystem erfüllt verschiedene Zwecke: Es garantiert Mindestpreise, verhindert damit einen ruinösen Preiskampf nach unten (löst also das Problem des aktuellen, grenzkostenbasierten Marktsystems). Weiterhin ermöglicht es durch seine standortspezifische Ausgestaltung den dezentralen Ausbau regenerativer Energien in ganz Europa. Zudem wird eine Konzentration des Ausbaus in denjenigen Ländern verhindert, die besonders hohe Vergütungen zahlen.

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Im Bereich E-Mobilität sind keine über Frage 3 und 4 hinausgehende Regelungen notwendig. Im Bereich Heizen und Kühlen hingegen sollen zusätzlich die Steuern auf konventionelle Energieträge erhöht werden, und zwar EU-weit.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

Europaweites Fördersystem für erneuerbare Energien: Europaweit geltende Einspeisetarife, die jedoch differenzieren nach (a) Technologie und (b) Standorteigenschaften d.h. Windhöffigkeit bei Wind-; Globalstrahlung bei Solarenergie; Tiefe bei Geothermieprojekten; Flächenkonkurrenzaspekten bei Biomasse. Das Fördersystem erlaubt eine Vermarktung in ganz Europa, ist also nicht wie bisher an Nationalstaatsgrenzen gebunden. Das Fördersystem erfüllt verschiedene Zwecke: Es garantiert Mindestpreise, verhindert damit einen ruinösen Preiskampf nach unten (löst also das Problem des aktuellen, grenzkostenbasierten Marktsystems). Weiterhin ermöglicht es durch seine standortspezifische Ausgestaltung den dezentralen Ausbau regenerativer Energien in ganz Europa. Zudem wird eine Konzentration des Ausbaus in denjenigen Ländern verhindert, die besonders hohe Vergütungen zahlen.

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Quotenvorgabe für erneuerbare Energien führen zu den stärksten Wettbewerbsverszerrungen, da diese die bestehenden oligopolistischen / monopolistischen Marktstrukturen festigen und dem Prinzip des Unbundling entgegenwirken.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Other (please specify)

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

Antwort 1: Die Planungs- und Genehmigungsverfahren für Stromleitungen (Freilandleitungen) in Deutschland dauern meist zehn Jahre und länger. Dies behindert eine rasche Erweiterung der Netzkapazitäten, die wiederum Voraussetzung für die Netzintegration des

regenerativen Stroms ist. Antwort 2: Derzeit findet nur eine sehr eingeschränkte räumliche Steuerung des Ausbaus der erneuerbaren Energien statt. Bei der Wahl der Standorte werden insbesondere die folgenden Aspekte nicht berücksichtigt: gleichmäßige räumliche Verteilung der Anlagen (damit: gleichmäßige Verteilung der Belastung von Landschaften und Anwohnern), ertragsoptimierende Standortwahl, Kosten der Netzintegration. Weiterhin ist die Ausweisung von Eignungsgebieten durch die staatlichen Stellen in vielen Regionen unzureichend. Infolgedessen können die politisch beschlossenen Ausbauziele voraussichtlich nicht erfüllt werden. – Hier wäre die Entwicklung eines integrierten Steuerungsansatzes auf europäischer Ebene notwendig, der die Erreichung der genannten Ziele sicherstellt.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

Entwicklung eines Systems der räumlichen Steuerung des weiteren Ausbaus von erneuerbare Energieanlagen: Das System soll eine ausreichende Flächenausweisung für erneuerbare Energieanlagen sicherstellen und gleichzeitig die Externalitäten der Standortwahl (insbesondere: ungleichmäßige räumliche Verteilung der Anlagen, ertragsoptimierende Standortwahl, Kosten der Netzintegration) berücksichtigt und soweit möglich in die privatwirtschaftlichen Entscheidungsprozesse internalisieren.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Curtailment regime

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Vor allem im Norden und Nordosten Deutschlands werden regelmäßig erhebliche Mengen regenerativen Stroms abgeregelt. Für die Zukunft wird eine weitere Zunahme der Abregelungen vorhergesagt. Grund hierfür sind der schleppende Netzausbau bei gleichzeitig steigender Einspeisung regenerativen Stroms. Hinzu kommt die mangelnde Flexibilität bestehender konventioneller Kraftwerke (insbesondere Kohle und Atomkraft) die dazu führt, dass die entsprechenden Kraftwerksleistungen – entgegen gesetzlicher Bestimmungen – nicht an die erhöhte Einspeisung regenerativen Stroms angepasst (also reduziert) werden können.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Obligation for network operator to develop network - Priority or guaranteed access - Priority dispatch and obligation on TSO to counteract curtailment - Other (please specify)

