Open consultation on the preparation of a report on additional sustainability measures at EU level for solid and gaseous biomass used in electricity, heating and cooling.

Following its Report on sustainability requirements for the use of solid and gaseous biomass[1] sources in electricity, heating and cooling[2] in February 2010, the Commission is currently analysing the need for additional measures at EU level. This questionnaire seeks views on whether the EU should take further action to ensure that biomass used for energy purposes is sustainable, in particular in light of the developments in the bio-energy sector (supply, production, policy and regulatory framework) and considering the impacts of national/regional biomass sustainability schemes development. Though the main target audience is EU citizens and stakeholders, comments from outside the EU will also be welcome.

This consultation concerns sustainability criteria for energy uses of biomass *other than biofuels and bioliquids*. Therefore, comments on the sustainability criteria for biofuels for transport should only concern potential areas of overlap with criteria for the use of solid and gaseous biomass for electricity and heating.

The consultation is open from **1st February 2011** and closes on **29th March 2011**

This questionnaire is only in English, but responses to open questions can be in any European Union language.

If you have views on some questions and not others, do not hesitate to send an answer covering only these questions.

Contributions will be published, on
http://ec.europa.eu/energy/res/consultation/index_en.htm

This document has been prepared by the Commission services as a basis for comments. It does not prejudge the final form of any decision to be taken by the Commission.

[1] Gaseous biomass refers to gases of biomass origin
[2] COM(2010)11:
http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/com_2010_0011_3_report.pdf

Background

Directive 2009/28/EC[3] on the promotion of the use of energy from renewable sources (RES Directive) was adopted on 23 April 2009. It sets national binding targets for Member States' share of renewable energy sources in energy consumption by the year 2020. The RES Directive includes a sustainability scheme for (a) biofuels for transport and (b) bioliquids used in other sectors (heating and electricity).

Article 17(9) of the RES Directive provides that the Commission reports on the need for sustainability requirements for energy uses of biomass other than biofuels and bioliquids (notably solid and gaseous biomass[4] in heating and cooling and electricity). The first such report, adopted in February 2010, COM(2010)11[5], was based on a public consultation[6] and was accompanied by an Impact Assessment[7].

In this report, the Commission concluded that non-legally binding recommendations to Member States were appropriate at that time. The recommended criteria, contained in COM(2010)11, are in almost all respects the same as those laid down in the RES Directive for biofuels and bioliquids, to ensure consistency, coherence and cost-effectiveness of policy[8].

The Commission decided not to propose mandatory sustainability criteria for solid and gaseous biomass used in electricity, heating and cooling, for the following reasons:

- Existing legislation and voluntary schemes at European and national levels provide for a framework for sustainable biomass production in the agriculture and forestry sectors as well as a framework for waste management.
- The life-cycle greenhouse gas performance (i.e. GHG savings) of most types of solid and gaseous biomass used in electricity, heating and cooling is assessed to be high.
- Biomass feedstocks produced in third countries, from areas with high carbon stock and/or high biodiversity and / or where the regulatory framework may be less comprehensive than in the EU, present the highest sustainability risks. Given that in 2007-2008 only 3-5% of biomass for energy was imported into the EU, the Commission considered that the sustainability risks related biomass use in the EU were relatively low.
- Finally, the assessment found that unlike the biofuels industry, there are many small-scale and local producers of bio-heat and bio-electricity in the EU who might not be able to bear the additional administrative costs of proving sustainability, even though production is sustainable. An EU-wide binding scheme could impose relatively high costs on small producers.

The Commission undertook to report by 31 December 2011 on whether or not national schemes, if any, have sufficiently and appropriately addressed the sustainability issues related to the use of biomass from inside and outside the EU, whether or not such schemes have led to barriers to trade and/or to the development of the bio-energy sector, and to consider if additional measures such as common sustainability criteria at EU level would be appropriate.

