

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

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

200 character(s) maximum

Heinz KOPETZ

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):

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	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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from waste (municipal solid waste, wood waste)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from agricultural and forest residues	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from algae	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from manure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from food crops (e.g. maize)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from waste, sewage sludge, etc.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest biomass (except forest residues)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest residues (tree tops, branches, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

Bioenergy based on feedstocks sourced in the EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks imported from non-EU countries	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

construction of new district heating grids as prerequisite for a growing role of biomass in heating

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grid balancing including through storage of biomass (in an electricity system with a high proportion of electricity from intermittent renewables)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of GHG emissions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental benefits (including biodiversity)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Resource efficiency and waste management	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boosting research and innovation in bio-based industries	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitiveness of European industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Growth and jobs, including in rural areas	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable development in developing countries	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

increased protein supply by 1st gen biofuels: one ha corn delivers 1.9toe ethanol and 1.9 ton soybean cake equivalent. More 1st gen biofuels in Europe reduce pressure on land for soybeans worldwide!

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

2500 character(s) maximum

3.2.1 Biomass as energy storage

Biomass is stored solar energy; it is the cheapest energy storage. Flexible heating systems based on biomass combined with power to heat installations can use excess electricity. Doing so electricity is indirectly stored in biomass - the cheapest storage solution. In addition, cogeneration units based on biomass can compensate for the intermittency of electricity generated from wind and solar..

3.2.2 Bioenergy and COP 21:

The key benefit: biomass has the potential to replace a considerable part of the completely unsustainable fossil fuels, especially in the heat and transport sector. From Art 4 of the Paris Agreement follows that fossil fuels in Europe should be almost deleted within 35 years. 2013 Europe used 1231 Mtoe fossil fuels. Based on a linear reduction strategy the use of fossil fuels should be below 700 Mtoe by 2030, below 380 Mtoe by 2040 and below 60 Mtoe by 250. Renewables and better efficiency should compensate for this loss of fossil fuels. Yet by 2013, renewables contributed only 197Mtoe, hereof 128 Mtoe bioenergy, 32 Mtoe hydro and 37 wind, solar and geothermal energy. The outcome of Paris means:

The EC needs urgently a new climate and energy strategy; the current targets

(27% RES and minus 40% GHG emission by 2030) are not sufficient at all. By 2030 more than 500 Mtoe renewables are needed, this is about 40% of the total demand.

This fast transition can only be reached if bioenergy is pushed much stronger in the next years. One scenario would be a doubling of bioenergy and a 6 fold increase of energy from wind, solar and geothermal from 2013 to 2030. Instead of elaborating on dispensable new burdens and barriers for biomass production,

the EC (European Commission) is urged to create a positive framework to boost the biomass production within the EU and take full advantage of the capacities of the European agriculture and forestry. A strong growth of bioenergy is essential to comply with the COP 21 targets.

further benefits:

3.2.3 first generation biofuels from Europe improve the food security, because

- they not only deliver energy but also protein and
- they allow a flexible use of the harvest in periods of unforeseen food shortages
- they allow to maintain the production capacity and to derive benefits from the productive capacity of the European agriculture.

3.2.4 bioenergy creates new jobs in rural areas
detailed comments see under 9 and attachement!!

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

Change in carbon stock due to deforestation and other direct land-use change in non-EU countries	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from the supply chain (e.g. cultivation, processing and transport)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Impacts on air quality	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on water and soil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks and/or subsidies for specific uses	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal market impact of divergent national sustainability schemes	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

risk of indirect promotion of fossil fuels by creating new burdens for bioenergy
risk of not complying with the Paris accord and accelerated climate change by new limitations for bioenergy

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

2500 character(s) maximum

Biomass for energy is part of the European agriculture and forest economy- This sector operates in a sustainable manner on the basis of comprehensive European and national regulations for agriculture and forestry.. In Europe the carbon stock in forests is growing, especially in those countries with a strong bioenergy sector like Sweden or Austria. There is no need for further binding sustainability criteria on European level for biomass originating from the member states. The result would be more additional bureaucracy, higher cost, less biomass and finally more fossil fuels and CO2 emissions.

