A sustainable bioenergy policy for the period after 2020

Fields marked with * are mandatory.

Introduction

EU Member States have agreed on a new policy framework for climate and energy, including EU-wide targets for the period between 2020 and 2030. The targets include reducing the Union's greenhouse gas (GHG) emissions by 40 % relative to emissions in 2005 and ensuring that at least 27 % of the EU's energy comes from renewable sources. They should help to make the EU's energy system more competitive, secure and sustainable, and help it meet its long-term (2050) GHG reductions target.

In January 2014, in its Communication on A policy framework for climate and energy in the period from 2020 to 2030,[1] the Commission stated that '[a]n improved biomass policy will also be necessary to maximise the resource-efficient use of biomass in order to deliver robust and verifiable greenhouse gas savings and to allow for fair competition between the various uses of biomass resources in the construction sector, paper and pulp industries and biochemical and energy production. This should also encompass the sustainable use of land, the sustainable management of forests in line with the EU's forest strategy and address indirect land-use effects as with biofuels'.

In 2015, in its Energy Union strategy,[2] the Commission announced that it would come forward with an updated bioenergy sustainability policy, as part of a renewable energy package for the period after 2020.

Bioenergy is the form of renewable energy used most in the EU and it is expected to continue to make up a significant part of the overall energy mix in the future. On the other hand, concerns have been raised about the sustainability impacts and competition for resources stemming from the increasing reliance on bioenergy production and use.

Currently, the Renewable Energy Directive[3] and the Fuel Quality Directive[4] provide an EU-level sustainability framework for biofuels[5] and bioliquids.[6] This includes harmonised sustainability criteria for biofuels and provisions aimed at limiting indirect land-use change,[7] which were introduced in 2015.[8]

In 2010, the Commission issued a Recommendation[9] that included non-binding sustainability criteria for solid and gaseous biomass used for electricity, heating and cooling (applicable to installations with a capacity of over 1 MW). Sustainability schemes have also been developed in a number of Member States.

The Commission is now reviewing the sustainability of all bioenergy sources and final uses for the period after 2020. Identified sustainability risks under examination include lifecycle greenhouse gas emissions from bioenergy production and use; impacts on the carbon stock of forests and other ecosystems; impacts on biodiversity, soil and water, and emissions to the air; indirect land use change impacts; as well as impacts on the competition for the use of biomass between different sectors (energy, industrial uses, food). The Commission has carried out a number of studies to examine these issues more in detail.

The development of bioenergy also needs to be seen in the wider context of a number of priorities for the Energy Union, including the ambition for the Union to become the world leader in renewable energy, to lead the fight against global warming, to ensure security of supply and integrated and efficient energy markets, as well as broader EU objectives such as reinforcing Europe's industrial base, stimulating research and innovation and promoting competitiveness and job creation, including in rural areas. The Commission also stated in its 2015 Communication on the circular economy[10] that it will 'promote synergies with the circular economy when examining the sustainability of bioenergy under the Energy Union'. Finally, the EU and its Member States have committed themselves to meeting the 2030 Sustainable Development Goals.

[1] COM(2014) 15.

[2] COM/2015/080 final.

[3] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (OJ L 140, 5.6.2009, p. 16).

[4] Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC (OJ L 350, 28.12.1998, p. 58).

[5] Used for transport.

[6] Used for electricity, heating and cooling.

[7] Biomass production can take place on land that was previously used for other forms of agricultural production, such as growing food or feed. Since such production is still necessary, it may be (partly) displaced to land not previously used for crops, e.g. grassland and forests. This process is known as indirect land use change (ILUC); see http://ec.europa.eu/energy/en/topics/renewable-energy/biofuels/land-use-change.

[8] See more details on the existing sustainability framework for biofuels and bioliquids in section 5.

[9] COM/2010/0011 final.

[10] Closing the loop – an EU action plan for the circular economy (COM(2015) 614/2).

1. General information about respondents

* 1.1. In what capacity are you completing this questionnaire?

- academic/research institution
- as an individual / private person
- civil society organisation
-

international organisation
- ○ other
- ○ private enterprise
- ◉ professional organisation
- ○ public authority
- ○ public enterprise

* 1.4. If you are a professional organisation, which sector(s) does your organisation represent?

