

A sustainable bioenergy policy for the period after 2020

Fields marked with * are mandatory.

Introduction

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

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

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

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

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

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

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

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

[1] COM(2014) 15.

[2] COM/2015/080 final.

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

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

[5] Used for transport.

[6] Used for electricity, heating and cooling.

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

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

[9] COM/2010/0011 final.

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

1. General information about respondents

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

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

- international organisation
- ☐ other
 - ☐ private enterprise
 - ☐ professional organisation
 - ☐ public authority
 - ☐ public enterprise

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

200 character(s) maximum

This response is submitted on behalf of the Institute for European Environmental Policy (IEEP) (www.ieep.eu)

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

n/a

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 type="radio"/>	<input type="radio"/>
Biofuels from energy crops (grass, short rotation coppice, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from waste (municipal solid waste, wood waste)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biofuels from agricultural and forest residues	<input type="radio"/>	<input 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 type="radio"/>
Biogas from manure	<input 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biogas from waste, sewage sludge, etc.	<input 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat and power from forest residues (tree tops, branches, etc.)	<input 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)					
Heat and power from industrial residues (such as sawdust or black liquor)					
Heat and power from waste					
Large-scale electricity generation (50 MW or more) from solid biomass					
Commercial heat generation from solid biomass					
Large-scale combined heat and power generation from solid biomass					
Small-scale combined heat and power generation from solid biomass					
Heat generation from biomass in domestic (household) installations					
Bioenergy based on locally sourced feedstocks					

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

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 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 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 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"/>

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

2500 character(s) maximum

Bioenergy is part of a potential suite of actions that could contribute to deliver transition in Europe's (and the global) energy system towards low carbon alternatives. Bioenergy has potential benefits as part of a future, secure energy system and in the delivering of GHG emission reductions. It offers opportunities for jobs in rural areas and the wider resource efficiency and management.

The heterogeneity of feedstocks (including their production pathways, context and alternatives) means that the benefits and opportunities offered by bioenergy are also heterogeneous. Within the array of possibilities there are significant risks for the environment which are associated with certain choices, and specifically risks for the achievement of climate mitigation targets. Equally there are significant opportunities to support the low carbon transition, and to generate jobs and growth (it is common for studies on green jobs creation to highlight significant potential linked to bioenergy particularly in terms of rural development)

No opinion is offered in response to 3.1 on reducing GHG emissions as at present it is felt that there is no appropriate and consistent system that enables the opportunities and benefits associated with bioenergy to be championed and consistently realised. Specifically there are no rules that effectively address the question of the environmental and GHG parameters around solid and gaseous uses of biomass. Nor are there rules that adequately deal with questions around the wider 'non-food' based feedstocks for biofuels. This means that risks fundamental to the delivery of the core goal of GHG reduction are not mitigated against, bringing into question the effectiveness of bioenergy in delivering climate mitigation. This lack of certainty raises question regarding policy support for bioenergy and can be seen to have led directly investment uncertainty within industry, and added burdens for operators who independently seek to mitigate against risks relating to the sustainability of bioenergy

Bioenergy offers opportunities and benefits for enhanced energy security, the balancing of grid load, reduction of GHG emissions, resource efficient material use, growth, jobs and competitiveness in Europe. However, without policies and controls that secure a proper foundation for biomass use, in line

with robust GHG emission reduction targets and with wider goals to limit environmental impact, all of these benefits and opportunities are undermined.

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 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input type="radio"/>	<input 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 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 type="radio"/>	<input type="radio"/>
Impacts on air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impacts on water and soil	<input type="radio"/>	<input 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"/>
Varying degrees of efficiency of biomass conversion to energy	<input 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					
Internal market impact of divergent national sustainability schemes					
Other					

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

2500 character(s) maximum

The commentary here relates to the specific biomass resources used and their origin, and does not explicitly address the difference between energy end uses, conversion efficiency. In policy terms the relevance of the risks can only be assessed against the objectives of the policy. As the 'improved EU biomass sustainability policy' is yet to be proposed, we relate the risks to the objectives of the current RED.

