

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

Fields marked with \* are mandatory.

## Introduction

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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

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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](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

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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.

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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

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

- Individual
- Organisation
- Company
- Public Authority
- Other

\* Name of the company/organisation

Transport & Environment

\* Please describe briefly the activities of your company/organisation and the interests you represent

Transport & Environment's mission is to promote, at EU and global level, a transport policy based on the principles of sustainable development.

\* Please enter your email address

laura@transportenvironment.org

\* Are you registered with the EC transparency register?

- Yes
- 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
- Other

\* 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

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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.

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The RED has had a critical impact on the market volumes, and therefore cost reductions, of renewable energy in the EU. Determining success factors were:

- national binding targets;
- the provision of a stable, reliable and predictable overall framework for renewable energy development;
- the interlinkage with overall climate mitigation targets;
- ensured flexibility and opportunities for national 'adaptation'.

However, with over 60% of the EU's renewable energy coming from bioenergy (only partly subject to sustainability criteria and GHG accounting), the RED has only partially helped achieving the EU's energy and climate goals. Some large-scale renewable energy deployment without appropriate planning and safeguards has also caused negative environmental impacts.

Between 1995 and 2000, the share of renewable energy in the EU final energy consumption grew by only 1.9% a year on average. Between 2001 and 2010, with indicative targets, the average growth rate increased by 4.5% per year. With legally binding national targets, the growth accelerated further. In 2012, the share of renewable energy sources increased by 9.3%, thereby reducing CO2 emissions, the EU demand of fossil fuels and in particular the consumption of natural gas.

The Keep on Track project's most recent report finds that of 28 Member States, only 22 were on track regarding the RES trajectories defined in the NREAPs, while 6 underachieved. The report also highlights the fact that the trajectory will become more ambitious in the run-up to 2020. As emphasised by the European Commission, the starting point of the 2030 targets should therefore be the full implementation of the 2020 targets.

However the RED lacked sufficient safeguards to ensure sustainable use of bioenergy. Sustainability criteria in the 2009 RED for biofuels failed to address indirect land use change and related emissions, leading to cases where biofuels increased GHG emissions in comparison with the fossil fuels they replaced. The 10% target in the transport sector has almost exclusively incentivised the use of and easy blend in of unsustainable crop-based biofuels, causing direct negative environmental and social impacts and undermining GHG emissions reductions with very large amounts of CO2 emissions caused by ILUC. A sectorial target in transport based only on volumes of biofuels has not been a successful tool to drive real decarbonisation.

Other forms of bioenergy had no sustainability requirements, leading to negative environmental impacts for example by increasing harvesting of forests for biomass and conversion of grasslands to maize monocultures for biogas, without assurance that GHG emissions are really reduced. For further examples of negative environmental impacts see:  
<http://eubioenergy.com/category/case-studies/>

The RED for the period 2020-2030 should build upon the successful provisions of the current RED. Therefore, revising the current directive should be the preferred option (as opposed to a new directive, which require to (re-) negotiate every single article of the (new) directive).

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Best practice is derived from the implementation of the existing Renewable Energy Directive	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional consultations on renewable energy policy and measures are required	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Member States consult on and adopt renewable energy strategies that serve as the agreed reference for national renewable energy policies and projects	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Commission provides guidance on national renewable energy strategies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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*

National binding targets remain the most stable, predictable and transparent option for delivering the 2030 targets. Given the importance of capital costs for renewables, clear and binding targets will provide visibility for investors and therefore act as a de-risking lever, which will at the end make the energy transition cheaper.

Current RED has shown the importance of providing a detailed template for planning and reporting, facilitating the monitoring of the Member State actions and increased transparency for investors. National Renewable Energy Action Plans (NREAPs) have been a useful but non-spatial and non-binding tool, which has decreased their potential influence and importance and ability to provide assurance to investors. They also did not consider environmental sustainability and impacts of the plans and failed to identify what kind of biomass, from where and with what kind of social, environmental and climate consequences will be used, while also largely underestimating the role of imports.

Post 2020 equivalents must be more meaningful and more useful in steering development to the right locations across Europe and within MS. Post 2020 plans must be real political commitments, developed in dialogue with other regional MS and the Commission. Forward looking strategic planning of RES development is crucially important, and should be required by EU legislation.

National and regional plans should identify target capacities for the various RES technologies, taking into account the availability of sustainable biomass

supplies and the availability and broad locations of suitable for other RES technologies such as wind or tidal power. Planning for delivery should be accompanied by Strategic Environmental Assessment (Directive 201/42). Member States and regions should take an adaptive management approach to strategic planning, i.e. consult and report on nature protection issues raised during implementation and revise plans accordingly.