- ☐ Agriculture
- ☐ Automotive
- ☐ Biotechnology
- ☐ Chemicals
- ☑ Energy
- ☐ Food
- ☐ Forestry
- ☐ Furniture
- ☐ Mechanical Engineering
- ☐ Other
- ☐ Printing
- ☐ Pulp and Paper
- ☐ Woodworking

1.5. If you are a professional organisation, where are your member companies located?

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

- [ ] Romania
- [ ] Slovakia
- [ ] Slovenia
- [ ] Spain
- [x] Sweden
- [ ] United Kingdom
- [ ] non-EU country(ies)

1.8. If replying as an individual/private person, please give your name; otherwise give the name of your organisation

200 character(s) maximum

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Energiföretagen Sverige AB (Swedenergy AB)
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1.9. If your organisation is registered in the Transparency Register, please give your Register ID number.

(If your organisation/institution responds without being registered, the Commission will consider its input as that of an individual and will publish it as such.)

200 character(s) maximum

1.10. Please give your country of residence/establishment

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

- ○ Portugal
- ○ Romania
- ○ Slovakia
- ○ Slovenia
- ○ Spain
- ◉ Sweden
- ○ United Kingdom
- ○ Other non-EU European country
- ○ Other non-EU Asian country
- ○ Other non-EU African country
- ○ Other non-EU American country

* 1.11. Please indicate your preference for the publication of your response on the Commission's website:
(Please note that regardless the option chosen, your contribution may be subject to a request for access to documents under Regulation 1049/2001 on public access to European Parliament, Council and Commission documents. In this case the request will be assessed against the conditions set out in the Regulation and in accordance with applicable data protection rules.)

- ◉ Under the name given: I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication.
- ○ Anonymously: I consent to publication of all information in my contribution and I declare that none of it is subject to copyright restrictions that prevent publication.
- ○ Please keep my contribution confidential. (it will not be published, but will be used internally within the Commission)

Perceptions of bioenergy

2.1. Role of bioenergy in the achievement of EU 2030 climate and energy objectives

Please indicate which of the statements below best corresponds to your perception of the role of bioenergy in the renewable energy mix, in particular in view of the EU's 2030 climate and energy objectives:

- ○ Bioenergy should continue to play a dominant role in the renewable energy mix.
- ◉ Bioenergy should continue to play an important role in the renewable energy mix, but the share of other renewable energy sources (such as solar, wind, hydro and geothermal) should increase significantly.
- ○ Bioenergy should not play an important role in the renewable energy mix: other renewable energy sources should become dominant.

2.2. Perception of different types of bioenergy

Please indicate, for each type of bioenergy described below, which statement best corresponds to your perception of the need for public (EU, national, regional) policy intervention (tick one option in each line):

	Should be further promoted	Should be further promoted, but within limits	Should be neither promoted nor discouraged	Should be discouraged	No opinion
Biofuels from food crops	○	○	○	●	○
Biofuels from energy crops (grass, short rotation coppice, etc.)	●	○	○	○	○
Biofuels from waste (municipal solid waste, wood waste)	●	○	○	○	○
Biofuels from agricultural and forest residues	●	○	○	○	○
Biofuels from algae	●	○	○	○	○
Biogas from manure	●	○	○	○	○
Biogas from food crops (e.g. maize)	○	○	○	●	○
Biogas from waste, sewage sludge, etc.	●	○	○	○	○
Heat and power from forest biomass (except forest residues)	●	○	○	○	○
Heat and power from forest residues (tree tops, branches, etc.)	●	○	○	○	○

Heat and power from agricultural biomass (energy crops, short rotation coppice)	◉	○	○	○	○
Heat and power from industrial residues (such as sawdust or black liquor)	◉	○	○	○	○
Heat and power from waste	◉	○	○	○	○
Large-scale electricity generation (50 MW or more) from solid biomass	◉	○	○	○	○
Commercial heat generation from solid biomass	◉	○	○	○	○
Large-scale combined heat and power generation from solid biomass	◉	○	○	○	○
Small-scale combined heat and power generation from solid biomass	◉	○	○	○	○
Heat generation from biomass in domestic (household) installations	○	○	○	◉	○
Bioenergy based on locally sourced feedstocks	◉	○	○	○	○

