



BIOMASS REPORTING

**under Annex IX, Part 1 (m) to Regulation (EU) 2018/1999
of the European Parliament and of the Council of 11
December 2018 on the Governance of the Energy Union
and Climate Action**

1 October 2021

Please send your questionnaire to:

- European Commission, Eurostat, Energy Statistics (for Member States of the European Union, Countries of the European Economic Area and Energy Community countries)

Transmission details are provided below:

The completed quality report should be transmitted to Eurostat via the **Single Entry Point (SEP)** following the implementing procedures of **eDAMIS** (electronic Data files Administration and Management Information System), selecting the electronic data collection **ENERGY_BIOMASS_A**.

E-MAIL ADDRESS

estat-energy@ec.europa.eu

NOTE

For questions regarding the questionnaire, contact Mr Rajmund Laczko
e-mail: Rajmund.LACZKO@ec.europa.eu; Telephone: + 352 4301 34417

REPORTING INSTRUCTIONS

The definitions and reporting conventions used in this questionnaire are consistent with those used in the Renewables and Wastes annual questionnaire. Therefore, consistency between data reported in both questionnaires should be respected as much as possible. In addition, the definitions and scope used in this questionnaire have been consulted and harmonized with international organisations (FAO, UN), other directorates of the European Commission (DGs ENER, ENV, CLIMA and JRC), as well as with other statistical domains (agriculture, forestry) at Eurostat.

Reporting units in this questionnaire are, with one exception, expressed in m³ to fulfil the obligation of the Governance Regulation¹ to report in these units. Therefore, the template offers the possibility for countries to report average calorific values and transform volumes into energy units (TJ, to facilitate comparison with the annual Renewables and Wastes questionnaire. Where available, countries should report the average calorific values in the relevant column.

OBJECTIVES AND SCOPE

Eurostat collects, processes and publishes annual, monthly and short-term monthly energy statistics on quantities of numerous energy commodities, both primary (e.g. crude oil, natural gas, hard coal, etc.) as well as secondary (e.g. motor gasoline, gas/diesel oil, coke, patent fuels, etc.). Statistics are also produced on end-user prices of electricity and natural gas. Taking onboard the collection of the biomass questionnaire, Eurostat aims to fulfil the obligation of the Governance Regulation with high quality data and to ensure as much consistency as possible between the figures reported in this questionnaire and official data reported under Regulation (EC) No 1099/2008 on energy statistics.

In order to establish the definitions and scope, Eurostat has tried to ensure consistency with the annual renewables and wastes questionnaire. Eurostat has also consulted internally with other statistical domains, other DGs of the Commission and externally with other international organisations to avoid contradictions with other reporting frameworks. Ideally, the totals of the biomass questionnaire should be consistent with the totals reported in the renewable AQ. Eurostat is aware of the difficulties, but it aims in that direction.

The timeline for initiating the data collection has three phases:

- A **first pilot data collection** still this year (with an indicative deadline end of October 2021), where volunteer countries could send data that are currently available to them, together with comments and challenges to fill in the questionnaire.
- A **voluntary data collection** in 2022 (deadline 15 March 2022 for reference year 2020).

¹ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, *OJ L 328, 21.12.2018, p. 1–77*, <http://data.europa.eu/eli/reg/2018/1999/oj>

Eurostat hopes that many countries will participate, as it is beneficial for all parties. Eurostat will use this double experience to fine-tune the questionnaire, methodology and validation process if needed.

- After this voluntary phase Eurostat will launch the **first mandatory data collection** (deadline 15 March 2023 for reference year 2021).

DEFINITIONS

(1) Forest biomass used for energy production

Definition in line with energy statistics and Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources: Organic, non-fossil material of biological origin used as fuel for heat production or electricity generation. This should be understood as the biodegradable fraction of products, wastes and residues from biological origin from forestry and related industries and other activities, including biomass from forests and also isolated trees. Agricultural biomass and organic waste biomass should not be reported under point 1, but under points 2 and 3.

(1a) Primary biomass from forest

Definition from energy statistics: Organic, non-fossil material of biological origin from the forest or isolated trees. Clarification: Whether identified separately or not in voluntary items 1(a)i and 1(a)ii, this category should include, in addition to roundwood, also wood harvested from stumps, branches and treetops.

(1ai) Branches and tree tops

Non-stem wood, branches are parts of a tree which grow out from the trunk (stem) or from a bough. Tree top is the uppermost layer in a tree, also known as the crown.

(1aii) Stumps

Non-stem wood, small remaining portion of the trunk with the roots still in the ground after a tree has been cut and felled.