Please specify which other rules -open reply-(optional)

Bislang sind deutsche Netzbetreiber im Fall knapper Netzkapazitäten gesetzlich verpflichtet, ihre Netze auszubauen oder, falls das nicht möglich ist, die bestehenden Netze zu optimieren (z.B. durch Leiterseiltemperaturmonitoring, Hochtemperaturseile vgl. § 9 EEG). Diese gesetzliche Pflicht ist europarechtlich zu verankern. Um die Aufnahmefähigkeit der Netze weiter zu erhöhen, könnten die Netzbetreiber künftig zu zusätzlichen Optimierungsmaßnahmen (Speichereinsatz, verstärktes Lastenmanagement, u.a.) verpflichtet werden. Der Netzausbau allein scheint für die künftig abzusehenden Herausforderungen einer nahezu vollständig regenerativen Stromversorgung nicht geeignet. Alternative Handlungsansätze im Bereich Smart Grid (Speicher, power-to-gas, Lastenmanagement, intelligente Steuerung der Stromproduktion, regionale statt nationale Organisation der Versorgungssysteme etc.) sollten daher verstärkt in die Praxis umgesetzt werden. Um dies zu beschleunigen könnten administrative Vorgaben oder auch Anreizprogramme geschaffen werden. Anreize könnten zum Beispiel durch einer erweiterten Kalkulationsgrundlage der Netzentgelte geschaffen werden – diese kann allerdings im nationalen Rahmen getroffen werden.

D.2.1. Please explain why -open reply-(optional)

Zu 1: Ein bedarfsgerechter Ausbau der Stromnetze ist notwendig, kann aber aus Sicht der Netzbetreiber unerwünscht sein (Aufwand, Kosten). Daher sollten Netzbetreiber auch nach 2020 gesetzlich zu einem bedarfsgerechten Ausbau verpflichtet werden. Zu 2: Ein garantierter Netzzugang verhindert eine diskriminierende Netzpolitik, die insbesondere bei erneuerbaren Energieanlagen zu befürchten

ist: Erstens da sie auf Grund ihrer fluktuierenden Einspeisung den Netzbetrieb verkomplizieren und so dem Netzbetreiber zusätzliche Arbeit bescheren. Zweitens weil erneuerbare Energieanlagen auf Grund des im EEG geregelten Einspeisevorrang konventionelle Kraftwerke verdrängen. Zu 3: Langwierige Planungs- und Genehmigungsverfahren verzögern aktuell den Netzausbau. Da dieser kurzfristig nicht beschleunigt werden können, stellt die Netzoptimierung die einzige Möglichkeit dar, die Übertragungskapazitäten zu erhöhen. Diese Pflicht ist europarechtlich zu verankern. Der Einspeisevorrang (priority dispatch) ist notwendig um erneuerbaren Energien den Vorrang einzuräumen, der politisch gewollt ist.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Accelerate infrastructure development and interconnection - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)

Verbraucher sollten idealerweise nicht nur ihren Verbrauch entsprechend der aktuellen Versorgungslage regulieren, sondern zudem ihre eventuell vorhandenen Speicherkapazitäten (Elektroautos, Kleinspeicher für Aufdachsolaranlage etc.) für das Stromsystem zur Verfügung stellen: (1.) im Fall einer Unterversorgung wird Strom aus den Speichern ins öffentliche Netz eingespeist. (2.) Bei einer Überversorgung wird Strom in private Kleinspeicher eingelagert. Anreize sollten über flexible Stromtarife gegeben werden, die europarechtlich eizuführen sind.

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)

Please specify which instruments incentivising investment -open reply-(optional)

Neues Strommarktdesign: Zielsetzung: wirtschaftliche Anreize zum Ausbau erneuerbarer Energien sowie Förderung regionaler Stromversorgung (Begründung regionale Stromversorgung vgl. I 3). Grundelemente: Regenerativer Strom wird regulär über den Markt vermarktet. Erneuerbare Energien sind dabei perspektivisch mit konventionellen Energien konkurrenzfähig. Da sie jedoch Grenzkosten nahe Null haben, kann das neue Marktdesign nicht grenzkostenbasiert sein. Daher soll ein europaweites Fördersystem auf Basis von festgelegten Einspeisetarife für erneuerbaren Strom eingerichtet werden. Dieses System garantiert Mindestpreise und verhindert damit einen ruinösen Wettbewerb. Es garantiert weiter ein Mindestmaß an Investitionsanreizen, und damit einen kontinuierlichen Ausbau erneuerbarer Energieanalgen. Anreize für eine regionale Stromerzeugung werden über fiskalpolitische Rahmensetzungen erzeugt. Strom, der regional erzeugt und verbraucht wird, wird von bestimmten Abgaben ausgenommen. Hierdurch entsteht ein entsprechender Preisvorteile. In der Folge werden sich Energieversorgungsregionen herausbilden, die häufig auch die Landesgrenzen überschreiten.

