

Consultation on the Review of Directive 2018/2001/EU on the promotion of the use of energy from renewable sources

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Introduction

This consultation aims to collect views and suggestions from stakeholders and citizens in view of the possible proposal for a revision of Directive 2018/2001/EU on the promotion of the use of renewable energy (RED II), planned for 2021.

Renewable energy is produced using the earth's natural resources, like sunlight, wind, water resources (rivers, tides and waves), heat from the earth's surface, or biomass. Using renewable energy, instead of fossil fuels, substantially reduces the emission of greenhouse gases, which is why renewable energy is also referred to as 'clean energy'.

Today, the energy sector is responsible for more than 75% of the EU GHG emissions, so increased uptake of renewable energy alongside energy efficiency has a key role to play in reducing GHG emissions in a cost-effective way. More energy from renewable sources also enhances energy security, creates growth and jobs, reduces air pollution when not based in combustion and strengthens the EU's industrial and technological leadership.

The review of RED II is carried out in the context of the European Green Deal[1] in which the Commission committed itself to review and propose to revise, where necessary, "the relevant energy legislation by 2021.

In the European Green Deal the Commission proposed to increase the Union's 2030 greenhouse gas (GHG) reduction target from 40% to at least 50% to 55%, with the objective of climate-neutrality by 2050.

On 17 September 2020, the Commission published its 2030 Climate Target Plan, which presents a new 2030 target of at least 55% net GHG emission reductions compared with 1990 levels on basis of a comprehensive impact assessment. Achieving at least 55% net GHG emissions reductions would require an accelerated clean energy transition with renewable energy seeing its share reaching 38% to 40% of gross final energy consumption by 2030.

This range of 38% to 40% is higher than the binding Union level target for 2030 of at least 32% of energy from renewable energy sources introduced by RED II. It is also higher than the share of renewables, between 33.1% and 33.7%, that would be achieved if Member States complied with the national contributions set in their integrated National Energy and Climate Plans (NECPs) for 2030.

In addition, the Commission has adopted, or will adopt, other strategies containing a number of key actions supporting the increased climate ambition, which could be followed through in the review of REDII. This is the case, for instance, of the Energy System Integration[2] and the Hydrogen Strategies[3], adopted on 8 July 2020, the Renovation Wave Strategy[4], adopted on 14 October 2020, and the Offshore Renewable Energy Strategy, planned for 19 November. In addition, the European Green Deal includes a "Green Oath

to do no harm”, in particular by preserving biodiversity and reducing air pollution. To this end, the Commission adopted on 20 May 2020 an EU Biodiversity Strategy for 2030, which also contains commitments of relevance for the REDII review.

The answers to this questionnaire will feed into the review process of RED II, and more in particular into the impact assessment that the Commission will carry out to assess whether a revision is needed and what revision would be the most appropriate. No evaluation of RED II will be done, since this Directive, adopted in December 2018, has not yet been transposed and implemented by Member States (its transposition deadline is on 30 June 2021), and a full-fledged evaluation of Directive 2009/28/EC (RED I) was done in 2016 when preparing the proposal for RED II.

The questions are formulated to respect the requirements of the Better Regulation rules[5]. The questions are divided into different sections: questions about the identity of respondents, general questions on revising RED II, questions on transversal elements derived from the Energy System Integration and Hydrogen Strategies, and technical questions on specific aspects of RED II, including questions on buildings and offshore renewables, in line with the Renovation Wave and the Offshore Renewable Energy Strategy. If you don't have an opinion on a question, do not reply.

[1] COM(2019) 640 final

[2] https://ec.europa.eu/energy/sites/ener/files/energy_system_integration_strategy_.pdf

[3] https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf

[4] https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en#documents

[5] https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en

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Please note that this questionnaire will be available in all EU-languages as from 09/12/2020.

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* First name

Michael

* Surname

Villa

* Email (this won't be published)

michael.villa@smarten.eu

* Organisation name

255 character(s) maximum

smartEn, the European business organisation for demand-side flexibility.

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

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1. General questions on the review and possible revision of the Renewable Energy Directive

REDII provides a general framework for the promotion of energy from renewable within the Union in order to ensure the achievement of the binding EU renewable energy target of at least 32% by 2030. It sets out rules on support schemes for renewable energy, on guarantees of origin for energy from renewable sources, on administrative procedures, on the integration of renewable sources in buildings, on selfconsumption and renewable energy communities, and on renewable energy in heating and cooling and in transport. It also sets out sustainability and GHG emissions criteria for bioenergy.

On 17 September 2020, the Commission published its 2030 Climate Target Plan, where it presents an at least 55% net target for GHG emissions reduction in 2030. As result of this increased ambition, the plan indicates that renewables should represent from 38% to 40% of the gross final energy consumption in 2030.

1.1 How important do you think renewable energy will be in delivering the EU's higher climate ambition for 2030 and carbon neutrality by 2050?

- Very important
- Important
- Not very important
- Not important

1.2 Do you think REDII needs to be modified? (multiple answers possible)

- Yes, it needs to be more ambitious as result of the higher climate ambition in the European Green Deal and Climate Target Plan
- Yes, it needs to be more prescriptive to ensure that the EU renewable energy objectives are reached
- Yes, it needs to be less prescriptive, giving Member States more freedom on how to achieve their renewable energy objectives

- Yes, but only those adjustments required to reflect the European Green Deal objectives
- No, it strikes the right balance as it is
- No, even if there could be areas of improvement, legislation should not be modified so shortly after its adoption
- Other

Please specify

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The revised RED should contribute to the achievement of climate neutrality in the most cost-effective way. The penetration of variable renewable electricity in all end-use sectors should be achieved through an efficient and flexible demand.

