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

* 1.7. 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

Government of Canada (with input from Global Affairs Canada, Natural Resources Canada, Canadian Council of Forest Ministers' Forest in Mind Program, Wood Pellet Association of Canada)

1.9. If your organisation is registered in the Transparency Register, please give your Register ID number.

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

200 character(s) maximum

1.10. Please give your country of residence/establishment

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France

- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom
- Other non-EU European country
- Other non-EU Asian country
- Other non-EU African country
- (•) Other non-EU American country

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

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 (it will not be published, but will be used internally within the Commission)

Perceptions of bioenergy

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

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

- Bioenergy should continue to play a dominant role in the renewable energy mix.

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

2.2. Perception of different types of bioenergy

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

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

Heat and power from forest biomass (except forest residues)					
Heat and power from forest residues (tree tops, branches, etc.)					
Heat and power from agricultural biomass (energy crops, short rotation coppice)					
Heat and power from industrial residues (such as sawdust or black liquor)					
Heat and power from waste					
Large-scale electricity generation (50 MW or more) from solid biomass					
Commercial heat generation from solid biomass					
Large-scale combined heat and power generation from solid biomass					
Small-scale combined heat and power generation from solid biomass					

Heat generation from biomass in domestic (household) installations					
Bioenergy based on locally sourced feedstocks					
Bioenergy based on feedstocks sourced in the EU					
Bioenergy based on feedstocks imported from non-EU countries					
Other					

3. Benefits and opportunities from bioenergy

3.1. Benefits and opportunities from bioenergy

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

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

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

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

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

2500 character(s) maximum

Canada is responding to this consultation because of its involvement in established European Union (EU) markets for wood pellets for the production of energy and heat. Canada recognizes that there are significant benefits and opportunities associated with the broader bioeconomy, which includes the bioenergy sector, but our comments in response to this consultation will focus on woody biomass.

Canada agrees with the benefits listed in 3.1 above, but suggests that it is also important to acknowledge that bioenergy delivers many of these benefits simultaneously. The scalable nature of bioenergy (i.e., its ability to supply heat and energy across a range of scales, from individual households, to communities and to regions) is another benefit that could be added to the list in 3.1.

4. Risks from bioenergy production and use

4.1. Identification of risks

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

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

	critical	significant	not very significant	non-existent	No opinion
Change in carbon stock due to deforestation and other direct land-use change in the EU	○	○	○	○	○
Change in carbon stock due to deforestation and other direct land-use change in non-EU countries	○	○	○	○	○
Indirect land-use change impacts	○	○	○	○	○
GHG emissions from the supply chain (e.g. cultivation, processing and transport)	○	○	○	○	○
GHG emissions from combustion of biomass ('biogenic emissions')	○	○	○	○	○
Impacts on air quality	○	○	○	○	○
Impacts on water and soil	○	○	○	○	○
Impacts on biodiversity	○	○	○	○	○
Varying degrees of efficiency of biomass conversion to energy	○	○	○	○	○
Competition between different uses of biomass (energy, food, industrial uses) due to limited availability of land and feedstocks and/or subsidies for specific uses	○	○	○	○	○
Internal market impact of divergent national sustainability schemes	○	○	○	○	○
Other					

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

2500 character(s) maximum

Canada recognizes that the potential risks and benefits associated with bioenergy production and use are the subjects of a diverse and ongoing conversation in scientific and policy circles. The risk and benefits of bioenergy will be informed by a complex set of goals and variables that take into consideration, among others, site-to-landscape conditions, time, and comparisons with alternate scenarios in which bioenergy is not used. The relative importance of the risks listed in 4.1 above must therefore be weighed against the benefits, and will vary with the scenario being evaluated.
Risks from bioenergy production and use should be evidenced-based. Care should be taken to ensure that studies used to inform the new bioenergy policy are based on accurate scenarios; for example, modelled scenarios that link increased demand for wood pellets in the EU to more intensive exploitation of Canadian forests need to be interpreted with caution because the vast majority of Canada's forests are publicly owned and are therefore managed to ensure the long-term sustainability of forest ecosystems. Canadian forests are not managed for any single product, in that annual allowable cut (AAC) is based solely on forest growth rates and is not changed to meet market conditions for new or expanding product demands. Furthermore, an increased demand for wood-derived biomass would not influence forest harvesting in Canada because the biomass sector relies on residues from primary processors: 92% of the feedstock for wood pellets is mill by-products.
Canada sees a significant risk in divergent national sustainability schemes having an impact on the EU's internal market for bioenergy. A lack of harmonization of sustainability policies has created uncertainty for investors and producers and resulted in a negative impact on the development of a commodity market for biomass, including wood pellets. Canada therefore suggests that any future sustainability policies that form part of the EU's new Renewable Energy Directive provide regulatory clarity for investors and operators, and that the experience of Member States (MS) that actively produce renewable energy from biomass be taken into consideration. The harmonized policy should adopt approaches that work well in MS and should be prescriptive enough to avoid the creation of additional requirements at the MS-level that may create uncertainty for the industry or result in a reduction in the ability of the EU to satisfy its biomass needs.

