Preparation of a new Renewable Energy Directive for the period after 2020

Fields marked with * are mandatory.

Introduction

In its Energy Union Framework Strategy, the Commission announced a new renewable energy package for the period after 2020,[1] to include a new renewable energy directive (REDII) for the period 2020-2030 and an updated EU bioenergy sustainability policy. This consultation covers the REDII aspects. The bioenergy sustainability policy will be covered by a separate public consultation.

The results of this consultation, together with the results of the separate public consultation launched by the Commission in July 2015 concerning market design (available at https://ec.europa.eu/energy/en/news/redesigning-europes-electricity-market-%E2%80%93-give-your-fee will inform the impact assessment for REDII.

Please, submit your response to this public consultation by 10 February 2016 at the latest. You are invited to reply to the questions in the questionnaire by using the link to the survey on DG ENER's consultation webpage or via EU Survey. Always use this questionnaire even if also other documents are submitted. In order to facilitate the Commission's processing of responses, please respond in English as far as possible.

Received contributions will be published on the Internet, unless a confidentiality claim has been made on reasonable grounds. Responses from non-registered organisations will be published separately. The Commission also intends to publish a document summarizing the main outcomes of this consultation.

[1] Commission Communication: A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy (COM/2015/080 final) of 25 February 2015

Evaluation of current policies

As part of the Commission's better regulation agenda, the current renewable energy directive[1] (RED) was included in the Commission's 2013 REFIT programme and a comprehensive evaluation study of the RED was carried out in 2014 for the purpose of assessing its effectiveness, efficiency, relevance, coherence and EU added value and to obtain stakeholders' views on the impacts and benefits of the Directive.[2] The main findings were included in the 2015 Renewable Energy Progress

Report.[3] This public consultation builds on the REFIT evaluation and aims at obtaining additional information on impacts and benefits of the RED. Where appropriate, some of the questions in this questionnaire therefore also address evaluation of current policies.

[1] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

[2] REFIT Evaluation of the Renewable Energy Directive (CE DELFT, 2014) available on:

https://ec.europa.eu/energy/sites/ener/files/documents/CE_Delft_3D59_Mid_term_evaluation_of_The_R

[3] COM (2015) 293, available at:
https://ec.europa.eu/energy/en/topics/renewable-energy/progress-reports

Context and challenges

In its Energy Union Framework Strategy, the Commission announced a new renewable energy package for the period after 2020,[1] to include a new renewable energy directive (REDII) for the period 2020-2030 and an updated EU bioenergy sustainability policy. This consultation covers the REDII aspects. The bioenergy sustainability policy will be covered by a separate public consultation.

The results of this consultation, together with the results of the separate public consultation launched by the Commission in July 2015 concerning market design (available at https://ec.europa.eu/energy/en/news/redesigning-europes-electricity-market-%E2%80%93-give-your-fee will inform the impact assessment for REDII.

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[1] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

The core objectives of the EU Energy Union Framework Strategy[1] are to develop a long-term, secure, sustainable and competitive energy system in the EU. Europe should also be a leader in renewable energy. For this, it is important to continue to increase the share of renewable energy sources in the EU.[2] The RED ensures that all Member States will contribute to reaching 20%

renewables at EU-level by 2020. In October 2014, the European Council agreed that **at least** 27% share of renewables by 2030 would reflect a cost-optimal way of building a secure, sustainable and competitive energy system (alongside an at least 40% domestic GHG emissions reduction target and the at least 27% energy efficiency target, which is to be reviewed by 2020, having in mind an EU level of 30%).

As the current legislation will not be sufficient for this purpose[3], there is a need to modify the legislative framework to ensure a timely and cost effective achievement of the EU level binding target on renewables by 2030. A combination of different factors will need to be addressed, including:

- **General approach**: The existing policy framework does not address uncertainties with regard to national policies, governance and regional cooperation to ensure a timely and cost effective target achievement for the period after 2020.
- **Empowering consumers**: A lack of consumer empowerment and incomplete information on renewable energy solutions can hinder cost-optimal deployment of renewable energy at city and community level.
- **Decarbonising the heating and cooling sector**: In the heating and cooling sector, which represents almost half of the EU energy consumption, the current regulatory environment in combination with a lack of information does not incentivise cost-optimal deployment of renewables in heating, cooling and hot water use. The sector remains dominated by fossil fuels and therefore dependent on imports.
- **Adapting the market design and removing barriers**: The current regulatory environment does not properly reflect externalities of energy production in market prices, including environmental, social, innovation and economic externalities. Together with persistent and distortive fossil fuel subsidies,[4] this is one of the reasons leading to high capital costs that hinder cost-optimal renewable energy deployment. In addition, a lack of market integration, infrastructures (storage, interconnections) and smart solutions, including demand-response, also hinder cost-optimal deployment of renewable energy. Finally, complex administrative procedures for renewable energy deployment at national and local level have not yet been eliminated. This covers, inter alia, permitting and grid connection procedures[5].
- **Enhancing renewable energy use in the transport sector**: A policy fostering the use of sustainable alternative renewable fuels would contribute to decarbonising the transport sector and reducing risks related its fossil fuel dependency and could remove current market distortions and fragmentations observed in particular in the internal market for biofuels. Despite the progress made with regard to the development of alternative renewable fuels such as advanced biofuels and renewable fuels of non-organic origin, commercial deployment of such products in the EU is lagging behind. The main reason is the perceived uncertainty about the policy framework after 2020. Only a few Member States have adopted dedicated support measures for advanced biofuels, while most have focussed on more traditional biofuels. The potential for electric transport using renewable electricity deployment is still untapped, due to still high technology costs of deployment and lack of necessary infrastructure.

[1] Commission Communication: A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy (COM/2015/080 final) of 25 February 2015

[2] As highlighted in the 2030 climate and energy framework (COM(2014) 15 final)

[3] As highlighted in the baseline scenario of the 2030 climate and energy framework (COM(2014) 15 final)

[4] Estimated by IMF to be 330 Billion Euro in 2015, source: http://www.imf.org/external/pubs/ft/survey/so/2015/new070215a.htm

[5] Without prejudice to international and Union law, including provisions to protect environment and human health.

Part 1: Information about the respondent

* Are you responding to this questionnaire on behalf of/as:

- ( ) Individual
- ( ) Organisation
- ( ) Company
- (•) Public Authority
- ( ) Other

* Please enter your email address

postmottak@oed.dep.no

* Which countries are you most active in?

- [ ] Austria
- [ ] Belgium
- [ ] Bulgaria
- [ ] Croatia
- [ ] Cyprus
- [ ] Czech Republic
- [ ] Denmark
- [ ] Estonia
- [ ] Finland
- [ ] France
- [ ] Germany
- [ ] Greece
- [ ] Hungary
- [ ] Ireland
- [ ] Italy
- [ ] Latvia
- [ ] Lithuania
- [ ] Luxembourg
- [ ] Malta
- [ ] Netherlands
- [ ] Poland
- [ ] Portugal

- [ ] Romania
- [ ] Slovakia
- [ ] Slovenia
- [ ] Spain
- [ ] Sweden
- [ ] United Kingdom
- [x] Other

* Please specify 'Other':

Norway

* Can we publish your answers on the Commission website?