The revised RED should be coherent with the Energy System Integration Strategy and aligned with all follow-up legislations, including:

- The Energy Efficiency Directive (EED). Variable renewable electricity should be consumed and stored by flexible demand-side sectors in an efficient way to reduce the need to invest in unnecessary back-up generation and grid reinforcements. In this sense, the application of the EE1st at system level is crucial;
- The Energy Performance of Buildings Directive (EPBD). Renewable electricity should penetrate the building sector. Renovated and new buildings should efficiently and flexibly consume and store renewable energy produced on-site or from the system they are connected with. Buildings should become valuable flexible assets;
- The Alternative Fuels Infrastructure Directive (AFID). Smart charging would enable electric vehicles to consume electricity when cost-effective and beneficial for both drivers and the system. Smart charging enables EVs to shift their consumption when renewable electricity is abundant and support the grid when it is not. Smart charging should be enabled not to stress the system following an increased electrification in the transport sector.

1.3 If you answered ‘yes’ to the previous question, which parts of RED II do you think should be amended? (multiple answers possible)

- Overall Union target of at least 32% for renewable energy for 2030
- Target of at least 14% for renewable energy in transport by 2030.
- Indicative target of an annual increase of 1.3% point for renewable energy used in heating and cooling
- Indicative target of an annual increase of 1% point for renewable energy used in district heating and cooling and provisions on access to district heating networks
- Provisions on how to design support schemes for electricity from renewable sources
- Provisions on cooperation mechanisms between Member States
- Provisions on how to promote renewable energy in buildings

- Provisions simplifying administrative procedures for renewables project developers
- Requirements on guarantees of origin for energy from renewable sources
- Provisions on self-consumption and renewable energy communities
- Sustainability and GHG emission saving criteria for energy produced from biomass
- Provisions on sustainable low carbon fuels such as low-carbon hydrogen and synthetic fuels with significantly reduced full life-cycle greenhouse gas emissions compared to existing production
- Other

Please specify

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Please explain your answer

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The revised RED should:

- Facilitate and drive the penetration of renewable electricity in different end-user sectors, including buildings, heating & cooling, industry and transport. To support a smart sector integration, the share of electricity in final energy consumption should grow from 23% today to 62% by 2050, as projected together with partners of the Electrification Alliance. To achieve our climate goals, this electricity needs to be largely renewables based, such as wind and solar. Electrification of final energy demand creates new sources and opportunities for system flexibility,
- Accompany any increase in renewable targets with increased demand-side flexibility efforts to support the cost-efficient penetration of renewables without creating a stress to the (local) grid and increase system efficiency. An increase in variable renewables will bring important changes to the way the electricity system functions. Increased demand-side flexibility will be crucial for the overall management of the electricity system, to keep costs down and limiting costly grid expansions. smartEn recommends a minimum target for demand-side flexibility of at least 10% of peak demand by 2030, to be applied in each Member State.
- A roadmap with milestones should be set by national governments to clarify how to achieve the 2030 target starting from a minimum reduction of 5% of peak demand through demand-side flexibility in 2025. Such levels are already realised in the United States today where a demand-side flexibility capacity of 20% of US peak load by 2030 has been estimated to be cost-effective and could even be worth more than \$15 billion annually in avoided system costs,
- Introduce mechanisms to match consumption with variable renewable generation at real-time (hourly or less, 24/7) as Guarantees of Origin for each hour 24/7 and not on a yearly basis. This would increase the value of flexible consumption that would adapt to when wind and solar are abundant,
- Strengthen the role of C&I players in renewable energy communities. The current focus on households should be expanded to include also the C&I sector which is increasingly demanding for more renewable electricity and partnerships at local level,
- Simplify permitting and administrative procedures for renewable self-consumers or renewables communities, taking into account the asymmetry in terms of information and technical capacity between those small actors and commercial developers,
- Promote innovative business and financing models that could help unlock further renewables communities and self-consumption projects. For example, the ESCO type of model can be very effective in enabling households and small and medium enterprises with tighter budgets to actively participate in the energy transition,
- Include provisions to monitor and report on the development of both self-consumption and renewable communities at Member State level, including targets and indicators.

1.4 In which sectors do you think additional efforts to increase the use of renewable energy are most needed for a potentially higher renewables target for 2030? (multiple answers possible)

- Electricity
- Gas
- Heating and cooling
- District heating and cooling
- Buildings
- Services (including ICT)

- Industry
- Transport
- Agriculture
- Other

Please specify

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1.5 Do you see scope for simplifying RED II or reducing regulatory burdens, including administrative burdens?

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- Administrative procedures are often still hampering renewables and storage deployment. The length and complexity of procedures particularly increase uncertainty, cost and risks preventing the realization of important projects. Explicit measures, for example within the National Energy and Climate Plans, are needed to simplify and accelerate procedures efficiently.

- With increasing shares of renewables, grid allocation becomes essential for successful project realization. In the allocation of grid capacity, the benefits of combined generation and storage projects should be valued. In Portugal, this measure combined with multi-use-options lead to highly competitive tendering bids in hybrid auctions.

1.6 Do you think the level of the 2030 Union target for renewable energy should be raised within the range indicated in the 2030 Climate Target Plan (38 - 40%)?

- Yes
- No, it should be higher than 40%
- Other

1.7 Should the overall renewable target be binding at EU level or at national level?

- At both levels
- Only at EU level
- Only at national level
- At neither of the levels

2. Technical questions on Transversal Energy System Integration Enablers

In order to achieve climate neutrality cost-effectively the energy system needs to operate in a more integrated manner, across multiple energy carriers, infrastructures and consumption sectors. The Energy System Integration and Hydrogen Strategies published by the Commission in July set the vision to build an integrated energy system fit for climate-neutrality and turn hydrogen into a viable solution. This vision is established around three main pillars: 1) a more circular energy system, with 'energy-efficiency-first' at its core; 2) accelerating the electrification of energy demand, building on a largely renewables-based energy system; 3) promote renewable and low-carbon fuels, including hydrogen, for hard-to decarbonise sectors.

