

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

Fields marked with * are mandatory.

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

About you

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English
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La version pdf contient d'autres questions, mais qui apparaissent en fonction des choix faits avant. Les questions ici correspondent à 'contribution as company/business organisation'

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
3000 characters maximum

It needs to be more prescriptive for transport to arrive at a more harmonised approach among Member States.
It needs to be based on CO2 reduction target to avoid overlapping with other related regulations, such as FQD-7A.

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

3000 characters maximum

N/A

Please explain your answer

3000 characters maximum

Total asks for consistency with the EU Biodiversity Strategy, both in terms of sustainability criteria (in particular for forest biomass) and biomass availability (supply and demand in various sectors of the economy).

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

3000 characters maximum

When considering setting objectives on the industry sector, their implementation should take into account the overlap of different regulation mechanisms as well as the industrial constraints and the various energy sources used in different sectors of the industry.

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

3000 characters maximum

N/A

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

Please specify
3000 characters maximum

N/A

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		x		
Increase the mobilisation of waste heat, for instance from industry or data centres		x		
Accelerate the deployment of smart district heating and cooling networks that use renewable energy and thermal storage		x		
Accelerate the use of renewable energy in buildings		x		
Accelerate the use of renewable electricity in industry	x			
Accelerate the use of renewable electricity in the transport sector		x		
Accelerate the production of renewable liquid fuels	x			
Accelerate the production of sustainable biogas and biomethane	x			
Increase the production and use of renewable hydrogen	x			
Accelerate the digitalisation of the energy system	x			

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

3000 characters maximum

N/A

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		x		
Promote the production of heat directly from renewable energy or waste heat with minimal energy transformation		x		
Promote the installation of thermal energy storage together with the renewable heat generator			x	
Promote self-consumption of renewable thermal heat			x	
Promote the reuse of waste heat from industrial sites, data centres, or other sources	x			
Promote the use of renewable electricity in end-uses across all sectors where this is cost-efficient	x			
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)		x		
Provide information to consumers about the energy content of the energy they are purchasing, across carriers and sectors		x		
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	x			

Other? Please specify.

3000 characters maximum

N/A

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			x	
Further specific measures for electrification of buildings		x		
Further specific measures for electrification of transport		x		
Further specific measures for electrification of industry		x		
Further specific measures for consumer empowerment		x		
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		x		
Align taxation of energy products and electricity with EU Climate and Energy Policy goals	x			
Further measures to foster digitalisation		x		
Further development of interconnections	x			

Further development of transmission and distribution networks		x		
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Other? Please specify.

3000 characters maximum

N/A

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.

3000 characters maximum

All technologies contributing to GHG reduction should be considered. Hydrogen from natural gas, coupled with CCS, offers a cost-effective way to reduce GHG emissions and will be needed as an enabler to build scale for the development of renewable hydrogen. This is also valid for hydrogen produced from biogas (with or without CCUS) or from low carbon electricity.

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	x			
Carbon Contracts for difference ¹	x			
Supply-side quotas	x			
Market based support schemes		x		
Supply-side GHG-based targets				

Other? Please specify.

3000 characters maximum

For transport, in favour of CO2 based targets (FQD7a) (as in Germany for example).

To support the development of biogas and biomethane, we recommend the introduction of mandates for inclusion of biomethane in natural gas grids.

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	x			
The certification and verification system should cover all renewable and low carbon fuels	x			
The certification and verification system should demonstrate that renewable hydrogen and renewable synthetic fuels are produced from additional renewable electricity				x
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.		x		
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.		x		
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			x	

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.

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	x			
Where CO2 is used in the production of a fuel, the certification system should distinguish between fuels using CO2 of fossil origin and CO2 of non-fossil origin			x	

Other principles? Please explain.

1252/3000 characters maximum

A robust and comprehensive EU-wide system of certification and verification covering all renewable and low-carbon fuels is essential for supporting the uptake of renewable and low-carbon fuels. We recommend a system that builds on the existing certification of Guarantees of Origin in REDII and extends this to apply to renewable and low-carbon gases, with additional mandatory information on life cycle GHG emissions. Such a certification system could form the basis for valuing the reduction of GHG emissions, and for rewarding investment in renewable and low-carbon gas and liquid fuel technologies.

