

# EREF

European Renewable Energies Federation

## EREF KEY Messages on a European Renewable Energy Strategy for 2020 and beyond

"For a sustainable energy future in Europe, we need stable and reliable framework conditions and flexible and responsive markets for a predominantly renewable energy system. First of all we need an ambitious and binding EU minimum target of 45% Renewables in 2030, underpinned by binding national targets for each Member State, and implemented by strong and coherent national policies for ambitious growth of Renewables." (Rainer Hinrichs-Rahlwes, EREF President)

- The European Union has committed to at least 20% of its energy supply coming from renewable sources in 2020 and to the long-term objective of a low-carbon society with renewable energies being the main sources of energy supply. It should be clear that this target requires a paradigm shift towards an energy system predominantly relying on Renewables.
- The system change will end times of mainly centralized, large scale generation and highly concentrated markets. With increasing shares of renewable energy, the markets will and will have to become more open and the number and role of market players more diversified. Small and medium enterprises, as well as private households, farmers and independent producers of energy from Renewable sources will play an increasingly important role.
- However, as current markets are very much distorted, support is needed to level the playing field. EREF seeks to highlight that in distorted markets support for Renewables are not distorting but rather facilitating competition. Without distortions (e.g. through subsidies to fossil fuels, which are still about four times as high as any subsidies to renewables, through market power of incumbents, intransparent grid tariffs etc.), most Renewables could already today easily compete on the markets.
- As experience with the current Renewable Energy Directive (Directive 2009/28/EC) has shown, a stable European framework, with binding minimum targets for each Member State and with Member States' applying well designed national support schemes, creates good conditions for the development of renewable energies and thus a really sustainable energy system. Accordingly, EREF calls for the adoption of a binding EU minimum target of 45% renewable energy in 2030, underpinned with binding national targets and implemented through strong and consistent national policies.
- Stability of the policy framework and long-term investment security are key for a sound development of a sustainable energy future. EREF therefore believes that the adoption of a new binding minimum target only in 2018, as foreseen in the current Directive, will be too late. The process to agree on an ambitious new target should start now and agreement should be reached before 2014.

- Within that stable EU policy framework, depending on the respective circumstances in each of the Member States, additional measures may be needed to create a level playing field and to speed up the transition to a sustainable energy supply in Europe. However, as Member States are different, there cannot be a “one size fits all” solution. Different situations require different solutions. EREF thus opposes the idea of a harmonized EU renewables support scheme, or of harmonized levels of support determined on EU level.
- The same is true for different technologies, and even more so for the different sectors – there cannot be ONE solution applicable in all EU Member States. EREF recalls that – according to the subsidiarity principle, among others – Member States should continue to be able to take the necessary about which technology to support at which level.
- An important precondition for a sound and economically reasonable transition towards a sustainable energy system predominantly based on Renewables will be to eliminate all remaining subsidies and competitive advantages for “conventional” energy sources. This would also include full internalization of their real external costs. EREF is convinced that energy markets would become much more competitive, fairer and ultimately much more sustainable with Renewables as the main source of supply.
- To unlock the full potential of Renewable energies, markets have to be adapted to a flexible energy supply and demand, based on increasing shares of variable and dispatchable Renewables. Infrastructure needs to become smarter and more responsive to demand and load changes. Intelligent integration of small-scale and distributed as well as large-scale and centralized energy production will be a major challenge of the next decade.
- Important precondition for further grid development will be priority access, transmission and dispatch for Renewable energy, but also better information and communication between and the active participation of all parties involved. EREF encourages for examples, the development of smart grids in which distribution system operators bear more responsibility, business models for energy service companies and the participation of independent power producers in local, regional, national and European regulatory, legislative and policy-making procedures.
- EREF welcomes the Commissions approach to have a closer look not only on the electricity sector, but also to the heating & cooling and to the transport sector. Further development of sustainable biomass use combined with increasing efficiency and energy savings will be key to tap the potentials in these sectors.