2.1 How important do you consider the following measures to build a more integrated energy system?

	Very important	Important	Not very important	Not important
Apply the Energy-Efficiency-First principle across the whole energy system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase the mobilisation of waste heat, for instance from industry or data centres	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the deployment of smart district heating and cooling networks that use renewable energy and thermal storage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the use of renewable energy in buildings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the use of renewable electricity in industry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the use of renewable electricity in the transport sector	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the production of renewable liquid fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Accelerate the production of sustainable biogas and biomethane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increase the production and use of renewable hydrogen	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accelerate the digitalisation of the energy system	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any other view or ideas related to the use of renewables that could contribute to building a more integrated energy system? Please specify.

3000 character(s) maximum

RES electrification of end-use sectors should not be perceived as an objective per se. Electrified buildings, vehicles and industries should not be isolated, but connected in the power system and enabled to react to signals received from the system to activate their (implicit and explicit) demand-side flexibility.

The Energy System Integration Strategy recommends to advance towards a more circular energy system, with 'energy-efficiency-first' at its core.

2.2 How do you think the energy efficiency first principle should be reflected in the Renewable Energy Directive?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Promote the use of renewables in low-temperature efficient heating systems	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the production of heat directly from renewable energy or waste heat with minimal energy transformation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the installation of thermal energy storage together with the renewable heat generator	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote self-consumption of renewable thermal heat	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the reuse of waste heat from industrial sites, data centres, or other sources	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the use of renewable electricity in end-uses across all sectors where this is cost-efficient	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prioritise the efficient use of renewable electricity by taking into account conversion efficiencies of renewable electricity in different end uses (eg. heat pumps have better efficiency than using hydrogen for space heating)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide information to consumers about the energy content of the energy they are purchasing, across carriers and sectors	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prioritise the use of available renewable energy carriers in those end use sectors where they have the greatest decarbonisation impact for each unit of energy consumed	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

To accelerate the clean energy transition, the static and narrow view of energy consumption which prevails today needs to evolve to a more dynamic approach considering not only the total consumption, but also

flexibility of consumption and actual usage patterns in a more holistic, carbon or system efficiency approach based on indicators and signals provided through a market-based mechanism.

The application of the EE1st principle should have a system-wide connotation, meaning that to achieve an efficient system, variable renewables should be consumed in a flexible way and at the right time. The activation of the demand-side flexibility of all end-use sectors would help penetrate more renewable electricity in the system. By shifting flexible demand, the system can use more renewable electricity rather than letting it go to waste.

As calculated for the Impact Assessment to the Electricity Market Design, 5.6bn Euro could be saved annually from the activation of the demand-side flexibility from electrified end-use sectors. Savings are the result of avoided investments in unnecessary investments in grid reinforcements, back-up generation and fossil fuels.

2.3 How appropriate do you think the following measures would be in supporting the electrification of energy consumption?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Sectorial targets for electrification of end-use sectors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further specific measures for electrification of buildings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further specific measures for electrification of transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further specific measures for electrification of industry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further specific measures for consumer empowerment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidance to Member States to address the high charges and levies borne by electricity and ensure the consistency of non-energy price components across energy carriers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Align taxation of energy products and electricity with EU Climate and Energy Policy goals	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further measures to foster digitalisation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further development of interconnections	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further development of transmission and distribution networks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Other? Please specify

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Going beyond and building on the existing certification and traceability framework, the Energy System Integration Strategy and the Hydrogen Strategy state that the Commission will consider additional measures to support renewable and low-carbon fuels, possibly through minimum shares or quotas in specific end-use sectors (including aviation and maritime), through the revision of REDII and building on its sectoral targets. Renewable fuels cover sustainable biofuels, bioliquids and biomass fuels, as well as renewable hydrogen and renewable synthetic fuels. Low carbon fuels cover hydrogen and synthetic fuels produced through a variety of processes, but with significantly reduced full life-cycle greenhouse gas emissions compared to existing production. According to the Strategies, the support regime for hydrogen will be more targeted, allowing shares or quota only for renewable hydrogen. They also state that the Commission will propose a comprehensive terminology for all renewable and low-carbon fuels and a European system of certification of such fuels, based notably on full life cycle greenhouse gas emission savings and sustainability criteria, building on existing provisions including in the Renewable Energy Directive.

2.4 How do you consider that “low carbon” fuels that are not renewable but provide significant GHG emissions reduction compared to fossil fuels, such as non renewable hydrogen and synthetic fuels with significantly reduced full life-cycle greenhouse gas emissions compared to existing production, should be treated?

- They should be promoted equally to renewable fuels and thus be mandatorily integrated in any end-use target or quota
- They should be promoted but less than renewable fuels
- Member States should have the freedom to decide whether to promote them alongside renewable fuels in any end-use target or quota
- They should not be promoted

2.5 Do you think the use of hydrogen and e-fuels produced from hydrogen should be encouraged (multiple answers possible)?

- Yes, regardless of the source used to produce them
- Yes, but only if produced from renewable energy
- Yes, but under a certain level of conversion losses
- Yes, but only if produced and used in a way that leads to no or low GHG emissions along their life cycle, compared to the fossil fuel they are replacing
- Yes, but only when its whole value chain is more energy efficient in comparison to alternative energy sources and carriers
- Yes, but only for limited uses where no other alternatives are feasible

- No
- Other

Please specify

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The potential of renewable energy sources to drive Europe’s decarbonisation even further and into new sectors is still very large. Generally, using this electricity directly is more efficient than converting it into other energy carriers (e.g. hydrogen), giving it a natural advantage in the market.

Due to the inherent nature of the conversion processes, the efficiency of hydrogen is low and might divert renewable electricity from uses with more decarbonisation impact.

However, indirect electrification solutions such as clean hydrogen produced from renewables and other clean electricity sources could play an important role in “harder to abate” sectors where direct electrification could not be technically feasible, less cost-efficient, or cannot be employed fast enough to meet the carbon-neutrality target. A particular scenario for its off-shore production could be contemplated for the excess electricity from the expected 450 GW off-shore wind, where the massive investment needs for cables could otherwise create an important bottleneck.