We support a common EU-wide system of certification and acceptance of Guarantees of Origin for renewable and low-carbon gas, with a decoupling of the emission benefits from the physical molecules. This book-and-claim approach would enable a common market for trading of certificates and enable consumers to contribute to decarbonisation without being physically connected to a source of renewable or low-carbon gas. A common market would be an alternative for the cooperation mechanism set out in the current REDII and enable renewable and low-carbon projects in one Member State to be used in another Member State, with certificates.

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 characters maximum

N/A

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			x	
Decarbonising energy intensive industries (e.g. chemicals, cement, steel)	x			
Production of hydrogen (i.e. based on natural gas with CCS)	x			
Creating negative emission / carbon removal, e.g. via CCS applied to bioenergy (BECCS) or direct air capture and storage	x			
Providing captured CO2 as a feedstock for other industries		x		

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 characters maximum

N/A

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		x		
Further streamline permitting procedures	x			
Further support the uptake of private renewable PPAs	x			
Establish minimum mandatory green public procurement (GPP) criteria and targets in relation to renewable electricity			x	
Further support the uptake of energy communities and self-consumption		x		

Other? Please specify.

3000 characters maximum

N/A

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

3000 characters maximum

N/A

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	x			
Removing administrative/legal barriers		x		
Creating green labels for buyers of renewables-based products		x		
None, market participants are already actively engaging				

Other? Please specify.

3000 characters maximum

N/A

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 characters maximum

N/A

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 characters maximum

Yes, because the production of electricity from offshore wind has very different specificities from the production from PV, onshore wind or hydropower.

The offshore wind sector is much less mature than other renewable energy sources, so the cost of production is still high in comparison, and much innovation remains to be done, particularly in the field of floating wind, which is very promising.

Knowing that the development time of an offshore wind project is currently around 10 years between the award and the commissioning, the promotion of this energy source would accelerate its development and thus contribute to the binding objectives of the EU on the share of renewables in the energy mix.

We propose a specific treatment of offshore wind on the following aspects :

- Financial framework facilitating investments
- Administrative streamlining to speed up licensing processes
- Support mechanisms on the purchase price of electricity
- Principles of interconnection of electricity networks between different countries of the Union as well as non-EU countries (case of the UK post BREXIT).

The installation of offshore wind farms has limited societal consequences or environmental impact compared to solar or onshore wind energy , which require large volume of land area, dedicated for other needs like arable land, forested land, wild spaces or residential spaces. On top of this, offshore wind projects' development has very positive implications in terms of local job creation, since it is currently a sector in which European players are both pioneers and leaders, with a local supply chain.

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			x	
Direct renewable heat use (from sustainable biomass, geothermal, solar thermal...)	x			
Direct renewable electricity use (in electric heat pumps using ambient energy)		x		
Use of renewable gases		x		
Use of district heating and cooling networks that can supply in the same system waste heat and renewable heat	x			

Other? Please explain.

3000 characters maximum

N/A

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

Please specify.

3000 characters maximum

N/A

3.2.7 Do you think these measures should be made binding?

- Yes
- Only some of them
- No

Please explain your reply.

3000 characters maximum

N/A

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)		x		
EU guidance on support schemes for renewable heating and cooling		x		
Renewable heating and cooling obligation on energy suppliers				x
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			x	
Binding regulations on technical building systems for heating and cooling			x	
Mandatory heat planning and implementation at the appropriate level (local, municipal, regional) to ensure fulfilling the renewable heating and cooling target	x			
Strengthen corporate energy purchase agreements for heating and cooling		x		

Other? Please specify.

3000 characters maximum

N/A

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	x			
A separate assessment obligation of renewable potentials for heating and cooling under RED II		x		
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			x	

Other? Please specify.

3000 characters maximum

N/A

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

Please explain by how much.

600 characters maximum

N/A

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		x		
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		x		
Requirement for the relevant competent authorities to encourage cooperation between industrial and service sector companies	x			
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	x			
Specific target for waste heat and cold use		x		

Other? Please specify.

3000 characters maximum

N/A

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 characters maximum

N/A

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.			x	
Increased transparency of heat and cold supply prices to consumers and their components (e.g. energy and, network costs, taxes, levies)		x		
Strengthen disconnection ² rules for consumers			x	
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		x		
Make it possible for consumers to feed renewable heat or waste heat and cold into the network (prosumer rights)		x		

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

3000 characters maximum

N/A

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	x			
Removing barriers to renewable thermal energy storage		x		
Promotion of the use of flexible renewable generation capacities (e.g. heat pumps, cogeneration, power to heat)	x			

² 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.