- (•) YES - under my name (I consent to all of my answers/personal data being published under my name and I declare that none of the information I have provided is subject to copyright restrictions).
- ( ) YES - anonymously (I consent to all of my answers/personal data being published anonymously and I declare that none of the information I have provided is subject to copyright restrictions).
- ( ) NO - please keep my answers confidential (my answers/personal data will not be published, but will be used internally within the Commission)

Part 2: General approach

The RED sets an EU target for renewable energy in gross final energy consumption of 20% by 2020 and 10% of the final energy consumption in transport. In order to achieve the overall 20% target, mandatory national targets for 2020 are fixed for each Member State. The RED also obliges Member States to prepare National Renewable Energy Action Plans (NREAPs) and biannual progress reports to create transparency and predictability for investors and facilitate monitoring of progress towards target achievement. The European Council has reiterated several times that the 2020 targets need to be fully met[1].

For the period after 2020, binding national targets are replaced by a binding EU-level target of at least 27% renewable energy in final energy consumption by 2030 without sectorial targets or binding targets at national level. A new approach to target achievement therefore needs to be developed, building on the Energy Union Governance and Member States' national energy and climate plans for the period up to 2030, which are expected to include national contributions towards the EU-level renewable energy target.

Without putting into question Member States' flexibility with regard to meeting their greenhouse gas reduction targets in the most cost-effective manner in accordance with their specific national circumstances, energy mixes and capacities to produce renewable energy, the new Energy Union Governance will need to provide sufficient transparency and reliability, predictability and stability to spur renewable energy investments and allow access to low-cost capital. It will also need to enable the EU to compare and monitor progress towards the renewables target. Within the broader context of the development of the Energy Union Governance, it will need to be considered what type of governance system will be able to deliver on these renewable energy objectives.

Given that the renewable energy target for 2030 is binding on the EU as a whole, the European Commission will need to have means to ensure that this target is met in a sustainable and cost-effective way. For this purpose, EU measures could be put in place and be designed to deliver on a number of objectives of the Energy Union:

1. create a market-based environment in which renewables can attract the required investments cost-efficiently;
2. foster regional cooperation and regional projects;
3. empower consumers to deploy cost-optimal renewable energy solutions;
4. incentivise the roll-out of new and innovative technologies; and
5. ensure that any potential gap arising in reaching the at least 27% renewable energy target, in terms of either ambition or delivery, is filled.

A number of questions would arise in this respect, including under what circumstances EU measures could be used or activated, how to share potential costs in a fair and equitable way and how to ensure participation by all Member States.

The experience gained with support schemes so far has allowed developing more cost-effective and market-based support schemes. Some Member State support schemes did not respond sufficiently rapidly to falling technology cost development, which resulted in some cases in unnecessary increasing costs for consumers. The EU Energy and Environment State Aid Guidelines build on this experience and puts down conditions for the approval of State Aid. In this context an improved functioning energy market, with improved price signals, as well as a strengthened EU ETS shall improve the investment signal. At the same time it is reasonable to expect that support schemes and other incentives (financial and regulatory) will still be the main policy tools that Member States will use to implement their renewable energy objectives with respect to renewable technologies that are not yet able to be fully financed by the internal energy market.

For new and innovative technologies, it can be important to ensure that regulatory and market risks are reduced to allow that project promoters can bring down costs through technology learning and industrialisation of manufacturing and installation, in particular if the EU is to become a world leader in renewable energy. However, where possible, some degree of market integration should remain if this goes beyond mere initial technology deployment of innovative technologies, to ensure their development takes into account market needs, does not lead to overcompensation and prepares these technologies for further market integration.

Finally, in line with the broader objectives of the Energy Union, a new regional approach to renewable energy policy cooperation and incentives should be considered.

In this context, it is important to examine the optimal geographical scope and design of any support schemes in order to drive the achievement of the 2030 target in a cost-effective way, which does not lead to fragmentation and distortion of the internal energy market.

It also needs to be assessed how regional cooperation agreements similar to those developed under RED can be improved and could play a role and to what extent support at EU-level could become relevant.

[1] The latest Renewable Energy Progress Report issued in June 2015 concluded that the majority of Member States are currently on track to meeting their 2020 renewables target. In 2013, the combined EU share of renewable energy reached 15% and the estimate for 2014 indicates a 15.3% share, which is above the trajectory for the EU as a whole. 26 Member States met their first 2011/2012 interim target and 25 Member States are expected to meet their 2013/2014 target. Some Member

States have already reached their 2020 targets. However, as the trajectory towards the 2020 target becomes steeper over the coming years up to 2020, some Member States may need to intensify their efforts to keep on track (COM(2015)293 final and SWD(2015)117 final). Available here: https://ec.europa.eu/energy/en/topics/renewable-energy/progress-reports).

1. To what extent has the RED been successful in helping to achieve the EU energy and climate change objectives?

- Very successful
- Successful
- Not very successful
- Not successful
- No opinion

To what extent did implementation measures for the RED as well as external factors (technological development, financial crisis, security of supply concerns and related market interventions) affect the effectiveness and efficiency of achieving the objectives?
Please identify and ideally also quantify the direct and indirect costs and benefits such as macroeconomic effects, competitiveness effects, innovation, cost and cost reductions, environmental and health effects of the Renewable Energy Directive.

3600 character(s) maximum

Increasing the production of renewable energy in Europe is important if the EU is to achieve its energy and climate objectives.

There are many factors that influence production and consumption of energy. The Renewable Energy Directive (RED) impose quantitative targets on the share of renewable energy in total energy consumption for each country. National implementation and choice of policies vary among countries. Different national measures are in place. Renewable energy interacts with the rest of the energy system, and (national) policies to incentivize production of renewable energy will also affect the energy system as a whole. Theses impacts and interactions are important to reveal and assess. If policies and measures are narrowly designed and only the incremental effects on renewable energy are assessed, there is a of risk unexpected and adverse effects in the power market and the rest of the energy system. The RED and national measures have increased production of renewable energy and the share of intermittent renewable energy in the energy system. Substantial amounts of intermittent renewable power in the European power system have impacts that have to be addressed.

The effects from the RED, including national targets, are that countries will increase the volume of renewable energy production and/or limit energy use. In countries with initially high renewable share, it might be less costly to limit consumption instead of increasing production, while in countries with low share, the main force is to increase production. This is due to the target being based on a renewable share of energy (a fraction). This system leads to unequal incentives for production and consumption in European countries, and suboptimal solutions and policies. The cost efficiency in European energy policy consequently will be weak.

The RED has spurred a substantial deployment of renewable energy technologies in Europe and has contributed to the price reduction in renewable energy technologies globally in the latest years.