(1aiii) Roundwood

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire and the term woody biomass from forest for energy from the FAO/UNECE Joint Wood Energy Enquiry (JWEE): Wood in the rough. All roundwood felled or otherwise harvested and removed, which is finally used for energy purposes. It comprises all wood obtained from removals, i.e. the quantities removed from forests or isolated trees, including wood recovered from natural felling and logging losses during the period, excluding branches, tree tops and stumps. It includes all

wood removed in its round form, or split, roughly squared or in other form and wood that is roughly shaped or pointed. It is reported in solid volume underbark (i.e. excluding bark).

(1aiii-I) Industrial roundwood

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire and the term industrial round wood from woody biomass from forest for energy from the FAO/UNECE Joint Wood Energy Enquiry (JWEE): All roundwood except fuelwood (wood fuel). Although might not be primarily harvested for energy purposes, it is finally used as energy carrier. It includes wood initially intended for the purpose of sawlogs, veneer logs, pulpwood, round and split; and other industrial roundwood (like roundwood initially intended to be used for poles, piling, posts, fencing, pitprops, shingles and shakes, wood wool, tanning, distillation, shiitake mushroom growing and match blocks, etc.). It is reported in solid volume underbark (i.e. excluding bark).

(1aiii-II) Fuelwood

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire and the term fuelwood from woody biomass from forest for energy from the FAO/UNECE Joint Wood Energy Enquiry (JWEE): Roundwood that is harvested to be used as a fuel for purposes such as cooking, heating or power production. It includes roundwood harvested from main stems and wood that will be used as a feedstock for the production of charcoal (e.g. in pit kilns and portable ovens), wood pellets and other agglomerates for energy use. The volume of roundwood used in charcoal production is estimated by using a factor of 6.0 to convert from the weight (mt) of charcoal produced to the solid volume (m³) of roundwood used in production. It also includes wood chips to be used for fuel that are made directly (i.e. in the forest) from roundwood. It is reported in solid volume underbark (i.e. excluding bark). It excludes wood charcoal, pellets and other agglomerates, which are reported under 1(d) only when the corresponding feedstock is not reported in point 1(a), 1(b) or 1(c).

(1b) Forest-based industry co-products

Definition in line with UNECE/FAO Joint Wood Energy Enquiry (JWEE): Primary industrial residues (liquid and solid).

(1bi) Bark

Definition in line with UNECE/FAO Joint Wood Energy Enquiry (JWEE): Bark is the outermost layer of stems and roots of woody plants. It includes bark unaccounted for in the under bark figures of primary solid biomass. E.g. European Waste 03 01 01 Waste bark and cork.

(1bii) Chips, sawdust and other wood particles

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire and the UNECE/FAO Joint Wood Energy Enquiry (JWEE): Wood that has been reduced to small pieces and is suitable for pulping, for particle board and/or fibreboard production, or for other purposes and it is finally used as a fuel. It includes chips made directly from roundwood in chipping mills. It excludes wood chips made as part of a continuous industrial process (e.g. chips produced from

roundwood or wood residues in production of pulp, particle board and fibreboard) and wood chips made directly in the forest from roundwood (i.e. already counted as pulpwood or wood fuel). It is reported in cubic metres solid volume excluding bark.

(1biii) Black liquor and crude tall oil (tonnes)

Definitions in line with energy statistics (black liquor) and with UNECE/FAO Joint Wood Energy Enquiry (JWEE) for both:

Black liquor is the alkaline-spent liquor obtained from the digesters during the production of sulphate or soda pulp required for paper manufacture.

Crude tall oil, also called liquid rosin or tallol, is a viscous yellow-black odorous liquid obtained as a byproduct of the Kraft process of wood pulp manufacture. Crude tall oil contains rosins, unsaponifiable sterols (5-10%), resin acids (mainly abietic acid and its isomers), fatty acids (mainly palmitic acid, oleic acid and linoleic acid), fatty alcohols, some sterols, and other alkyl hydrocarbon derivatives. All the above tall oil components should be reported under this category.

(1c) Post-consumer wood

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire and the UNECE/FAO Joint Wood Energy Enquiry (JWEE): Recovered wood such as pallets, private household waste, as well as used wood arising from construction or demolition of buildings or from engineering works, whether contaminated or not, which is reused for energy purposes.