A new bioenergy sustainability policy will be a crucial part of the renewable energy package and it should be implemented together and in coherence with the other pieces of legislation of the climate and energy framework since the beginning of the period to which these policies apply. This will help to guide the right kinds of investments, avoid changing market signals and ensure that policy incentives are aligned. The sustainability policy needs to be robust, addressing both the quantity and quality of biomass used for energy; limiting the overall volume of biomass use for energy, ensuring efficient use of biomass resources in line with the cascading use principle, consider the full carbon balance of bioenergy including emissions from direct and indirect land use change and changes in the carbon stocks of forests and land and mitigate negative impacts on biodiversity, soil and water.

It is also important for the Commission to continue to regularly report on progresses made by MS. In the future, such reports should cover the sustainability aspects of all bioenergy, including the reporting on ILUC emissions, progress of advanced biofuels etc. as requested in the ILUC revision of the RED.

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In relation to national/regional natural resources, specific technology relevant trajectories for renewable energy up to 2030	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overview of policies and measures in place and planned new ones	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overview of renewable energy trajectories and					

policies to 2050 to ensure that 2030 policies lie on the path to 2050 objectives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Qualitative analysis	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trajectories for electricity demand including both installed capacity (GW) and produced energy (TWh)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measures to be taken for increasing the flexibility of the energy system with regard to renewable energy production	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain.

*3600 character(s) maximum*

All the above-mentioned elements are crucial. In particular, a long-term perspective is vital to ensure that measures implemented to achieve the 2020 and 2030 targets increase the likelihood of delivering 2050 goals to ensure that system elements with an extended life span, particularly electricity transmission and distribution infrastructure, are appropriately designed to ensure increasing volumes of variable renewable energy in the system. NGOs and others have demonstrated that the global energy mix can be 100% renewable by 2050. The EU should achieve this goal (well) before 2050. The long-term vision should serve as a guide and not as an excuse to postpone important investment/divestment decisions in the coming two decades.

The energy and climate plans should include all policies that are directly relevant to renewable energy deployment and integration and include also potential barriers of market penetration of renewables and market incentives in place for competing energy sources. To be successful, the energy transition needs to be supported by various categories of actors (businesses, local authorities, citizens, unions...), which have to be involved in the design and follow-up of national plans.

Making national and regional plans deliver and environmentally acceptable, and compatible with clear commitments to 2050, will give greater certainty to investors as well as helping to protect nature from immediate threats and from climate impacts in future.

It is worth highlighting that while NREAPs have proved to be a useful tool of the current RED, they did not consider the environmental sustainability and impacts of the plan. National and regional plans must identify and reflect available RES resources such as wind and sun and the areas suitable for their deployment, but also crucially 1) the available sustainable supplies of biomass for energy use, prioritizing waste and residues based resources and avoiding indirect displacement of uses by respect cascading of use principle and the waste hierarchy, and 2) the availability of suitable sites for onshore and offshore RES (wind, solar, hydro, tidal) development that will not require incursion into sites where development would create conservation risks for wildlife.

First generation biofuels should not receive any state aid after 2020, continue to be capped (as per the ILUC revision) and be progressively phased out before 2030.

More generally, renewable energy policies have to be in line with the Paris climate agreement, which commits the EU to contribute to limit global temperature rise to 1.5°C above pre-industrial levels. This will require the EU to revisit its assumptions that underlie the 2030 goals, including the energy efficiency and renewable energy targets. The RED should provide for a revision clause for the ambition level when new information and assessments determine a more appropriate ambition level. The interplay of energy efficiency and renewable energy targets is obviously important; both should be adjusted in parallel.

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*

None of the above choices is the best one per se.

The RED must not per se harmonise EU-wide level support schemes, but help regional level support schemes to emerge as well as national support schemes to fully or partially open to renewable energy producers in other Member States to ensure coherence and use of synergies.

Regional support would also necessitate regional coordination, leading to more efficient and sustainable deployment (provided resource assessments take ecological limits into account).

A gradual and careful alignment of national support schemes through common EU rules could be useful if focussing on the following: 1) best practices on dynamic design elements to avoid overcompensation, coupled with clear market monitoring mechanisms; 2) best practices for the design of tendering mechanisms.

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*

An EU-wide scheme should be available in case the EU is not on track to achieve the 27% target. It should not be envisaged at the beginning of the 2020 - 2030 period to close a potential gap stemming from national targets/pledges and regional agreements on renewable energy, as it could undermine those commitments.

However EU-level support for innovation and to support strategic investments (such as for energy infrastructure projects of common interest or funding through Horizon 2020) will continue to be important and it is necessary to ensure that these schemes steer a careful deployment of renewable energy, taking into consideration environmental impacts.