Bioenergy based on feedstocks sourced in the EU	◉	○	○	○	○
Bioenergy based on feedstocks imported from non-EU countries	◉	○	○	○	○
Other	◉	○	○	○	○

Please specify the "other" choice

200 character(s) maximum

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Other: district cooling based on forest or waste residues  should be promoted.
We refer to EU's Heating and Cooling strategy. Bioenergy should origin from
sustainable sources based on market situation
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3. Benefits and opportunities from bioenergy

3.1. Benefits and opportunities from bioenergy

Bioenergy (biofuel for transport, biomass and biogas for heat and power) is currently promoted as it is considered to be contributing to the EU's renewable energy and climate objectives, and also having other potential benefits to the EU economy and society.

Please rate the contribution of bioenergy, as you see it, to the benefits listed below (one answer per line):

	of critical importance	important	neutral	negative	No opinion
Europe's energy security: safe, secure and affordable energy for European citizens	◉	○	○	○	○
Grid balancing including through storage of biomass (in an electricity system with a high proportion of electricity from intermittent renewables)	◉	○	○	○	○
Reduction of GHG emissions	◉	○	○	○	○
Environmental benefits (including biodiversity)	◉	○	○	○	○

Resource efficiency and waste management	◉	○	○	○	○
Boosting research and innovation in bio-based industries	◉	○	○	○	○
Competitiveness of European industry	◉	○	○	○	○
Growth and jobs, including in rural areas	◉	○	○	○	○
Sustainable development in developing countries	○	○	○	○	◉
Other	○	○	○	○	○

3.2. Any additional views on the benefits and opportunities from bioenergy? Please explain

2500 character(s) maximum

1) Bioenergy dominates the use of renewable energy in the EU and is a key element in achieving ambitious climate targets at the same time as promoting security of supply and competitiveness of European industry. There is a large potential to increase the use of biomass from sustainable supply chains, especially in member states with good natural conditions and potential for agricultural and forestry industry.
2) The current level of national and EU policy should be considered sufficient to deal with sustainability risks from the supply chain, and biomass that fulfil all relevant legislation should be considered sustainable.
3) It is from a trade, competition and market distortion risk perspective important that sustainability criteria do not apply only to one sector. All sectors demanding the same raw material should take the same responsibilities. It is not relevant to differentiate between different types of end-use of the biomass.
4) Bioenergy is the dominant renewable energy source in EU. To succeed the transformation from a fossil fuel based energy system into a renewable energy system, the use of bioenergi will be of crucial importance also in the future.

5) Bioenergy has an important role to play in decarbonizing the energy sector. We believe biomass has an important role to play in both the power and heat sector, including through the use of efficient and flexible CHPs and on balancing the fluctuating production of other renewable sources. But grid balancing, also contribute to stabilization of the power system caused by fluctuation in the system.
6) Increased integration of the electricity and heating sector will be key for achieving the European energy and climate ambitions. District Heating, CHP, and "power to district heating" concepts using excess power from renewable energies offer substantial potential to increase renewable-based heating, and

will enable higher levels of fluctuating renewable sources in the energy system. Bioenergy CHP can contribute to this integration of the power and heat sector in a sustainable and CO2 neutral manner.

4. Risks from bioenergy production and use

4.1. Identification of risks

A number of risks have been identified (e.g. by certain scientists, stakeholders and studies) in relation to bioenergy production and use. These may concern specific biomass resources (agriculture, forest, waste), their origin (sourced in the EU or imported) or their end-uses (heat, electricity, transport).