The largest risks are additional burdens and obstacles that hinder the growth of bioenergy and support the continued use of fossil fuels at a far too high level. With each ton of fossil fuels carbon is transferred from the earth crust to the atmosphere thus accelerating climate change. The main concern has to be how to stop using fossil fuels to avoid a climate disaster. The EU is urgently required to bring forward serious solutions for the real risks of the European energy system with a clear focus on fossil fuels instead of creating a needless sideshow on bioenergy.

The GHG emissions in the supply chain are not a specific risk, they are just a fact: as long as the energy system is dominated by fossil fuels each economic activity is connected with GHG emissions. To reduce these emissions the use of fossil fuels in the energy system has to be reduced but not the use of biomass.

Complains about the competition between different users of biomass are normal in a market economy. Those who try to reduce the use of biomass for energy to get rid of competitors are concerned about the profitability of their business, which is normal and part of their job. They do not care about climate change and how to replace fossil fuels.

Yet it would be a historical fault if public authorities sacrifice the common goal of climate mitigation for the sake of financial interests of companies. The EC has been influenced by market actors in this direction. Under the smokescreen of the "Cascading principle" there are unqualified attempts to create planned economy rules for biomass. The EC has to stop these misleading concepts. Market conditions shall optimize the flow of raw materials. Each economic activity needs energy and raw materials. There is no reason why biomass for material use is better than for energy.

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

GHG emissions from direct land-use change	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on soil, air and water	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any additional comments?

2500 character(s) maximum

At the beginning the promotion of 1st generation biofuels served three objectives: better security of supply, climate mitigation and rural development. The discussion was narrowed down to issues of land use change and sustainability aspects.

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Land use change: the land use in a country is changing permanently. This change is driven by many factors: higher productivity and new technologies in agriculture, changing import and export flows of agricultural commodities, land use for cities, infrastructure, ecological focus areas, leisure activities, increasing areas of abandoned land etc. Although all these changes have an impact on carbon stocks and carbon flows nobody cares.

However, if land is used to produce biomass for energy a complicated model is applied to limit this development. The issue of land use change is exploited to limit biomass for energy and thus protect the fossil fuel industry.

No doubt, forests and fertile farm land have to be protected by government policies in order to have sufficient land for food, feed, raw materials and energy. Food production has to have priority. But it is better, to use farm land not needed for food production, for energy than the land is abandoned and the use of fossil fuels goes on.

The ceiling of 7% for 1st gen. fuels was a throwback. This change of rules during a given period undermined the confidence into the European policy with the effect that investors now go abroad and avoid investment in Europe. This decision also ignores other aspects:

- Productivity gains in agriculture with the effect that less land is needed for food production
- Reduced need of land for sugar beets in the future due to imports and new technologies,
- the fact, that due to rules of agronomy the potential to produce ethanol in Europe is bigger than the potential for vegetable oils as feedstock for biodiesel..

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The subject of biofuels includes a variety of aspects and should not be

reduced to narrowly defined sustainability rules. A new long run approach for the development of 1st gen biofuels and advanced biofuels from Europe for Europe should be elaborated.

International trade with biofuels on the basis of sustainability criteria similar to Europe is needed but not limitless. In the future countries that want to export biofuels to Europe have to prove that they use an adequate share of biofuels at home. According to the Agreement of Paris all states have to delete the use of fossil fuels!

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

The EC has great merits in pushing research and demonstration in favour of advanced biofuels. This is positive. The promotion of advanced biofuels into the market is a different and delicate issue, because the production cost are rather high and the feedstock availability for big plants is limited in many parts of Europe.

Advanced biofuels, especially cellulosic ethanol, have their chance and importance in regions with an abundance of cellulosic material and a modest or zero use of fossil fuels for residential heating. In Europe these criteria might fit to Scandinavian countries, worldwide to countries in tropical regions with sugar cane production or short rotation coppices and in regions with an abundance of not used straw or other by-products.

Because these criteria do not fit for most of the European countries, the European policy should permit member states to implement their own support schemes for the promotion of advanced biofuels if they see the need to do this in their country.

