

Case Id: 47cb6452-4a3e-4cbc-89cf-e61e3817de0c

Date: 09/05/2016 17:54:15

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

* 1.2. If you are a private or public enterprise, could you please indicate your principal business sector?

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

* 1.3. If you are a private or public enterprise, could you please indicate the size of your company?

(Medium-sized enterprise: an enterprise that employs fewer than 250 persons and whose annual turnover does not exceed EUR 50 million or whose annual balance-sheet total does not exceed EUR 43 million.

Small enterprise: an enterprise that employs fewer than 50 persons and whose annual turnover and/or annual balance-sheet total does not exceed EUR 10 million.

Micro-enterprise: an enterprise that employs fewer than 10 persons and whose annual turnover and/or annual balance-sheet total does not exceed EUR 2 million.)

- large enterprise
- medium-sized enterprise
- small enterprise
- micro-enterprise
- I don't know

* 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
- Sweden
- United Kingdom
- non-EU country(ies)

* 1.6. If you are a civil society organisation, please indicate your main area of focus.

- Agriculture
- Energy
- Environment & Climate
- Other
- Technology & Research

* 1.7. If you are a public authority, can you define more specifically your area of competence?

- national government
- national parliament
- regional government
- regional parliament
- local authority
- governmental agency
- other

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

200 character(s) maximum

AEBIOM - European Biomass Association

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

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

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

Please specify the "other" choice

200 character(s) maximum

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

2,500 character(s) maximum

Bioenergy contribution to reducing households energy bills and boosting rural areas are missing is the list

Biomass benefits are explained into details in the factsheets developed under the AEBIO M "biomass counts" campaign attached to this answer.

Energy security: The dependency on fossil fuels is responsible for weakening the EU's geopolitical influence and for fueling of GDP-leakage, with the EU spending hundreds of M of euros per day on importing fossil fuels, a significant part of which come from unstable regions. Solid biomass imports represent today around 2-3% of the EU's gross biomass inland consumption for H&C and E. These imports are expected to increase but most of the biomass consumed in Europe will still be EU locally produced.

Reduce households energy bills:

- 1) Individual heating: Between 2007 and 2014, the price of pellets has been on average 72% lower than the electricity price, 50.1 % lower than the heating oil price and 40.3% lower than the gas price in 4 EU Member States (FR, IT, AT, DE), which are key in pellet consumption in Europe
- 2) District heating: as an example, the switch from gas to biomass in DH systems in Lithuania has reduced consumers energy bill by 25%

Industrial competitiveness: more and more EU industries are switching their energy system from fossil to biomass in order to reduce their energy costs, thus strengthening their competitiveness. Two examples: Spendrups (Brewery, SE) ; Vicuinai Group (world leader of surimi production, LT)

Jobs: 494 000 people worked in the bioenergy sector in 2012 (43% of total RES jobs). Biomass creates 2 times more jobs than gas in fuel production activities and at least 10 times more jobs than nuclear power. In addition to being more numerous, these jobs are mainly generated within the EU which is not the case with imported fuels

Innovation: The bioenergy sector is continuously evolving and innovating. Some innovations are currently being developed (bio-refineries, microCHP, torrefaction, steam explosion or pyrolysis oil) and offer promising opportunities for the future. Some of the older technologies have already gone through impressive innovative development (eg: pellet stoves and boilers)

Grid balancing: Today, bioenergy is used in installations functioning as baseload. However, the ability of biomass to balance the grid as a dispatchable RES is one of its potential greatest benefits and may be of critical importance to balance other RES in a very near future

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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on biodiversity	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 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 type="radio"/>

Please specify the "other" choice

200 character(s) maximum

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

2,500 character(s) maximum

Air Quality: At EU level, emissions from large and medium scale combustion installations and from new individual appliances are regulated by the EU IED and MCP Directives and Ecodesign rules which set strict emissions limits. AEBIOM fully supports this approach. Through additional efforts to replace old inefficient individual installations, the emissions issue would be strongly mitigated

Varying degrees of efficiency: The use of biomass has proven to provide important carbon savings. In particular when replacing coal or diesel, biomass highly contributes to climate change mitigation.