## Section A: General policy approach

*In light of the results of recent communications on a Roadmap to a low carbon economy and transport white paper as well as the Energy 2050 Roadmap:*

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 mandatory target at EU level is appropriate**

### EREF:

If Europe wants to maintain its renewable energy leadership and live up to its 2050 decarbonisation objective, a stable policy framework with a binding EU minimum 45% target for 2030 is a crucial prerequisite. .

Due to long investment cycles, it is important there is a binding overall renewables target established NOW for the time beyond 2020. 2018, as foreseen by the Directive 2009/28/EC is too late. Binding targets have proven successful in the past, and a 45% EU target now for 2030 underpinned by binding national targets for the Member States would send the right picture to the industry and would provide reliable investment conditions in the sector.

It is true that, in particular regarding the Heating and Cooling and Transport sector, in the future a more balanced growth is needed. This makes it necessary that - within the framework of the overall binding EU minimum target of 45% renewable energy in 2030 - the Member States – within their NREAPs – set national targets for each sector on an “at least increase” basis. Those targets would provide the crucial investment security in particular in the Heating and Cooling sector. They would however also allow the Member States to continue their existing policies and priorities and- most importantly - they would not lead to termination of the existing support schemes that are in existence in some Member States and that have proven quite successful. Not undermining existing support schemes should be first prerogative.

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, 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 (Smart Grids, DSO responsibility, Demand Side Management, ESCO services...) (max. 1500 characters)**

## EREF

The binding EU minimum target of 45% is only one – though central – fact, also, a comprehensive and stable policy and reliable regulatory framework are needed.

In particular, 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. Articles 13 and 16 of Directive 2009/28/EC are not yet 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 unsustainable energy, e.g. conventional fuels and in particular to nuclear energy, would be another important factor: 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 fully competitive.

Renewable energy is often generated on a decentralized level, which constitutes a great asset: the potential for local generation and distribution, using existing infrastructures and existing storage could be one part of the response to the need for grid extension and would take off some of the pressure from on this topic. Thus a policy is needed that allows distribution network operators to work better and closer together with renewable plant operators, that which encourages Demand Side Management energy services and smarter grids.

## Section B: Financial support

*Member States at present rely on various forms of national support mechanisms to fulfil their national renewable targets for 2020. This section refers to the further development of support mechanisms post-2020.*

1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration?

✓ **For selected technologies/circumstances/markets (please specify) (max. 1500 characters)**

### EREF

Some renewable technologies are already close to reaching the LCOE (levelized costs of electricity) status despite the present imperfect markets. Others, less mature technologies are still on their way but with equally clear digression curves and all face the obstacle of high subsidies to fossil fuels and nuclear power. Many technologies need more time to become cost competitive, and will need further financial support and in particular investment security. Also, there are big differences between the Member States – as the respective markets are different and so are the conditions for the technologies. And before the background of decentralised deployment of renewable despite ever increasing efficiencies it may be longer more “costly” to tap the renewable resources in less optimal natural and local situations. Intelligent mechanisms such as in the German Feed-In Law guarantee fairness between regions and technologies and trigger access to renewables across regions thus reducing the negative side of too concentrated deployment of renewable technologies and increased grid enforcement costs

Experience with the Directive 2009/28/EC has shown that competition between national systems for financial support systems works: knowledge exchange between Member States - despite current problems under the financial crisis- will in the long run encourage progressive and adapted support systems which on the same time take into account national or regional specifics.

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?

✓ **Making support schemes more market-oriented (please specify how) (max. 1500 characters)**

**EREF:**

The solution is not so much making support schemes for renewable more market oriented, but making the market fair for renewables by creating a level playing field. As there are still imperfect conditions with subsidies paid to fossil fuels and nuclear energy which keep the prices artificially low, as there are still structures that prevent proper access (from administrative hurdles, over grid access issues to questions of unavailable financing as banks still lack the experience with renewable (in particular Heating and Cooling) projects), and indeed, as some renewable technologies are still in early stages of development and need financial support, support schemes are merely an answer to an imperfect market. They do not create a separate world for renewables, but they make their participation in the market possible.

Instruments for adapting Feed-In Tariffs over time – such as a degression as in the German EEG – can properly align for example a technology's learning curve and the financial support paid and that way respond to improvement in the technologies and in the markets. .

