

Case Id: fa5b5353-afaf-444e-8f1d-2d20a9ef5174

Date: 04/05/2016 07:34:46

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

Fortum Corporation

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

ID 03501997362-71

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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from waste (municipal solid waste, wood waste)	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Biogas from manure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from food crops (e.g. maize)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biogas from waste, sewage sludge, etc.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest biomass (except forest residues)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest residues (tree tops, branches, etc.)	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from industrial residues (such as sawdust or black liquor)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from waste	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Commercial heat generation from solid biomass					
Large-scale combined heat and power generation from solid biomass	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Small-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"/>
Heat generation from biomass in domestic (household) installations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on locally sourced feedstocks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks sourced in the EU	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bioenergy based on feedstocks imported from non-EU countries	<input type="radio"/>	<input type="radio"/>	<input checked="" 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. 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 type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input 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 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 is boosting the development of rural areas and is important especially for SME enterprises. Bioenergy enhances employment: almost half a million people work in the EU bioenergy sector (2012).

Biomass use yields revenues for forest owners, taxes from sales of timber, income for harvesting and transportation enterprises, taxes from enterprises and employees, and the manufacturing and maintenance of machinery and equipment. Especially the forest owners benefit from the additional income from harvesting residues and thinnings.

Local biomass contributes to energy security. Biomass can be stored during low demand and used when needed. Biomass can balance the increasing share of variable renewable electricity from wind and solar in the electricity system. The ability of biomass fired plants to respond to load variation is not fully exploited yet, but could become important in the future.

As the majority of the biomass used in the EU area is domestic (solid biomass imports only 3% of the EU's consumption), it also improves the EU energy security and the diversification of energy supply, and reduces dependency on imported fossil fuels. This has direct and indirect effects on GDP and the trade balance.

The bioenergy sector is continuously evolving and innovating. Some innovations like bio-oil production from biomass through pyrolysis offer promising opportunities. As there is increasing competition for the use of biomass, it is important to ensure that it is used as efficiently as possible. Advanced CHP+ solutions where e.g. biofuel or bioliquid production is integrated into a CHP plant improve the resource efficiency si

gnificantly. In such processes, the by-products of the production process can be fully utilised in heat and power production and the excess thermal energy can be utilised as district heating or cooling.

We would also like to highlight the unused potential of horse manure in energy production. In the current EU legislation horse manure has been categorized as waste and hence cannot be used to produce energy. To enable combustion, the Animal by-products Regulation EC/1069/2009 should be amended e.g. by enlarging the scope of the exemption granted to the poultry manure in Regulation EU/592/2014 to cover also horse manure. Due attention should be paid to enabling larger-scale use of manure and not only at estate level. The legislative changes would unleash the potential of larger scale use of horse manure in a sustainable manner.

4. Risks from bioenergy production and use

4.1. Identification of risks

A

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

Please rate the relevance of each of these risks as you see it (one 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Internal market impact of divergent national sustainability schemes	<input checked="" type="radio"/>	<input 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

Due to increasing competition for the use of biomass, it has to be used as efficiently as possible. Recently, the principle of cascading biomass

s use has entered into the debate: the same biomass should be used more than once, starting with material use. Energy conversion would typically be the last step in the hierarchy. However, in many cases energy conversion may be the only economically viable or available option for the use of biomass resources. Instead of cascading use of biomass, the resource efficiency could be an indicator of the preferred use of biomass. There are substantial benefits from the use of biomass for CHP production. The overall efficiency of CHP is typically 70-90% and up to over 100 %, compared to an average of 30-40% in dedicated biomass plants for electricity only. Total efficiency can be further increased in advanced solutions where e.g. biofuel or bioliquid production is integrated into a CHP plant. In such processes, the by-products of the production process can be fully utilised in heat and power production and the excess thermal energy can be utilised as district heating or cooling.

Internal market impact of divergent national sustainability schemes is a real risk. Solid and gaseous bioenergy are regulated by a spectrum of national and voluntary sustainability criteria. The lack of uniform criteria for all bioenergy hinders investments in bioenergy. Divergent national sustainability rules become a barrier to biomass trading and make it more difficult and costly to meet the increasing demand for biomass use in electricity and heat production. To avoid internal market impact of divergent national sustainability schemes, the mutual recognition of national schemes should be ensured.

Harmonised sustainability criteria for all bioenergy would increase the predictability and stability of the operating environment, ensure proper functioning and transparency of the biomass markets and increase the use of sustainable biomass in energy production.

Carbon debt and accounting are increasingly debated. Clarity on the climate impact of bioenergy is needed. Biomass should always be considered carbon neutral and have a zero emissions factor in the EU ETS. This principle cannot be denied or even challenged.

The GHG inventory provides a profound and correct description of climate impact. In line with IPCC and UNFCCC rules, biogenic carbon dioxide emissions from the energy use of forest biomass are already covered under the LULUCF sector.

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

Any additional
comments?

2,500 character(s) maximum

The existing scheme is profound and very effective in addressing the key sustainability risks. However, uncertainty on the GHG emissions remains a risk for the industry. The ILUC debate and decisions has aggravated this problem. 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 in the EU policies among biofuels financiers.