A GHG saving threshold would take into account the efficiency of biomass installations (EE rate is part of the EU methodology). Many installations are already very efficient today but more efforts are still needed to replace inefficient individual heating appliances. A large majority of biomass (75%) today goes to the heat sector. In the power sector, biomass is key to complementing other RES and accompanying their development. In the medium / long term, more efficient energy installations should be developed and energy efficiency should continue to be addressed under a holistic approach for all fuels (eg: EED)

Internal market: Several MS have set their own bioenergy sustainability scheme (UK, NL, BE, DK) and many MS have rules related to bioenergy sustainability (Biobench study). These diverging rules mitigate potential risks but make biomass trade more complicated due to higher costs and to lower liquidity

Water, soil, biodiversity: in Europe, risks in these areas are not significant as there are strong EU and national legislations in place, as well as voluntary SFM schemes that ensure protection

GHG from combustion of biomass: Provided that biomass is regenerated, biogenic C emissions are always neutral as the C comes from biomass that took it from atmosphere first and will take it again. This principle cannot be denied. Carbon accounting depends on many parameters and should be taken care of at macro level. EU LULUCF policy and similar approach in non EU countries are taking care of it

Competition of uses: A forest owner is managing his forest with a perspective of high value roundwood with which bioenergy can't compete. When competition is happening, this is in many cases not negative. The energy market has given a value to certain types of biomass which had no value before, thus creating additional revenues for forest owners to better manage their forests

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

Any additional comments?

2,500 character(s) maximum

The EU sustainability scheme for biofuels and bioliquids has allowed addressing some risks.

However, the European biofuel industry has been badly hurt by political uncertainty and lack of long-term policies. Uncertainty, above all else, puts off investors from making investment decisions. The ILUC debate, which has led to a change of the EU biofuels sustainability policy has created uncertainty for investors and decreased the overall trust of biofuels economic actors in EU policies. This example is a very important lesson for the coming EU sustainable bioenergy policy which should address all issues from the beginning in a pragmatic and efficient way and not open the door to never-ending revision with unclear outcomes. Regarding the so called carbon debt debate, concerning EU woody biomass, which could be tempting to address later in a revision clause, such solutions should be avoided and alternative robust and efficient solutions be implemented from the start (eg: LULUCF accounting and risk based approach).

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?

2,500 character(s) maximum

Development of new, so-called advanced biofuels, based on new feed-stocks, depends on a strong market for the existing conventional biofuels. Often, the same companies are actively pursuing both kinds of biofuels. By limiting the market for biofuels in general, with the revised RED directive (ILUC rules), this also hurts the development on new biofuels and thus, benefits the fossil transport fuels.

In addition, double-counting is not appropriate as it is a way of giving the public a false picture of the conversion from fossil fuels to renewable fuels. Finally, Member States have to transpose the ILUC directive into national legislation by mid-2017 and establish their national indicative targets for advanced biofuels within 18 months (end 2016- beginning 2017). Hence the pressure to move to advanced biofuels is rather low.

For advanced biofuels to develop, investors and bankers need secure, long-term conditions. Today, this is not happening. The conditions after 2020 are not clear. High quality technology providers and machine suppliers are available today in EU but it remains difficult to get to the commercialisation phase. The risk is that these developments may move to where there is more support (US; Brazil, China)

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?

2,500 character(s) maximum

- At the beginning of the implementation of the EU biofuels sustainability scheme, there was a lack of compliant biomass to supply biofuels producers. This is due to the fact that legislations take time to be implemented. An appropriate timing for implem

entation should be considered for the future EU bioenergy sustainability policy. Progressivity is an important principle for the coming EU sustainable biomass policy.

- The implementation of the EU biofuels sustainability criteria has led to financial and administrative burdens related to the system implementation. While this burden was possibly acceptable for large economic operators, it has been more problematic for small ones. As an example, in Sweden, the cost for small operators has been 10 times higher than for large operators according to a recent study.
- One positive aspect of the EU biofuels sustainability scheme which has proved to be efficient is the fact that it has taken into account in a pragmatic way the existing EU legislations on environmental impacts of the agricultural sector. Such an approach should be reiterated for the future EU bioenergy sustainability policy.
- Overall, the EU harmonisation of biofuels sustainability criteria has avoided burdens related to diverging rules at national level but has still led to administrative burdens on operators to set the system and comply with EU rules. However, these burdens have been mitigated thanks to the pragmatic approach endorsed by the EU legislation (recognition of existing rules).

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?

2,500 character(s) maximum

Support mechanisms for innovative low-carbon techno: many biomass technologies are mature today. However, improvement and new technologies arising are still possible and are in need of support in terms of R&D.