2.6 How effective do you think the following measures would be in supporting the uptake of RES and low-carbon fuels?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Minimum shares or quotas of renewable and low carbon fuels, including renewable hydrogen, in specific end-use sectors	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon Contracts for difference[1]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supply-side quotas	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market based support schemes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supply-side GHG-based targets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[1] Carbon contracts for difference are long term contract with a public counterpart that would remunerate the investor by paying the difference between the CO2 strike price and the actual CO2 price in the ETS in an explicit way, bridging the cost gap compared to conventional fossil-based production.

Other? Please specify

3000 character(s) maximum

2.7 How important do you think the following principles are for a robust and comprehensive certification and verification system covering all renewable

and low carbon fuels? (Multiple answers possible)

	Very important	Important	Not very important	Not important
The certification and verification system should cover all end-use sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The certification and verification system should cover all renewable and low carbon fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The certification and verification system should demonstrate that renewable hydrogen and renewable synthetic fuels are produced from additional renewable electricity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The certification and verification system should follow as closely as possible the real energy flows and ensure that consumption of renewable and low carbon fuels takes place in certain target sectors (e.g. transport) in the Union, for instance by using a mass balance system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
The certification and verification system does not need to follow the real energy flows as it is sufficient to incentivise the promotion of renewable and low carbon fuels independently of where they are consumed in the Union, for instance by using a book-and-claim approach such as for Guarantees of Origin.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The certification and verification system should follow as closely as possible the real energy flows only for liquid renewable and low carbon fuels, but allowing a book-and-claim approach such as for Guarantees of Origin is more appropriate for gaseous renewable and low carbon fuels injected into the natural gas grid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
The certification and verification system should ensure that the GHG impact of energy conversions along the value chain (e.g. renewable electricity used to produce renewable hydrogen) are fully taken into consideration, while avoiding double counting	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Where CO ₂ is used in the production of a fuel, the certification system should distinguish between fuels using CO ₂ of fossil origin and CO ₂ of non-fossil origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other principles? Please explain

3000 character(s) maximum

Without sufficient precision, energy consumers lack visibility on the source of their energy and carbon emissions, and there is no incentive for demand-side flexibility.
Adopting a real-time (hourly) 24/7 accounting period for GOs enables consumers to understand exactly where their energy is coming from and what their carbon emissions are at any given moment.
This would support demand-side flexibility by providing a new external signal specifically related to renewable generation.

2.8 In the current system, only electricity suppliers are required to certify to consumers the share of energy from renewable sources by guarantees of origin. Do you think that this obligation shall be extended to suppliers of renewable fuels (such as biogas, biomethane or renewable hydrogen) as well, and possibly of “low carbon” fuels?

- Yes, for renewable fuels
- Yes, for renewable fuels and low carbon fuels
- No

2.9 Do you think the cooperation mechanisms set out in RED II should be extended to cover renewable hydrogen regardless of its end use, so that Member States can support renewable hydrogen projects in other Member States and in third countries while counting the energy produced as their own?

- Yes
- No

Please explain your reply

3000 character(s) maximum

Indirect electrification solutions such as renewable hydrogen will play an important role in “harder to abate” sectors where direct electrification could not be technically feasible, less cost-efficient, or cannot be employed fast enough to meet the carbon-neutrality target. Expanding the scope without taking into account the potential in end-use sectors would unnecessarily increase system costs.

The EU’s 2050 decarbonisation scenarios and other international reports suggest that renewables, energy efficiency and electrification will have to deliver most of the required emission reductions. However, carbon capture technologies will potentially be needed to create the negative emissions required to reach climate neutrality and address emissions from hard-to-abate sectors.

2.10 Carbon-capture and storage/usage in the EU should play a prominent role in...

	Strongly agree	Agree	Disagree	Strongly disagree
Decarbonising the power sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decarbonising energy intensive industries (e.g. chemicals, cement, steel)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production of hydrogen (i.e. based on natural gas with CCS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating negative emission / carbon removal, e.g. via CCS applied to bioenergy[1] (BECCS) or direct air capture and storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing captured CO2 as a feedstock for other industries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.11 In addition to how CCS and CCU are treated in other EU legislation, do you think REDII should be revised to encourage the uptake of CCS and CCU?

- Yes
- No

Please specify

3000 character(s) maximum

3. Technical questions on specific sectors

This section covers specific sectors covered by REDII and asks for your opinion on whether they should be changed/strengthened in order to improve the chances of achieving the EU's 2030 climate ambitions.

3.1 RENEWABLES IN ELECTRICITY

Mobilising private investment for the development in renewables is essential in the context of increased ambition. In REDII, there are new several provisions aiming to promote the use of renewable power purchase agreements (contract under which a natural or legal person agrees to purchase renewable electricity directly from an electricity producer "PPAs").

3.1.1 How would you rank the appropriateness of the following measures in tackling the remaining barriers for the uptake of renewable electricity that matches the expected growth in demand for end- use sectors?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Further foster regional cooperation in the deployment of renewable electricity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further streamline permitting procedures	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further support the uptake of private renewable PPAs	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establish minimum mandatory green public procurement (GPP) criteria and targets in relation to renewable electricity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Further support the uptake of energy communities and self-consumption	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

With increasing amounts of new loads and especially electric vehicles, potential benefits of self-consumption of renewable energy generated on site can be unlocked. Distributed energy generation has the potential to boost the deployment of renewable generation while limiting public acceptance issues and unnecessary grid expansion.

However, self-consumption, as laid out in REDII Article 21 is still subject to many restrictions and obstacles within Member states. Charges and fees often reduce the benefits of self-consumption beyond profitability. For example, medium sized commercial and industrial self-consumers with an employee fleet of EVs and a generation capacity above 30kW are particularly burdened with fees and charges in terms of self-consumption. This threshold should be lifted to 100kW. This customer segment is often subject to disproportionate administrative procedures like extensive and risky tendering processes. Ensuring proportionate administrative procedures is key.