The Commission also undertook to report on how international climate change negotiations and other policy developments including land use, land use change and forestry (LULUCF)

[3] Directive 2009/28/EC: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009L0028:EN:NOT
[4] "Gaseous biomass" refers to gases of biomass origin
[5] http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/com_2010_0011_3_report.pdf
[6] http://ec.europa.eu/energy/renewables/consultations/2008_09_30_biomass_en.htm
[7] http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/sec_2010_0065_1_impact_assessment_en.pdf
[8] Exception: it is recommended that greenhouse gas performance criteria is not applied to waste. Also, the report indicates that the recommendations should apply only to energy producers of 1 MW thermal or 1 MW electrical capacity or above

accounting and how the United Nations programme on Reducing Emissions from Deforestation and Forest Degradation (REDD) in Developing Countries relate to the sustainable production of biomass. Regarding LULUCF, the Commission is currently preparing a report on whether LULUCF emissions should be included in the EU GHG emissions reduction commitment[9], and has recently organised a public consultation on this issue[10]. Therefore, this specific issue will not be addressed in detail in this consultation.

The objective of this consultation is to collect views and experiences of stakeholders on:

1) the extent to which recent developments in the bio-energy sector reflect significant changes compared to the conclusions drawn in the first sustainability report (in terms of imports flows, types of biomass used for energy etc…);
2) the extent to which other new policy developments related to the use of biomass have contributed to the sustainable production and consumption of biomass in the EU; and
3) the development of sustainability criteria for solid and gaseous biomass at national and/or regional level and their impacts in the EU.

In the process of preparing the new report, the Commission is seeking the views of stakeholders and other interested parties on the need for additional measures at European level, so as to ensure solid and gaseous biomass sustainability when used for energy purposes.

Section A: Developments in the bio-energy sector

According to Member States' projections in their National Renewable Energy Action Plans (NREAPs)[11] bio-energy will play an important role in reaching the EU 20% renewable energy target. Around 10% of the total gross final energy consumption in the EU is expected to come from biomass (i.e. half of all renewable energy sources). In particular, by 2020, biomass would contribute to around 6.5% of final electricity consumption, around 17.5 % of the heating and cooling consumption, and around 9.5 % of the final transport consumption. This means an overall increase of bio-energy in all three sectors, amounting to more than doubling of bio-energy consumption from 2005 up till 2020, with the heating and cooling sector remaining the most important one for biomass consumption.

For domestic biomass supply (i.e. production of biomass from forestry, agriculture and wastes), an overall significant increase is expected by 2020. Biomass from forestry would remain the main source of supply, but biomass from agriculture and fisheries would see the most significant increase in absolute term.

Annex 1 and 2 provide respectively Member States projections on biomass consumption projected by Member State in electricity, heating and cooling and transport, and primary energy from biomass supply (from agriculture, forestry and wastes).

Section B: New policy developments related to biomass sustainability

Since the adoption of the report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling in February 2010, the European and international policy context on biomass has continued to evolve, including some important changes in the following areas.

[9] Report required under the effort sharing decision (Decision 406/2009/EC)
[10] http://ec.europa.eu/environment/consultations/climate.htm
[11] Provisional results based on the analysis of the 27 NREAPs available on http://ec.europa.eu/energy/renewables/transparency_platform/action_plan_en.htm

Forestry and Agriculture

1. Illegal Logging Regulation[12]. Adopted in October 2010, this Regulation prohibits the placing on the market of illegally harvested timber or timber products, including fuel-wood[13], and lays down obligations on operators to exercise due diligence when placing timber or timber products on the market[14]. The due diligence system provides for risk assessment procedures enabling the operator to analyse and evaluate the risk of illegally harvested timber or timber products being placed on the market, and risk mitigation procedures to minimise effectively that risk.

2. Wood mobilisation. In March 2010, as a follow-up to the EU Forest Action Plan (FAP) [15] and Action 2 of the Communication on "Innovative and sustainable forest-based industries in the EU"[16], the "Good practice guidance on the sustainable mobilisation of wood in Europe" [17] was published.

3. Forest protection. In March 2010, the European Commission adopted a Green Paper on "Forest Protection and Information in the EU: Preparing forests for climate change"[18], which launched a debate on options for an EU approach to forest protection and information in the framework of the EU Forest Action Plan (FAP), and on how new challenges, including climate change, modify the terms of forest management in Europe[19].

