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## EBA position on biomass sustainability under the Renewable Energy Directive

### Introduction

The European Biogas Association (EBA) strongly supports the creation of ambitious EU-wide sustainability criteria for all three energy sectors. Robust and realistic measures to protect the soil, tackle land use and put limits on carbon intensive forms of bioenergy are important to establish a durable legislative framework for investors and technology developers in the biomass sector, while also affirming public acceptance.

As EU-wide repetitive of the biogas and gasification sectors which produce renewable gasses, EBA supports the following amendments related to sustainability in the Commission's proposal for a recast of the Renewable Energy Directive 2016/0382(COD).

### EBA recommendations for amendments:

#### Article 2 - (q) – Definition of 'non-food cellulosic material'

**Explanation:** As long as there is no change to food production and no additional land use (neither direct nor indirect), when farmers introduce an additional second harvest for energy purposes, they should have the possibility to innovate into secondary crops with high starch content for energy use. Cover crops are already recognised in Directive 2015/1513 as eligible feedstock for advanced biofuels, but limited to "*grassy energy crops with a low starch content*". Several southern regions are fit for the production of high yield cover crops (besides a main crop), several of which are not grasses, and moreover R&D is ongoing that promises more types of fast growing high yield cover crops. This Directive should encourage the use of high yield cover crops, rather than trying to restrict it, as this can increase GHG emission savings and profitability for farmers, without bringing about any threat to land use. A 2017 study of ECOFYS shows several of the benefits of sequential cropping for biogas production.<sup>1</sup> Concretely, EBA proposes to move the bracket, taking out cover crops from the category of grassy energy crops with low starch.

Proposed amendment in Article 2 (q): (q) 'non-food cellulosic material' means [...] *grassy energy crops with a low starch content (such as ryegrass, switchgrass, miscanthus, and giant cane) and cover crops before and after main crops*, industrial residues [...]

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<sup>1</sup> [ECOFYS Study of November 2016](#): Benefits outlined in the study include additional income to farmers, a high rate of biogenic carbon storage in soil, enhanced soil quality and fertility, no impact on the on-farm biodiversity, low impact on water availability and savings in the purchase of organic fertilisers.

## Article 25 - Obligation on fuel suppliers in the transport

**Explanation:** Fuel suppliers for transport are required to ensure a minimum blending of renewable fuels in the final share of energy sold. Rather than respecting a renewed target in transport, Member States would instead be responsible to implement a national system requiring fuel suppliers to report this information. By leaving the actual blending of renewable fuels to the individual actions of economic operators, EBA is concerned that this would result in gaps and inefficiencies without proper tools to implement corrective actions (e.g. infringement procedures). Clearer wording is needed to ensure that national measures can guarantee that fuel suppliers will fulfil their obligations.

Proposed amendment adding to Article 25.4: ***Member States shall specify a detailed timeline, corrective measures to be applied in the case of deviations from the annual obligations and penalties in situations of non-compliance to be respected by the fuel suppliers with the blending mandate.***

**Explanation:** Moreover, EBA strongly supports the architecture and ambitious objectives set for renewable transport in the Commission's proposal under article 25, as well as annexes IX and X. EBA supports initiatives by the co-legislators to further increase the ambition in the transport sector, including a higher transport target of 12% as proposed by the Blanco Lopez draft report. At the same time and in view of the slow take up of renewables in transport so far, EBA requests decision-makers not to undermine efforts to decarbonise transport by trying to go below the Commission proposal's ambition and therefore advises the following:

- Avoiding the introduction of multipliers for any kind of renewable in transport, as this will artificially inflate the shares of renewables as is already the case in the current Directive;
- Not removing advanced feedstocks from annex IX (including 'non-food cellulosic material' definition in article 2 (q)), nor changing the conditions under either new feedstocks are added or existing ones are removed, as this would severely undermine investors' certainty;
- Refraining from decreasing the proposed trajectory for advanced biofuels, which is both realistic and essential to decarbonise transport.

## Article 26. 1 - Small gaseous biomass plants

**Explanation:** EBA considers that it is adequate to exclude smaller gaseous biomass fuel plants because: it avoids disproportionate burdens on small producers, most of them being farmers or cooperatives of farmers; potential impacts to sustainability from small plants are low, as their total combined production is small.

Nonetheless, setting this important value only in electric installed capacity largely disadvantages biogas plants that operate flexibly and those with biomethane upgrading. Biogas installations designed for flexible electricity generation during peaks in demand have larger CHP units, what puts them at a clear disadvantage, compared to biogas plants designed to operate on a 24/7 basis to provide baseload electricity, which will have smaller engines even while producing an equivalent amount of energy from the same amount of feedstock. Considering that flexible generation is one of

the key goals of the Electricity market design revision and that biogas is one of the few flexible renewable energy sources available at a large scale in Europe, it is essential that plants with a flexible design and of an equivalent size in terms of feedstock use are not at a disadvantage. Similarly, biogas plants with upgrading facilities to produce biomethane (i.e. renewable natural gas equivalent) do not normally produce electricity on site and do not have electric generation capacity, as they inject their produce in the gas grid instead.

For these reasons and in order to streamline this value with the solid biomass threshold, EBA proposes a gaseous biomass threshold set in fuel capacity in terms of feedstock used. Taking into account energy conversions, EBA proposes a threshold comparable to the installation size proposed by the commission, which is of **2 MW of fuel capacity for gaseous biomass fuel plants**.