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

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

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

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

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

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

5.1. Effectiveness in addressing sustainability risks of biofuels and bioliquids

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

	effective	partly effective	neutral	counter-productive	No opinion
GHG emissions from cultivation, processing and transport	○	○	○	○	○
GHG emissions from direct land-use change	○	○	○	○	○
Indirect land-use change	○	○	○	○	○

Impacts on biodiversity	◯	◯	◯	◯	◯
Impact on soil, air and water	◯	◯	◯	◯	◯

Any additional comments?

2500 character(s) maximum

Canada is not in a position to comment on the effectiveness of the existing EU sustainability scheme in addressing risks associated with biofuels and bioliquids; however, Canada continues to have concerns about the terminology used in the forest land criteria set out in Article 17 of Directive 2009/28/EC (specifically the prohibition on sourcing raw materials from “primary forests”) and encourages the Commission to avoid adopting the same language if expanding the scope of this sustainability scheme to solid biomass.
Canada maintains that sustainability criteria should be evidence-based and reflect widely agreed principles of sustainability. The use of proxy measures such as “primary forests” for sustainability and biodiversity conservation criteria should be avoided or approached carefully, especially for forests that have adapted over millennia to regenerate after natural disturbances, such as fire, insects and diseases. The current use of the FAO definition of “primary forest” as a basis for prohibiting some sources of biomass is problematic because it is difficult to measure, and countries report using inconsistent methods. Canada suggests that assessment of biodiversity and sustainable forest management should rely on a comprehensive set of indicators, such as those agreed through international criteria and indicators systems (like the Montreal Process) or certification schemes, rather than relying on a binary indicator like “primary forests” that may not be scientifically defensible in forests driven by natural disturbance.

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

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

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

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

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

	effective	partly effective	neutral	counter-productive	No opinion

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

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

2500 character(s) maximum

Canada is not in a position to comment on the effectiveness of current EU policies in addressing the risks of negative environmental impacts associated with solid and gaseous biomass within EU Member States. However, there are already several EU rules that address forest management practices in countries external to the EU-28, such as the EU Timber Regulation and GHG emissions calculation methodologies that have been taken up by exporters shipping into this market.

Canada suggests that the new Renewable Energy Directive and bioenergy sustainability policy should recognize the efforts of producers/jurisdictions, such as Canada, that already successfully incorporate sustainability principles into their industry through government regulation and/or participation in voluntary certification schemes. Canada is a leader in sustainable forest management (SFM) as a result of: efforts to balance environmental, social and economic values; rigorous forest management planning; comprehensive laws, regulations and policies that govern the publicly-owned forest estate (which includes 94% of Canada's forests); and a commitment to science-based, adaptive management. In addition, Canada has 166 million hectares of land with third-party forest certification, which is more than any other country in the world. Forest practices in the majority of Canada's forests where forest operations can occur are now certified.

Any new regulations or policies introduced to address environmental impacts in non-EU countries should apply a risk-based approach that recognizes robust SFM and environmental frameworks already in place in supplier countries, as well as voluntary certification schemes that provide assurance of the integrity of the product through the supply chain. This would serve to minimise regulatory burden for producers who already adhere to high environmental standards while encouraging other producers to improve their production processes.

Regarding competition between different uses of biomass, Canada suggests that any regulation should involve the minimum amount of regulatory burden necessary to meet the goals of the Directive. Markets and industry participants are likely to be the most effective and efficient decision makers for how available biomass resources are used.

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

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

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

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

7.2. Any other views? Please specify

2500 character(s) maximum

All of the objectives listed above in 7.1 are important and could possibly be advanced simultaneously using a well-designed policy initiative, but Canada suggests that the first priorities of an improved EU bioenergy sustainability policy should include provision of regulatory clarity using harmonized requirements and promotion of a single market. These requirements should ensure that biomass consumed in the EU is sustainable and minimizes its environmental footprint. However, the requirements should also be practical so that the sector is encouraged to develop and grow. Designing a sustainability policy that is too complex or restrictive could create undue administrative burdens, and stifle investment and innovation.

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

Canada suggests that the proposed EU bioenergy sustainability policy include:
• Regulatory clarity and certainty for investors, operators and suppliers.
o A harmonized, practical approach that is applied across the EU's single market and that draws upon experiences and best practices of Member States.
o Adequate detail and prescription so that the creation of additional, layered requirements at the Member State level are avoided.
• Recognition for producers that already successfully incorporate sustainability principles into their industry through government regulation and/or participation in voluntary certification schemes.
o Application of a risk-based approach that accounts for robust sustainable forest management and environmental frameworks that exist in supplier countries
o Use of voluntary certification schemes to minimize administrative burdens
• The minimum amount of regulatory burden necessary to meet the goals

of the new Directive.
• Sustainability criteria that are evidence-based and reflect widely agreed-upon principles of sustainability.
o Studies used to inform the policy should be based on accurate scenarios.
o Use of proxy measures for determining sustainability and biodiversity conservation (such as “primary forest”) should be avoided.

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

In regards to Question 2.2., Canada takes note that the Commission has invited comment on the treatment of biomass based on its origin: local, EU and non-EU. Canada believes that any policy ultimately adopted should not only be science-based and transparent, but also non-discriminatory and trade facilitating. A focus on the source of biomass rather than the sustainability of the biomass would not fulfil these goals.

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

Thank you for participation to the consultation!

Contact

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