Daher müssen entsprechende grenzüberschreitende Planungs- und Koordinationsprozesse ermöglicht werden (anschließend an das Konzept der Europaregionen). Eine weitere Voraussetzung der Energieregionen ist die Einführung des beschriebenen europäischen Vergütungssystems, welches die Vermarktung erneuerbaren Stroms im europäischen Ausland ermöglicht.

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of awareness - Lack of suitable information
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal - Solar thermal - Electrification together with higher share of renewables in electricity production - Other (please specify)

Please specify which other pathways -open reply-(optional)

Hybridlösungen die die oben genannten Technologien miteinander verbinden und die regionalen Gegebenheiten berücksichtigen, sind am erfolgversprechendsten.

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Beide Maßnahmen gehören zusammen.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Pace of technology development - Lack of standards - Lack of infrastructure - Other (please specify)

Please specify which other barriers -open reply-(optional)

Einzufordern ist eine Aufgabe des Leitbilds der Technologieneutralität in der Förderpolitik, die auch die EU-Kommission bisher beibehält, und ein klares Bekenntnis zur Elektromobilität als einzige Lösung für einen nachhaltigen Transport.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers - Road for goods - Rail

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Both biomass and fossil fuel have to bear signals that express their sustainability foodprint. An exclusive obligation for biomass is not balanced. Additional criteria are not necessary since the focus of the sustainable transport policy should be laid on e-mobility.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient	No (please specify how they should be amended or which elements added)

to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	

Please specify how they should be amended or which elements added -open reply-(optional)

EU Mitgliedsstaaten sollten ihren gemeinschaftlichen, grenzübergreifenden EE-Ausbau nicht nur statistisch erfüllen könnten, sondern auch durch gemeinschaftliche regionale Planungen und die Schaffung gemeinsamer grenzüberschreitender Energieregionen (u.a. grenzüberschreitende Planung von erneuerbare Energieanalgen und Netzausbauprojekten).

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

Der Ausbau der Netze soll einen Import regenerativen Stroms aus Drittländern ermöglichen. Einen solcher Import sollte aber aus den folgenden Gründen nicht prioritär gefördert werden: Die EU verfügt über ausreichend Potential, um ihren Energiebedarf regenerativ zu decken. Der Weg zur Erschließung dieses Potentials liegt im europaweiten, dezentralen Ausbau erneuerbarer Energien. So kann ein aufwändiger Netzausbau vermieden, die Kosten für die Energieerzeugung mit etablierten Technologien zu niedrigen Preisen realisiert, die Wertschöpfung innerhalb der EU gesteigert, Arbeitsplätze in der Fläche geschaffen, die Abhängigkeit von Wettersituationen in „Produktionszentren“ reduziert, die Abhängigkeit von der politischen Situation in Drittstaaten vermieden, sowie ein möglichst schneller Ausbau erneuerbarer Energien ermöglicht werden. Zudem wird durch eine Deckung des Strombedarfs aus EU-internen Quellen die Möglichkeit einer regenerativen Stromversorgung für andere Länder demonstriert. Nichtsdestotrotz kann sich Europa bzw. europäische Unternehmen an der Realisierung von regenerativen Energieanlagen in Drittländern beteiligen; jedoch sollten diese dann auch zur Deckung des Strombedarfs in den entsprechenden Ländern dienen.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Other measures (please specify)

Please specify which other measures -open reply-(optional)

Fostering cooperation with third stated should be reduced on technology and competence exchange.

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Wie oben (Frage 3) bereits erwähnt, sollte dies Kooperation nicht auf den Import von regenerativem Strom in die EU abzielen. Vielmehr sollte die EU den Aufbau von regenerativen Erzeugungskapazitäten sowie deren Netzintegration in den südlichen Mittelmeerländern fördern, um dort den Anteil erneuerbarer Energien an der Energieversorgung zu erhöhen und die Versorgungslage der Bevölkerung zu verbessern.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Grundsätzlich ist die gemeinschaftliche, grenzüberschreitende Planung und Nutzung von Stromtrassen begrüßenswert. Durch solche Kooperationen kann sowohl der grenzüberschreitende Stromhandel erleichtert als auch die Kosten des Netzausbaus gesenkt werden (Vermeidung unnötiger Doppelstrukturen). Erkenntnisse des Nordsee Projekts sollten wenn möglich beim künftigen Ausbau des europäischen Stromnetzes genutzt werden.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges
-open reply-(optional)