Please rate the relevance of each of these risks as you see it (one asnwer per line):

	critical	significant	not very significant	non-existent	No opinion
Change in carbon stock due to deforestation and other direct land-use change in the EU	○	○	○	◉	○
Change in carbon stock due to deforestation and other direct land-use change in non-EU countries	○	◉	○	○	○
Indirect land-use change impacts	○	○	◉	○	○
GHG emissions from the supply chain (e.g. cultivation, processing and transport)	○	○	◉	○	○
GHG emissions from combustion of biomass (‘biogenic emissions’)	○	○	◉	○	○
Impacts on air quality	○	○	◉	○	○
Impacts on water and soil	○	○	◉	○	○
Impacts on biodiversity	○	○	◉	○	○

Varying degrees of efficiency of biomass conversion to energy	○	○	◉	○	○
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks and/or subsidies for specific uses	○	○	◉	○	○
Internal market impact of divergent national sustainability schemes	○	○	○	◉	○
Other	○	○	○	○	○

4.2. Any additional views on the risks from bioenergy production and use? Please explain

2500 character(s) maximum

1) The outlined risks differ strongly between feedstock type. Our focus in the reply is on solid biomass. In our answers we have considered current biomass volumes and sources and expectations for coming years. Following sustainability criteria and national and European legislations, there will not be any risk of change in carbon stock in the EU.
2) All use of land has impact on the biosphere. The use of land should be regulated by national authorities that have the competence to judge how the land should be used in the perspective of the utility of the society. Potential sustainability criteria other than national forest or land use policies should be on the user of the land, i.e. the biomass producer. The end user of biomass has less possibilities to influence the direct production, and assure the quality of the processes in the value chain.
3) If sustainability criteria for solid biomass, apart from national forest policy, should be developed for import from countries outside EU, it should be possible to fulfill those criteria by use of existing regulation as EU-TR but with supplement as with GHG-verification, or established international sustainability certification systems such as FSC, PEFC or SBP (Sustainable Biomass Partnership).
4) Potential risks from biomass production are typically handled by national land use or forest policies. Potential risks are also possible to handle within a system for sustainability criteria. To handle the risks in such a system, the responsibility for fulfillment of sustainability criteria should be put on the producer, not the end-user. Other risks that can be avoided by the responsibility of sustainability criteria on the producer, is the risk of distortion between sectors that uses biomass as raw material. With the responsibility of fulfillment of sustainability criteria on the end user, the market for users of biomass raw material will be distorted.
5) The demand on fulfillment of sustainability LCA, biodiversity and social

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aspects should not differ between fossil fuel and biomass.
6) Swedish large scale plants have high-level flue-gas and water cleaning
system while domestic small scale wood boilers could be a danger for public
health.
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5. Effectiveness of existing EU sustainability scheme for biofuels and bioliquids

In 2009, the EU established a set of sustainability criteria for biofuels (used in transport) and bioliquids (used for electricity and heating). Only biofuels and bioliquids that comply with the criteria can receive government support or count towards national renewable energy targets. The main criteria are as follows:

- Biofuels produced in new installations must achieve GHG savings of at least 60 % in comparison with fossil fuels. In the case of installations that were in operation before 5 October 2015, biofuels must achieve a GHG emissions saving of at least 35 % until 31 December 2017 and at least 50 % from 1 January 2018. Lifecycle emissions taken into account when calculating GHG savings from biofuels include emissions from cultivation, processing, transport and direct land-use change;
- Biofuels cannot be grown in areas converted from land with previously (before 2008) high carbon stock, such as wetlands or forests;
- Biofuels cannot be produced from raw materials obtained from land with high biodiversity, such as primary forests or highly biodiverse grasslands.

In 2015, new rules[1] came into force that amend the EU legislation on biofuel sustainability (i.e. the Renewable Energy Directive and the Fuel Quality Directive) with a view to reducing the risk of indirect land-use change, preparing the transition to advanced biofuels and supporting renewable electricity in transport. The amendments:

- limit to 7 % the proportion of biofuels from food crops that can be counted towards the 2020 renewable energy targets;
- set an indicative 0.5 % target for advanced biofuels as a reference for national targets to be set by EU countries in 2017;
- maintain the double-counting of advanced biofuels towards the 2020 target of 10 % renewable energy in transport and lay down a harmonised EU list of eligible feedstocks; and
- introduce stronger incentives for the use of renewable electricity in transport (by counting it more towards the 2020 target of 10 % renewable energy use in transport).

[1] Directive (EU) 2015/1513 of the European Parliament and of the Council of 9 September 2015 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources (OJ L 239, 15.9.2015, p. 1).