The cultivation, harvesting or extraction of biomass for energy has a range of inherent risks, including in relation to the following three factors

1) the location or source from which the feedstocks are sourced:

in relation to conservation areas, vulnerable soils, areas where water scarcity is an issue;

whether production in these areas competes with the production of other commodities, such as food, feed and fiber;

whether use of the feedstocks for energy competes with other existing or potential uses of the biomass;

2) the management practices and level of intensity at which the feedstocks are cultivated

3) the scale at which feedstocks are produced/extracted.

Whilst risks are inherent in any use of biomass (whether for energy or other purposes) the level and severity or impact of risk can vary, even in relation to specific feedstocks or locations. The risks posed by bioenergy production increase with the scale of deployment. At relatively small scales, the risks from biomass use can be moderate and addressed through robust sustainability criteria defining the areas and conditions under which biomass can be considered sustainable. With increased deployment risks can begin to be compounded with scale effects as biomass use begins to push against sustainability boundaries. It is not always clear at what point these boundaries will be reached as they can be in relation to available land from which to source feedstocks, the pressure on natural resources to support

production, or the management options chosen to increase output.

Other risks that are important to consider relate to the methods used to measure and calculate impacts, such as carbon debt, ILUC and competition effects; and how these impacts are reported and accounted for in the broader energy and climate framework.

Addressing these risks comprehensively is crucial to ensuring the overall sustainability of bioenergy. The aim should be to provide the necessary safeguards for the use of bioresources in Europe and the investment certainty necessary for development in this area

5. Effectiveness of existing EU sustainability scheme for biofuels and bioliquids

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

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

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

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

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

5.1. Effectiveness in addressing sustainability risks of biofuels and bioliquids

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

	effective	partly effective	neutral	counter-productive	No opinion
GHG emissions from cultivation, processing and transport	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GHG emissions from direct land-use change	<input type="radio"/>	<input checked="" 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on soil, air and water	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any additional comments?

2500 character(s) maximum

The existing EU sustainability framework for biofuels and bioliquids has been partly effective in addressing sustainability risks, particularly in addressing the direct impacts on well-defined 'no-go' areas, such as designated sites or high carbon stock land. However, the RED sustainability criteria focus primarily on land-based feedstocks and, until recently, direct impact. They do not provide sufficiently robust criteria to address some of the issues that might arise in relation to the use of feedstocks that do not rely on land for their production or only partly so (i.e. advanced biofuels). Broader sustainability risks, referred to in the RED (Article 18), have also received limited attention. Addressing these issues requires a change to and broadening of the sustainability criteria

Other aspects of this policy area need to be assessed, such as the speed at which policy has reacted to known issues; the coherence between different energy end uses in policy (i.e. biofuels v's bioenergy); and the current carbon accounting framework. One of the shortfalls of EU policy in this area has been the speed at which known sustainability issues have been addressed and incorporated into the policy. ILUC has been a major challenge and resulted

in a highly polarized debate that led to delay in action affecting both the sustainability of the fuels produced and the confidence of those wishing to invest in this area in Europe. The time taken to define highly biodiverse grasslands is another example. Improving the robustness and predictability of policy in this area will be necessary to avoid a repeat of such issues

There are EU-level sustainability criteria for biofuels and bioliquids, but not for solid biomass. Such a distinction becomes less appropriate and even unworkable once advanced biofuels are brought to the market given an increasingly shared resource base. There is a need to recognise in EU policy the interconnectivity of the resource base for different biomass supply chains, and to focus on the sustainability of resource use, rather than the specific end use when promoted through the same policy

The current EU carbon accounting framework requires further attention if it is to deal with more complex and transnational issues, such as carbon debt and ILUC impacts, and relate these to the sustainability of biomass use, and ensure that it contributes credibly to a decarbonisation of EU energy supply, and to the delivery of the EU's Paris Agreement commitments