* Netzintegration (grid integration) * Recycling der Anlagen

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

* Weiterführung der bestehenden Forschungsbemühungen zum Thema smart grid und Speicher im Rahmen des European electricity grid initiative * Förderung von Modellprojekten / Forschungsvorhaben welche lokal bzw. regional eine vollständig regenerative Stromversorgung realisieren wollen bzw. die innovative Ansätze zur Netzintegration (z.B. Demand-Side-Management, Kombikraftwerke) erproben bzw. untersuchen * Einrichtung des geplanten Forschungszentrums zur Erforschung der Voraussetzungen und der idealen Gestaltung eines europaweiten Stromübertragungsnetzes. Das Übertragungsnetz soll dabei so gestaltet werden, dass es eine primär regional organisierte Stromversorgung sinnvoll ergänzt (Bereitstellung eines überregionalen Ausgleichspotentials). * Förderung von Forschungsprojekten, die klären, wie unter den Bedingungen einer vollständig regenerativen Stromversorgung die ausreichende Bereitstellung von Systemdienstleistungen realisiert werden kann. * Forschungsprojekte zum Thema Recycling von erneuerbare Energie Anlagen; dieser Aspekt gewinnt vor dem Hintergrund der steigenden Anlagenzahl sowie den steigenden Rohstoffpreisen (insbesondere für seltene Erden) zunehmend an Bedeutung.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

Intelligente Vernetzung von EE-Anlagen, beispielsweise in Form von virtuellen Kraftwerken.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

Yes, since there is a strong path dependency between different technologies.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	European Solar Thermal Industry Federation - Xavier Noyon
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Belgium
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, sectoral targets (e.g. electricity, transport, heating and cooling) are appropriate - Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

Sector such as heating and cooling require a specific strategy and target. Recent evolution show that this sector is lagging behind in terms of development and strategy

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Public procurement obligations in support of renewables - Better financing possibilities - Continue to ensure sustainability and scalability - Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Common European strategy concerning heating and cooling.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

solar thermal heat does experience various level of competitiveness and development. Financial incentives will probably be necessary after 2020 taking into account that such incentives are not currently in place in all EU countries. In initial phases today o in 22020 they are necessary

B.2. If renewable energy sources require	Making support schemes more market-oriented (please specify

support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	how)
Please specify how to make support schemes more market-oriented -open reply-(optional)	
adjust level of incentives to cost	
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	Yes, with EU-wide benchmark values for support level per technology
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
There is a huge difference between heating@ cooling and the other sectors. This included was included only in 2009. The fact that earlier regulations dealt with electricity and transport has initiated common approaches resulting for example in the introduction of Feed In tariffs for electricity in several european countries and the related development of renewable electricity. A common vision and strategy does not exist for heat and very country has a different approach. We do not need a european incentives which would not be adapted to very different situation but we need common concepts and guidelines specific for renewable heat.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Lack of commonly agreed technical specifications - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	None of the above
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivising investment in generation capacities with a high capex/opex ratio (please specify which)
Please specify which instruments incentivising investment -open reply-(optional)	

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc. - Lack of capacity (installers, other)
F.2. What pathways do you consider to be the most promising for further increasing the share	Biomass - Geothermal - Solar thermal

of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Renewable heat is suffering from the need to be classified under one heading or the other by EU policies. To a certain extent renewable heat technologies are both renewable energy production and energy savings. For example solar thermal produces heat but does not consume any energy, a water heating system combining a fossil fuel boiler and solar thermal is much more efficient (consumes less energy) than a stand alone fossil fuel boiler. Th share of heat produced by the solar thermal collector is ipso facto a saving. Therefore ESTIF considers that the promotion of energy efficiency of heating appliances and the energy performance of buildings are de facto promoting the integration solar thermal. We only observe that the difference made between energy efficiency and renewable heat seems artificial. The renewable heat technologies by nature and should be placed on the same ground as insulation and building envelope when it comes to building performance. This huge potential of renewable heat to the energy performance of buildings should not be ignored under the pretext that renewable energy sources are covered in the RES directive

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness - System integration - Industrial manufacturing and supply chain

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Renewable heat technologies should be the subject of an industry initiative.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Baltic Environmental Forum Latvia (on behalf of BEF Group), daina.indriksone@bef.lv
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Latvia
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Financial support should be defined country specific. In some countries there is still RES potential in 2020 which can be triggered by support schemes, e.g., on solar panels in the Baltic States, while this potential has been utilised to a much larger degree in other countries e.g., Germany and thus support schemes are probably ceased or at least signifficantly reduced by 2020.