5.1. Effectiveness in addressing sustainability risks of biofuels and bioliquids

In your view, how effective has the existing EU sustainability scheme for biofuels and bioliquids been in addressing the risks listed below? (one answer per line)

	effective	partly effective	neutral	counter-productive	No opinion
GHG emissions from cultivation, processing and transport	○	●	○	○	○
GHG emissions from direct land-use change	○	●	○	○	○
Indirect land-use change	○	○	●	○	○
Impacts on biodiversity	○	●	○	○	○
Impact on soil, air and water	○	●	○	○	○

Any additional comments?

2500 character(s) maximum

1) The EU sustainability scheme for biofuels has been partly effective in addressing the risks listed above, as in most cases the responsibility of fulfillment of the sustainability criteria lies upon the producer/supplier of the biofuel (except for bio liquids used in heating and electricity sector, where the responsibility lies on the end user).
2) Responsibility of fulfillment on the producer of the biomass secures equal competition between sectors that uses biomass as raw material of their products. In other case, it is inefficient as a policy instrument since the responsibility for fulfillment lies far from the actors in the value chain that has the best possibilities to fulfill the criteria.
3) If the responsibility of sustainability criteria fulfillment lies on the user of the biomass, the criteria will be more difficult to fulfill, or fulfilled in an inefficient and costly manner since the end user of the biomass has less possibilities to influence the direct production, and to assure the quality of the processes in the value chain.
4) The new rules that came into force 2015 directing ILUC, has been into force to short of time to show any effects and therefore difficult to evaluate the indirect land use change .
5) Life cycles emissions of fossil fuel shall be considered, not only biofuels. The Fuel Quality Directive that has put requirement on reporting and targets for emissions reductions of fuels in general is not expected to be continued, which poses an important question on how requirements on fossil fuels will be taken forward post 2020.
6) It is important to eliminate the possibilities of double counting of advanced bio fuels. The possibility of double counting is limiting the overall ambition level needed to achieve renewable targets in the transport sector and

have negative effects of competition for different inputs for fuel.
7) There are requirements on biofules originated from land use but no requirements are obligatory on 98% of land use for food production. Sustainability criteria should be implemented for all sectors. The same applies to fossil fuels.
8) For biogas, the calculation of climate performance within the RED should be updated so that the system perspective makes it possible to consider the full reduction of carbon emissions associated with production of biogas from manure as well as from the replacement of industrial fertilizers with digestate.

5.2. Effectiveness in promoting advanced biofuels

In your view, how effective has the sustainability framework for biofuels, including its provisions on indirect land-use change, been in driving the development of 'advanced' biofuels, in particular biofuels produced from ligno-cellulosic material (e.g. grass or straw) or from waste material (e.g. waste vegetable oils)?

- ○ very effective
- ○ effective
- ○ neutral
- ◉ counter-productive
- ○ no opinion

What additional measures could be taken to further improve the effectiveness in promoting advanced biofuels?

2500 character(s) maximum

Regarding double counting and the phase-in of advanced biofuels, it is important to eliminate the possibilities of double counting of advanced bio fuels. The possibility of double counting is limiting the overall ambition level needed to achieve renewable targets in the transport sector and have negative effects of competition for different inputs for fuel. The phase-in of bio fuels should be based on climate efficiency, where the definition of advanced biofuels should be based on a high criteria for carbon emission reduction of the fuels rather than arbitrary lists of fuels considered to be advanced or not. Sustainability criteria should be based on requirements to be fulfilled by individual fuel/biomass supply chains rather than lists of biomass types considered to be sustainable or not or advanced or not. The existing definition of first and second generation of biofuels or advanced biofuels is not consistent and counter-productive.

5.3. Effectiveness in minimising the administrative burden on operators

In your view, how effective has the EU biofuel sustainability policy been in reducing the administrative burden on operators placing biofuels on the internal market by harmonising sustainability requirements in the Member States (as compared with a situation where these matter would be regulated by national schemes for biofuel sustainability)?

- ○ very effective
- ○ effective
- ◉ not effective
- ○ no opinion

What are the lessons to be learned from implementation of the EU sustainability criteria for biofuels? What additional measures could be taken to reduce the administrative burden further?