3.1.2 How do you think regional cooperation in deploying renewables electricity could be further promoted?

3000 character(s) maximum

3.1.3 How appropriate do you think the following measure would be in promoting the use of private renewable power purchase agreements?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Financial solutions/instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Removing administrative/legal barriers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating green labels for buyers of renewables-based products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
None, market participants are already actively engaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

Public authorities, thanks to their purchasing power and often high electricity consumption, can be real drivers for change. RED II does not contain any provisions on renewable energy obligations in public procurement.

3.1.4 Should there be specific obligations for public authorities to contribute to achieving a high level of renewable energy (multiple answers possible)?

- Yes, all public authorities should be obliged to buy green energy
- Yes, but only larger public authorities should be obliged to buy green energy
- Yes, but only if it does not cost more
- Yes, but only if the green tender is likely to trigger investment in additional green energy generation
- No

Please explain your reply

3000 character(s) maximum

3.1.5 Do you think modifying REDII would be appropriate in order to further promote offshore renewable energy, following the adoption of the EU Offshore Renewable Strategy?

3000 character(s) maximum

3.2 RENEWABLES IN HEATING AND COOLING

Under REDII, Member States must endeavour to increase the share of renewable energy in heating and cooling by an indicative 1.3 percentage point (ppt) per year up to 2030. Sources of waste heat and cold can be counted towards the 1.3 ppt up to 40%, and in Member States where waste heat or cold is not used, the yearly increase that the Member States must endeavour to achieve is 1.1 ppt.

The impact assessment accompanying the 2030 Climate Target Plan indicates that the share of renewable energy in heating and cooling would constitute around 40% in 2030. This would require an increase of the share of renewable energy in heating and cooling in Member States significantly higher than the yearly increase of 1.3 ppt.

3.2.1 How appropriate do you consider the following options for increasing the uptake of renewable energy in heating and cooling?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Increased energy efficiency	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct renewable heat use (from sustainable biomass, geothermal, solar thermal...)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct renewable electricity use (in electric heat pumps using ambient energy)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of renewable gases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Use of district heating and cooling networks that can supply in the same system waste heat and renewable heat	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please explain

3000 character(s) maximum

3.2.2 Should the current indicative target of 1.3 ppt (or 1.1 ppt, if waste heat and cold is not used), annual average increase of renewable energy in heating and cooling set for the period of 2021-2030 in Article 23 become a binding target for Member States?



- Yes
- No

3.2.3 Should the annual average target of 1.3 ppt be increased?

- Yes, to the level leading to the 40% share of renewable energy in heating and cooling indicated in the Climate Target Plan
- Yes, to a lower level than that leading to the 40% share of renewable energy in heating and cooling indicated in the Climate Target Plan
- Yes, to a more ambitious level than that leading to the 40% share of renewable energy in heating and cooling indicated in the Climate Target Plan
- No

Under REDII, neither renewable electricity nor hydrogen and synthetic fuels produced from renewable electricity that is used for heating and cooling can be counted towards the target for heating and cooling, only thermal heating produced from renewable energy sources.

3.2.4 Do you think renewable electricity used for heating and cooling should be counted towards the target for heating and cooling?

- Yes
- No

3.2.5 Do you think that renewable hydrogen and synthetic fuels produced using renewable electricity and used in heating and cooling should be counted towards the target for heating and cooling?

- Yes
- No

The current Article 23 of REDII provides a list of measures that Member States can use to increase the share of renewables in heating and cooling. These are physical incorporation of renewables in energy fuels supplied, direct and indirect mitigation measures (e.g. installation of renewable heating systems), and other policy measures, e.g. fiscal measures and financial incentives.

3.2.6 Do you think the list of measures provided in the Directive that Member States can use to increase the share of renewables in heating and cooling should be expanded or made more detailed?

-

Yes

No

3.2.7 Do you think these measures should be made binding?

Yes

Only some of them

No

3.2.8 How would you rank the appropriateness of the following measures in increasing the share of renewable energy in heating and cooling?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Pricing instruments (taxes, levies and charges)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EU guidance on support schemes for renewable heating and cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renewable heating and cooling obligation on energy suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stricter product regulation for heating and cooling appliances to ensure that gradually only renewable and climate neutral heating technologies can be placed on the market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Binding regulations on technical building systems for heating and cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mandatory heat planning and implementation at the appropriate level (local, municipal, regional) to ensure fulfilling the renewable heating and cooling target	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthen corporate energy purchase agreements for heating and cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

3.2.9 Which of the following measures do you think could be appropriate to encourage public authorities to identify renewable heating and cooling

potentials and plan their exploitation?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Strengthening the obligation to assess renewable potentials for heating and cooling in the frame of the comprehensive heating and cooling assessments under Article 14 (1) of EED and Article 15(4) of REDII	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
A separate assessment obligation of renewable potentials for heating and cooling under RED II	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mandatory long-term strategies for decarbonising heating and cooling with binding milestones and measures taking into account synergies with other policy areas, such as the comprehensive heating and cooling assessments under Article 14 (1) of the EED and the longterm building renovation strategies under Article 2a of the directive amending the EPBD.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

3.3 RENEWABLES IN DISTRICT HEATING AND COOLING

Efficient district heating and cooling can play an important role in mainstreaming renewable energy in heating and cooling. Under REDII Member States must endeavour to increase the share of renewable energy in district heating and cooling by an indicative 1 percent point per year up to 2030. Alternatively, Member States must ensure, subject to limited exceptions, that third party suppliers can connect and sell renewable energy and waste heat or cold to district energy networks. The 1 ppt target of annual average increase in renewables can be fulfilled by waste heat and cold in district heating networks (waste heat flexibility).