B.2. If renewable energy sources require support post-2020, how do you think this can	Making support schemes more market-oriented (please specify how)

best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	

Please specify how to make support schemes more market-oriented -open reply-(optional)

Different instruments can be applied e.g., ETS, Green certificates.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	No, support levels should be entirely up to Member States
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States

Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other)
-open reply-(optional)

B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, all support schemes distort competition to a similar extent

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing

C.1.1. Please provide explanations and specific examples where available
-open reply-(optional)

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority or guaranteed access

D.2.1. Please explain why -open reply-(optional)

Priority or guaranteed access is a precondition for promotion of using renewable energy sources.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …)

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)

Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand

-open reply-(optional)

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Lack of suitable information

F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

Iteraction is positive. Increasing energy efficiency leads to reduction of energy demand for heating and cooling, and the remaining demand can be supplied by renewable energy.

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Pace of technology development
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Rail

G.2.1. Please explain your answer -open reply-(optional)

Rail has larger capacities and there are more opportunities to use renewable energy (electricity).

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Sustainability criteria are important in order to avoid negative environmental impacts e.g., air and water pollution. Sustainability criteria should be applied to avert negative social impacts.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	Yes
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	Agreements between the EU and third countries

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

Priorities would be establishing appropriate grid and back-up mechanisms.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Benefits would be in experience exchange and transfer of know-how. Such experience can be a case for similar processes in the Baltic States.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	System integration

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

Promotion of the research and development, modelling of options for system integration.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?
-open reply-(optional)

At the moment we do not see a need for additional technologies to be covered.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
-open reply-(optional)

Technology development should go ahead of the existing technologies. For new technology development at first the feasibility shall be proved in small scale pilot projects. When certain level is achieved then the result oriented deadlines can be set.

IDENTIFICATION

1. Please enter your **name** and, where relevant, the	Mariyana Yaneva, Bulgarian Wind Energy Association, my@bgwea.org

name of the organisation you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Bulgaria
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)
A. GENERAL POLICY APPROACH	
A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a mandatory target at EU level is appropriate
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
Bulgaria currently has the lowest electricity prices in the EU, mainly achieved through coal-power stations. Without binding targets for developing renewable energy and improving energy efficiency, a key incentive for the development of that market will be lost.	
A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources
B. FINANCIAL SUPPORT	
B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	Yes
B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Accelerate convergence of national support schemes
B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single	

choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	N/A
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	No, support schemes do not have a significant distorting impact on competition

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing - Lack of credible and certified training and qualification
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	Grid connection rules - Curtailment regime
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective?	Obligation for network operator to develop network - Priority dispatch and obligation on TSO to counteract curtailment

-multiple choices reply-(optional)	

D.2.1. Please explain why -open reply-(optional)

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)

Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?
-open reply-(optional)

Forecasting of production of renewable energy along with the balancing and the cost of balancing should be centralized and unified in one entity. This would mean that one centralized entity will be charged with obtaining and managing a single, nationwide forecast for all renewable energy capacity in the country. This same entity will then act as co-ordinator for all renewable energy capacity vis-à-vis the system operator. This entity will be financially liable for all imbalance arising from discrepancies between its forecast and actual production. To be able to cover these financial obligations the entity should be funded via a general 'balancing charge´ which will be determined by the regulator on trailing basis following the actual results from the preceding period. This balancing charge shall be charge per MWh to all producers.

E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Favourable regulatory treatment of storage operators
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Building regulations etc. - Lack of suitable information
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Solar thermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs - Lack of infrastructure - Limits of availability of sustainably produced biofuels
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Road for passengers

G.2.1. Please explain your answer -open reply-(optional)

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	N/A
I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the

North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness
J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)	
J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	N/A
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Octavian Ionescu Genesis Energy
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	Industry
3. Please indicate your country -single choice reply-(optional)	Romania

4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	Yes, a combination of EU and sectoral level targets is appropriate

A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Enhanced focus on R&D to bring down the costs of renewables technologies - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc) - Abolition of support mechanism or subsidies to other energy sources - Better financing possibilities - Continue to ensure sustainability and scalability

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

There it is a recognized need for implementing electrical power production facilities with a controllable output (biomass and bio-gas as examples). In comparison with electrical power production facilities which are using solar power and/or wind, where the harvested energy is free in the biomass there are costs related to harvesting the plants. In this area should be provided incentives to support the production of energy. Moreover, the controlled electrical power generation is the only way to promote intelligent energy networks.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Making support schemes more market-oriented (please specify how)

Please specify how to make support schemes more market-oriented -open reply-(optional)