As far as mature innovative technologies are concerned (eg: modern efficient pellet boilers), more efforts are needed to focus on supporting investments. In the bioenergy sector, the costs of initial investment are an important barrier. This is the case for private consumers, industries and district heating systems (local authorities). This barrier is even more important in a context of very cheap oil price. Through the future RES, EED and EPBD legislations, the EU could encourage the switch from fossil to renewable through co-supporting the initial investment cost and raising awareness and information.

Lessons learned from R&D support:

1) Advanced biofuels: To develop new biofuels from cellulosic feedstock and new production processes, massive support is needed for R&D and demonstration. However, limited resources have been allocated for R&D so far so few demonstration and full-scale projects have been realised. Awarded NER300 money has in many cases not been used due to the conditions for support, and a non-existent market for the produced fuels. Moreover, the NER300 program has in many ways delayed projects and hindered others waiting for the awards.

2) Advanced biomass fuels production: R&D is needed especially to evaluate the feasibility of efficient use of alternative feedstock (eg: fuel flexibility for biochar production) or new products such as biobased aviation fuels

In general:

- All bioenergy uses are important when it comes to R&D activities: advanced biofuels, electricity but also H&C installations.

-The innovation fund is valid for seven years and it is not clear at the time of drafting the legislation which technologies will fly and provide the best potential in practice. It may be useful to take an approach based on the end-products (eg: biochar) and leave it opened for the technology to reach this product (eg: torrefaction or steam explosion)

-Innovative technologies needs upfront investment support to balance the risk and higher cost inherent with any new technologies. They also need a secured market that can take the form of an obligation or a support scheme. This is valid for breakthrough technologies while for the improvement of existing technologies, standardization and market forces can make it happen.

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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input 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	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

feedstocks					
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify the "other" choice

200 character(s) maximum

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

2,500 character(s) maximum

Change in C stock in the EU: EU MS have robust forestry rules in place to prevent deforestation and forest degradation. These must be met so as to put wood on the EU market, according to the EU Timber Regulation EUTR. The EU is also monitoring and accounting emissions and removals from LULUCF. An EU decision is expected in summer on how to include LULUCF in the EU GHG emissions reduction commitment.

Change in C stock in non EU countries: Some EU MS have rules in place to mitigate this risk. The EUTR guarantees that wood imported to the EU was legally sourced. For those countries not involved in LULUCF reporting and monitoring under the Kyoto Protocol, COP21 Paris agreement will help to make progress.

GHG emissions from supply chain: A clear, transparent and appropriate GHG emissions calculation methodology was recommended by the Commission in 2010 and confirmed in the 2014 report on biomass sustainability. AEBIOM fully supports this methodology.

Biogenic emissions: The EU is currently following the IPCC approach: these emissions are accounted under LULUCF and, therefore, not in the energy sector. This approach should remain in the future EU bioenergy sustainability policy. At EU level, coming decisions are expected to include LULUCF emissions and removals in the EU GHG emission reduction commitment; regarding non EU countries, some of them have a robust government-operated forest inventory and analysis program to monitor emissions and removals from LULUCF.

Water, soil, biodiversity: today, many EU and national legislations aiming at protecting water, soil and biodiversity apply to the agricultural and forestry sector.

Varying degrees of efficiency of biomass: In the medium / long term, all fuels sources should be used in more efficient energy installations (eg: efficient heating systems and CHP). The EU bioeconomy strategy deals with the efficient use of the biomass resource for all uses. Energy efficiency is addressed in the Energy Efficiency Directive and air quality policies. This general approach should remain: efficiency should be tackled in a holistic way and not only focus on bioenergy.

Competition between different uses of biomass: The EC is finalising a study on cascading and plans to work on guidelines (non legislative approach). EU should not decide by law on how biomass should be used. This is for markets and economic operators to make this decision.

Air quality:Q.4.2

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 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"/>
Avoid environmental impacts (biodiversity, air and water quality)	<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"/>
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 checked="" type="radio"/>	<input type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure long-term legal certainty for operators	<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"/>	<input type="radio"/>
Minimise administrative burden for operators	<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 energy security	<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 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please specify the "other" choice

200 character(s) maximum

7.2. Any other views? Please specify

2,500 character(s) maximum

The question above is misleading as it mixes the objective of an improved bioenergy policy with bioenergy general benefits (eg: energy security) and with the safeguards that this policy should take into account in terms of practicalities (administrative burden).