2500 character(s) maximum

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1) If sustainability criteria shall exist, it is correct to harmonise
sustainability schemes. An increased harmonisation will support a growing
market. To support a growing market, to increase the harmonisation and
efficiency of the scheme, the responsibility of the fulfilment of the criteria
should consistently be on the producer of the biofuel. By that, the risks of
market distortions will be minimised and the trade flows will be more
efficient. More efficient trade flows means lower prices to the end users or
the consumers.
2) A risk-based approach should be taken to defining sustainability criteria..
Experience shows that the administrative burden and costs of the
sustainability criteria for biofuels have in general been high, which
especially affects smaller actors in the business. With a risk-based approach,
measures are not imposed generally on all biofuels but would instead focus on
concentrating measures to areas where significant risks have been identified.
3)  Additional measures that need to be taken to harmonise the EU
sustainability schemes, to reduce the administrative burdens and to remove
barriers to trade, are to solve problems that arise when implementing the
sustainability scheme. An example of such a measure that needs to be taken to
remove trade barriers is to deal with issues that arise from import and export
of biogas via pipelines, where a decision from the Court of Justice of the
European Union is pending to clarify if it is legally possible to fulfil the
sustainability criteria when biogas is distributed through gas networks cross
border.
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5.4. Deployment of innovative technologies

In your view, what is needed to facilitate faster development and deployment of innovative technologies in the area of bioenergy? What are the lessons to be learned from the existing support mechanisms for innovative low-carbon technologies relating to bioenergy?

2500 character(s) maximum

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1) Technology specific support risk distorting the market and hinder
innovation both for biofuels and for technology development. Technical
development should be supported primarily by the Eco-design directive.
However, clear signals on the strategic use of sustainable biofuels are needed
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to support long-term investment, investors need to see that there is a market for biofuels also in the future. Without clear signals of the seriousness of the development, both market development and innovation is hindered.
2) Need of long term target for renewables in the transport sector after 2020
3) Today there is a situation where many demonstration and innovation projects in the biofuels area that have received support from EU funds have been put on hold due to the uncertainties regarding long term direction of EU bioenergy policy.
4) In the field of advanced biofuels based on forest biomass there is a growing concern that the negative attitudes towards food crops would also in the next step spread to other areas of biomass. This lack of certainty of future direction of policy and firm base for decision on what is to be labelled sustainable in the longer time frame negatively affects innovation in bioenergy.
5) There is need of bridging projects from research to economical viable products but the driving force should come from companies rather than research institutes.

6. Effectiveness of existing EU policies in addressing solid and gaseous biomass sustainability issues

6.1. In addition to the non-binding criteria proposed by the Commission in 2010, a number of other EU policies can contribute to the sustainability of solid and gaseous bioenergy in the EU. These include measures in the areas of energy, climate, environment and agriculture.

In your view, how effective are current EU policies in addressing the following risks of negative environmental impacts associated with solid and gaseous biomass used for heat and power? (one answer per line)

	effective	partly effective	neutral	counter-productive	No opinion
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in the EU	◉	○	○	○	○
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in non-EU countries	○	◉	○	○	○
Indirect land-use change impacts	○	○	◉	○	○

GHG emissions from supply chain, e.g. cultivation, processing and transport	○	●	○	○	○
GHG emissions from combustion of biomass ('biogenic emissions')	●	○	○	○	○
Air quality	●	○	○	○	○
Water and soil quality	●	○	○	○	○
Biodiversity impacts	●	○	○	○	○
Varying degrees of efficiency of biomass conversion to energy	●	○	○	○	○
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks	○	○	●	○	○
Other	○	○	○	○	○

6.2. Any additional views on the effectiveness of existing EU policies on solid and gaseous biomass? Please explain

2500 character(s) maximum

1) Existing EU and national policies is considered sufficient to fulfil sustainability requirements within EU member states. For non-EU countries where existing legislation is not considered sufficient to fulfil sustainability requirements, multilateral agreements and voluntary initiatives and certification schemes should be used to verify compliance with sustainability criteria.
2) The responsibility of the fulfilment of the sustainability criteria should lie on the producers of the biomass raw material and be binding for all biomass, not only energy producers.
3) The current EU-policy that biomass has no carbon foot-print is in the line with ambition to increase the share of biomass. However, some organizations claims that biomass is not CO2-neutral. This assumption is wrong and a big threat against an increase of share of biomass. In Sweden more trees are planted than harvested yearly (and that is legislated in the law) which means that more carbon is stored in the forest than released from combustion. The origin for the misunderstanding on biomass CO2-netrality is that the LCA analysis is done based on a tree or a segment of trees. There is only one