Existing and likely remaining EU support schemes, such as the ETS should also be aligned to support only environmentally friendly renewable energy deployment that actually delivers GHG savings. The zero emission rating of all bioenergy by default in the ETS doesn't give any incentives to ensure that only low carbon sources of bioenergy are supported and should therefore be changed. The zero rating should be subject to safeguards or the full emissions of bioenergy should appropriately accounted for.

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*

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	<input type="radio"/>				
Administrative complexities	<input type="radio"/>				
Lack of cost-effectiveness / uncertain benefit for individual Member States	<input type="radio"/>				
Government driven process, not market driven	<input type="radio"/>				
Member States reluctant to see their taxpayers/ consumers' money used for investments outside their country	<input type="radio"/>				

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	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU-level requirements on market players to include					

a certain share of renewables in production, supply or consumption	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU-level financial support (e.g. a guarantee fund in support of renewable projects)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU-level support to research, innovation and industrialisation of novel renewable energy technologies	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enhanced EU level regulatory measures	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any other ideas or comments, please explain.

*3600 character(s) maximum*

In order to ensure that the targets are reached in a sustainable way and contribute to the overall emission reduction targets of the EU, adequate sustainability safeguards for bioenergy are needed, in particular (i) introducing a cap to limit the use of biomass for energy production to levels that can be sustainably supplied; (ii) ensuring the efficient and optimal use of biomass resources, in line with the principle of cascading use; (iii) including correct carbon accounting for biomass and (iv) introducing binding environmental and social sustainability criteria. For detailed NGO recommendations on the role of bioenergy in the EU climate and energy policy post-2020, see:  
<http://www.transportenvironment.org/publications/%EF%BF%BCpitfalls-and-potentials-%E2%80%93-role-bioenergy-eu-climate-and-energy-policy-post-2020>

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*

Yes, by setting clear national targets that go beyond BAU, the RED has been effective and efficient in improving renewable energy industrial development and EU competitiveness in this sector. Therefore, the revised RED needs to include mechanisms to exceed the 27% RES target for 2030.

Unfortunately the lack of discrimination between renewables on grounds of sustainability and carbon performance has meant that much of the RED potential has been wasted with subsidies flowing to the wrong renewables (eg biofuels, wood for electricity) at the expense of better renewables. In addition, the efficiency first principle should be applied as part of the Energy Union framework. Reduced final energy demand makes it easier and more feasible to

achieve higher shares of renewable energy.

The goal should never the less be considered with a wider perspective than just the percentage of renewable energy in the energy mix. It should also be measured in investor attractiveness, sustainability, public acceptance and renewable energy ownership by communities – a matrix of measures of leadership is therefore needed.

All of this requires minimising impacts on the environment – in particular impacts on biodiversity. Eurobarometer surveys (<http://ec.europa.eu/COMMFrontOffice/PublicOpinion/index.cfm/Survey/getSurveyDetail/search/biodiversity/surveyKy/2091>) show the depth of concern among EU citizens about nature protection. Over half a million people (520,325) have also called on the European Commission to save Europe's nature laws in the Birds and Habitats Directive Fitness Check consultation.

Qualitative measures are also important. Renewable energy's promise has always been its 'green' credentials – zero carbon, zero air pollution and not depleting what nature provides. The reputation of renewables shouldn't be tarnished by supporting projects that don't meet these requirements. More emphasis is therefore needed on the distinction between different forms of renewable energy, both when assessing the success of the RED and in recommendations for the future.

## Part 3: Empowering consumers

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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](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.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_EN_autre_document_travail_service_part1_v6.pdf)

[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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surplus electricity that is not self-consumed onsite cannot be sold to the grid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surplus electricity that is not self-consumed onsite is not valued fairly	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appliances or enabler for thermal and electrical storage onsite are too expensive	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complex and/or lengthy administrative procedures, particularly penalising small self-consumption systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Lack of smart grids and smart metering systems at the consumer's premises	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
The design of local network tariffs	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The design of electricity tariffs	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please explain.

*3600 character(s) maximum*

In the last few years, the share of distributed renewable energy has substantially increased in the EU. Given the cost dynamics at retail level, this trend is very likely to continue. On-site renewable generation becomes a very concrete way for consumers to control their energy costs. At the same time, by deploying self-generation and consumption practices, consumers truly engage in the energy transition.