The overall objective of an improved EU bioenergy policy should be to have harmonised EU rules that guarantee that biomass consumed in Europe (EU locally produced or imported) is sustainable in terms of biodiversity, soil / water protection, land use change limit, sustainable forest management and GHG emissions savings. These rules should take into account the already existing national requirements on sustainability as well as existing certification systems.

This framework will allow the bioenergy sector to keep developing and provide multiple benefits (climate, economic and social: see answer to question 3.2)

For this framework to be effective and successful, it must be set for a determined period (2020-2030) in order to provide certainty to economic operators. It must also avoid too heavy administrative burden on economic operators. The risk with a too complex policy would be a decrease of compliant biomass supply with economic operators not willing to take burden of the administrative and prove system (although producing sustainable biomass).

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

5,000 character(s) maximum

AEBIOM is in favour of the introduction of an EU harmonised sustainability framework for all bioenergy. This would contribute to secure investments, to create an equal level playing field and to answer concerns on related future developments.

The answer below summarises the key aspects that should be considered for the future EU policy on bioenergy sustainability.

More details are available in the AEBIOM paper uploaded together with the answer to this consultation

1) Define sustainability rules based on biomass types and categories

Today, all types of biomass can be used in the three main energy sectors (H&C, electricity, transport) and technological developments make it possible to produce all bioenergy forms in the same process. Taking a concrete example, the same woodchips can be combusted to produce heat and / or electricity and used for producing lignocellulosic biofuels. In this context, regarding the raw material sustainability, it is important that the Commission takes an approach based on the biomass types and categories rather than on the energy end use or form.

2) GHG emissions reduction

- Set a single GHG emissions savings threshold for all bioenergy: 60% may be relevant and appropriate.

- Methodologies: GHG emissions should be calculated according to the current methodologies endorsed by the Commission

- Default values should be established, as it is the case today

- Methodologies and default values should be established for the period 2020-2030

3) RES Directive land sustainability criteria and sustainable forest biomass

Agricultural biomass: The RES Directive land sustainability criteria currently applying to biofuels and bioliquids should be maintained and their scope extended to all primary agricultural biomass, irrespective of their final energy use.

Forest biomass: The development of bioenergy from forestry sources is raising questions and concerns on possible impacts on forest resources, carbon in forests and on forest ecosystems (biodiversity, soil, water...) The EU sustainable bioenergy policy should focus on these issues. To this aim, AEBIOM supports the Risk Based Approach (RBA).

4) Installations concerned: For H&C and E installations using biomass, the 20 MW fuel capacity threshold should be considered

5) Recognition of certification schemes: Voluntary schemes should have the possibility to be recognised by the Commission if they meet the EU requirements, following the same approach as biofuels voluntary schemes recognition.

6) Visibility and security for investors: It is highly important that the future EU bioenergy sustainability policy is set for at least until 2030 so as to provide visibility and security to investors. In addition, in order to secure past investments, a transition period should be established .

7) Sustainability in EU RES legislation: continuity of the current approach: The current EU biofuels / bioliquids sustainability scheme is part of the RES Directive. If the EU policy on bioenergy sustainability was to take the form of legislation, AEBIOM is of the view that this approach should be maintained with the EU sustainable bioenergy policy being part of the revised RES Directive.

9. Additional contribution

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

5,000 character(s) maximum

□ The woody bioenergy sector is characterised by many small and medium size enterprises, and the biomass is supplied by hundreds of thousands of forest owners, besides larger forest industries and forest owners (companies and state forests). These characteristics make it essential to reach a balanced approach to develop sustainability criteria that guarantee that the increased use of bioenergy is met with sustainably sourced biomass, while minimising new administrative burdens or blocking biomass mobilization.

□ Forests are already subject to several sets of legislation and to voluntary sustainable forest management (SFM) certifications. The future EU policy should take into account this existing framework.

□ Biomass from forests is used for wood products (sawn wood, panels, paper...) and for energy purposes (heat, electricity and advanced biofuels). In the medium-to-long term, it may be relevant to adopt a holistic approach.

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

AEBIOM_position_on_a_sustainable_bioenergy_policy_for_the_period__after_2020_May_2016.pdf

Economic_asset.zip

Energy_Security.pdf

Jobs__Innovation.pdf

Rural_Europe.pdf

Thank you for participation to the consultation!

Contact

✉ SG-D3-BIOENERGY@ec.europa.eu