An European wide system causes problems as can be seen with the concept of double counting. Double counting means that the targets for biofuels are finally halved. In addition it creates considerable problems to define the

feedstock, eligible for double counting, if waste becomes the main feedstock for advanced biofuels.

If the EC tries to support strongly advanced biofuels especially cellulosic ethanol in regions with heating systems based on gas or oil the result will be expensive and inefficient. Obviously it is cheaper and more efficient to replace oil and gas in the heating sector with wood, pellets, straw or other cellulosic material than to transform this feedstock to liquids and go on with fossil fuels for heating.

To conclude: Given a defined quantity of biomass, the promotion of advanced biofuels can be seen as a sub-target, the primary target should be to use this biomass in order to replace a maximum quantity of fossil fuels with minimum cost for the consumers.

The best strategy to support efficient solutions in the use of biomass is the implementation of carbon taxes based on the quantity of CO₂ emissions of fossil fuels. As a consequence fossil fuels for heating, for transport will be more expensive and in a market economy consumer will decide how to use solid biomass - for heating or for transport.

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

5.3 Effectiveness in minimising the administrative burden on operators
Reviews and turnarounds during a given time period - as in the last years in Europe -are extremely disadvantageous for the sector and stop the willingness to invest. Among investors for biofuels now countries in the Americas and Asia are the favourite place to go and Europe got the reputation of unreliable and bureaucratic.

A way out would be to declare: Any feedstock produced within the EU and complying to common rules (Cross Compliance, Natura 200 etc.,) national regulations (environmental protecting laws, forest laws) or voluntary

certification schemes such as PEFC have to be granted as sustainable without any additional administrative burden or costs.

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

A solid and stable regulatory framework beyond 2020 is needed to encourage continued investment in innovative technologies. But the focus should not only be on innovative technologies.

After PARIS Europe has to build up a new fossil free energy system based on renewables within one generation's time. Concerning bioenergy this new system has to be based on existing well proven biomass to energy technologies as well as on new innovative ones. The focus should not be only on innovative technologies but on the transformation of the energy system with well proven available technologies and new innovative one.

Key instruments to support all forms of technologies for bioenergy are: the deletion of all forms of subsidies and support for fossil and nuclear energies and the introduction of carbon taxes. Especially during a period of low oil prices carbon taxes are crucial to promote energy efficiency and all renewables.

A solid and stable regulatory framework beyond 2020 is needed to encourage continued investment in innovative technologies. But the focus should not only be on innovative technologies.

After PARIS Europe has to build up a new fossil free energy system based on renewables within one generation's time. Concerning bioenergy this new system has to be based on existing well proven biomass to energy technologies as well as on new innovative ones. The focus should not be only on innovative technologies but on the transformation of the energy system with well proven available technologies and new innovative one.

Key instruments to support all forms of technologies for bioenergy are: the deletion of all forms of subsidies and support for fossil and nuclear energies and the introduction of carbon taxes. Especially during a period of low oil prices carbon taxes are crucial to promote energy efficiency and all renewables.

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in carbon stock due to deforestation, forest degradation and other direct land-use change in non-EU countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
GHG emissions from supply chain, e.g. cultivation, processing and transport	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from combustion of biomass ('biogenic emissions')	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and soil quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity impacts	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other	<input type="radio"/>				
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6.2. Any additional views on the effectiveness of existing EU policies on solid and gaseous biomass? Please explain

2500 character(s) maximum

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

Europe has a detailed regulated agriculture and forestry sector and as a consequence European forestry and agriculture are producing sustainable renewable feedstock. Additional sustainability standards for specific use paths of biomass are seen as a superfluous laborious task to the detriment of the European economy.

The sustainable management of forests concern all European forest products and has already been implemented and put into practice by forest owner for generations. The sustainability of biomass is an issue which cannot be addressed according to the specific use of biomass. There is no need for additional legislation coming from Brussel targeted only to biomass for heat and electricity.

Regarding agricultural biomass, the Common Agricultural Policy (CAP) ensures a high level of environmental performance. Agricultural biomass from farms which are eligible for the CAP can be considered as complying with sustainability criteria.