For all the reasons mentioned above, the revised RED should create a clear framework for renewable self-consumption and generation, in close conjunction with energy efficiency and savings, including the following elements:

- A right to self-generate and consume renewable energy: the first pre-requisite to make sure European consumers can contribute to the development of renewable energy and control their energy costs via self-generation and consumption is to make it legally possible everywhere in the EU. A clear right to self-generate, consume (and store energy) and access the grid would therefore make discriminatory measures such as the ones developed in Spain not possible anymore.
- The market design reform should ensure a fair access to the market for community energy projects and prosumers in order to properly value the excess of electricity that is not self-consumed. The market design reform should also bring clarity on the definition and the role of storage;
- Simplified administrative procedures with one-stop-shops for community energy projects and prosumers: building on existing provisions (Article 13 of the Directive), with simple notification procedures for smaller systems (similarly to what we see in Portugal for instance). By lowering administrative costs, the revised RED can make the energy transition cheaper given the increasing importance of such costs (in relative terms) over time.
- Guidelines for the setting-up of distribution grid tariffs fit for the energy transition: the revised RED could provide some guiding principles and explore, for instance, mechanisms which give the prosumer the choice of freely contracting a given peak load capacity.
- A framework for making self-generation and consumption accessible to a large number of consumers.

In parallel, the reform of the Market Design and the revision of the Energy Efficiency Directive should further facilitate demand side flexibility and

aggregation, which will be needed to develop new business models at retail level.

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*

The RED had an effect on enabling renewable energy through the national binding targets. From these flowed the national support schemes, which in turn allowed many local renewables to flourish. The RED provided a framework for prosumer renewable energy expansion in those Member States that chose so (DE, AT, DK), but did not protect consumers from detrimental national policies nor provided EU-wide measures to support/protect prosumers (in the case of e.g. Spain, the Commission was unable to stop discriminatory measures).

National binding targets are still the most stable and reliable way to ensure the energy transition.

In the possible absence of national binding targets, the revised RED has to put in place other mechanisms. Otherwise there is a risk of a steep drop in the confidence of investors in (local) energy, who are often individuals or households investing their own money and need a level of certainty.

The primary way to do this is by embedding the principle that guarantees the citizens' right to consume, receive fair remuneration for excess electricity, store and partake in demand side management. This principle would give the certainty required to ensure that investment continues in local renewable energy.

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	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of administrative capacity and/or expertise/ knowledge/information at the local level	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of energy strategy and planning at local level	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of eligible land for projects and private property conflicts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Difficulties in clustering projects to reach a critical mass at local level	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of targeted financial resources (including support schemes)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Other? Please explain.

*3600 character(s) maximum*

Two main barriers emerge at this stage for cooperative projects: complicated administrative procedures at local level and a lack of appropriate funding mechanisms. On the latter and given the nature of cooperative players who may have a more limited technical and financial expertise, specific mechanisms (such as power purchase agreements with local actors for instance) should be developed for the valorisation of the renewable electricity.

This being said, an increasing number of cooperatives are already developing renewable energy projects. This is a very interesting lever for local development and social fairness. The revised RED should provide more visibility to project developers by agreeing on regional or local targets for cooperative projects, as it is the case in Scotland for instance.

Gaining fair access to the grid continues to be a barrier to local energy production. Fair and equitable grid access needs to be ensured for projects that have a specific social benefit as mentioned above. For example many local renewables projects put their profits into local community development funds or into efficiency measures for those in energy poverty.

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	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supporting local authorities in preparing strategies and plans for the promotion of renewable energy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating cooperation between relevant actors at the local or municipal level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating access to targeted financing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EU-wide right to generate, self-consume and store renewable electricity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measures to ensure that surplus self-generated electricity is fairly valued	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Harmonized principles for network tariffs that promote consumers' flexibility and minimise system costs	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please explain.

*3600 character(s) maximum*

An EU-wide right to self-generate, self-consume and store is a pre-requisite in order to develop renewable energy at the local level. The revised RED should play a key role by facilitating access to finance, ensure a proper remuneration of the non-self-consumed electricity and by ensuring that network tariffs do not hamper the transition to a more prosumer-centric system.

We recognise prosumers as are energy consumers such as households, institutions and small businesses who actively participate in the energy market by also engaging in energy production or supply either individually or collectively. We see the greatest potential in those prosumers who act collectively either in cooperatives or other social enterprises. An important barrier to prosumers is any measure that makes it harder to act collectively, e.g. delays or problems in getting grid connection.

Prosumers can participate in the energy market in two ways: (i) they can contribute to reaching the full potential of renewable energy production by maximising the development of PV, wind or other renewable energy projects on suitable roofs and land areas for self-consumption, and to sell to the grid; (ii) prosumers can also contribute to energy efficiency, demand side response and storage on the demand side, and support energy system management and grid integration of variable renewable energy sources. Guaranteeing and supporting the right to every consumer to become a prosumer ensures fair and equitable access to the benefits of renewables and energy efficiency.

We also see the right to access the grid as an important facet of such a principle, to allow the citizen to actively participate in the energy market as set out in the vision for the Energy Union of February 2015.