To avoid differences among states and producers of energy it will be better to have an unified system in Europe. The support schemes should be oriented to the controllable sources of energy.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single	Yes, with EU-wide benchmark values for support level per technology

choice reply-(optional)	
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	Yes (please explain how this could be achieved and which support structure you consider most suitable)
Please explain how this could be achieved and which support structure you consider most suitable -open reply-(optional)	
There it is a need to unify the value of energy among the European Union States. Therefore there it is a need to unify the support structure among EU member states.	
B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)	
All the sectors are correlated There it is difficult to let any of them behind. All of them should be treated equally and seriously in a high level controlled manner.	
B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	Member States need to open their support schemes to renewable generation from other Member States
Please explain how this could be achieved for other Member States (e.g. through convergence of national schemes, compensation mechanisms or other) -open reply-(optional)	
The only way to progress is the competition. There would be an asset for Europe to have fair competition.	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, all support schemes distort competition to a similar extent
C. ADMINISTRATIVE PROCEDURES	
C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Length and complexity of administrative procedures relating to authorisation/certification/licensing
C.1.1. Please provide explanations and specific examples where available -open reply-(optional)	
There are too many approvals to be obtained, and many time these approvals should issued by public clerks with no knowledge regarding the renewable energy. At each state level should be one office to deal with all the approvals.	
C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other
D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES	
D.1. Do you consider that any of the following	Grid connection rules

national rules and framework conditions will still create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	
D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)	
Due to the specific conditions (availability of resources, costs of land etc) there are specific area which are crowded with production facilities generating troubles to the grid. Therefore should be a scheme of controlling the amount and location where the facilities should be placed.	
D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	Priority dispatch and obligation on TSO to counteract curtailment
D.2.1. Please explain why -open reply-(optional)	
D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Increase availability of demand response (smart grids …) - Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time - Increased availability of storage - Enable renewable generators to offer balancing services to TSOs
E. MARKET INTEGRATION	
E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid - Balancing risk – producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation?)
Balancing risk, please specify how: responsibility on individual operator or centrally organised, same balancing rules for all operators or specific rules for variable generation? -open reply-(optional)	
There should be a centralized control of production and thus balance the responsibility between the producer and operators	
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	Dedicated arrangements to reward availability of generation capacity - Favourable regulatory treatment of storage operators - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
Develop demand response to market signals : please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand -open reply-(optional)	
For producers which does not have storage capacity they should bears the responsibility for the excess of energy produced and lost.	

E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	Wholesale markets would have to move to reflecting full costs

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Costs/lack of financial support - Building regulations etc.
F.2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	Biomass - Geothermal

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Costs
G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	Rail

G.2.1. Please explain your answer -open reply-(optional)

The consumption of electrical power into the railroads is significant. There could be a need for using renewable energy .

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Without criteria the output cannot be measured, and the results cannot be quantified.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	No (please specify how they should be amended or which elements added)

Please specify how they should be amended or which elements added -open reply-(optional)

The rules should be unified among European States.

I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	No, the EU should first focus on developing its own renewable potential
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-(optional)	No (explain why)

Please explain why -open reply-(optional)

There it is a priority for all member states. The development should be balanced and no favor should be done for a state.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

To take care on Europe and its members in an equal manner and only later when the differences between the European states will be reduced to look in other directions

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

Regional cooperation should be expanded to all over Europe.

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Technology performance and cost-competitiveness

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

-open reply-(optional)	
All the technologies capable of producing electrical power in a controlled manner. (less wind, solar etc)	
J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful
J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)	
Without benchmarks and deadlines there will be no results.	

IDENTIFICATION

1. Please enter your **name** and, where relevant, the **name of the organisation** you represent. Please include also an **e-mail** address for contact purposes for use only if we need clarification about your responses. -open reply-(optional)	Val Martin, Irish Spokesperson for European Platform Against Windfarming. valamhic@gmail.com
2. Are you responding to this questionnaire on behalf of /as: -single choice reply-(optional)	NGO
3. Please indicate your country -single choice reply-(optional)	Ireland
4. How would you prefer your contribution to be published on the Commission website, if at all? -single choice reply-(optional)	Under the name indicated (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)

A. GENERAL POLICY APPROACH

A.1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy? -multiple choices reply-(optional)	No, targets for renewable energy sources are unnecessary
A.1.1. Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits) -open reply-(optional)	
Present targets are based on the assumption that renewable energy can replace conventional types of fuel. Target setters wrongly believed that every mega watt of renewable energy produced resulted in a corresponding reduction in conventional plant. Wind energy is the principle form of renewable energy, it requires close to 100% backup from thermal generating plant. If condensing steam turbines are used, there has been found to be no saving in co2 emissions, if open and combined cycle gas plant is used the is a very slight saving. The generous subsides available to wind farms result in them using huge amounts of fossil fuel generated grid power on a daily basis. this is not metered and not paid for by owners, but is paid for by consumers. The "Priority Dispatch" rule compels conventional generators to accept all the wind power produced and to pay for constrained power never generated. There is a limit of the amount of wind power that can be allowed into the grid system. Wind generation in large amount is totally unsustainable in the long term and results in more rather than less conventional plant being required than in a system with no wind at all. This is borne out by several studies	

including 2 carried out for E.on Germnay which found that only 4% of the capacity of wind farms can be turned off at conventional plants.