What is needed is a more proactive EU policy to increase the supply of biomass for energy and material use by better protection of land for agriculture and forestry, by incentives to use abandoned land, to plant energy crops on land not used for food production etc.

Biogenic Emissions are commented already under other points, as they are defined as CO₂ emissions related to the natural carbon cycle, as well as those resulting from the production, harvest, combustion, digestion, fermentation, decomposition, and processing of biologically based material." (Source: "Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources" United States Environmental Protection Agency, November 2014).

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	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Avoid environmental impacts (biodiversity, air and water quality)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mitigate the impacts of indirect land-use change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Promote efficient use of the biomass resource, including efficient energy conversion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote free trade and competition in										

the EU among all end-users of the biomass resource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Ensure long-term legal certainty for operators	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimise administrative burden for operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote energy security	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote EU industrial competitiveness, growth and jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

As tenth target we propose: more efforts to increase the sustainable biomass offer for bioenergy and targeted policy to penetrate the heat market.

7.2. Any other views? Please specify

2500 character(s) maximum

The objective should not be limited to a bioenergy sustainability policy but broadened to a bioenergy policy within a sustainable energy policy; sustainability as principle should include the whole energy system because a sustainable bioenergy policy within an unsustainable energy system is no solution. Therefore the key target of the EC energy and climate policy should be reducing the utilisation of fossil fuels, cutting the GHG emissions from fossil fuels according to the outcome of COP 21, formulating a new climate and energy framework for 2030 and 2040 in coincidence with the Paris Agreement, introducing carbon taxes as key instruments for the transition of the system, carbon taxes that address all consumers of energy.

Concerning the ranking of the here mentioned targets contribution to climate change objectives and energy security are put on top. These objectives can only be achieved with long term legal certainty and a minimum of administrative burdens.

These two top objectives also need more policy efforts to increase biomass supply and to direct more biomass to the heating sector. This goes along with the target to promote efficient use of biomass and will also create more jobs.

The environmental aspects should be covered by the agricultural and forest policy, they are general issues of this sector and should not be limited to bioenergy policies. Trade of biomass is the second best solution, regional supply and regional demand have priority.

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

Sustainability of bioenergy is part of a sustainable agriculture and forestry. No specific policies on agriculture and forestry by the energy section of the EC are needed, a close cooperation with the direction of agriculture is recommended.

Several European countries like Sweden, Latvia, Austria are global leaders and positive examples in the development of bioenergy within sustainable managed forests for decades. New additional burdens for biomass production within the EU would hinder the development in these countries and handicap biomass deployment in other European countries and slow down the start up of biomass in other parts of the world. Such burdens should be avoided. They would reduce the availability of biomass, destroy new green jobs along the value chain and jeopardize the objectives for renewable energy in achieving the goals of COP 21.

The issues of better efficiency in the conversion of biomass to final energy should be tackled with by practical recommendation to the member states in such a way that the promotion of biomass is not hindered but obvious inefficient solutions are avoided. This is also valid for projects of advanced biofuels.

The situation is different concerning imports of biomass for energy. Industry based certification schemes should be applied.

Imports from outside Europe should only cover a limited portion of the total biomass consumption. This should be valid for solid biomass (wood chips, pellets) and for biofuels (ethanol, biodiesel, pyrolysis oil) due to three considerations:

- Not only Europe but all countries of the world have to delete fossil fuels and go for renewables. The global climate mitigation policy will not be successful if Europe imports feedstocks for bioenergy from everywhere and the exporting countries continue to rely on fossil fuels. In the longer run imports from outside Europe should be restricted to regions that already have a high share of renewables in their portfolio and have a real abundance of biomass that they don't need at home.
- Secondly a strong argument for biomass is the improved security of supply. This requires that the biomass is mainly sourced in Europe and not abroad.
- A limitation of imports also limits the risk of negative impacts on the sustainability of biomass production abroad.

To repeat it again: the main problem is the unsustainable energy system based on fossil fuels. The EC needs a detailed reduction plan step by step, decade by decade, how to get rid of fossil fuels until 2050. The expectation to continue using fossil fuels and develop CCS and Bio CCS is not justified. It is much cheaper and more efficient to leave fossil fuels in the earthcrust than to dig

them out first and put the carbon back into the ground again.