Climate change:
The EU-ETS should remain the cornerstone of European climate policy. A price on carbon trough the EU-ETS will encourage investments in renewable energy and energy efficiency. Thus, it is important that additional policies and measures to encourage renewable energy do not weaken EU-ETS. To reduce GHG emissions, carbon intensive energy technologies have to be replaced by less emitting technologies. In a power system with a very high existing share of renewable energy and little fossil (or nuclear) power production (like the Norwegian power system), there are few possibilities for such substitution. Support for additional renewable power into this market, will mainly result in lower prices and reduced profitability for the existing unsupported renewables production. This will reduce investments in other renewables.

2. How should stability, transparency and predictability for investors be ensured with a view to achieving the at least 27% renewable energy target at EU level? Please indicate the importance of the following elements:

	Very important	Important	Not very important	Not important	No opinion
Forward looking strategic planning of RES development is required by EU legislation	○	○	○	○	○
Best practice is derived from the implementation of the existing Renewable Energy Directive	○	○	○	○	○
Regional consultations on renewable energy policy and measures are required	○	○	○	○	○
Member States consult on and adopt renewable energy strategies that serve as the agreed reference for national renewable energy policies and projects	○	○	○	○	○
The Commission provides guidance on national renewable energy strategies	○	○	○	○	○

Any other view or ideas? Please specify. What are the lessons from the RED (mandatory national

targets, national plans, progress reports etc.)?

3600 character(s) maximum

Transparency and predictability for investors are essential to maintain and ensure investments in renewable energy. Market based solutions, together with the EU-ETS, will provide transparency and predictability to investors. The market is vital in providing efficient prices and investment signals for investors. The European power system is in a period of transition, and the regulatory framework must be flexible and forward looking. Plans and reporting system must be designed so that they do not impede efficient markets. Governmental intervention should be limited to avoid political risk for investors. At the same time, there is a need for governments to address real barriers to cost-efficient actions and investments. It is important to assess and define the areas where governmental intervention and planning are needed, to minimize market distortions.

3. Please rate the importance of the following elements being included in Member States' national energy and climate plans with respect to renewable energy in ensuring that the plans contribute to reaching the objectives of at least 27% in 2030.

	Very important	Important	Not very important	Not important	No opinion
Long term priorities and visions for decarbonisation and renewable energy up to 2050	○	○	○	○	○
In relation to national/regional natural resources, specific technology relevant trajectories for renewable energy up to 2030	○	○	○	○	○
Overview of policies and measures in place and planned new ones	○	○	○	○	○
Overview of renewable energy trajectories and policies to 2050 to ensure that 2030 policies lie on the path to 2050 objectives	○	○	○	○	○
Qualitative analysis	○	○	○	○	○
Trajectories for electricity demand including both installed capacity (GW) and produced energy (TWh)	○	○	○	○	○
Measures to be taken for increasing the flexibility of the energy system with regard to renewable energy production	○	○	○	○	○

Plans for achieving electricity market coupling and integration, regional measures for balancing and reserves and how system adequacy is calculated in the context of renewable energy	◯	◯	◯	◯	◯

Please explain.

3600 character(s) maximum

Plans and reporting system must be designed so that they do not impede efficient markets. Governmental intervention that is not directed at addressing externalities, real barriers or to spur necessary technology or infrastructure development, should be limited to avoid political risk for investors. It is important to assess and define the areas where governmental intervention and planning are needed, to minimize market distortions . An effective legislative and economic framework is a precondition for well -functioning energy markets, security of supply and ambitious environmental policies.

The target on renewable energy are set at EU-level. EU-level targets will draw upon the different countries relative advantages and contribute to making the most of national differences and circumstances. In this way, EU-level targets are more cost-efficient than national targets. Thus, it is important that the national climate and energy plans do not become an instrument that in practice translate EU-level targets into national targets. This is important because the optimal energy mix will vary among countries even though they share common objectives. Plans and policies need to reflect this important aspect, through necessary flexibility.

4. What should be the geographical scope of support schemes, if and when needed, in order to drive the achievement of the 2030 target in a cost-effective way?

- ◯ Harmonised EU-wide level support schemes
- ◯ Regional level support schemes (group of Member States with joint support scheme)
- ◯ National support schemes fully or partially open to renewable energy producers in other Member States
- ◯ Gradual alignment of national support schemes through common EU rules
- ◯ National level support schemes that are only open to national renewable energy producers

Please explain.

3600 character(s) maximum

Norway and Sweden have been closely integrated in the joint Nordic power market for many years. The Norwegian-Swedish electricity certificate scheme is the first example of a joint support scheme between states under Article 11 of the RED. Norway and Sweden have a combined goal of establishing 28.4 TWh new electricity production based on renewable energy in 2020. The Nordic power market is characterized by ample supply and relatively low prices, and we expect this to be the case also in the coming years.

Norway has a well-functioning cooperation with all the Nordic countries within working groups on i.a. renewable energy and electricity markets under the Nordic Council of Ministers, which is a forum for exchange of best practice and discussion on common policy issues. It is important that cooperation between countries is based on an identified benefit of cooperation; otherwise there is a risk that such requirements only lead to increased administration.

5. If EU-level harmonised /regional support schemes or other types of financial support to renewable energy projects would be introduced:

- What hinders the introduction at the EU wide and/or regional scale?
- How could such mechanism be activated and implemented? What would be their scope (what type of projects/technologies/support mechanisms could be covered?
- Who would finance them?
- How could the costs of such measures be shared in a fair and equitable way?

3600 character(s) maximum

It is worth noticing that if a joint/regional support scheme is successfully established between countries, there will be increased focus from investors on level playing field between countries. There are differences in national framework conditions that affects and determine the profitability of investments in renewables. Taxation, levies and licensing are conditions that will vary between countries. As investors in each country are eligible under the same support scheme, these differences will attract increased attention. However, national taxes and levies on electricity are designed to meet different purposes and take into account various local conditions. It will not be possible, and not necessarily desirable, to harmonize framework conditions at European level.

For the power sector there is already a harmonized European system in place that incentivizes renewables: The Emissions Trading System, ETS.

6. The current Renewable Energy Directive gives Member States the possibility to enter into various cooperation mechanisms (statistical transfers, joint projects and/or joint support schemes). Please expand on the possible new legislative and non-legislative measures that could be introduced to foster the development of cooperation mechanisms in the period beyond 2020.

3600 character(s) maximum

We refer to the answer to question 4 and 5

7. The use of cooperation mechanisms has been limited to date. Which of the below factors do you consider important in explaining the limited recourse by Member States to cooperation mechanisms so far?

	Very important	Important	Not very important	Not important	No opinion
Unclear legal provisions	○	○	○	○	○
Administrative complexities	○	○	○	○	○
Lack of cost-effectiveness / uncertain benefit for individual Member States	○	○	○	○	○
Government driven process, not market driven	○	○	○	○	○
Member States reluctant to see their taxpayers/ consumers' money used for investments outside their country	○	○	○	○	○

Other? Please explain.

3600 character(s) maximum

8. How could renewable electricity producers be fully or partially eligible for support in another Member State? Which elements would you include in a possible concrete framework for cross-border participation in support schemes? Any other consideration? Please explain.