✓ **Accelerate convergence of national support schemes. Why? (max. 1500 characters)**

**EREF:**

As mentioned above, there is no "one size fits all" solution to support schemes. Technologies are different, markets are different, conditions are different, and 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 catastrophic for others. Whereas it certainly makes sense for Member States to learn from good practise examples such as technology specific support, degression rates, priority grid access etc., there is no use in pushing for faster convergence of support systems, where this is not being developed on a factual basis on an equal footage between all participants of a cooperation project.

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 actively 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 begin become more market oriented, become able to compete in markets (if the markets are well designed and well functioning).

✓ **Phase out support schemes over time (please specify for which technologies if applicable)**

3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables?

✓ **No, support levels should be entirely up to Member States.**

4. Should the structure of financial support be gradually aligned EU-wide?

✓ **No**

5. With regard to questions 3. and 4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport). Max. 1500 characters

**EREF:**

It is correct that e.g. the electricity sector and the heating and cooling sector are quite different and have different needs due to those different specificities. However, as argued above, developments of the technologies in all sectors have not been linear in the Member States and it cannot be as the conditions widely differ, and political choices as well as consumer acceptance and the like also play a role.

Thus what has been said above – that there is no “one size fits all” solution and that Member States need to be the ones to determine the design and the levels of their financial support schemes – applies to all three sectors. There should be one overall binding EU minimum target of 45% renewable energy in 2030, underpinned by binding national targets for each Member States, with sectoral targets to be set by the Member States.

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?

✓ **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.**

7. Do national support schemes and differences between such schemes distort competition?

✓ **No, support schemes do not have a significant distorting impact on competition**

## EREF:

Support schemes do not distort competition. They rather respond to the specific existing “market” conditions and distortions and try to create a level playing field. Without the existing distortions (e.g. through subsidies to fossil fuels, which are still about four times as high as any subsidies to renewables, through market power of incumbents, intransparent grid tariffs etc.) – disadvantageous for renewable energies – in first place, renewables would be in a way better position to compete on the markets. That way, they enable competition.

In this regard, it should be noted, that e.g. in Germany, while there are four big “conventional” energy suppliers (with 80% of the market share in this field), renewables are generated mainly by independent power producers – 69% are private investors, often small and medium sized undertakings, 9% farmers, and only 7% from the industry and 7% from the electricity sector.

## **Section C: Administrative procedures**

*Articles 13 and 14 of the Directive lay down rules on administrative procedures, information and training.*

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?

- ✓ **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**

1.1 Please provide explanations and specific examples where available. (max. 1500 characters)

**EREF:**

Permitting for renewable energy plants can be challenging due to the complexity of procedures and long planning periods. Legislation on licensing procedures is long and complicated and there is often no one at the agency to help with explanations and practical assistance. 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 rules regarding nature conservation or building legislation, lack of tax incentives for local communities (e.g. in Germany rural communities often do not profit from business tax generation, but the cities where the operating company is located).

For one project, a number of different public enquiries have to be carried out, using the same Environmental Impact Assessment. The Committees exceed the scope of their evaluation role, evaluate to large sets of descriptors but do not consider sufficiently economical impacts – also, the procedures are intransparent and promoters are not allowed to attend the meetings.

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.

**2. Which policy response to the problems identified above do you consider appropriate?**

- ✓ **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**

**EREF:**

However, Member States are different in their internal set up and organisation. Harmonisation is thus not an option – in particular as the EU would intrude into Member States exclusive competence and sovereignty here. Standardisation may be a point, but it is questionable how this should work in practice.

Rather it is suggested to better enforce and reiterate the obligations the Member States have – that is to facilitate fair and transparent administrative procedures for renewables. In that, a similar approach as in the recent Infrastructure Package proposed by the Commission could be taken.

For example, mandating a single permitting procedure would reduce the time under which all permits could be obtained, as the multiplication of procedures is inefficient and unnecessary as the respective enquiries require the same information. A national contact and coordination body could be useful if it entails that all administrations would be in line and regional bodies would follow recommendations and best practice guidance from that body. In our experience in project development, we often noted that political commitment and interpretation of the rules could be very different between national and local level. A fixed time limit would be helpful provided that when the time limit is passed without any official decision, the permits is be granted and not rejected.