Better integration of district heating and cooling systems in EU, national and local energy infrastructure planning		x		
Better integration of variable renewable electricity and heat in urban planning		x		

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 characters maximum

40 to 50% for new buildings

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		x		
Simplify permitting and administrative procedures for the integration of renewable energy solutions in buildings		x		
Set minimum renewable energy shares for heating and cooling in national building stocks		x		
Set specific renewable energy requirements at district or neighbourhood levels, i.e. nearly zero-energy districts.		x		

Extend REDII provisions on selfconsumption, applicable to electricity, to heating and cooling	x			
Strengthen consumer information and accessibility of measures to deploy renewables in buildings' heating and cooling systems, in particular in low-income or vulnerable households			x	

Other ? Please specify.
3000 characters maximum

N/A

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 ³ .	x			
Building renovation programmes (at national, municipal and district levels) should specifically support the modernisation of heating systems by their replacement with renewable technologies		x		
Energy Performance Certificates and heating system inspections should indicate recommended dates, steps and possible options for renewable heating systems	x			
National building renovation strategies should specifically address the transition from fossil fuel to renewable and climate neutral heating with related investment plans		x		
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		x		
Information campaigns should also target heating system replacement programmes with appropriate advice and information, including regarding financing and public support opportunities and solutions		x		
Digitalization should give early warnings on the need for repair/maintenance	x			

Other ? Please specify.

³ 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).

3000 characters maximum

N/A

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

Please indicate which ones.

3000 characters maximum

Yes, a minimum amount of renewable energy could be imposed, but this should remain reasonable, adjusted to the type of energy used in each sector and increase gradually over time.

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		x		
Technical support, including training and skills development, for uptake and integration of renewables in small- and medium-size enterprises		x		
Specific innovation programmes to develop renewables- and electricity based production processes	x			
Energy audits required under the Energy Efficiency Directive should cover renewable energy used by the enterprise	x			
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	x			
Contracts for difference for zero-carbon products and services	x			

Other ? Please specify.

3000 characters maximum

N/A

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%⁴ 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.

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 characters maximum

N/A

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 fuels⁵ 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

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**

Please specify.

⁴ Member States have the right to lower their target if they set limitations on food and feed-based biofuels going beyond RED II

⁵ '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.

3000 characters maximum

All options will be needed to achieve the Green deal ambitions:

- Renewable hydrogen used in fossil refinery to produce RFNBOs as well as synthetic fuels,
- Low carbon hydrogen used in fossil refinery to produce low carbon fuels

Both production pathways will bring significant GHG savings.

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 characters maximum

N/A

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	X			
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.			X	
The fuels supply obligation should be based on GHG emissions targets to stimulate the uptake of best performing fuel options on the fuel market	X			
The level of ambition should be fixed at the same level for all Member	X			
States to create a level playing field and avoid market fragmentation	X			
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)	X			
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. ⁶	X			

Other ? Please specify.

⁶ 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.

3000 characters maximum

N/A

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		X		
Set an additional dedicated sub-target for hydrogen and hydrogen-derived synthetic fuels	X			
Allow double counting of the contribution of hydrogen and hydrogen-derived synthetic fuels towards the transport target or the fuel supplier obligation	X			

Other ? Please specify.

3000 characters maximum

We recommend applying these measures to all types of low-carbon hydrogen production : Hydrogen from natural gas coupled with CCS, hydrogen from biogas with CCS (BECCS) or without CCS, hydrogen from electrolysis using renewable or low-carbon electricity.

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		X		
Support the installation of electric vehicle chargers in households and enterprises	X			
Set stricter CO2 standards for cars			X	
Ensure the availability and interoperability of public recharging infrastructure	X			
Establish a minimum level of renewable electricity as a part of the target for renewable energy in transport			X	
Giving consumers information on whether they are recharging their electric vehicle with renewable energy		X		

Other ? Please specify.

3000 characters maximum

N/A

3.7 BIOENERGY SUSTAINABILITY

The Biodiversity Strategy⁷ 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

⁷ COM/2020/380 final

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 system⁸ 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).

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

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

Please explain your reply.

3000 characters maximum

N/A

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 (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

Please explain your answer.

3000 characters maximum

To support an increased ambition in renewables in transport, all feedstocks that meet strict sustainability criteria need to be taken into account, including but not limited to feedstocks listed in Annex IX A) and B).

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

⁸ COM/2020/381 final

- Yes, by increasing the threshold for GHG emission savings
- **No**
- Other

Please specify.

3000 characters maximum

N/A

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

Please specify.

3000 characters maximum

N/A