3600 character(s) maximum

9. Please assess what kind of complementary EU measures would be most important to ensure that the EU and its Member States collectively achieve the binding at least 27% EU renewable energy target by 2030:

	Very important	Important	Not very important	Not important	No opinion
EU-level incentives such as EU-level or regional auctioning of renewable energy capacities	○	○	○	○	○
EU-level requirements on market players to include a certain share of renewables in production, supply or consumption	○	○	○	○	○
EU-level financial support (e.g. a guarantee fund in support of renewable projects)	○	○	○	○	○
EU-level support to research, innovation and industrialisation of					

novel renewable energy technologies	○	○	○	○	○
Enhanced EU level regulatory measures	○	○	○	○	○

Any other ideas or comments, please explain.

3600 character(s) maximum

10. The Energy Union Framework Strategy sets the ambition of making the European Union the global "number one in renewables". What legislative and non-legislative measures could be introduced to make/strengthen the EU as the number one in renewables? Has the RED been effective and efficient in improving renewable energy industrial development and EU competitiveness in this sector?

3600 character(s) maximum

Market failures are recognized in the different phases of the innovation chain, especially when it comes to development of environmental technology. Research and development is important to fulfill the ambitions on increased deployment of renewables, including support for market introduction of new technologies. This is a long-term commitment.

A strong EU-ETS will encourage investments in renewable energy in a cost-efficient way. It may be useful to supplement with additional efforts for a limited period, if learning effects and economy of scale can be expected.

Strong commitment to volume-based targets will trigger countries to develop production plants based on mature technology.

Part 3: Empowering consumers

The European Commission's Energy Union Strategy put the consumer at the centre stage. Consumers have a key role to play in energy markets and in driving the transition to a more sustainable energy system in the EU. On 15 July 2015, the Commission issued a Communication on delivering a new deal for energy consumers (COM/2015/339)[1] as well as a guidance document on best practices on renewable energy self-consumption (SWD/2015/ 141).[2] In this context, REDII provides opportunities to develop more targeted measures for empowering consumers, including communities and cooperatives[3].

As active participants in the energy market, consumers should be able to self-consume and store renewable energy in the EU.

Provisions on simplified and streamlined procedures on permitting and grid connection in case of projects for self-consumption of renewable energy could be further enhanced.

The wide-spread development of self-consumption may also require gradual adjustment of retail tariffs to promote consumers' flexibility, while supporting energy efficiency and the renewable energy objectives and at the same time minimise total system costs. The establishment of common principles at EU-level for network tariff design will thus need to be considered.

Renewable energy deployments need also to observe certain rights granted to the public, by international and EU law, such as, for instance, the right to access to information, public participation and consultation, as well as access to justice on environmental matters[4]. Thus, contributing to accountability, transparency and public awareness.

The REDII also offers opportunities to foster local ownership of renewable energy (e.g. community and citizen participation in renewable energy cooperatives). It seems particularly important to support local authorities in preparing strategies for the promotion of renewable energy, enable cooperation between relevant actors at the local or municipal level and facilitate access to finance.

Under the RED, a Guarantees of Origin (GO) system provides an EU wide mechanism to inform electricity consumers as to the renewable nature of the electricity that they use, enabling green tariffs to develop but also being criticised for not sufficiently linking these tariffs to real incentives for additional new green energy deployment. It should be assessed to what extent the current rules for electricity disclosure (incl. GO) can be improved to reflect best practice in Member States' implementation and help consumers choose a more sustainable energy consumption pattern.

[1] https://ec.europa.eu/energy/sites/ener/files/documents/1_EN_ACT_part1_v8.pdf

[2] http://ec.europa.eu/energy/sites/ener/files/documents/1_EN_autre_document_travail_service_part1_v6.p

[3] Without prejudice to the EU and international law on the right to access to information, public participation and consultation, as well as access to justice on environmental matters.

[4] UNECE Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention), Directive 2011/92/EU, as amended by Directive 2014/52/EU (EIA Directive), Directive 2001/42/EC (SEA Directive).

11. How would you rate the importance of the following barriers for consumers to produce and self-consume their own renewable energy?

	Very important barrier	Important barrier	Not very important barrier	Not important barrier	No opinion
Self-consumption or storage of renewable electricity produced onsite is forbidden	○	○	○	○	○
Surplus electricity that is not self-consumed onsite cannot be sold to the grid	○	○	○	○	○
Surplus electricity that is not self-consumed onsite is not valued fairly	○	○	○	○	○

Appliances or enabler for thermal and electrical storage onsite are too expensive	○	○	○	○	○
Complex and/or lengthy administrative procedures, particularly penalising small self-consumption systems	○	○	○	○	○
Lack of smart grids and smart metering systems at the consumer's premises	○	○	○	○	○
The design of local network tariffs	○	○	○	○	○
The design of electricity tariffs	○	○	○	○	○

Other? Please explain.

3600 character(s) maximum

It is an important principle to enable energy consumers to participate actively in the market. This should include the possibility to produce and self-consume their own renewable energy.
It is important to keep in mind that increased renewable share is not linked only to local energy production. In some countries, major parts of the centralized energy system are based on renewable energy. It should not be an independent goal to free e.g. buildings and consumers from the centralized energy system if the centralized system is based on renewable energy. In order to ensure cost-effective deployment of renewable energy in the energy system, individual or small scale renewable energy installations should not be over-incentivized or favored to the detriment of alternative and potentially more cost effective large scale measures in the collective energy systems. There should be fair conditions for local energy production. Explicit promotion of local energy production however, could lead to suboptimal solutions.

12. In general, do you think that renewable energy potential at local level is:

- ☐ Highly under-exploited
- ☐ Under-exploited
- ☐ Efficiently / fully exploited
- ☐ Over-exploited (i.e. beyond cost-effectiveness)
- ☐ No opinion

Other? Please explain. Has the RED been effective and efficient in helping exploiting the renewable energy potential at local level?

3600 character(s) maximum

See text under question 11

13. How would you rate the importance of the following barriers that may be specifically hampering the further deployment of renewable energy projects at the local level (municipalities and energy cooperatives):

	Very important barrier	Important barrier	Not very important barrier	Not important barrier	Not important barrier	No opinion
Lack of support from Member State authorities	○	○	○	○	○	○
Lack of administrative capacity and/or expertise/ knowledge/information at the local level	○	○	○	○	○	○
Lack of energy strategy and planning at local level	○	○	○	○	○	○
Lack of eligible land for projects and private property conflicts	○	○	○	○	○	○
Difficulties in clustering projects to reach a critical mass at local level	○	○	○	○	○	○
Lack of targeted financial resources (including support schemes)	○	○	○	○	○	○

Negative public perception						

Other? Please explain.