## Section D: Grid integration of electricity from renewable energy sources

Article 16 of the Directive lays down a number of binding rules related to network development, access and operation in order to ensure that electricity from renewable energy sources may access the electricity network freely.

1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020?

- ✓ **Grid connection rules**
- ✓ **Cost-sharing rules**
- ✓ **Balancing rules**
- ✓ **Curtailement regime**

1.1 If so please specify which obstacles and the nature and degree of them for each of the following: (max. 1500 characters)

### EREF:

- Grid connection rules: Above all, priority access to the grid for renewable energy sources should be maintained until renewables 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 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. 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). Currently in some countries, power plants developers have to pay the grid upgrades and then transfer it for free to the DSO. It is then the DSO that gets the yearly remuneration for those upgrades. This system needs to be changed and it should be clearly defined who has to pay for what 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 benefit of integration of renewable into the grid.

2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? (please explain why)

- ✓ **Obligation for network operator to develop network**
- ✓ **Priority or guaranteed access**
- ✓ **Priority dispatch and obligation on TSO to counteract curtailment**
- ✓ **Other (please specify).**

### EREF:

In addition to priority or guaranteed dispatch, the German so-called “hardship clause” is recommended: the grid operator has to pay damages 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 – in Germany – sufficiently strong and stable grid infrastructure, he is also held liable.

Reducing curtailment of variable renewable is the best way to maximize the contributions of renewables, especially renewables 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.

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:

- ✓ **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) (max. 1500 characters)**

### EREF:

Some Back-up capacity is certainly needed, however, it needs to be ascertained that – as a rule - and to guarantee that the objectives of the energy system transformation are implemented – this does not come from fossil energy power plants. In fact, coal or nuclear cannot be back-up capacity – those plants are not technically capable of being run only as a flexible back-up as they cannot be switched on and off easily and their costs are incredibly high and running them at low volumes economically simply makes no sense.

The renewables industry therefore should not be obliged to make any kind of capacity payments, which would only be one more obstacle to overcome on the way to system transformation.

For Europe’s new energy supply system, increasing the availability of demand response such as smart grids is very relevant for decentralized renewables plants and also for small scale, home (rooftop) installations. For instance, net metering/self-consumption would be a good measure for those countries where renewables are close to competitive.

For larger renewables projects, such as offshore wind, accelerating infrastructure development and building new interconnections is important to ensure flexibility of the EU system. For both large and small projects, increased use of (inter-state) trade and trading closer to real time have huge potential – for that forecasting capabilities need to be used efficiently, and the market platforms need to be more flexible.

## Section E: Market integration

*Current national support schemes expose renewable energies to market signals to various degrees. In many cases, these support schemes nevertheless result in parallel "systems" for conventional and for renewable generation which are largely unresponsive to each other. The following questions ask in which way this could be addressed in a post-2020 perspective where renewables will represent a significant share of the market.*

1. In which of the following ways could renewable energy be made responsive to market signals?

- 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 –
- 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?)
- Producers of renewable energy should continue to be treated separately (no exposure to conventional market)

### EREF:

The question by itself is intrinsically flawed: renewables are not a separate market; rather they are new players in a distorted market, trying to live up against the existing structures. Support schemes are not made for protecting a separate and cozy renewable energy space, but to facilitate fair and level market participation for renewables, if there is a market. Thus they are already market oriented, and they will become even more so, the more the existing distortions are minimized and ultimately eliminated.

In particular the answer that producers of renewable energy should be treated separately is thus absurd.

Similarly, and clear and never questioned for fossils and nuclear, it is the role of the grid owner operator to take care of the grid and to ask for increased grid tariffs in accordance to cover those costs, which will be – if reasonable – approved by the regulator. Such a system will make the grid a clear stand-alone investment case and will facilitate involvement of funds and finance corporations. (For example, the German Grid Agency currently is designing business models under strict competence and authority rule for the grid owner to bear the costs of enforcement of the grid...)