4. Emissions from land use, land use change and forestry (LULUCF). In 2008, the EU has committed unilaterally to reduce its overall greenhouse-gas (GHG) emissions to 20 % below 1990 levels by 2020, and up to 30 % below 1990 levels if conditions were right[20]. Emissions and removals relating to land use, land use change and forestry (LULUCF) activities are not yet part of the above-mentioned commitment but the Effort Sharing Directive requires to assess the issue by June 2011 and, as appropriate, propose how these activities may be included in the EU GHG reduction target[21].

5. Reducing Emissions from Deforestation and Forest Degradation (REDD). In December 2010, within the framework of the international negotiations on climate change, countries agreed to establish a REDD mechanism to provide incentives for developing countries that

[12] Regulation EU/995/2010[12] laying down the obligations of operators who place timber and timber products on the market: http://eur lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:295:0023:0034:EN:PDF

[13] The Regulation applies to category 4403 of the Nomenclature set out in Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff: *"Fuels wood, logs, in billets, in faggots or in similar forms; wood in chips or particles; sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms"*

[14] Article 2 (h) gives a definition of "Applicable legislation", listing the legislative matters covered by the Regulation: rights to harvest timber within legally gazetted boundaries; payments for harvest rights and timber including duties related to timber harvesting; timber harvesting, including environmental and forest legislation including forest management and biodiversity conservation, where directly related to timber harvesting; third parties' legal rights concerning use and tenure that are affected by timber harvesting; trade and customs in so far as the forest sector is concerned.

[15] COM(2006)302: http://ec.europa.eu/agriculture/fore/action_plan/com_en.pdf

[16] COM(2008) 113 final, Brussels, 27.2.2008

[17] http://ec.europa.eu/agriculture/fore/publi/forest_brochure_en.pdf

[18] SEC(2010)163 final

[19] The summary report on the response to the consultation is available at: http://ec.europa.eu/environment/forests/fprotection.htm

20 These conditions include that: other developed countries commit themselves to comparable emission reductions and economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities.

[21] In preparation of the report, the Commission has conducted extensive consultation with Member States, experts and stakeholders: http://circa.europa.eu/Public/irc/env/clim_lulucf/library

protect and restore their forest carbon stocks[22]. By helping to address the drivers of deforestation, the REDD mechanism may have implications on EU imports of agricultural and forest commodities.

6. Possible legally binding agreement on forests. Within the framework of Forest Europe process[23], at the Ministerial Conference of Forest Europe to be held in Oslo (Norway) in June 2011, parties will decide to enter into negotiations for a legally binding agreement on forests in the pan-European region. The objective of such possible agreement would be to support and enhance sustainable forest management and the multifunctional role of forests and to enhance co-operation at European level.

7. Future EU Common Agricultural Policy (CAP). In November 2008, under the so called "CAP health check", the European Commission adopted measures to modernise, simplify and streamline the CAP, including promoting renewable energies and addressing climate change, through increasing rural development budget. In November 2010, under the CAP reform process[24], the European Commission presented a Communication on "The CAP towards 2020"[25] which identifies environment protection and climate change as key challenges to be tackled in the future.

Biodiversity

8. EU biodiversity strategy. Following the Commission Communication on 'Options for an EU vision and target for biodiversity beyond 2010'[26], in March 2010 the Environment Council, adopted a new post-2010 biodiversity target: *To halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.* Building on this, the European Commission is currently revising the EU biodiversity strategy.