Proposed amendment in Article 26.1: *“Biomass fuels need to fulfil the sustainability and greenhouse gas emissions saving criteria set out in paragraphs 2 to 7 only if used in installations producing electricity, heating and cooling or fuels with a fuel capacity equal to or exceeding 20 MW in case of solid biomass fuels and ~~with an electrical capacity~~ with a fuel capacity equal to or exceeding 2 MW in case of gaseous biomass fuels. Member States may apply the sustainability and greenhouse gas emission saving criteria to installations with lower fuel capacity.”*

#### **Article 26.7 – GHG savings from biomass**

**Explanation:** Gasification is one of those promising technologies, where Europe being a leader with dozens of small scale pilot facilities, could offer an efficient and clean way of turning woody biomass and dry organic waste into storable biomethane from syngas. Equally, cogeneration of biogas and thermal application of biomethane offer a sustainable contribution to the decarbonisation of the heating sector.

One single requirement in the proposal likely to be a limiting factor for several promising technologies is the 80% (85% from 2026 onwards) GHG emission savings threshold for electricity and heating. Differently from the gradual introduction of minimum GHG emission savings threshold for biofuels in transport which followed the innovation curve of the technology, the bioenergy use in the electricity and heating sectors will have to comply with very strict requirements (i.e. from no savings requirements to 80% and 85%). This is likely to have a disruptive effect on the deployment of renewable heat, where uptake has been slow and mainly biomass based, and also in renewable electricity where biomass still provides the most promising option for dispatchable electricity to balance intermittent renewable sources. Innovative technologies such as gasification will be particularly penalised before even reaching the energy market.

Moreover, the GHG savings for the heating sector will in particular difficult to reach as the fossil fuel comparator (FFC) is set at 100% natural gas. This significantly underestimates the current GHG emissions from the heating sector: natural gas constitutes a part of the fuels mix and is recognised as a low carbon fossil fuel<sup>2</sup>, while there are other more carbon intensive fuels which are not considered in the FFC like heating oil and coal that raise the overall real emissions of the sector.

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<sup>2</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0094&from=IT>

EBA strongly believes that harmonising a threshold for all three energy sectors at 70% would strike a good balance between high environmental ambitions and what is technically possible today in the field of bioenergy. The EU should not close the door to promising technologies which may reach higher efficiency levels in the future, and instead should focus on the long term goal of replacing non-renewable energy by renewable sources.

Proposed amendment in Article 26.7 (d): at least 80–70 % for electricity, heating and cooling production from biomass fuels used in installations starting operation after 1 January 2021 and 85% for installations starting operation after 1 January 2026.

## Technical recommendations related to renewable gasses

### Inclusion of more pathways for biogas and biomethane – Annex VI Part A

Explanation: EBA welcomes the coverage of typical and default values for three feedstocks commonly used to produce biogas and biomethane, as well as setting fossil fuel comparators across energy sectors (transport, heating and power). Nonetheless, anaerobic digestion is a versatile technology that uses a much wider variety of wet biomass feedstocks in all 3 energy sectors. The lack of more pathways in the tables of annex VI is problematic for biogas and biomethane plant operators that mostly run small production units, most of them being farmers, who will have to face the burden of calculating their own values. EBA strongly advises Co-legislators and the Commission to add more pathways for anaerobic digestion, for biogas and biomethane.

The 1<sup>st</sup> priority in terms of pathways for biogas and biomethane should be straw. This important low carbon feedstock is already widely digested and its use is expected to increase rapidly, it has a very high energy potential in the EU and is already recognised in the Annex IX list of advanced biofuel feedstocks. To avoid unnecessary burden to hundreds of small operators, EBA recommends adding straw pathways for biomethane and biogas in annex VI. The feedstock values for straw composition can be taken from the already proposed ethanol pathway for straw pellets. Also, the distinction between liquid and solid manure should be kept as is in the current Directive.

Biomethane currently only has pathways for transport, what limits its use as it is also perfectly fitted for industrial processes, household heating and cogeneration. Moreover, several countries already provide incentives for this renewable fuel in heating. Therefore, EBA requests the Co-legislators and the Commission to add biomethane pathways in heating and cooling for all feedstocks, encompassing the 3 that already are in annex VI and those added in the future.

EBA also requests the Commission and JRC to calculate and add new pathways via technical amendments, in particular for: different cover crops, grasses and agro-industrial wastes.

### GHG emissions savings for biowaste - Annex VI Part A

Explanation: EBA calls for a reassessment of the GHG emission saving values assigned to biowaste for both transport and electricity/heat. Our assessment is that the proposal significantly underestimates

the GHG savings of biogas and biomethane from biowaste. We do not challenge the entire JRC's LCA, but we propose to reevaluate two factors concerning the biowaste pathways: storage of biogenic carbon in soil and mineral fertiliser substitution. Diverting biowaste from costly disposal or incineration to anaerobic digestion results in the production of biogas and also in making available organic fertiliser (digestate) that would otherwise be lost, making the economy more circular and local. Digestate is a fertiliser that has two key benefits: it provides nutrients to plants, which would otherwise be industrially mined and manufactured, thereby saving CO<sub>2</sub> emissions; it increases soil quality by adding carbon to the soil, what is good for plants and also naturally sequesters organic carbon. When biowaste is treated via incineration these multiple benefits do not take place, as highlighted in the Commission's Communication on Waste to Energy.

EBA requests the European Commission and the Joint Research Centre to recalculate as soon as possible GHG savings for biowaste in biogas and biomethane. Two key parameters that should be closely taken into account are storage of biogenic carbon in soil and mineral fertiliser substitution.