5.2. Effectiveness in promoting advanced biofuels

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

- ☐ very effective
- ☐ effective
- ☐ neutral
- ☐ counter-productive
- ☐ no opinion

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

2500 character(s) maximum

In our view, a durable and effective approach to ensuring the sustainable use of biomass as a whole for energy purposes requires more than the development and application of criteria alone. The criteria need to fit within a wider EU framework which could include a clear climate and energy policy regime for 2030 and beyond (including clarity on rules for the LULUCF sector); the identification of the scale of ambition (target or limit setting); improved information and data gathering; clear and specific objectives for specific sectors or technologies where appropriate; clear terminology and definitions; the governance framework to implement the criteria and shape the development of the sector; and guidance and advice, relating to the sustainability criteria. The elaboration of an improved governance framework to better

implement a sustainable renewable energy policy, including bioenergy policy post-2020, is a key priority. We see coherence at the EU level as essential in achieving this, and also helpful in the creation of a more predictable investment climate. In addition, it must also be acknowledged that the policy framework for renewables needs to be elaborated at other levels as well, with many decisions taken at the regional or local level.

See further details in IEEP's reports:

1) Sustainability criteria for biofuels made from land and non-land based feedstocks

http://ieep.eu/assets/2034/IEEP_2016_Sustainability_criteria_for_biofuels_post_2020.pdf

2) Delivering Synergies between Renewable Energy and Nature Conservation

http://www.ieep.eu/assets/1905/Final_25_Nov_RES.pdf

5.3. Effectiveness in minimising the administrative burden on operators

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

- ☐ very effective
- ☐ effective
- ☐ not effective
- ☐ no opinion

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

2500 character(s) maximum

5.4. Deployment of innovative technologies

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

2500 character(s) maximum

Fostering technology and innovation has to be done in accordance with clear and defined goals. It is therefore important that in the area of bioenergy any further development and deployment of technologies is driven by the primary objective of reductions in atmospheric GHG concentrations and to a wide range of environmental benefits. Two main elements can help progressing toward this goal: setting clear systemic boundaries for bioenergy and filling in the
















current knowledge gaps on how best to utilise biomass materials along the existing and future supply chains.

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 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 type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indirect land-use change impacts	<input 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 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 type="radio"/>	<input type="radio"/>
Air quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and soil quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Varying degrees of efficiency of biomass conversion to energy					
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks					
Other					

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

2500 character(s) maximum

Existing EU policies have been partially effective in mitigating some of the specific risks arising from the promotion of solid and gaseous biomass. However, the use of solid and gaseous biomass (as well as other bioenergy modes) creates risks that require specific mitigation approaches, not all of which are within the scope of the current acquis. There are currently gaps in legislation dealing with carbon stock changes, for example, that policy needs to deal with, taking account of net carbon emissions and land-use changes. The scope of the risks posed also extends beyond the current reach of EU legislation, particularly where biomass is sourced from third countries.

Therefore, whilst any future EU policy on solid and gaseous biomass must be developed coherently with the existing and future EU environmental acquis, the risks arising from bioenergy promotion through public policy warrant a focus on more effective implementation on the environmental safeguards set out in legislation such as the Strategic Environmental Assessment Directive, and the Environmental Impact Assessment Directive.

7. Policy objectives for a post-2020 bioenergy sustainability policy

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

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Contribute to climate change objectives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 checked="" type="radio"/>	<input type="radio"/>	<input 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 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 efficient use of the biomass resource, including efficient energy conversion	<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 free trade and competition in										

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

7.2. Any other views? Please specify

2500 character(s) maximum

The aims of bioenergy policy must be to deliver genuine and substantial GHG emission reductions through the progressive decarbonisation of the EU energy sector; and to ensure that the use of biomass in this process does not adversely impact on biodiversity, ecosystem function or land use. These are, in our opinion the primary objectives of the policy.