A.2. Are other policy elements necessary to promote renewable energy post-2020, such as: -multiple choices reply-(optional)	Other (please specify)

Please specify which other policy elements? -open reply-(optional)

Hold a proper scientific techno / economic analysis, to which which the public can contribute. Examine the present wind farms to find out what contribution if any, they are making.

B. FINANCIAL SUPPORT

B.1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration? -single choice reply-(optional)	For selected technologies/circumstances/markets (please specify)

Please specify which technologies/circumstances/markets -open reply-(optional)

Some support should be make available for research and development into Europe's energy plans. Science not political correctness should be the guiding principle. All subsidies for wind power are hugely expensive and place all the burden for providing all the back - up and ather cost for wind power on the backs of the already over put upon consumer and taxpayer.

B.2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment? -multiple choices reply-(optional)	Phase out support schemes over time (please specify for which technologies if applicable)

Please specify for which technologies (if applicable) to phase out support schemes over time

-open reply-(optional)

Phase out all supports for renewable energy which does not reduce our dependence on fossil and nuclear fuel, this includes wind power. The Irish power producer Eirgrid, plan to increase conventional capacity from 6100 mw to 9200 mw by 2016. This is largely to back up wind. This is a silly thing to do, why are they not planning to reduce conventional capacity? The answer is wind power does not work. See the Bentek study and the study of Dr Fred Udo available on line.

B.3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables? -single choice reply-(optional)	N/A
B.4. Should the structure of financial support be gradually aligned EU-wide? -single choice reply-(optional)	No

B.5. With regard to questions B.3. and B.4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). -open reply-(optional)

Yes. Reducing emissions in any of the above 3 is difficult if done accurately. The direct nature of the use of fuel in heating and transport means that its measuring cannot be miss-calculated. (A house uses 3,000 litres of fuel and a lorry uses 10,000 litres of fuel). In the case of electricity generation, the calculation have been done on the basis the one mw of wind power produced results in a saving of one mega watt of conventional power and consequent saving on emissions. There is no evidence that countries with high wind capacity are saving emissions of co2, due to the intermittent nature of the wind and its low load factor. Load factors have been overstated up to recently. The plant that has to balance wind power, is run at part load so as to be able to pick up when wind died down and is there fore

less efficient. The key to reducing emissions in transport is planning of trips, assisting workers to find work near their homes. The key to reducing in heating is a total review of house and building design into the future. Money spent on this will provide savings whereas money spent on wind farms does not.

B.6. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables? -multiple choices reply-(optional)	
B.7. Do national support schemes and differences between such schemes distort competition? -single choice reply-(optional)	Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

Please specify which support schemes you consider most distorting -open reply-(optional)

Support schemes for generation plant that actually can generate and provide power on its own, which is dispatchable and can be relied on to provide power when required, may be justified. For example the start up cost of a new hydro plant. The support schemes for wind are causing environmental destruction, health problems for neighbours and giving no contribution towards national grid's needs. See "You Tube valmartinireland myth about wind energy" these are a series of video clips which explain the subject in detail. Wind power uses up resources that could be better spent on Research and development, We shoudl be scientifically correct not politicaly correct.

C. ADMINISTRATIVE PROCEDURES

C.1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following Member States' implementation of the provisions of the Directive? -multiple choices reply-(optional)	Other (please specify)

C.1.1. Please provide explanations and specific examples where available -open reply-(optional)

Lack of open and transparent interaction with people like me and members of EPAW. Wind power is just window dressing. See report of Stuart and Young available on line. Consumers must pay for wind power + conventional power, for auditors, extra staff in control centres to deal with wind power, accountants etc. In other words the inclusion of wind power necessitates a greatly inflated staffing level. None making anything the consumer wants. This is driving up costs of power and will result in some consumers resorting to generating their own electricity to avoid the huge extra cost of grid power. This is making Europe's industry un-competitive in relation to other countries.

C.2. Which policy response to the problems identified above do you consider appropriate? -single choice reply-(optional)	Other (please specify)

Please specify which would be in your view a workable solution to eliminate barriers -open reply-(optional)

Stop further development of renewable energy and in particular wind power, until a full scientific techno economic analysis is carried out. Contracts last 15 years and are unsustainable. They bind consumers and taxpayers into paying for a technology which is mature , did not work in the past and will not work in the future. Over time it will be discovered that wind power does not work, then policy makers will have to answer why they ignored representations made by people such as EPAW.