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*

Even though very few consumers are aware of GOs and, in some countries, GO systems are still underdeveloped, more and more consumers are interested in green electricity, so maximising the information available on all energy sources is generally a good idea and a GO system is needed.

The focus should be on a homogenous implementation of the rules and on better (clearer) information of those consumers NOT buying renewable electricity. In many cases, such consumers are only informed about the supplier's mix (including the green contracts), not about the mix of their own electricity (often consisting of nuclear and fossil electricity).

Also within renewable energy sources themselves, more 'granularity' is possible and the guarantees of origin system could also be used beyond just tracing general types of renewables. More information on bioenergy feedstock and potential ecological impacts of renewable energy could be added so that it could also help the transparency needs in terms of the sustainability demands and provide consumers with relevant information. This is already possible: for example EKOenergy, a European label for green electricity, uses GO information to sell biodiversity-friendly renewable energy.

## Part 4: Decarbonising the heating and cooling sector

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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)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lack of administrative capacity and/or expertise/ knowledge/information at the national and local level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of energy strategy and planning at the national and local level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of physical space to develop renewable heating and cooling solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Lack of requirements in building codes and other national or local legislation and regulation to increase	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of targeted financial resources and financing instruments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of definition and recognition of renewable cooling	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of electricity market design supporting demand response, decentralised energy and self-consumption and thermal storage in buildings and district systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of mapping tools to identify the resources potential at regional scale with local renewable energy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of tools and information to compare the lifecycle costs of the various alternative heating and cooling alternatives	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negative public perception	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Other? Please specify and explain.

*3600 character(s) maximum*

Efficiency, energy savings and minimizing the need for heating through building design should always be the first option in the heating and cooling sector. These options should never be overlooked or given less priority even if there was a 'renewable energy' source for heating or cooling. Therefore a strategy is needed to promote carbon neutral buildings. Given that every single existing building must be reconstructed in order to achieve the 2050 goals, widespread strategies are needed to promote measures for building renovations and energy heating installations.

Currently bioenergy is the most important renewable energy source in heating but possibilities to increase the use of bioenergy in an environmentally sustainable way are limited in Europe. Therefore renewable electricity, heat pumps, solar heating etc. need to be promoted rather than relying solely on biomass. As the majority of bioenergy is consumed in the heating sector, a robust bioenergy sustainability policy is needed to ensure sustainable renewable energy use in the sector.

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	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measures supporting best practices in urban planning, heat planning, energy master planning, and project development	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Criteria and benchmarks for promoting district heating and cooling taking into consideration the local and regional conditions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nearly zero-energy building (NZEB) standards to include a mandatory minimum use of renewable energy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Including systematically renewable energy production in buildings' energy performance certificates	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The promotion of green public procurement requirements for renewable heating & cooling in public buildings	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heating and cooling equipment installers should present renewable energy alternatives when asked to replace fossil fuel heating and cooling equipment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop best practices for enterprises, including SMEs, to integrate renewable heating and cooling into their supply chains and operations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requirement to consider renewable energy alternatives in subnational, national, regional or EU security of supply risk preparedness plans and emergency procedures	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Targeted financial measures	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

*3600 character(s) maximum*

A very effective option to enhance the amount of renewables in buildings would be to oblige Member States to set a minimum share of renewables to be generated on-site in buildings, both for new ones as well as for renovated ones, as in Switzerland. Such an option should bear in mind that efficiency, energy savings and minimising the need for heating and cooling through building design should always be the first option in the heating and cooling sector. These options should never be overlooked or given less priority even when there is a renewable energy source for heating or cooling.

Buildings still relying on oil or coal for heating offer cost-effective opportunities to 'leapfrog' to renewable heating. RED should therefore require programs to be implemented by member states to prioritise renewable heating conversions instead of fossil-to-fossil conversions.

## 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	<input type="radio"/>				

Shorter trading intervals (e.g. 15 min)	<input type="radio"/>				
Lower thresholds for bid sizes	<input type="radio"/>				
Risk hedging products to hedge renewable energy volatility	<input type="radio"/>				
Cross border capacity allocation for short-term markets (i.e., some capacity being reserved for intraday and balancing)	<input type="radio"/>				
Introduction of longer-term transmission rights (> 3 years)	<input type="radio"/>				
Regulatory measures to enable thermal, electrical and chemical storage	<input type="radio"/>				
Introduction of time-of-use retail prices	<input type="radio"/>				
Enshrine the right of consumers to participate in the market through demand response	<input type="radio"/>				

Any other view or ideas? Please specify.

*3600 character(s) maximum*

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?