3.3.1 Should the current indicative target of 1 ppt annual average increase of renewable energy in district heating and cooling set for the period of 2021-2030 become a binding target?

- Yes
- No

3.3.2 Should the level of the current indicative target of 1 ppt annual average increase of renewable energy in district heating and cooling be increased?

- Yes
- No

3.3.3 How would you rank the appropriateness of the following measures in encouraging the use of waste heat and cold by district heating and cooling networks?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Obligation for district heating and cooling network operators to connect waste heat and cold suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obligation for industrial and service sector companies (e.g. data centres) producing significant waste heat and cold to make available their waste heat and cold to district heating and cooling companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requirement for the relevant competent authorities to encourage cooperation between industrial and service sector companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requirement for the relevant competent authorities to prepare the necessary plans (heat plans, energy plans, energy infrastructures plans, spatial plans, etc.), policies or regulations enabling the feeding of waste heat and cold into district networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific target for waste heat and cold use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

3.3.4 Do you consider that third party access to district heating networks by renewable heat suppliers should be strengthened?

- Yes

No

Please explain your reply

3000 character(s) maximum

3.3.5 Which of the following measures do you think would be appropriate in strengthening the rights of consumers in district heating and cooling networks?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Improve information to consumers on the energy performance and renewable shares of district heating and cooling, including to low-income and vulnerable consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased transparency of heat and cold supply prices to consumers and their components (e.g. energy and, network costs, taxes, levies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthen disconnection [1] rules for consumers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make it easier for consumers to switch to renewable supplies within a network via either a single buyer model or third party access or guarantees of origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make it possible for consumers to feed renewable heat or waste heat and cold into the network (prosumer rights)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[1] RED II allows customers to disconnect from those district heating or cooling systems that are not efficient or do not become efficient by 31 December 2025, in order to produce heating or cooling from renewable sources themselves.

Other? Please specify and/or explain your choice of the previous questions.

3.3.6 How appropriate do you think the following measures are in making district heating and cooling systems be better integrated within the overall energy system?

--	--	--	--

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Better coordination with electricity and gas TSOs and DSOs to plan network investment and integrate flexibility to maximise renewable integration	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Removing barriers to renewable thermal energy storage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotion of the use of flexible renewable generation capacities (e.g. heat pumps, cogeneration, power to heat)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better integration of district heating and cooling systems in EU, national and local energy infrastructure planning	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better integration of variable renewable electricity and heat in urban planning	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.4 RENEWABLE ENERGY IN BUILDINGS

Buildings account for 40% of energy use in the EU, and heating and cooling is responsible for around 50-80% of that energy consumption. Three quarters of heating and cooling in buildings is still supplied from fossil fuels. The EU building stock should be carbon-neutral by 2050. The Renovation Wave initiative aims to address the current low renovation rates across the EU and accelerate the transformation of the EU building stock into a highly energy efficient and decarbonised building stock by 2050. Contributing in this perspective, REDII requires Member States to introduce measures in their building regulations and codes to increase the share of energy from renewable sources in the building sector, but does not set any particular target or level for this. On average the percentage use of renewables in buildings is 23.5%.

3.4.1 Do you think that Member States should require a minimum percentage of renewable energy in the energy use of new buildings or buildings subject to major renovation?

- Yes
- Yes, only for new buildings
- Yes, only for buildings subject to major renovation
- No

3.4.2 If yes, what minimum percentage of energy consumed by a building do you think must come from renewable sources?

- 10%
-

- 20%
- 30%
- 40%
- 50%
- 100%
- Other

Please specify

3000 character(s) maximum

Alongside with reducing energy consumption through building renovations, accelerating renewable energy penetration, together with a systemic fossil-fuel phaseout, is paramount to decarbonize the building sector. A recent BPIE paper (December 2020) finds that renewable energy must increase to 53% of the final energy mix in buildings, while fossil fuels must decrease to 47% total by 2030. This direct electrification of building through distributed renewable generation should be combined with the uptake of energy storage assets and demand response to enable the flexible and active participation of buildings to the clean energy transition. That way excess generation of individual buildings can be stored or used in flexible appliances or to compensate lacking generation of other buildings. Buildings with roofs with only a small potential for generation could compensate by providing additional flexibility, while other buildings could generate a higher share of renewables than the minimum standard to compensate.

Buildings are key energy infrastructures in the energy system and their active engagement should be fostered.

3.4.3 How would you rank the following measures in terms of their appropriateness in ensuring that buildings' heating and cooling systems are increasingly based on renewable energy while fossil fuels are gradually phased out?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Set minimum renewable energy levels (see 3.4.1) in REDII and ensure conformity in building regulations and codes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simplify permitting and administrative procedures for the integration of renewable energy solutions in buildings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set minimum renewable energy shares for heating and cooling in national building stocks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set specific renewable energy requirements at district or neighbourhood levels, i.e. nearly zero-energy districts.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Extend REDII provisions on selfconsumption, applicable to electricity, to heating and cooling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthen consumer information and accessibility of measures to deploy renewables in buildings' heating and cooling systems, in particular in low-income or vulnerable households	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

Heating systems in building are generally replaced when they break down, usually during winter when it is urgent, leading to suboptimal decisions favouring replacement with the same, generally fossil fuel appliance. A planned replacement of heating systems would enable consumers to make informed choices and prepare the installation of renewable and more efficient heating.

3.4.4 How would you rank the appropriateness of the following measures in improving the replacement of heating systems, in particular to encourage the replacement of fossil fuel appliances by renewable heating systems?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Heating system replacements should be coordinated with and be part of building renovation whenever there is major renovation of a building or at other trigger points in the life-cycle of a building for carrying out energy efficiency renovations [1].	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building renovation programmes (at national, municipal and district levels) should specifically support the modernisation of heating systems by their replacement with renewable technologies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy Performance Certificates and heating system inspections should indicate recommended dates, steps and possible options for renewable heating systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National building renovation strategies should specifically address the transition	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

from fossil fuel to renewable and climate neutral heating with related investment plans				
Fossil fuel heating systems replacement with renewable and other climate neutral ones (like waste heat) should be part of neighbourhood and district approaches to building renovation and urban renewal programmes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information campaigns should also target heating system replacement programmes with appropriate advice and information, including regarding financing and public support opportunities and solutions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digitalization should give early warnings on the need for repair/maintenance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[1] A trigger point could be: a transaction (e.g. the sale, rental or lease of a building, its refinancing, or a change in its use) a renovation (e.g. an already planned wider non-energy-related renovation).