D. GRID INTEGRATION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

D.1. Do you consider that any of the following national rules and framework conditions will still	Balancing rules - Curtailment regime

create obstacles to renewable energy production after 2020? -multiple choices reply-(optional)	

D.1.1. Please specify which obstacles and the nature and degree of them for each -open reply-(optional)

Wind power owners should pay for the cost of balancing all their wind power, its a cost of sale in the Profit and loss account. No payments should be made for curtailed wind power.

D.2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? -multiple choices reply-(optional)	None of the above

D.2.1. Please explain why -open reply-(optional)

Wind power is a mature technology, no amount of regulation will make it work. Every effort is being made to make it work but there has been no success. The Danish Experience is a classic example. There is no saving on fuel there as a result of a massive wind turbine development.

D.3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system: -multiple choices reply-(optional)	Other (please specify)

Please specify which other measures -open reply-(optional)

Why should back up capacity payments be increased? That only increases the co2 emissions.

E. MARKET INTEGRATION

E.1. In which of the following ways could renewable energy be made responsive to market signals? -multiple choices reply-(optional)	Price risk – producers of renewable energy should operate without any aid
E.2. How can it be ensured that market arrangements reward flexibility? -multiple choices reply-(optional)	
E.3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables -single choice reply-(optional)	N/A

F. RENEWABLES IN HEATING AND COOLING

F.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

An analysis into bio fuel should take place. Figures should be published to show how much fossil fuel it takes to produce bio fuel. Tractors use diesel fuel, as do lorries etc to plough and sow and reap etc and transport. We do not know is bio fuel is really renewable, if fossil fuel is needed to produce it, is is of no avail.

F.2. What pathways do you consider to be the most promising for further increasing the share	Other (please specify)

of renewable energy in heating and cooling beyond 2020? -multiple choices reply-(optional)	

Please specify which other pathways -open reply-(optional)

Building design in accordance with science. heat exchangers etc

F.3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector? -open reply-(optional)

It is possible that wind turbines directly wired to buildings could help heat building. it is essential that the wind power is not mixed with grid power, where you end up using grid power mainly. Turbines would need to be placed near buildings

G. RENEWABLES IN TRANSPORT

G.1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport? -multiple choices reply-(optional)	Other (please specify)

Please specify which other barriers -open reply-(optional)

Electric cars simple transfer the emissions from the car to the power station. Wind in the system does not reduce this effect to any degree. An electric car uses more fossil fuel per 100 km than a similar sized fossil fuel car.

G.2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy? -multiple choices reply-(optional)	

G.2.1. Please explain your answer -open reply-(optional)

None. Its a question of following science, not wishful thinking.

H. SUSTAINABILITY

H.1. Do you think that additional sustainability criteria are necessary in the post 2020 period? -multiple choices reply-(optional)	Yes, sustainability criteria should apply to both all biomass and fossil fuels

H.1.1. Please explain -open reply-(optional)

Bio Mass takes up a lot of land and is less intensive than fossil fuel. I believe that other foreign countries will increase their burning of fossil fuel in the years ahead. Again science must be listened to. At present policy is to spend and spend on something whether its works or not.

I. REGIONAL AND INTERNATIONAL DIMENSIONS

I.1. Do you consider current rules for cooperation between Member States sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU? -single choice reply-(optional)	N/A
I.2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy? -single choice reply-(optional)	N/A
I.3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose? -single choice reply-	No (explain why)

(optional)	

Please explain why -open reply-(optional)

Part of Europe's debt crisis is the result of spending on renewable infrastructure. Spain and Portugal are in huge financial difficulty party because of renewable spending which is not working at all. Ireland is in the same position. Only minor up grades of national grids is needed. No industry ever abandoned a site due to inadaquate energy supply.

I.4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area? -single choice reply-(optional)	N/A

I.5. In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders", the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities? -open reply-(optional)

EU should review its renewable energy policy before it goes totally bankrupt.

I.6. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere? -open reply-(optional)

J. TECHNOLOGY DEVELOPMENT

J.1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives? -multiple choices reply-(optional)	Other (please specify)

Please specify which other key challenges -open reply-(optional)

Hold an technical economic analysis

J.2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050? -open reply-(optional)

EU energy policy is craze and is not popular with its people.

J.3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships? -open reply-(optional)

Fossil fuel generation plant should be upgrades and allowed perform as it is designed. Making it back up wind is forcing it to produce too much co2. The future lies with a mix of nuclear and gas with a small amount of coal oil and hydro.

J.4. How successful do you consider the existing measures have been and which have been the main drawbacks? -single choice reply-(optional)	Not successful

J.5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline? -open reply-(optional)
No deadlines force bad decisions.