- 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	<input type="radio"/>				
Transparent and foreseeable grid development, taking into account renewable development and integrating both TSO and DSO level and smart technologies	<input type="radio"/>				
Predictable transparent and non-discriminatory connection procedure	<input type="radio"/>				
Obligation/priority of connection for renewables	<input type="radio"/>				
Cost of grid access, including cost structure	<input type="radio"/>				
Legal position of renewable energy developers to challenge grid access decisions by TSOs	<input type="radio"/>				
Transparency on local grid congestion and/or market-based incentives to invest in uncongested areas	<input type="radio"/>				

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*

RES and grid planning should be better integrated at regional and national levels. An obligation of Member States to make realistic, achievable plans for a sustainable energy transition would:

- give greater certainty to all investors;
- make delivery more efficient, reducing overall costs;
- enable spatial planning to minimise impacts on the natural environment, and;
- make achievement of climate and energy goals more certain.

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
- 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*

It is of utmost importance that the principle of priority access and dispatch enshrined in the current RED should be maintained after 2020.

Priority grid access should firstly benefit variable renewable energy sources such as solar and wind. It is less appropriate for non-variable sources such as bioenergy and hydropower which are less in need of support and are typically more problematic for environmental reasons.

It is also worth recalling that in some European countries coal-fired power plants benefit from a “legal” priority dispatch as much as renewable technologies do: this is allowed by article 25 of Directive 2009/72/EC. Similarly, co-generation can benefit from priority dispatch under the Energy Efficiency Directive. Such priority dispatch for coal and co-firing should be removed.

The Trans-European Energy Networks (TEN-E) and Connecting Europe Facility currently still focus too heavily on gas infrastructure, based on inflated demand assumptions that are not in line with EU climate and energy objectives. In line with the Paris Agreement, it is time for the EU to support more electricity infrastructure.

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online application for permits	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A defined maximum time-limit for permitting procedures, and effective consequences if deadline is missed	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Harmonisation of national permitting procedures	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special rules for facilitating small-scale project permitting, including simple notification	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-identified geographical areas for renewable energy projects or other measures to integrate renewable energy in spatial and environmental planning	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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*

Progress on streamlining of administrative procedures has so far been limited - this is probably the area where the RED has been the least successful so far. Hence, these provisions should be further strengthened in a revised RED. Administrative costs (permitting) represent a still untapped potential for reducing the cost of renewables, and a very low-hanging fruit to be considered in the revised RED.

A suggestion would be to require the setting up of a one-stop shop to coordinate administrative procedures of authorities involved in the permitting procedures, in order to create a single permit procedure. This and all the measures suggested above should be pursued as matter of priority, simply because they can substantially decrease the cost of renewables - without involving any financial support.

On the other hand, streamlining administrative procedures should not happen at the expense of important measures to protect nature and to ensure access to information and justice.

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*

Nature protection designations and laws are often perceived as a 'barrier' to development, because consideration of these important safeguards is deferred to a very late stage in planning. This of course results in controversy. It also entails consenting to risks for promoters, who may proceed with developing their plans while unaware of the environmental realities on the ground.

The EU requirement to use 'strategic environmental assessment' (SEA) (Directive 2001/42) should, in principle, help to 'nature-proof' energy

investment plans and ensure that public and environmental stakeholders are informed and consulted. Given the public opposition faced by large energy investments, such efforts to build legitimacy and minimise impacts are important. However, the SEA is not applied by the European Commission to its own plans and programmes – for example for PCIs. Moreover, SEAs for national energy infrastructure plans, where these are carried out, rarely seek to avoid potential impacts on biodiversity and the Natura2000 network.

In many Member States the SEA is first used to consider nature protection in detail during corridor selection for a specific grid project. This means consideration of nature protection issues is effectively deferred to a point in time when developers are seeking spatial planning and/or development consents, i.e. after considerable investment of time and resources. This situation clearly has the potential to give rise to conflicts ‘on the ground’ between energy and environmental goals. If it is treated as an afterthought to expensive and important European and national plans, environmental realities are likely to appear as an obstruction, and the requirement to respect EU environmental law are likely to be seen, by some, as a cause of delays and costs.

The solution is not weakening or removal of administrative requirements, but earlier consideration in policy and planning so that these requirements are not confronted as ‘barriers’ to specific projects.

**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	<input type="radio"/>				
Cost of compliance	<input type="radio"/>				

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

*3600 character(s) maximum*

**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	<input type="radio"/>				
Increased control and quality assurance from public authorities	<input type="radio"/>				
Understanding of the benefits and potential of renewable technologies by installers	<input type="radio"/>				
Mutual recognition of certificates between different Member States	<input type="radio"/>				

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*

Acceptability should be the goal, not 'acceptance'. More strategic planning to minimise impacts and public consultation will help to build legitimacy. Better enforcement of environmental law, weeding out the most damaging projects, will help to gain support and confidence of citizens. Environmental engagement should be supported in early stages of grid planning. More support should be awarded for micro-generation, self-consumption etc., and opportunities to invest in infrastructure projects, to give citizens more of a stake in the energy transition.