No new rules for sustainability of biomass for energy are needed but new incentives to derive better benefits from the land in Europa to produce enough food and more feedstock for material use and energy. In a future without fossil fuels farm land will serve for food production as well as for the production of raw materials for energy and a biobased economy.

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

9.1 bioenergy within a sustainable energy system

This is a paper about sustainable bioenergy policy after 2020. One of the best definitions of sustainability comes from The Brundtland Commission's. Its report defined sustainable development as "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs".

Hence a sustainable bioenergy policy is only possible within a sustainable energy system. However, the current energy system based to more than 80% on fossil and nuclear sources is a prototype of an unsustainable system. It is based on not renewable resources and endangers the global climate system. This perception was the also the basis of the Paris Agreement.

Following the Paris Agreement the crucial questions with respect to climate and energy policy should be:

1. How can Europe delete the use of fossil fuels latest by 2050?

And striving for a fair burden sharing in the transformation of the energy system between generations:

2. What should be the maximum quantity of fossil fuels used by 2030 in Europe?

And following from this:

3. What should be the minimum contribution of Renewables to the system by 2030?

According to our own analysis here the answer:

By 2030 Europe should use less than 700 Mtoe fossil fuels as compared to 1230 Mtoe in 2013 and the contribution of all renewable sources should be more than 500 Mtoe in order to supply sufficient energy for the economy and society.

But the concept of the whole questionnaire does not correspond to this central issues. The focus is on a narrowly defined bioenergy policy with strict limitations to avoid any risks whereas the huge risks connected with the current fossil and nuclear dominated system are ignored.

Europe can only comply with the Paris Agreement if bioenergy and the other

renewable sources grow rapidly, if the targets for renewables and GHG emissions reduction by 2030 are redefined. The objectives of 27% share of renewables by 2030 are not compatible with the Paris agreement. After Paris a revision of the EU climate and energy policy is needed and the focus has to be how to delete fossil fuels as fast as possible.

But this is not only an European issue. If the reasoning and the spirit behind this questionnaire prevails in the future and dominates the European energy and climate policy Europe will fail in complying with targets and decisions of COP 21 and hinder the global community in fighting climate change successfully. The EU will become from a leader to a latecomer in pushing renewables.

9.2 a carbon tax as key instrument of the energy transition

A general answer to many questions concerning efficiency, GHG gas emissions along the bioenergy supply chain, the future security of supply would be the phasing out of all subsidies for fossil fuels and nuclear energy and the implementation of a general tax on fossil CO₂ emissions. Such a step would encourage the growth of bioenergy and other renewables but also incentivise all efforts for better efficiency without any administrative burden. This proposal has also to be seen under the aspect that the European production of oil, gas and coal is declining sharply since 2000 and that the current low and gas oil prices will increase the dependency on these fuels and thus on imports. The Agreement of Paris and the current oil glut offer a window of opportunity to go for general carbon taxes in Europe. The EC should encourage member states to take this step, even if a common European solution is not yet feasible.

9.3 improved food security by more 1st generation biofuels:

first generation biofuels from Europe improve the food security, because

- they not only deliver energy but also protein and
- they allow a flexible use of the harvest in periods of unforeseen food shortages
- they allow to maintain and to derive benefits from the productive capacity of the European agriculture.

In normal years the part of the harvest not needed for food goes to biofuels production and delivers ethanol or biodiesel and protein.

In years with an undersupply of food due to droughts or other climate disasters the feedstock for biofuels production can quickly be redirected to the food or feed market and thus compensate for a shortage of food or feed. But this is only feasible with a strong and performant first generation biofuel industry.

If the production of first gen. fuels is strictly limited at a rather low level as it is now, the productivity gains in agriculture lead to an overproduction, and as a consequence to a decline of farm prices, to set aside programs, to the loss of farm land - farm land is altered to forests, is abandoned, used as ecological focus areas etc. But this land once lost as farmland cannot be used for food production immediately or not at all, if it was altered to forests.

1st gen biofuels can be seen as an insurance strategy for better food security!

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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