Other? Please specify

3000 character(s) maximum

Heating systems powered with renewable electricity and electricity storage can become valuable flexibility assets. For example, currently in commercial buildings, heating and cooling are the main sources of consumption (up to 80%), which are flexibility resources. These buildings can be pre-heated and pre-cooled efficiently and should be able to offer this flexibility to the market.

3.5 RENEWABLE ENERGY USE IN INDUSTRY

Industry is a big energy user being responsible for 25% of the final energy consumption. However currently there are no specific provisions or targets related to the use of renewable energy for the sector. The Commission's Energy System Integration Strategy and Hydrogen Strategy have however identified industry as an economic sector where rapid progress is required to increase the use of renewable energy, be it through direct use of renewable heat, through electrification, or through the use of renewable and lowcarbon fuels to replace fossil fuels as feedstock and fuel.

3.5.1 Do you think there should be an obligation on industry or certain industrial sectors to use a minimum amount of renewable energy?

- Yes, on industry in general
- Yes, but for specific industries only
- No

3.5.2 How would you rank the appropriateness of the following additional measures to encourage the use of renewable energy in industry?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Creation of renewables-based industrial parks/clusters	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Technical support, including training and skills development, for uptake and integration of renewables in small- and medium-size enterprises	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific innovation programmes to develop renewables- and electricity based production processes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy audits required under the Energy Efficiency Directive should cover renewable energy used by the enterprise	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simplified permitting and administrative support for corporate sourcing of renewables, including for on-site and near-site generation as well as corporate renewable power purchase agreements	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contracts for difference for zero-carbon products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

Real-time (hourly or less) Guarantees of Origin (GOs) would help renewable electricity to penetrate the industrial sector more effectively while improving traceability and certification. The current system does not allow matching the supply of renewable energy with demand for that energy on an hourly basis. A revision of GOs provisions to require a better way of tracking renewable electricity would enable a cost-efficient penetration of RES in industry (and other end-use sectors) and a flexible consumption that would adapt when RES electricity is available. A revised GO policy framework would boost innovative business cases to allow tracing electricity from renewable sources to provide information to electricity customers on the source of their energy on an hourly basis.

3.6 RENEWABLE ENERGY IN TRANSPORT

Under REDII, each Member State must set an obligation on fuel suppliers to ensure that renewable energy makes up at least 14%^[1] of the energy used in that Member State in the transport sector. The achievement of the target is facilitated by **several multipliers on energy content**:

- a multiplier of 4 for renewable electricity consumed in **road transport**

- a multiplier of 1.5 for renewable electricity consumed in **rail transport**
- a multiplier of 1.2 for renewable fuels consumed in **maritime and aviation transport**
- a multiplier of 2 for advanced **biofuels and biogas**

The impact assessment accompanying the 2030 Climate Target Plan indicates that the share of renewable energy in transport would constitute around 24% in 2030, calculated according to the methodology described above. Both the aviation and maritime sectors will need to scale up efforts to increase the use of sustainably produced renewable and low-carbon fuels. This will be assessed in greater detail in the context of the ReFuelEU Aviation and FuelEU Maritime initiatives.

[1] Member States have the right to lower their target if they set limitations on food and feed-based biofuels going beyond RED II

3.6.1 Do you think that the level of the renewable target in transport should be increased?

- Yes, but less ambitious than indicated in the 2030 Climate Target Plan
- Yes, as ambitious as indicated in the 2030 Climate Target Plan (24%)
- Yes, but more ambitious than indicated in the 2030 Climate Target Plan (for instance 24% without multipliers)
- No

Please explain your reply

3000 character(s) maximum

3.6.2 Member States can count renewable electricity, sustainable biofuel and biogas, hydrogen produced from renewable electricity (except if such electricity comes from biomass) and recycled carbon fuels[1] towards the 14% target in transport. Do you think Member States should also be able to count other low carbon fuels which have fewer emissions than fossil fuels, such as low carbon hydrogen?

- Yes
- No

[1] 'recycled carbon fuels' means liquid and gaseous fuels that are produced from liquid or solid waste streams of non-renewable origin which are not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC, or from waste processing gas and exhaust gas of non-renewable origin which are produced as an unavoidable and unintentional consequence of the production process in industrial installations.

3.6.3 Do you think that some renewable and low carbon fuels should be specifically promoted in transport, beyond being part of the obligation on fuel suppliers ?

- Yes
- No

3.6.4 If you answered 'yes' to the previous question, which of the following types of renewable and low carbon fuels do you think should be specifically promoted ? (Multiple answers possible)

- Advanced biofuels and other fuels produced from biological wastes and residues
- Renewable hydrogen and renewable synthetic fuels
- Low-carbon hydrogen and low carbon synthetic fuels (including through applying CCS techniques)
- Renewable electricity
- Recycled carbon fuels
- Other

3.6.5 Which types of renewable and low carbon fuels can be best promoted by an obligation on fuel suppliers, based either on energy content or GHG emissions, compared to other instruments?

- Liquid renewable fuels
- Liquid low carbon fuel
- Gaseous renewable fuels such as hydrogen
- Gaseous low carbon fuels such as hydrogen
- Renewable electricity
- Other

Please specify

3000 character(s) maximum

The electrification of the transport sector - a crucial step towards climate neutrality - requires the integration of transport and energy, as confirmed in the Impact Assessment accompanying the 2030 Climate Target Plan by the European Commission.
However, the electricity system simply cannot cope with the increased uptake of electric vehicles (EVs) unless their use of the electricity system is smartly managed.