Better communications campaigns to raise awareness of the impacts of climate change, and why this requires renewable energy and grid development, are needed. Citizen and local authorities' investment in renewable energy projects, and their involvement in projects and decision-making are also key. Indeed, research shows that citizen engagement in renewable energy projects plays a large role in acceptability; when communities or citizens are engaged they can go from simply tolerating a project to actively supporting and feeling favourably towards it. Therefore the measures mentioned earlier such as a right to prosumption, storage and the grid are all important.

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

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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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Reduce dependency on oil imports	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase diversification of transport fuels	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase energy recovery from wastes	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce air pollution, particularly in urban areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Strengthen the EU industry and economy competitiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Stimulate development and growth of innovative technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Reduce production costs of renewable					

fuels by lowering the level of investment risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Facilitate fuel cost reduction by integration of the EU market for renewable fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

**Any other view or ideas? Please specify**

*3600 character(s) maximum*

The RED target didn't incentivize the best solutions for the climate, as it focused on quantity and not quality of the renewables used in transport. Having this volume approach was not a good idea and from the beginning several NGOs have been opposing the inclusion of the 10% target. There are GHG savings threshold that biofuels have to meet in order to be used to meet the RED target but there is no differentiation between different renewable fuels in terms of GHG emissions, like under the FQD target for example. Thus, the easiest and cheapest options to meet the target have the priority, no matter if they go with technologic innovation or not and whether they deliver the most important GHG reductions or not. As a result, the RED didn't incentivise the best renewable solutions in the transport sector.

The RED target for transport has been a big driver of crop-based biofuels and the 10% target is expected to be mostly met by using these biofuels. However, there are big differences in GHG savings between different renewable fuels and the RED calculation methodology doesn't take into account the indirect emissions linked to these biofuels (ILUC). If ILUC emissions are taken into account, some biodiesels can have a worse GHG footprint than the fossil diesel it is supposed to replace. In that sense the RED target hasn't delivered a lot regarding the objective of decarbonising transport, since it incentivized mainly the least GHG savings ones. In addition, the fact that mostly crop-based biofuels have been incentivised and used until now has not really helped to diversify the type of fuels used in transport. The 1st generation biofuels sector also received huge amounts of subsidies, mainly to buy the expensive feedstocks.

There has been some use of waste to biofuels (Used Cooking Oil and animal fat mainly) but clear and robust sustainability framework was missing to avoid potential negative impacts e.g. waste hierarchy, cascading principle, or specific sustainability measures for biofuels produced from residues.

Regarding the reduced dependency on oil imports, the RED created a new dependency, this time because of the need to import more vegetable oil as a compensation for the huge amount of EU vegetable oil now being used for biofuels and also biofuels' feedstocks.

Other renewable fuels like electricity have not been sufficiently pushed into the market by the RED. The incentives were not clear enough for electricity,

the methodology to account for its use in transport is still pending, and using guarantees of origin in the sector is still not allowed. Electricity represents only a small amount of the share of renewable energy in transport (1484ktoe compared to 10.3 Mtoe of biodiesel). The large majority of the electricity share is represented by the train sector, with electrified road transport still lagging behind. The electrification of road transport is an absolute need to meet 2020 and 2030 renewable targets; far from representing a burden, electro-mobility offers important opportunities in terms of decarbonisation, jobs, growth and health. Analysis of the European Climate Foundation shows that the shift to hybridisation and electrification of cars and vans alone might generate between 501,000 and 1.1 million net jobs in EU by 2030, cut CO<sub>2</sub> emissions by 64-93% by 2050 as well as NO<sub>x</sub> (85-95%) and particulates (74-95%). The new RED should therefore promote the electrification of transport to achieve the 2020 and 2030 renewable targets.

**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*

The concept of technology neutrality has been promoted, but with incorrect parameters in place, including wrong carbon accounting (no inclusion of ILUC for biofuels). The indirect effects of the biofuels policies were already known at the time when the RED was adopted but these had not been quantified yet. Instead of waiting and ensuring predictable rules for many years to come, the EU chose to go ahead with incentivizing the wrong solutions through a volume approach and then had to make a U-turn last year by adopting a cap on land-based biofuels. The adoption of the cap was a clear recognition of the negative effects of the EU biofuels policies but it also highlighted the fact that such early and not well enough informed political choices should be prevented in the future.