3600 character(s) maximum

See text under question 11

14. Please rate the appropriateness of stronger EU rules in the following areas to remove barriers that may be specifically hampering the further deployment of renewable energy projects at the local level:

	Very appropriate	Appropriate	Not very appropriate	Not appropriate	No opinion
Promoting the integration of renewable energy in local infrastructure and public services	○	○	◉	○	○
Supporting local authorities in preparing strategies and plans for the promotion of renewable energy	○	○	◉	○	○
Facilitating cooperation between relevant actors at the local or municipal level	○	○	◉	○	○
Facilitating access to targeted financing	○	○	◉	○	○
EU-wide right to generate, self-consume and store renewable electricity	○	○	○	○	◉
Measures to ensure that surplus self-generated electricity is fairly valued	○	○	◉	○	○
Harmonized principles for network tariffs that promote consumers' flexibility and minimise system costs	○	○	◉	○	○

Other? Please explain.

3600 character(s) maximum

It is an important principle to enable energy consumers to participate actively in the market. This should include the possibility to produce and self-consume their own renewable energy. EU legislation should allow for renewable energy projects at the local level. Policies for local renewable

energy projects should however be tackled at national level to make sure that the requirements do not become counterproductive in countries with already high share of renewable energy in the centralized system. It is vital to take into account the need for flexibility in the choice of policy instruments which are adapted to each country's energy situation. It will not be possible, and not necessarily desirable, to harmonize framework conditions at European level. E.g. regulation of the design and structure of distributional tariffs should remain a national concern.

15. Should the current system for providing consumers with information on the sources of electricity that they consume be further developed and improved?

If not, why? If yes, how?
Should the current Guarantees of Origin (GO) system be made the mandatory form of information disclosure to consumers?
Should other information, such as e.g. CO2 emissions be included?
Should it be extended to the whole energy system and include also non-renewable sources? Other ideas?
To what extent has the current GO system been successful in providing consumers with information on the sources of electricity that they consume?

3600 character(s) maximum

The GO system is difficult to fully understand for the consumer. One must take care not to misinform the consumers about the sources of electricity that they actually consume, as the specific source of electricity cannot be traced to individual consumers. GOs are a proof of production and are traded separately from the electricity which is consumed. For consumers who know that the physical production in their region is renewable, it is difficult to accept that this quality can be sold to other regions. One must be very mindful of how such a system is used and how it is perceived by consumers.

Part 4: Decarbonising the heating and cooling sector

Renewable heating and cooling can make a real difference for the decarbonisation of the EU economy and enhance EU security of supply. While cost-effective renewable energy equipment is available, 80-90% of the EU heat and hot water production is still using largely imported gas and oil. The RED includes limited provisions for the promotion of renewable heating and cooling. In REDII, more targeted measures could be considered to further increase renewables deployment in the heating and cooling sector, building on and interacting with energy efficiency and security of energy supply legislation. A comprehensive approach could be developed targeting buildings, individual energy use for heating and cooling, and the share of renewable energy in district heating and CHP units.
Efficient ways need to be found to stimulate switching from fossil fuels to renewable heating and cooling and hot water generation in the large number of EU homes with individual heating equipment. The existing nearly-zero energy building (NZEB) standards (mandatory from 2021 for all new building) include obligations for minimum use of renewable energy. It appears however that this is insufficient to further encourage the use of renewables at the building level. It could therefore be considered whether the NZEB rules should be made more ambitious to also include an obligation to

use renewable energy heating (including water heating) and cooling in the existing building stock, effective if and when the building is subject to major renovation or the heating system is replaced. Measures will also need to encourage a shift in consumer behaviour, perhaps through better information about renewable energy alternatives from heating equipment suppliers and installers, and encourage investment in energy storage and demand-shifting capacity.
Although district heating systems only cover 13% of the European heat market, in Nordic, Central and Eastern European Member States 50-80% of the heating is produced by district heating. Most of this heating is produced from imported natural gas, followed by coal, and renewables. In these Member States, measures to increase the share of renewable energy in heating and cooling supply could bring significant gains. For example, it could be assessed whether, based on comprehensive assessments of national heating and cooling potentials, energy suppliers could potentially be required to progressively increase the share of renewable energy in the overall energy that is placed on the market for heating and cooling purposes, taken into account the market incentives already available for this sector. It could also be assessed whether all new and significantly upgraded heating and cooling infrastructure should enable at least a certain share of all heating, cooling and hot water needs to be sourced from renewable energy sources produced on site or nearby (through local networks).
The potential for renewable energy in decarbonising the heating and cooling sector will also be addressed within the forthcoming Heating and Cooling Strategy and Security of Energy Supply proposals, while sustainability aspects will be addressed through the post-2020 EU bioenergy sustainability policy.

16. Please rate the importance of the following barriers in hampering the deployment of renewable heating and cooling in the EU:

	Very important barrier	Important barrier	Not very important barrier	Not important barrier	No opinion
Real or perceived incoherence in existing EU policies (such as RED, EED and EPBD)	○	○	○	○	○
Lack of administrative capacity and/or expertise/ knowledge/information at the national and local level	○	○	○	○	○
Lack of energy strategy and planning at the national and local level	○	○	○	○	○
Lack of physical space to develop renewable heating and cooling solutions	○	○	○	○	○
Lack of requirements in building codes and other national or local legislation and regulation to increase the share of energy from renewable sources in the building sector	○	○	○	○	○

Heating and cooling equipment installers lack sufficient knowledge or information to offer renewable energy alternatives when asked to replace fossil fuel heating and cooling equipment					
Lack of targeted financial resources and financing instruments					
Lack of definition and recognition of renewable cooling					
Lack of electricity market design supporting demand response, decentralised energy and self-consumption and thermal storage in buildings and district systems					
Lack of mapping tools to identify the resources potential at regional scale with local renewable energy					
Lack of tools and information to compare the lifecycle costs of the various alternative heating and cooling alternatives					
Negative public perception					

Other? Please specify and explain.

3600 character(s) maximum

17. Please rate the most effective means of addressing these barriers and advancing the decarbonisation of EU heating and cooling supply:

	Very effective	Effective	Not very effective	Not effective	No opinion
Renewable heating and cooling obligation					
Requirement for energy suppliers and/or distributors to inform consumers of the costs of heating and cooling and to offer renewable heating and cooling solutions					

Requirement that all urban and municipal infrastructure upgrades (energy infrastructures, and other relevant infrastructure, such as sewage water, water and waste chains) make it possible and promote the distribution and use of renewable energy for heating and cooling and hot water generation	○	○	○	○	○
Measures supporting best practices in urban planning, heat planning, energy master planning, and project development	○	○	○	○	○
Criteria and benchmarks for promoting district heating and cooling taking into consideration the local and regional conditions	○	○	○	○	○
Nearly zero-energy building (NZEB) standards to include a mandatory minimum use of renewable energy	○	○	○	○	○
Including systematically renewable energy production in buildings' energy performance certificates	○	○	○	○	○
The promotion of green public procurement requirements for renewable heating & cooling in public buildings	○	○	○	○	○
Heating and cooling equipment installers should present renewable energy alternatives when asked to replace fossil fuel heating and cooling equipment	○	○	○	○	○
Develop best practices for enterprises, including SMEs, to integrate renewable heating and cooling into their supply chains and operations	○	○	○	○	○
Requirement to consider renewable energy alternatives in subnational, national, regional or EU security of supply risk preparedness plans and emergency procedures	○	○	○	○	○
Targeted financial measures	○	○	○	○	○

Other? Please specify and explain. How could such measures be designed? How could they build on existing EU rules?