This implies that the revised RED should be aligned with the revised AFID to promote smart charging capabilities for EVs.

If charging is done smartly, EVs becomes Decentralised Energy Resources which:

- extensively interact with homes, buildings, the grid,
- align with variable renewable electricity generation patterns,
- and provide a full range of flexibility services to the benefit of end-users and the entire energy system.

3.6.6 How would you rate the appropriateness of the following measures regarding the use of renewable and low carbon fuels in transport?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
The scope of fuels that can be counted should be harmonised to ensure that all fuels that are eligible for counting towards the renewable energy target are supported in all Member States	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Member States should have flexibility to design the supply obligation using one of the following approaches: in terms of volume, energetic value or GHG emission intensity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The fuels supply obligation should be based on GHG emissions targets to stimulate the uptake of best performing fuel options on the fuel market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The level of ambition should be fixed at the same level for all Member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
States to create a level playing field and avoid market fragmentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The multiplication factors for different types of renewable energy sources should be abolished to simplify the legislation and to increase the ambition level (limitations and sub targets would remain)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set out specific measures to promote the use of renewable and low carbon fuels in aviation and maritime transport such as dedicated supply obligations, sub-targets or other incentives.[1]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[1] In parallel, the ReFuelEU Aviation and FuelEU Maritime initiatives are assessing legislative options to boost the production and uptake of sustainable fuels in the aviation and maritime sectors.

Other? Please specify

3000 character(s) maximum

3.6.7 How appropriate do you think the following measures would be in encouraging the use of hydrogen and hydrogen-derived synthetic fuels in transport modes that are difficult to decarbonise?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Include hydrogen and hydrogen-derived synthetic fuels in a dedicated sub-target together with advanced biofuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set an additional dedicated sub-target for hydrogen and hydrogen-derived synthetic fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allow double counting of the contribution of hydrogen and hydrogen-derived synthetic fuels towards the transport target or the fuel supplier obligation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other? Please specify

3000 character(s) maximum

3.6.8 How would you rank the effectiveness of the following measures in encouraging the use of renewable electricity in the transport sector?

	Very appropriate	Appropriate	Not very appropriate	Not appropriate
Support the purchase of electric vehicles	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support the installation of electric vehicle chargers in households and enterprises	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set stricter CO2 standards for cars	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure the availability and interoperability of public recharging infrastructure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establish a minimum level of renewable electricity as a part of the target for renewable energy in transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Giving consumers information on whether they are recharging their electric vehicle with renewable energy



Other? Please specify

3000 character(s) maximum

The installation of chargers is not enough if not smart-ready to allow a flexible consumption of EVs.

To increase the penetration of renewable electricity in the e-mobility sector and avoid renewables curtailment, the revised RED should be aligned with AFID to ensure smart charging is developed to absorb peak renewable generation and avoid unnecessary investments in grid expansion and back-up generation.

3.7 BIOENERGY SUSTAINABILITY

The Biodiversity Strategy[1] acknowledges that, to mitigate climate and environmental risks created by the increasing use of certain sources for bioenergy, REDII already includes strengthened sustainability criteria (to be implemented on the ground starting 1 July 2021 at the latest) and promotes the shift to advanced biofuels. According to the Strategy, the use of whole trees and food and feed crops for energy production should be minimised. Moreover, the Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system[2] contains concrete measures for a sustainable use of biomass. The Commission is continuously assessing the EU and global biomass supply and demand and related sustainability. An ongoing study on the use of forest biomass for energy production is expected to be finalised and published by the end of 2020. This will inform the Commission's policy-making, including the review and revision, where necessary, of the level of ambition of the Renewable Energy Directive. In order for Member States to count energy from forest biomass towards their renewable energy targets, Article 29 paragraphs 6-7 of REDII requires that the country of origin has laws in place to ensure the legality of harvesting and forest regeneration. If that cannot be shown, sustainability compliance must be shown at the level of the biomass sourcing area (e.g. through forest management certification or equivalent tools)

[1] COM/2020/380 final

[2] COM/2020/381 final

3.7.1 Do you think the sustainability criteria for the production of bioenergy from forest biomass in RED II should be modified? (only one reply possible)

- Yes, they should be made stricter
- No, they should not be modified

Please explain your reply

3000 character(s) maximum

3.7.2 The obligation to fulfil sustainability criteria for biomass and biogas in heat and power applies to bioenergy installations of at least 20 MW for solid biomass and 2 MW for biogas. Should these thresholds be lowered to include smaller installations?

- Yes
- No

3.7.3 Do you think that there should be limits on the type of feedstock to be used for bioenergy production under REDII?

- Yes, it should only be possible to use feedstock listed in Part A) of Annex IX of REDII[1] (therefore excluding used cooking oil and animal fats)
- Yes, it should only be possible to use the feedstock listed in Part A) and Part B) of Annex IX of REDII
- Yes, it should only be possible to use wastes and residues
- Yes, it should only be possible to use feedstock that does not have higher added-value in nonenergy sectors
- Yes, in some other way
- No

3.7.4 Do you think that the minimum GHG emission saving thresholds for biomass in heat and power, currently at 70% for installations starting operation from 2021 and at 80% for installations starting operation from 2026, should be extended and/or made stricter? (multiple answers possible)

- Yes, by extending them to heat and power installations that started operation before January 2021
- Yes, by increasing the threshold for GHG emission savings
- No
- Other

3.7.5 Do you think that the energy efficiency requirements applying to bio electricity-only installations (article 29, paragraph 11) should be made more stringent (multiple answers possible)?

-

Yes, they should be extended to plants of less than 50 MW total rated thermal input

- Yes, the energy efficiency requirements should be higher
- No
- Other

Contact

ENER-REDII-REVIEW@ec.europa.eu