Regarding renewable fuels made from waste & residues that could potentially deliver more GHG savings than crop-based biofuels, the RED did not provide the right framework to correctly capture the diverse parameters of their use in transport. First, the RED didn't include a specific carbon performance metric that would differentiate biofuels based on their GHG savings and therefore did not incentivize the ones having the highest GHG savings. In addition, it didn't include a robust sustainability framework to take into account other elements than GHG savings (waste hierarchy, soil fertility, etc.). Combined with the absence of impact assessments, this didn't provide a robust framework for ensuring a stable and robust choice of the "quality" ones.

One of the barriers for the development of the most sustainable solutions was also the lack of coherence in policy framework, by not fully taking into account the issue of competing uses, the existing provisions in the waste framework directive or by not having enough impact assessments about the concrete impacts on land, resources used, etc. The discussions around renewables in transport have been too much detached from the discussion around other existing frameworks (WFD, etc.) and impacts on the ground, in the EU but

also outside the EU, in regions of the worlds like South-East Asia for example.

Regarding renewable electricity in transport, the RED lacks clear incentives: the accounting methodology of renewable electricity in transport is not straightforward in the RED, as there is no methodology yet at EU level for use in vehicles. A European standardised accounting methodology to count renewable electricity in road transport - as is already established for the rail sector - is needed. Mobile on-board-metering technology is already established in trains and needs to be standardized and accredited as a measurement method for EVs electricity consumption. Further barriers exist especially in the absence of simple, reliable and standardised infrastructure solutions suitable specifically for each e-mobility option from e-buses to e-bikes. In addition, incentives for consumers to smartly charge their e-vehicles off-peak are necessary. Another barrier to overcome is a standard for fast-charging infrastructure that prevents private investments.

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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More harmonised promotion measures at Member States level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The introduction of certain market players' obligations at the EU level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Targeted financial support for deployment of innovative low-carbon technologies (in particular to the heavy duty transport and aviation industry)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased access to energy system services (such as balancing and voltage and frequency support when using electric vehicles)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased access to alternative fuel infrastructure (such as electric vehicle charging points)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Any other view or ideas? Please specify.**

*3600 character(s) maximum*

Based on the results and impacts of the current RED, it is clear that there shouldn't be a new dedicated transport target in the RED i.e. the 10% target should be discontinued.

However the EU should build on the 7% cap for limiting the amount of land-based renewable fuels, such as rapeseed, soy biodiesel, energy crops, etc. that can be put on the market at EU level. The 7% cap should also progressively be lowered at EU level e.g. by 1% a year as of 2020.

Regarding advanced biofuels (non-land based (wastes, residues)), they can only be supported if in parallel the EU decides to phase out land-using biofuels, see above. Such possible support should be based on environmental and climate criteria, overall assessing the quality of the biofuels produced, taking into account also the limited availability at sustainable levels of some of the waste and residues. A key principle to take into account as well is the cascading principle for the different uses of wastes and residues. Quantity should not be a priority when it comes to resource-based energy, because of the risk of detrimental effects on the environment, land rights, etc.

One big lesson from the 2020 debacle is that we need to be more cautious about bioenergy in transport; therefore we advocate only setting policy for 2025 with a review moment for 2030 well before that - to ensure that there are progressive checks of the policy's impacts and that any measure that would not help fulfilling the EU long-term goals is reviewed on time to avoid detrimental impacts, whether it relates to the climate, the environment, land use, etc. We need to avoid repeating the mistakes of the past.

If we look at decarbonising transport fuels in general, a blending mandate ('incorporation obligation') is the wrong way to go. By using blending mandates for liquid fuels you lose the flexibility to choose how to reach your target and the system excludes de facto other renewables (solar energy, etc.). It only focuses on liquid renewables = biofuels.

However we would advocate changing for a directive to a regulation on fuel suppliers, obliging them to surrender clean fuel credits which would also include incentives for the supply of solar and wind electricity. This could be done e.g. through changing the fuel quality directive into a fuel quality regulation and expanding it to cover clean fuel credits. Land-using biofuels falling under the current 7% cap would not receive clean fuel credits.

**Electric vehicles:** The very successful Co2 emission standards for vehicles should be extended to 2025 and should be amended with a flexible mandate for ultralow-carbon vehicles (ULCVs). Other parts of the world, notably California and China, recognise the vital medium-term importance and choose to stimulate the market this way, leading to 300,000 EV sales in 2015 in China alone. As opposed to the Californian system where the EV quota is fixed, a 'flexible' mandate would require all carmakers in Europe to sell 15% ULCVs in 2025. If they achieved this, their target would be unchanged. Sell more and the company

target is increased. Sell less and it is tightened. This approach is fair, it rewards those companies trying to create the early market but expects those not investing in these technologies to improve the efficiency of conventional vehicles more. The mandate could include the sales of electric quadricycles (L8) to stimulate the LEV market uptake and allow trading of credits between companies to encourage over achievement and new market entrants.

## Contact

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