3600 character(s) maximum

The heating and cooling sector can make use of heat energy which otherwise could be wasted. The sector offers important flexibility in energy supply where other sources are intermittent. Increasing the renewable share in heating and cooling is important. It is however vital to take into account the need for flexibility in the choice of policy instruments for decarbonizing the heating and cooling sector that are adapted to each country's energy situation.
Legal requirements should not differentiate between if RES heat is produced on the building, or supplied via district heating or the electricity grid. Requirements for RES on the building itself (rather than high share of RES in the heating system) will be counterproductive as it can stimulate more expensive solutions rather than allowing the market to define locally most cost-efficient method to increase the share of RES.
A well functioning market with efficient price information is the foundation for optimal utilization and development of the energy system

Part 5: Adapting the market design and removing barriers

A separate public consultation, which was open during the period 15 July – 8 October 2015, gathered extensive input on a wide range of issues aimed inter alia at making the market design fit for renewables. This section includes complementary questions. Both public consultations will inform policy makers during the development of REDII.

Changes in the market provisions are of utmost importance in order to build a market which is fully fit for renewables. For example, the establishment of liquid and better integrated short-term intraday and balancing markets will help to increase flexibility and help renewable energy producers to integrate in the market and compete on an equal footing with conventional energy producers, while the strengthening of the EU ETS can contribute to reinforce the long term investment environment.

The RED includes obligations to ensure transparent and foreseeable grid development for renewable energy as well as predictable, transparent and non-discriminatory grid connection and access procedures and costs. REDII as well as the Commission's market design initiative offers opportunities to update and improve these rules to take account of market developments and experience gained. Consideration also needs to be given to dispatch provisions in close connection with the development of the market design initiative.

The on-going evaluation of the Renewable Energy Directive (REFIT) shows that overall progress in removing non-financial barriers to renewable energy deployment in EU Member States is still limited and slow across the EU despite the specific provisions on administrative procedures, regulations and codes for renewable energy projects, requirements to share information and ensure quality of renewable energy training enshrined in the RED. Other studies point towards the same conclusion. It is reasonable to assume that there is therefore a need for more harmonized EU rules in a number of areas, including permitting procedures, spatial and environmental planning and vocational and professional training.

Note should be taken of already existing legal provisions and practice for streamlining and improving permit granting processes, in particular the provisions laid down in Regulation 347/2013 (TEN-E Regulation) and Directive 2011/92/EU (EIA Directive). Given the existing internal energy market, it is important to ensure that streamlining and improving the permitting granting processes is performed in accordance with existing internal EU legislation, as well as with due regard to the principle of subsidiarity and the national competences and procedures enabling renewable energy deployment. More effective and efficient administrative procedures should not compromise the high standards for protection of the environment and public participation. The establishment of a competent authority or authorities integrating or coordinating all permit granting processes ('one-stop-shop') should reduce complexity, increase efficiency and transparency and help enhance coordination among Member States.

18. In your view, which specific evolutions of the market rules would facilitate the integration of renewables into the market and allow for the creation of a level playing field across generation technologies? Please indicate the importance of the following elements to facilitate renewable integration:

	Very important	Important	Not very important	Not important	No opinion
A fully harmonised gate closure time for intraday throughout the EU	○	◉	○	○	○
Shorter trading intervals (e.g. 15 min)	○	◉	○	○	○
Lower thresholds for bid sizes	○	◉	○	○	○
Risk hedging products to hedge renewable energy volatility	○	○	○	◉	○
Cross border capacity allocation for short-term markets (i.e., some capacity being reserved for intraday and balancing)	○	◉	○	○	○
Introduction of longer-term transmission rights (> 3 years)	○	○	○	◉	○
Regulatory measures to enable thermal, electrical and chemical storage	○	○	◉	○	○
Introduction of time-of-use retail prices	○	◉	○	○	○
Enshrine the right of consumers to participate in the market through demand response	○	◉	○	○	○

Any other view or ideas? Please specify.

3600 character(s) maximum

A well-functioning market with efficient price formation is the foundation for optimal utilization and development of the power system. Prices provide important signals to market participants concerning daily operations, long-term investments in increased production, storage or transmission capacity and development of new products and solutions.
All actors should be integrated in the market and have the opportunity to respond to relevant price signals. Different technologies should participate on an equal footing, so that the different resources are utilized cost-efficiently. Shorter trading intervals and lower thresholds for minimum bid sizes is important for participation of new actors, such as variable RES, aggregators, storage facilities and other services. This may increase the system flexibility and further facilitate the integration of variable RES. The market design must also take into account the needs of the system operator to maintain system security.

To activate flexibility from small end-users, a clear link between wholesale and retail prices must be prevalent. Installation of smart-meters is essential to provide consumers access to real-time or near real-time information about prices and consumption, and allow for settlement and billing based on hourly prices. Smart meters will also open for new services and solutions that may increase demand response. The development of such services should be market-driven and voluntary based.

The regulatory framework should accommodate derivatives trading at accessible, organized market places. With liquid forward markets, detailed regulation of different hedging products is not needed. A range of hedging products will emerge, based on the relevant situations and needs of the market. Depending on the market conditions, this may include longer-term transmission rights and specific products to hedge RES volatility.

Reservation of transmission capacity
When considering reservation of transmission capacity for short-term markets, it is important to distinguish between capacity reservation for the exchange of balancing capacity and intraday trade, as these are two separate issues. For TSOs to exchange balancing capacity, TSOs may need to reserve transmission capacity to guarantee the ability to deliver the balancing energy in real time. Both ENTSO-E and ACER have recommended methodologies for such reservation for the Electricity Balancing Guideline. Such solutions, if implemented efficiently, may increase social welfare and are important steps to reach an integrated European balancing market. This will in turn contribute to efficient RES-integration. The Norwegian TSO has experience with exchanging balancing services by reserving capacity on interconnectors to Sweden and Denmark.
Reservation of capacity in intraday is another issue and is, with good reasons, not a part of the current setup for the IEM.
With well-functioning day-ahead and intraday markets in each interconnected bidding zone, market participants should, without the need for reservation of transmission capacity, be able to perform internal trades in order to ensure the efficient dispatch order, if e.g. market conditions change. This should ensure optimal market outcome. We can therefore not see how reserving intraday transmission capacity could increase social welfare or efficient

RES-integration. On the contrary, reservation of intraday transmission capacity will split liquidity between the day-ahead and intraday, which may lead to negative welfare.

19. Currently, some exceptions from the standard balancing responsibilities of generators exist for energy from renewable sources. In view of increasingly mature renewable generation technologies and a growing role of short-term markets, is time ready to in principle make all generation technologies subject to full balancing responsibilities?