9. United Nations Biodiversity Plan In October 2010, under the UN biodiversity negotiations[27], a new ten-year Strategic Plan for global biodiversity protection was adopted, including 20 headline targets. Among these, countries agreed to ensure that by 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. They also agreed that by 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Green public procurement [28]

10. Green Public Procurement (GPP). The potential of public procurement has been increasingly recognised as a tool for addressing growing concerns about the sustainability of consumer goods. In July 2010, EU GPP criteria[29] were established for: a) Combined Heat and Power (CHP), focusing on overall energy efficiency and the associated primary energy savings; and b) windows, glazed doors and skylights and wall panels[30], sectors that all

[22] http://www.un-redd.org/
[23] http://www.foresteurope.org/
[24] http://ec.europa.eu/agriculture/cap-post-2013/index_en.htm
[25] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0672:FIN:en:PDF
[26] COM(2010)4
[27] http://www.cbd.int/ . The EU and the 27 Member States are part of this Convention
[28] EU GPP are based on a Communication on Public Procurement for a Better Environment (COM(2008)400) provides for a process of co-operation with the Member States, aimed at setting common criteria for use in GPP for priority sectors. EU GPP is a voluntary system. However, Member States are invited to formally endorse the already developed common GPP criteria.
[29] http://ec.europa.eu/environment/gpp/second_set_en.htm
[30] In 2008, a first set of GPP criteria was already established for the following sectors relevant for wood and wood based products: copying and graphic paper, construction and furniture.

relevant for wood and wood based products. As wood products processing often lead to the production of wood co-products that can be used for energy purposes, these criteria may indirectly concern biomass for energy uses. EU work addressing GPP for heating systems may follow in the future[31].

Resource efficiency

11. Resource efficiency flagship. In January 2011 the Commission adopted the "Resource Efficient Europe" flagship initiative under the Europe 2020 strategy[32], which supports the shift towards a resource-efficient, low-carbon economy to achieve sustainable growth. This flagship initiative will be followed by concrete proposals for strategies to improve resource efficiency in a number of policy areas, including a Resource Efficiency Roadmap.

Section C: Consideration of the impacts of national / regional biomass sustainability schemes in the EU

Section D: Consideration of additional European measures

[31] http://susproc.jrc.ec.europa.eu/heating/index.html
[32] http://ec.europa.eu/resource-efficient-europe/

Annex 1: Final energy consumption from biomass projected by Member States in electricity, heating and cooling and transport (Provisional analysis of tables 10, 11 and 12 of National Renewable Energy Action Plans[33])- (in ktoe)[34]

2005	Electricity	Heating and Cooling	Transport	Total
BE	154	477	0	631
BG	0	724	0	724
CZ	62	1374	3	1439
DK	279	1759	0	2038
DE	1206	7261	1919	10386
EE	3	505	0	508
IE	10	183	1	194
EL	8	951	1	960
ES	228	3477	258	3963
FR	328	9153	403	9884
IT	402	1655	179	2236
CY	0	4	0	4
LV	4	1114	3	1121
LT	1	686	4	690
LU	4	19	1	24
HU			5	5
MT				
NL	434	647	0	1081
AT	243	3033	43	3319
PL	125		43	168
PT	170	2508	0	2678
RO	0	3166	0	3166
SI	10	444	0	454
SK	3	358	0	361
FI	831	5490	0	6321
SE	651	7078	166	7895
UK	783	560	75	1418
TOTAL	5937	52627	3104	61668

2020	Electricity	H&C	Transport	Total
BE	949	2034	789	3772
BG	75	1073	200	1348
CZ	530	2517	672	3719
DK	761	2643	261	3665
DE	4253	11355	5517	21125
EE	30	607	89	726
IE	87	486	482	1054
EL	108	1222	617	1947
ES	861	4950	3504	9315
FR	1477	16455	3660	21592
IT	1615	5670	2530	9815
CY	12	30	38	80
LV	105	1392	77	1574
LT	105	1023	167	1295
LU	29	83	216	327
HU	286	1281	511	2078
MT	12	2	13	26
NL	1431	1520	834	3785
AT	443	3607	584	4634
PL	1223	5089	1968	8280
PT	302	2322	477	3101
RO	249	3876	496	4621
SI	58	525	192	775
SK	147	690	190	1027
FI	1110	6610	560	8280
SE	1441	9491	810	11742
UK	2250	3914	4205	10369
TOTAL	19950	90467	29658	140075

[33] http://ec.europa.eu/energy/renewables/transparency_platform/action_plan_en.htm

[34] Please note that when Member States provided two possible data for some projections, the Commission calculated the average. Also, some data was modified by the Commission for consistency reasons.