Whilst not specific objectives of the policy in their own right, ensuring long-term legal certainty for operators and enabling development in this area through burden reduction will be crucial in achieving the overall aims of the policy and should guide development and implementation in this area.

In delivering these objectives the policy must aim to be as coherent with broader EU strategic objectives and those relating to other policy areas, such as energy security, promoting free trade and improving EU industrial competitiveness, growth and jobs. It is not the role of EU bioenergy policy to deliver these aims, but rather be coherent with them.

8. EU action on sustainability of bioenergy

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

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

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

5000 character(s) maximum

A new EU policy on bioenergy sustainability, as part of the low carbon transition, should cover all types of bioenergy providing parity across end uses and a clearer and more predictable picture to producers.

To be effective in its implementation, an improved policy on bioenergy sustainability must provide clear and long-term policy certainty for operators whilst having the flexibility to adapt to new information and evidence. To ensure that Europe is seen as providing a positive investment climate for renewable energy, the policy should set a clear trajectory for development of bioenergy beyond 2020 in line with broader climate and energy targets. As bioenergy is a transition technology, this may include signalling a limit to

the scale of deployment, in order to promote other modes and measures to reduce overall GHG emissions.

The objectives set out in this consultation (section 7) highlight the importance of taking a broader view of the use of biomass for energy than the specific scope of the renewable energy policy. Questions around sustainability, legal certainty, growth and competition apply equally to the use of biomass for material and chemical uses, whether new or traditional. In its original proposal, the Commission referred to an improved 'biomass' policy. This was a more appropriate articulation of the ambition to address the application of bioresources use across the broader, and growing bioeconomy. This would complement and inform the delivery of climate and energy goals, and provide a more integrated set of objectives and principles for the efficient use of Europe's bioresources. It would set out a framework for the sustainable use of biomass that could then be applied across EU policy, complementing climate policy, resource efficiency goals and existing waste management requirements, as well as new actions under the Circular Economy package. It would be the place to embed strict sustainability criteria and lay down a credible and predictable policy framework for biomass uses in line with their respective public benefits. Technical standards, for example for LCAs, might be located here too. This would allow EU law to reflect the reality that while biomass in principle can be renewed, the overall quantity that is sustainably available is finite and must be shared across an emerging bioeconomy.

9. Additional contribution

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

5000 character(s) maximum

Two additional elements should be considered when examining the need for an improved bioenergy policy post-2020.

Bioenergy is part of a wide array of renewable sources and comparatively accounts for a large proportion of current renewable energy supplies in the EU. The use of biomass for energy raises environmental concerns and challenges that are different in terms of type, impacts and scale from other renewable technologies. Despite this, biomass' use for energy is not subject to statutory or consistent EU wide safeguards. It is therefore important that, as part of an improved EU bioenergy sustainability post post-2020, appropriate action is put in place to rebalance and align environmental and energy goals, which would also provide investors with greater confidence by improving clarity as to the supply systems that will be judged acceptable into the future. See further details in IEEP's report Delivering Synergies between Renewable Energy and Nature Conservation
http://www.ieep.eu/assets/1905/Final_25_Nov_RES.pdf

Bioenergy is only one of the many demands (including food and timber) relying on land as a resource. Although in principle renewable, it is limited however by the extent of land that is available to be used for different purposes. Sustainable use of land for multiple demands is very much dependent on the location and conditions attached to any specific situation. To meet the multiple demands on land, in a way that is sustainable and promotes the efficient use of natural resources, appropriate action is needed to make informed decisions about the most sustainable use of land. The need for a coherent approach to land use and its integration into a wide range of policy areas, including bioenergy, is therefore critical. See further details in IEEP's report Land as an Environmental Resource
<http://ec.europa.eu/environment/agriculture/pdf/LER%20-%20Final%20Report.pdf>

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

d0187e50-5efd-417e-ba03-d7f291bbb293/IEEP_response_to_the_European_Commission_public_consult

Thank you for participation to the consultation!

Contact

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