- [x] Yes, in principle everyone should have full balancing responsibilities
- [ ] No, we still need exemptions

Please specify: If exemptions remain necessary, please specify if and in which case and why exemptions would still remain necessary (e.g. small renewable producers, non-mature technologies)?

3600 character(s) maximum

20. Please assess the importance of stronger EU rules in the following areas to remove grid regulation and infrastructure barriers for renewable electricity deployment:

	Very important	Important	Not very important	Not important	No opinion
Treatment of curtailment, including compensation for curtailment	○	○	○	◉	○
Transparent and foreseeable grid development, taking into account renewable development and integrating both TSO and DSO level and smart technologies	○	○	◉	○	○
Predictable transparent and non-discriminatory connection procedure	○	○	◉	○	○
Obligation/priority of connection for renewables	○	○	◉	○	○
Cost of grid access, including cost structure	○	○	◉	○	○
Legal position of renewable energy developers to challenge grid access decisions by TSOs	○	○	◉	○	○
Transparency on local grid congestion and/or market-based incentives to invest in uncongested areas	○	○	◉	○	○

Comments and other ideas, including whether there are any consideration concerning gas from renewable energy sources, for instance expansion of gas infrastructure, publication of technical rules, please explain.

3600 character(s) maximum

We believe all actors should be integrated in the energy market and be subject to prices that reflect the market conditions, including physical congestions in the grid. With an efficient bidding zone configuration, the energy prices will provide necessary signals on grid congestion. The producers will react to the price signals in their daily operations and in the planning of long-term investments. This will contribute to an optimal localization of new production and minimize the need for curtailment.

We support the general principles of a transparent and foreseeable grid development, and transparent, objective and non-discriminatory terms and procedures for grid connection. Grid tariffs, including the payment for grid access, should be cost-reflective. These principles should apply equally, to all market participants. In our view, the existing EU-legislation, i.e. the third energy market package and the current renewable energy directive, holds the necessary provisions in this regard. More detailed provisions should be left to national legislation.

In Norway, the TSO and DSOs are required to ensure market access for new producers and consumers, as well as increased production or consumption from existing facilities. If there is not sufficient capacity in the existing grid, the relevant grid owners must carry out necessary investments in their grids to connect the project as soon as possible. The grid owner may apply for an exemption to give connection to a production project if the joint investment in grid and production is regarded economically inefficient.

21. Which obstacles, if any, would you see for the dispatching of energy from all generation sources including renewables on the basis of merit order principles? Should there be any exemptions in some specific cases?

- [ ] Yes, exemptions are necessary
- [x] No, merit order is sufficient

Please specify: If yes, in which case and why? What are the lessons from the implementation of RED?

3600 character(s) maximum

22. Please assess the importance of stronger EU rules in the following areas to remove administrative barriers to renewable energy deployment:

	Very important	Important	Not very important	Not important	No opinion
Creation of a one stop shop at national level to allow for more					

streamlined permitting procedures	○	○	○	◉	○
Online application for permits	○	○	○	◉	○
A defined maximum time-limit for permitting procedures, and effective consequences if deadline is missed	○	○	○	◉	○
Harmonisation of national permitting procedures	○	○	○	◉	○
Special rules for facilitating small-scale project permitting, including simple notification	○	○	○	◉	○
Pre-identified geographical areas for renewable energy projects or other measures to integrate renewable energy in spatial and environmental planning	○	○	○	◉	○

Any other views or ideas? To what extent has the RED been successful in reducing unnecessary administrative barriers for renewable energy projects in the Member States? Please specify.

3600 character(s) maximum

One-stop shop
The Norwegian licence processing system can be described as a one-stop shop with the Norwegian Energy and Water Resources Directorate (NVE) as the central authority for all or significant parts of the processing. Developers do have to contact multiple authorities within different topics, but this is primarily to acquire information. One of the strengths of the system is that NVE is a licensing authority for both production and grids. This contributes to good coordination between production and transmission capacity permits.

Online application
Norway sees no need for EU rules for online application for permits. The Norwegian Government has already implemented electronic mailboxes in all public offices. All applications can be submitted electronically.

Time-limit for permitting procedures
The time spent on license processing of energy projects varies considerably between projects, depending on e.g. the size of the project, degree of conflict, private-law factors, the municipality’s planning processing, coordination of multiple applications in the same area, season for inspections and the number of applications. The processing time also depends on whether the license decision is appealed. A defined maximum time-limit for permitting procedures is not considered to be appropriate, neither at the national level

or at the EU level.

Harmonization of national permitting procedures
Norway considers it inappropriate to harmonize the licensing process for energy project licensing across countries. Countries have very different management structure and legal traditions. Due to this, harmonization would be difficult to carry out across the EU. Certain elements such as the main elements of the environmental assessments are already harmonized through EU directives (EIA, WFD, etc.). However, Norway does not see lack of harmonization of national permitting procedures as an obstacle for development of more renewable energy.

Special rules for facilitating small-scale project
Hydropower plants with installed capacity under 10 MW are already subject to simpler processing rules than larger projects in Norway. In these cases, the Norwegian Energy and Water Resources Directorate (NVE) has the authority to grant a license. The purpose of the delegation is to contribute to a quicker processing procedure.
Small-scale, decentralized facilities such as solar panels, bio-boilers and small wind turbines do not require license processing as long as each component has lower voltage than 1 kV.
Pre-identified geographical areas
Norway believes that also in this area it should be up to the countries themselves to decide whether to identify geographical areas for energy projects or not. Norway has to a certain extent, identified areas where development should be avoided.

23. Please identify precise challenges with regard to grid regulation and infrastructure barriers in EU Member States that you are aware of.

3600 character(s) maximum

We welcome the collaboration between national TSOs within Entso-E. In our view the regional investment plans and the Ten Year Network Development Plan (TYNDP) developed within this framework are important tools for planning and coordination of grid development in the various countries.

In order to incentivize investments in the energy sector we need a market design that enables these investments to be economically profitable. Efficient markets, where prices reflect scarcity, also provide the grid owners with important signals for investments in infrastructure.

The positive effects of building interconnectors may be unevenly distributed between the hosting countries, and may also benefit third countries. Our experience with cross border connections from Norway, is that voluntary agreements on cost allocations have been reached between the relevant countries.

24. How would you rate the administrative burden and cost of compliance with the RED for national, regional and local authorities?

	Very important	Important	Not very important	Not important	No opinion
Administrative burden	○	◉	○	○	○
Cost of compliance	○	◉	○	○	○

Please explain. How could the administrative burden and cost of compliance be reduced in the period after 2020?

3600 character(s) maximum

There are administrative costs attached to plans and reporting schemes. There are also costs tied to support schemes and the follow up of these – both financially and to the economy as a whole if there are unintended repercussions.

25. Please rate the importance of stronger EU rules in the following areas to remove barriers relating to renewable energy training and certification:

	Very important	Important	Not very important	Not important	No opinion
Incentives for installers to participate in certification/qualification schemes	○	○	○	○	◉
Increased control and quality assurance from public authorities	○	○	○	○	◉
Understanding of the benefits and potential of renewable technologies by installers	○	○	○	○	◉
Mutual recognition of certificates between different Member States	○	○	○	○	◉

Comments, other ideas, please explain. To what extent has the RED been successful in reducing unnecessary training and certification barriers in the Member States?