Annex 2: Details of biomass supply coming from agriculture, forestry, and wastes projected by Member States (Provisional analysis of tables 7 and 7a of National Renewable Energy Action Plans[35]) – primary energy production (ktoe)[36]

	Biomass from forestry	Biomass from agricultulture and fisheries	Biomass from waste	Total
BE				
2006	814,37	87	368	**1269**
2015	732,03	1670	561	**2963**
2020	868,59	1030	536	**2435**
BG				
2006	736	0	59	**795**
2015	830	130	64	**1024**
2020	892	169	84	**1145**
CZ				
2006	1536	40	133	**1709**
2015	2529	286	113	**2928**
2020	2716	358	183	**3257**
DK				
2006	1246	515	561	**2322**
2015	1629	621	632	**2882**
2020	2011	705	704	**3420**
DE				
2006	9792	7357	955	**18104**
2015	12217,5	7847	2126	**22190**
2020	11966	9136	2317	**23419**
EE				
2006	0	0	2	**2**
2015	0	0	0	**0**
2020	0	0	2	**2**
IE				
2006	122	60	8	**190**
2015	169,81	382	235	**787**
2020	258	1036	435	**1729**
EL				
2006	729	202	33	**964**
2015	1361	1200		**2561**
2020		1500		**1500**
ES				
2006	2800	1712	378	**4890**
2015	3531	2262	743	**6536**
2020	3783	3240	1006	**8029**
FR				
2006	11029	1217	1345	**13591**
2015	13455	3005	1890	**18350**
2020	15229	4210	2290	**21729**
IT				
2006	880	1033	711	**2624**
2015	1600	2600	940	**5140**
2020	4000	6500	2350	**12850**
CY				
2006	9	1	1	**11**
2015	5,05	6	4	**15**
2020	5,05	8	6	**19**

[35] http://ec.europa.eu/energy/renewables/transparency_platform/action_plan_en.htm

[36] 2006: domestic biomass + Imports – Exports / 2015 and 2020: domestic biomass.
Please note that when Member States provided two possible data for projections, the Commission calculated the average. Also, some data was modified by the Commission for consistency reasons.

LV				
2006	159	0	0	**159**
2015				
2020				
LT				
2006	728	0	0	**728**
2015	684	267	79	**1030**
2020	612	509	121	**1242**
LU				
2006	22,6	10	16	**49**
2015	49	25	23	**97**
2020	107	39	27	**173**
HU				
2006	590	52	0	**642**
2015	584	649	0	**1233**
2020	636	1130	0	**1766**
MT				
2006	0	0	0	**0**
2015	0	5	5	**10**
2020	0	5	5	**10**
NL				
2006	462	537	1354	**2353**
2015	376	1199	2198	**3773**
2020	558,5	2047	2687	**5292**
AT	0	0		
2006	3725	337	52	**4114**
2015	3588	420	100	**4108**
2020	3870	730	150	**4750**
PL				
2006	4173	461	24	**4658**
2015	2002	1763	1151	**4916**
2020	2081	2929	1758	**6768**
PT				
2006	2731	7	99	**2837**
2015	2946	302	163	**3411**
2020	2894	326	236	**3456**
RO				
2006	1200	817	1391	**3408**
2015	1560	1586	0	**3146**
2020	1800	1604	0	**3404**
SI				
2006	443	0	0	**443**
2015	324	0	0	**324**
2020	333	0	1	**334**
SK				
2006	453,4	152	20	**625**
2015	979	2180	64	**3223**
2020	1222	2194	90	**3506**
FI				
2006	7.273	63	0	**7336**
2015				
2020				
SE				
2006	8205	617	764	**9586**
2015	9128	322	926	**10376**
2020	9628	408	1202	**11238**
UK				
2006	582	709	2196	**3487**
2015				**2145**
2020				**6085**
Total				
2006	60440	15987	10468	**86895**
2015	60279	28725	12017	**103167**
2020	65470	39812	16191	**127558**