A challenge today is that country specific sustainability systems are not automatically recognised elsewhere – not even between the EU member states – even if they are based on the RES Directive. This adds a level of bureaucracy and additional costs, as the sustainability of an exported product must be approved in each country separately. For example Fortum has practical experience from exporting bioliquid (pyrolysis oil) produced in Finland to other EU member states. The sustainability system has been approved by the Finnish Energy Authority and the exported product meets the requirements of the national sustainability legislation. This has not however been automatically recognised in the recipient country, but additional information has been requested.

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

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

As a whole, the sustainability system based on the RES Directive for complying with the criteria for bioliquids and biofuels is considerably extensive and laborious. The batch-specific tracking of biomass is technically challenging, results in significant expenses, and limits competition by excluding small players in practice. Small fuel suppliers can't afford to build and maintain expensive "stump-to-gate" data systems, so the strict sustainability verification practice puts raw material suppliers in an unequal position.

The process to prove sustainability should be pragmatic, non-bureaucratic and effective and applicable to all kind of operators (most of biomass suppliers are small and medium-size enterprises). A risk-based approach (country level or regional) would be preferable. Sustainability criteria should be applied to energy production plants exceeding 20 MWth the verification of the sustainability could be linked to the verification of the ETS-installations.

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

Many bioenergy technologies are mature and commercial today. Subsidies for all mature renewable energy technologies, including bioenergy in the sectors covered by the ETS, should be gradually phased out. Subsidies should focus on bioenergy innovations and R&D activities, in particular on the commercialisation of new bioenergy technologies and bringing them to the markets. In general, innovative technologies need upfront investment support to balance the risk and higher cost inherent with any new technologies (no optimization yet, no economy of scale yet). Development of bioenergy may require additional incentives in non-ETS sectors. Lessons from existing support mechanisms are that policies and schemes are very fragmented distorting the functioning of biomass market. Biomass support is often tailored to and focused on a particular type of biomass. The level of subsidies and the biomass fractions entitled to subsidies differ significantly in various member states, and electricity and heat are usually treated differently. Focus on the schemes has often been on electricity and heat has not been fully acknowledged. This has created imbalance on the market and even discouraged efficient CHP-production.

CHP, which has a pivotal role in bioenergy production, faces rather divergent treatment in various member states in terms of heat price regulation, subsidies and taxation. The support schemes are also constantly (and even retrospectively) changing, which reduces the investment willingness, especially among smaller enterprises.

High overall efficiency of new technologies should be promoted and rewarded. Good examples are integrated processes where e.g. biofuel/bioliquid production is integrated into CHP plant in an advanced way. In these solutions the byproducts of the process can be fully utilized by combusting them into bioheat and power and the excess thermal energy can be utilized as district heating or cooling.

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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from 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 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varying degrees of efficiency of biomass conversion to energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Competition between different uses of biomass (energy, food, industrial uses) due to limited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

availability of land and 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

Focus should not be on legislation only: e.g. sustainable forest management is the mix of legislation, soft law practices and voluntary systems. In addition, European legislation like Forest Europe plays a key role.

EU member states have robust forestry rules to prevent deforestation and forest degradation. Forest biomass used in the EU has to comply with these requirements according to the EU Timber Regulation (EU TR). The EU is also monitoring and accounting emissions and removals from land use, land use change and forestry (LULUCF).

The EUTR guarantees that wood and wood products imported to the EU come from legally harvested forests. Certain third countries (but not all) exporting wood to Europe are also involved in LULUCF reporting and monitoring under the Kyoto Protocol. Paris Agreement is likely to boost progress also in countries who are not yet involved.

The Commission has set a clear and transparent GHG emissions calculation methodology in 2010 and it was confirmed in 2014. To date, such an approach only applies to a few member states. For this to become effective, The sustainability criteria should set a GHG emissions reduction threshold for all types of biomass, irrespective of the final energy use. An appropriate level of the threshold could be a 60-70% reduction. GHG emissions should be calculated according to the existing methodology recommended by the Commission.

The EU is currently following the IPCC approach for biogenic emissions: these are accounted under LULUCF and not in the energy sector. This approach is effective, clear and coherent with international rules. Biomass should be considered carbon neutral and have a zero emission factor in the EU ETS.

Biodiversity measures are taken into account in sustainable forest management practices, and the profound EU legislation should prevent the sourcing of raw material from high biodiversity areas. The biodiversity risks of biomass use in energy production are minimal, as forest biomass

is currently largely produced as a complementary by-product of wood material and fibre products in Europe.

The efficient use of biomass is included in the EU Bioeconomy Strategy and also in the circular economy package. The efficient use of biomass should be tackled through addressing all biomass uses, not only bioenergy. There is no contradiction between the energy and industrial uses of biomass. Markets and economic operators, not politicians, should decide on biomass use to various purposes.