3600 character(s) maximum

26. How can public acceptance towards renewable energy projects and related grid development be improved?

3600 character(s) maximum

The development of energy projects and related grid development affects local communities, the environment and other stakeholders. The Norwegian licensing process facilitates a thorough and transparent process. Energy companies have

to involve stakeholders and affected parties at an early stage, to ensure that all parties have the opportunity to participate in the whole process. A comprehensive and including process is in our view important to ensure public acceptance.

Part 6: Increase the renewable energy use in the transport sector

Decarbonisation and the replacement of fossil fuels is particularly challenging in the transport sector. 94% percent of EU transport relies on oil products, of which 90% is imported and represents a growing share of carbon emissions. Against this background, the October 2014 European Council invited the European Commission to further examine instruments and measures for the transport sector, including the promotion of energy from renewable energy sources.

According to European Commission estimates, a significant contribution from renewable transport fuels will be required to meet the overall EU 2030 decarbonisation targets . To achieve this, measures will need to be put in place to require an increased market up-take and deployment of sustainable low-carbon biofuels and alternative renewable fuels as well as renewable electricity in battery electric vehicles and hydrogen in fuel cell vehicles.

For example, further use could be made of incorporation obligations, dedicated financing (in particular in the heavy duty transport and aviation industry) and measures to increase access to smart energy services and infrastructure and promote the development of advanced renewable fuels which are not based on food crops. Special care needs to be taken to remove current market distortions and fragmentations of the EU internal market.

28. To what extent has the RED been successful in addressing the following EU transport policy objectives?

	Very successful	Successful	Not very successful	Not successful	No opinion
Contribute towards the EU's decarbonisation objectives	○	○	○	○	○
Reduce dependency on oil imports	○	○	○	○	○
Increase diversification of transport fuels	○	○	○	○	○
Increase energy recovery from wastes	○	○	○	○	○
Reduce air pollution, particularly in urban areas	○	○	○	○	○
Strengthen the EU industry and economy competitiveness	○	○	○	○	○

Stimulate development and growth of innovative technologies	○	○	○	○	○
Reduce production costs of renewable fuels by lowering the level of investment risk	○	○	○	○	○
Facilitate fuel cost reduction by integration of the EU market for renewable fuels	○	○	○	○	○

Any other view or ideas? Please specify

3600 character(s) maximum

At the EU level, our perception is that the RED has contributed well to increased production and consumption levels of biofuels, but to a lesser extent to the electrification of transport.
However, the largest effect has been a promotion of first generation biofuels, while the focus forward needs to be on second generation biofuels that better ensure real global reductions in greenhouse gas emissions. Such reductions are imperative if biofuels are to be considered as a climate measure. The ILUC directive takes some steps in this direction by amending the RED, but is far from addressing the ILUC effects sufficiently. Values of ILUC effects should be included in the sustainability criterium of reduced GHG emissions, not only reported. If such an inclusion is not made compulsory at the EU level, the revised RED should allow these effects to be included in sustainability criteria voluntarily on a national basis. Currently no national derogations are allowed under RED, as clarified also in point 2.4 of Communication 2010/C 160/02 from the Commission. Which ILUC values to apply in this case, can nonetheless be harmonised at the EU level to improve the functioning of the common market.
A consequense of the fact that the RED has mainly promoted first generation biofuels, is that the RED has not been effective in reducing air pollution. In fact, national evaluations show that biodiesel FAME may lead to higher levels of air pollution. Other types of biofuels, e.g. HVO, may however contribute to reduced air pollution.
The voluntary schemes for certification of biofuels have been effective in reducing the administrative burden.
In Norway, an important aspect in the national policies has been to reduce the emissions from new cars. National measures (e.g use of the tax system and other benefits such as access to bus lanes) have proven effective in promoting electric vehicles. As of 2015, approximately 20 % of new cars sold were electric vehicles. National measures are also promoting e.g. battery-electric car ferries. Electric vehicles reduce air pollution, and may reduce noise at low speeds.

29. Please name the most important barriers hampering the development of sustainable renewable fuels and renewable electricity use in transport?
Please explain, and quantify your replies to the extent possible.

3600 character(s) maximum

We consider the non-inclusion of ILUC values in the sustainability criteria as a barrier against increasing the use of biofuels: We are cautious towards increasing the amount of biofuels as long as real global GHG emissions cannot be ensured.

Some fuel suppliers want to supply 100 % HVO to the market. Our understanding is that this is approved for use in cars in the US, but is currently approved by very few car makers in Europe. Pure HVO does not comply with the density specification of diesel standard EN 590

30. Please rate the most effective means of promoting the consumption of sustainable renewable fuels in the EU transport sector and increasing the uptake of electric vehicles:

	Very effective	Effective	Not very effective	Not effective	No opinion
Increased use of certain market players' obligations at Member State level	○	○	○	○	○
More harmonised promotion measures at Member States level	○	○	○	○	○
The introduction of certain market players' obligations at the EU level	○	○	○	○	○
Targeted financial support for deployment of innovative low-carbon technologies (in particular to the heavy duty transport and aviation industry)	○	○	○	○	○
Increased access to energy system services (such as balancing and voltage and frequency support when using electric vehicles)	○	○	○	○	○
Increased access to alternative fuel infrastructure (such as electric vehicle charging points)	○	○	○	○	○

Any other view or ideas? Please specify.

3600 character(s) maximum

The overlap with climate targets should be taken into consideration. Establishing renewable targets simultaneously may increase costs of reaching the climate targets. The fact that aviation is part of the EU ETS should also be considered when evaluating efficient measures.
Development of zero and low emissions vehicles, including electric road vehicles, has been important and will be very important in the time forward. Biofuels should be directed towards transport where electrification is most

difficult, e.g. aviation and some heavy duty vehicles.
Coordination of measures may increase effectiveness and efficiency where transport is international. One measure under consideration in Norway is establishing a quota obligation for aviation biofuels, possibly from 2018. A potential challenge is the higher costs of biofuels compared to fossil fuels, which may lead to more refuelling abroad and possibly adaptations of route schedules to facilitate this. If such a quota obligation is implemented in a more coordinated way across countries, theseeffects would be reduced. Measures should nonetheless be decided at the national level.
Default values for aviation biofuels should be considered included in the sustainability criteria to reduce the administrative burden for producers and suppliers.
Any measures addressing electric vehicles need to take into account the different levels of deployment in EU/EEA member states. National measures can more easily be adapted to national circumstances. Still, there is a need for coordination to ensure a functioning cross-border network of infrastructure, such as electric vehicle charging points.
Multiplication factors for renewable electricity are currently limited to trains (2.5 cf. ILUC directive) and road transport (5 cf. ILUC directive). Other types of transport could be considered treated in the same way, e.g. maritime transport, to promote electrification with a wider scope.

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