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forest in Sweden, extremely large,  and it grows. Use of biomass for different
purposes including energy recovery does not contribute to increase of
GHG-emissions.
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7. Policy objectives for a post-2020 bioenergy sustainability policy

7.1. In your view, what should be the key objectives of an improved EU bioenergy sustainability policy post-2020? Please rank the following objectives in order of importance: most important first; least important 9th/10th (you can rank fewer than 9/10 objectives):

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Contribute to climate change objectives	○	○	●	○	○	○	○	○	○	○
Avoid environmental impacts (biodiversity, air and water quality)	○	○	○	○	●	○	○	○	○	○
Mitigate the impacts of indirect land-use change	○	○	○	○	○	○	○	○	●	○
Promote efficient use of the biomass resource, including efficient energy conversion	●	○	○	○	○	○	○	○	○	○
Promote free trade and competition in										

the EU among all end-users of the biomass resource	○	●	○	○	○	○	○	○	○	○
Ensure long-term legal certainty for operators	○	○	○	●	○	○	○	○	○	○
Minimise administrative burden for operators	○	○	○	○	○	○	●	○	○	○
Promote energy security	○	○	○	○	○	●	○	○	○	○
Promote EU industrial competitiveness, growth and jobs	○	○	○	○	○	○	○	●	○	○
Other	○	○	○	○	○	○	○	○	○	○

7.2. Any other views? Please specify

2500 character(s) maximum

1) It is difficult to prioritize the targets since they are all important. The most important aspects of receiving the results (however they are prioritized) are firstly to use national forest or land use policies to achieve sustainability regarding land use or forestry. Secondly, if sustainability schemes apart from national land use policies and regulations shall exists, it is important to harmonize by putting the responsibility of fulfillment of the criteria on the producer of the biomass raw material.
2) Solid biomass and forestry policy is of national concern. Thus EU should avoid to introduce any regulation in this area.
3) Legislation should be at the national level but EU should give the framework and harmonize.
4) It is important to increase the harmonization by putting the responsibility of fulfillment of the criteria on the producer of the biomass raw material and also to put the same demands on fossil fuels as on biomass, i.e. introduce sustainability criteria on fossil fuel producers as well.
5) Sustainability criteria should ensure that the biomass used contributes to climate change mitigation by setting GHG-requirements for the whole value chain and that negative environmental impacts are avoided. Thereby public acceptance of the biomass use would be increased and allow biomass to also contribute to the energy security of the EU by providing firm capacity in a system relying increasingly on variable renewable generation. European criteria would ensure long-term legal certainty for operators by ending the current patchwork of national sustainability criteria regulations. This in turn would promote the free trade, long term investments and competition in the EU.

8. EU action on sustainability of bioenergy

8.1. In your view, is there a need for additional EU policy on bioenergy sustainability?

- (●) No: the current policy framework (including the sustainability scheme for biofuels and bioliquids, and other EU and national policies covering solid and gaseous biomass) is sufficient.
- ( ) Yes: additional policy is needed for solid and gaseous biomass, but for biofuels and bioliquids the existing scheme is sufficient.
- ( ) Yes: additional policy is needed on biofuels and bioliquids, but for solid and gaseous biomass existing EU and national policies are sufficient.
- ( ) Yes: a new policy is needed covering all types of bioenergy.

8.2. In your view, and given your answers to the previous questions, what should the EU policy framework on the sustainability of bioenergy include? Please be specific

5000 character(s) maximum

1) If an additional policy instruments on bioenergy sustainability shall be introduced, it is important that the responsibility for fulfilment lies on the producer of the biomass. Only then it is possible to ensure competition neutrality between sectors and actors participating on the market for biomass. Thereby, it is the only way of avoiding market distortions.
2) For non-EU countries where existing legislation is not considered sufficient to fulfil sustainability requirements, already existing regulation as EU-TR but with supplement as with GHG-verification, multilateral agreements and voluntary initiatives or established international sustainability certification systems such as FSC, PEFC or SBP (Sustainable Biomass Partnership) should be used to verify compliance with sustainability criteria.
In our view, a sustainability policy for solid biomass should include:
• Sustainable Forest Management (SFM) requirements based on existing EU policies;
• GHG-requirements for the entire supply chain
• Data gathering to enable monitoring of carbon stock developments in key biomass supply regions.