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 type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Promote efficient use of the biomass resource, including efficient energy conversion	<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"/>
	<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"/>

Promote free trade and competition in the EU among all end-users of the biomass resource										
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 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"/>
Promote energy security	<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 EU industrial competitiveness, growth and jobs	<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"/>
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"/>

Please specify the "other" choice

200 character(s) maximum

7.2. Any other views?

Please specify

2,500 character(s) maximum

The overall key objective of an improved future EU bioenergy sustainability policy is to have harmonised and legally binding EU wide sustainability criteria for all bioenergy that ensure long-term legal certainty for operators and guarantee that biomass consumed in Europe is sustainable. This framework will allow the bioenergy sector to keep expanding and providing the multiple benefits listed in the previous sections of this consultation.

Improved bioenergy policy would increase the predictability and stability of the operating environment, ensure proper functioning and transpar

ency of the biomass markets, increase the use of sustainable biomass in energy production, and promote the transition from fossil fuels to renewable and carbon-neutral biomass fuels.

Sustainability criteria should apply to the origin of all bioenergy regardless of end-use: industry, energy production or transport. In practice, all biomass is originating from the same single tree in the forest. However, the criteria should distinguish between forest and agriculture biomass.

To be effective and successful, the sustainability framework must be set for a determined period (at least until 2030) in order to provide certainty to economic operators.

There has to be a practical approach to prove the compliance with the sustainability criteria. The forest biomass sector has thousands of players: from small and medium enterprises and hundreds of thousands of private forest owners to large forest companies and institutional forest owners, such as corporations and states. The sustainability criteria should meet the needs of all these stakeholders. It should enable increased use of biomass while minimising administrative burdens or related costs. The new criteria should not decrease the competitiveness of biomass: in many cases, biomass competes with fossil fuels, which generally have no requirements to demonstrate sustainability.

The criteria should apply to energy production plants that are included in the EU emissions trading scheme (plants exceeding a capacity of 20 M Wth).

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

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

Fortum welcomes the initiative of the Commission to define an EU sustainable bioenergy policy for the period after 2020. Fortum has long been calling for the introduction of a common, harmonised European framework for all bioenergy and we established our position already in 2011 (see the attached document).

The EU policy framework on the sustainability of bioenergy should establish a harmonised, balanced, pragmatic, non-bureaucratic and effective approach to sustainability of biomass. It should be a combination of better implementation of the existing legislation, guidance and further utilization of voluntary systems and new elements to complement the existing policy. The policy framework should combine all these elements into a coherent package, either as part of the new RES directive or as a separate sustainability policy package. This framework will allow the bioenergy sector to keep expanding and providing the multiple benefits listed in the previous sections of this consultation.

To summarise our key points:

Sustainability criteria and the procedures to prove sustainability of solid biomass should

- apply to the origin of all biomass irrespective of its end use
- be legally binding
- apply to biomass providers, only biomass providers have the needed sustainability information. The verification of sustainability should be done either using third-party auditing or competent authority.
- differentiate between various biomass categories (forest, agro)
- be aligned and based on existing legislation and voluntary standards
- use a risk based approach to forest biomass on national or regional level

onal level

- not create trading barriers between EU and third countries (as Russia, which is now and will be an important supplier of biomass in the future)
- be administratively adapted for complex supply chains and SME's
- allow time for implementation
- ensure that biomass is sourced from sustainably managed forests and that all relevant legislation is respected
- set a clear target for the GHG emissions reduction and ensure carbon neutrality of bioenergy
- take into account resource efficiency as an indicator of the preferred use of biomass
- be applied to energy installations with a capacity higher than 20 MWth
- give flexibility to choose the tools to prove sustainability and recognise voluntary schemes
- ensure the mutual recognition of different sustainability schemes

Greenhouse gas reduction criteria

The sustainability criteria should set a GHG emissions reduction threshold for all types of biomass, irrespective of the final energy use. The threshold would allow to prove emission savings and ensure a minimum savings level. An appropriate level of the threshold could be a 60-70% reduction. GHG emissions should be calculated according to the existing methodology recommended by the Commission.

Resource efficiency criteria

Resource efficiency could be an indicator of the preferred use of biomass.

Sustainable forest management criteria

The EU and member states have profound legislation and established practices in forestry and sustainable forest management. These take also into account the national characteristics. It should be enough if forest biomass meets all relevant legislation at the member state and EU level.

Compliance with the criteria

A risk assessment approach on a national or regional level and audited by a third party would be the most appropriate. This approach is already used in the EU Timber

Regulation and by several voluntary sustainability certification schemes. If a country is classified as a low-risk country, sourcing of forest biomass should be allowed without further requirements.

Biomass users should have flexibility in choosing the appropriate tool to prove the compliance with the sustainability criteria e.g. by applying sustainable forest management certifications and practices or countr

y specific risk assessments. Voluntary sustainability schemes (e.g. PEF C, FSC, SBP) that tackle the risks mentioned above should be recognised also by the EU authorities.

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

111221_Sustainable-Use-of-Bioenergy_final.pdf

160120_Bioenergy_Valmet_and_Fortum_position_final_en.pdf

160419_Energy_Review_Biomass_EN_2016.pdf

Thank you for participation to the consultation!

Contact

SG-D3-BIOENERGY@ec.europa.eu