2. How can it be ensured that market arrangements reward flexibility?

- ✓ **Favourable regulatory treatment of storage operators**
- ✓ **Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand) max. 1500 characters**

**EREF:**

For energy system transformation as envisaged, it is insufficient to “just” increase renewables. Rather, the market needs to adapt to the different specifics – and to the different potentials.

Renewables are often generated decentrally, which allows for local generation and local consumption and if those are better aligned, for a reduced need for storage. Demand Response can thus play a crucial role – and in particular DSOs can play a central role in such a system. 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.

3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables

- ✓ **Electricity markets should evolve into energy services markets, earning revenues from more than just electricity**

## Section F: Renewables in Heating and Cooling

*The challenges for renewable energy in the heating and cooling market are sometimes considered to be different in that its use is in many cases already cost-competitive but impeded by other barriers. Many of the barriers should be addressed when the Directive is implemented.*

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?

- ✓ **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)**

### EREF:

It is not only the lack of financial support, but it is the overall package, that has not proven sufficient to trigger growth in the Heating and Cooling sector in many countries. There are interesting ideas being developed, and some countries do in fact already have success stories to tell. However, often it is the design of the support that does not meet the very different, often more small-scale needs of renewable heating and cooling. As this though again depends on national 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 heating and cooling sector and for their markets and consumers. (E.g. international experiences with a use obligation show that while this was taken up with great success in Israel, it failed quite miserably in Spain. Similarly, while in Tunisia people might take up systems with no up front costs, in the UK the supermarket chain Sainsbury's failed even with a scheme in which the installations were offered for free. This shows how different the needs are and reiterates that the only way to deal with this is an improved and enforced support on national level, specifically targeted for the sensitive heating and cooling sector of that country.)

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?

- ✓ **Biomass**
- ✓ **Geothermal**
- ✓ **Solar thermal**
- ✓ **Electrification together with higher share of renewables in electricity production**

**EREF:**

Electrification would only contribute where abundant, and could even play a great role in avoiding curtailment, or to reduce the need of storage. It does not offer a solution to entirely replace all heating and cooling.

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?

**EREF:**

They are both necessary allies with both of them needing to be fostered, together as well as independently.

Also, the role and obligations of architects will become more and more important – renewables need to be integrated in modern architecture to reflect our modern lifestyle.

## Section G: Renewables in transport

*Transport is almost entirely dependent on oil consumption. There is a growing recognition that major efforts are needed to reduce GHG emissions and fossil fuel dependency in this sector. The Directive requires that 10% of transport fuel should come from renewable energy sources but more efforts to reduce oil dependency and GHG emissions are needed post-2020.*

1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport?

- ✓ **Lack of standards**
- ✓ **Lack of infrastructure**
- ✓ **Lack of awareness**
- ✓ **Lack of suitable information**
- ✓ **Limits of availability of sustainably produced biofuels**
- ✓ **Other (please specify)**

### EREF:

Lack of awareness may in this regard also mean lack of willingness – car manufacturers seem to refuse to deal with technical necessities of pure biofuels (sustainable of course) and to develop e-mobility instead of luxury cars. This may however also be due to the wrong support: there should be a clear incentive via an exemption from mineral oil tax, rather than a blending quota scheme.

Blending – with the lower figure being RE – always means sticking to fossil fuel. Blending like E85 – meaning that some fossil has to be added for technical reasons but could be replaced later – would be better. But the future – as we are looking BEYOND 2020 – should be RE-electric cars

2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy?

- ✓ **Road for passengers**
- ✓ **Road for goods**
- ✓ **Rail**
- ✓ **Air**

2.1. Please explain your answer:

### EREF:

Road and rail are certainly most promising. On the roads, the share of electric cars should be increased, as well as on larger rail tracks. While pure biofuels would in future cover the rest, in particular road for goods and smaller rail tracks.

Methane gas CH<sub>4</sub> as biogas should be mentioned as well, as it could be a good solution for aircrafts.