9. Additional contribution

Do you have other specific views that could not be expressed in the context of your replies to the above questions?

5000 character(s) maximum

2.1 We suggest that the statement under 2.1 should be "Bioenergy should continue to play an important role in the renewable energy mix, and the share of other renewable energy sources (such as solar, wind, hydro and geothermal) should increase significantly." We cannot see any contradiction that all renewable energy should play a role.

2.1 Waste-to-energy connected to district heating will support a resource and energy efficient system whereby a developed waste management to follow the waste hierarchy will be necessary.
2.2 There should be requirements on sustainability of biofuels, especially when imported from Non-European countries. Waste-to-energy should be done according to waste hierarchy. No difference on plant size if forest residues but important to consider the resource efficiency criteria. All Technologies should be economically viable and competition should be done based on market roles.
Promote does not include financial support.
3.2. If sustainability criteria, apart from national forest policy, should be developed, it should be a voluntary choice based on international sustainability certification system such as FSC, PFSC or SBP. If sustainability criteria, other than national forest policy, shall be introduced, the responsibility for fulfilment of the sustainability criteria should be on the producers of the biomass. The sustainability criteria should then include all sectors and all countries within and outside EU. Responsibility of fulfilment on the producer of the biomass secures equal

competition between all sectors that uses biomass as raw material of their products. If the responsibility of sustainability criteria fulfilment lies on the user of the biomass, the criteria will be more difficult to fulfil, or fulfilled in an inefficient and costly manner since the end user of the biomass has less possibilities to influence the direct production, and to assure the quality of the processes in the whole value chain. Sustainability criteria would, with such a set-up, be inefficient as a policy instrument since the responsibility for fulfilment lies far from the actors in the value chain that has the best possibilities to fulfil the criteria. The demand on fulfilment of sustainability criteria should not differ between renewable energy or fossil energy.
- EU policy must taken into consideration the difference between the forest, land, and climate conditions in south and north Europe.
- With respect to direct land use change, it is our view that for forest biomass the fraction going to bioenergy normally constitutes a minority share of the total value of the harvest. As such bioenergy is not the main driver of the harvest. We therefore don't expect direct land-use change or deforestation within or outside the EU caused by the demand for biomass for energy.
- The risk of indirect land use change is limited to (large scale) dedicated energy crop plantations. The use of residues and co-products from existing forests, the dominant feedstock today and in the coming years, does not constitute an ILUC risk.
- GHG savings of bioenergy for heat and power, taking into account the full supply chain, typically amount to more than 80%.
- For processing residues such as saw dust it should be sufficient to ensure compliance with the EU Timber Regulation and the GHG criteria. This is consistent with the requirements on processing residues for bio-oils and bioliquids in the RED. The justification of this is that the use of such residues do not create significant SFM risks as these SFM risks are located in the forest operations and the use of these residues has little or no impact on these forest operations.
- Regarding double counting and the phase-in of advanced biofuels, it is important to eliminate the possibilities of double counting of advanced bio fuels. The possibility of double counting is limiting the overall ambition level needed to achieve renewable targets in the transport sector and have negative effects of competition for different inputs for fuel. The phase-in of bio fuels should be based on climate efficiency, where the definition of advanced biofuels should be based on a high criteria for carbon emission reduction of the fuels rather than arbitrary lists of fuels considered to be advanced or not. Sustainability criteria should be based on requirements to be fulfilled by individual fuel/biomass supply chains rather than lists of biomass types considered to be sustainable or not or advanced or not. The existing definition of first and second generation of biofuels or advanced biofuels is not consistent and counter-productive.

Finally, you may upload here any relevant documents, e.g. position papers, that you would like the European Commission to be aware of.

Thank you for participation to the consultation!

Contact

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