## Section H: Sustainability

*Currently biofuels have to comply with sustainability criteria in order to benefit from support or to be counted towards renewable energy targets. This is in order to avoid negative side effects from an increasing use of biofuels. In addition, the Commission is currently considering introducing additional requirements related to indirect land use change and criteria for solid and gaseous biomass for energy.*

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**

## Section I: Regional and international dimensions

*The cooperation mechanisms of the current Directive offer a framework for cooperation between Member States and with third countries. A number of initiatives are currently under consideration for putting regional coordination in practice, both within the EU as well as with neighbouring regions.*

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?

✓ **Yes.**

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?

✓ **No, the EU should first focus on developing its own renewable potential**

3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose?

✓ **No (explain why)**

**EREF:**

It is not for the EU to impose any prioritization on projects in Member States. Member States shall retain their sovereignty over what projects they like to support or not. What has been said on support schemes holds true here as well – there is no “one size fits all” and what can work in one country, will not necessarily work in the other. Therefore, it is only the Member States who can competently decide on such issues.

If one or more Member States decide to cooperate, and can agree on a project, then the Directive 2009/28/EC with its flexibility mechanisms already provides a possibility for that.

4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area?

✓ **Other measures (please specify)**

**EREF:**

If one of the Member States should decide to cooperate with a third country, then they should be allowed to do so. The Directive 2009/28/EC provides already provides a basis for this and it remains to be seen if and how this works.

However, it is certainly not for the EU to start entering into agreements and imposing them on their Member States – at times when national markets are as different and differently distorted as they are., even the most well-intended effort could have catastrophic impacts. For the same reasons as no harmonization is possible – and even less desirable – no EU agreements should be concluded. There is no reason – as long as the EU and Member States are serious about the transition towards a sustainable energy supply – to encourage third country cooperation more than the Renewables Directive does. This would open another loophole for delaying the shift towards Renewables.

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?

**EREF:**

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.

The priorities, as already reiterated above, should clearly be the development of Europe's internal potential – thus interconnector capacities alongside with a renewable energy target of minimum 45% in 2030.

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?

**EREF:**

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.

## **Section J: Technology development**

*The SET plan presents the strategic framework to accelerate the development and deployment of cost-effective low carbon technologies in the perspective until 2020. For a limited number of technologies industrial initiatives were set up according to two criteria, their large-scale availability by 2020 and the willingness of industry to engage in public private partnerships.*

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?

✓ **Other (please specify)**

**EREF:**

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 system transformation towards a renewables based energy system, and not so much system so much for integration of renewables into an outdated system designed for fossil and nuclear, 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.

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?

**EREF:**

The four main instruments would be the Regional structural funds, EIB, Intelligent Energy for Europe and the HORIZON 2020 framework.

As, an example, the R&D Roadmap for PV which is elaborated within the SET Plan defines the necessary technology improvements needed to ensure that PV is a mainstream energy source by 2020. The Solar Europe Industry Initiative (SEII) identifies 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.

Furthermore, the EIB can offer funding – in particular programmes for the Heating and Cooling sector could be kick started this way.

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?

**EREF:**

This is an awkward question – prioritizing is always difficult, when there are so many differences in the market conditions in the Member States. Also, potentials in production sites, in project sizes, etc. vary widely – which is exactly at the very heart of the future energy supply.

What is clear is that the future energy system will have to be based on a broad mix of various renewable energy technologies and sources, not only large-scale, but definitely also on smaller scale and on distributed levels. This system change should be part of further development of the SET-Plan. The idea of prioritizing itself seems to be more an idea of the past.

4. How successful do you consider the existing measures have been and which have been the main drawbacks? Explain why.

- ✓ **Successful but some drawbacks (please specify which)**
- ✓ **Not successful**

**EREF:**

One particular drawback – if to be called so – would be that while indeed some progress was made in the renewables sector, there continues to be support for fossil and nuclear energy. As those are the main obstacles that renewables face anyways – that are the existing structures and subsidies – this is counterproductive – and rather than being a drawback simply undermines the system.

5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?

**EREF:**

It is problematic to simply link results to a deadline, so the general answer is no. Technology development will by itself reach a balancing point – this cannot be pressed into rigid frames. . However, 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 and more years money has been and will be wasted, now waiting for another 50 years. Burning money does not – but for the bit of heat – produce energy and cannot be the interest.