(1d) Processed wood-based fuel, produced from feedstocks not accounted under point (1)(a), (b) or (c):

Definition in line with the UNECE/FAO Joint Wood Energy Enquiry (JWEE): Secondary (processed) biofuels in the form of solids (e. g. charcoal), liquids (e. g. alcohol, vegetable oil), or gases (e. g. biogas as a mixture of methane and carbon dioxide), can be used for a wider range of applications with higher efficiency rates on average, including transport and high-temperature industrial processes.

(1di) Wood charcoal

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire, with energy statistics and with UNECE/FAO Joint Wood Energy Enquiry (JWEE): Solid residue of the destructive distillation and pyrolysis of wood and other vegetal material. It is wood carbonised by partial combustion or the application of heat from external sources. It only includes charcoal used as a fuel.

(1dii) Wood pellets and wood briquettes

Definition in line with the Eurostat/FAO/UNECE/ITTO joint forest sector questionnaire, with energy statistics and with UNECE/FAO Joint Wood Energy Enquiry: Agglomerates produced from co-products (such as cutter shavings, sawdust or chips) of the mechanical wood processing industry, furniture-making industry or other wood transformation activities.

Wood pellets are a cylindrical product which has been agglomerated from wood residues by compression with or without the addition of a small quantity of binder.

Wood briquettes are a densified biofuel made with or without pressing aids in the form of cubiform or cylindrical units, produced by compressing pulverized biomass. The raw material for briquettes can be woody biomass (...) are usually manufactured in a piston press. The total moisture of the biofuel briquette is usually less than 15 % of mass. (The JWEE assumes water content of 8 %)

Report only products used for energy purposes.

(2) Agricultural biomass

Matter derived from biological organisms from agricultural industries/activities, such as corn, straw, plants, woody energy crops, fruit or other type of trees, animal waste, offal and perennial grasses. As with other types of biomass, agricultural biomass can be transformed into energy. Only agricultural biomass used for meaningful energy purposes (in particular, for electricity and heat production) should be reported.

(2a) Energy crops for electricity or heat (including short rotation coppice)

Definition in line with Eurostat's agriculture statistics: Crops supplied essentially for the production of electric and thermal energy produced from biomass.

Extract from the definition in Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers.

Food and feed feedstocks (e.g. maize, soya), herbaceous energy crops (e.g. miscanthus) and short rotation coppices are included in this item."

(2ai) Of which: From food and feed feedstocks

Please report here the amount of agricultural biomass - energy crops that are food and feed feedstocks (e.g. soya, maize)

(2b) Agricultural crop residues for electricity or heat

Definition in line with Eurostat's agriculture statistics: Residues of the plant which remain after harvest of the (fodder) crop (e.g. stalks and stubble). Crop residues may remain above or below ground. Residues which are harvested as by-product with the fodder (crop) (e.g. straw) and are used for electricity or heat production. Only residues used for meaningful energy purposes are to be reported. Residues of the plant which are burned on the field without energy recovery are not to be reported.

This definition is also compatible with the FAO definition: Straw, stubble or other plant parts leaving good mulch that remain from the previous harvest. From "World Programme for the Census of Agriculture 2020. Volume 1: Programme, concepts and definitions", Roma, 2015: https://ec.europa.eu/eurostat/ramon/statmanuals/files/world_census_agri_2020_EN.pdf

(3) Organic waste biomass

Report that portion of waste that is biological material and is used for meaningful energy purposes.

(3a) Organic fraction of industrial waste

Definition in line with energy statistics: Solid renewable portion of industrial waste combusted directly at specific installations for meaningful energy purposes (for example natural rubber in waste rubber tires or natural fibres in textile wastes). Waste incinerated without any heat recovery is excluded. Indigenous production already reported in the Eurostat/IEA/UNECE joint annual renewables and wastes questionnaire in TJ.

(3b) Organic fraction of municipal waste

Definition in line with energy statistics: Portion of municipal waste which is biological material. Municipal waste is waste produced by households, hospitals and the tertiary sector (in general all waste that resembles household waste) combusted at specific installations for meaningful energy purposes. Waste incinerated without any heat recovery is excluded. Fuel already reported in the Eurostat/IEA/UNECE joint annual renewables and wastes questionnaire in TJ.

(3c) Waste sludges

Waste sludge is the residual, semi-solid material that is produced as a by-product during sewage treatment of industrial or municipal wastewater. Report only the amount used for meaningful energy purposes (i.e. combusted at specific installations for useful electricity and/or heat production).

STRUCTURE OF THE TEMPLATE

Eurostat has conceived the structure of this questionnaire in a simple way with only 2 sheets. However, countries can propose the creation of additional sheets during the pilot phase and the first voluntary data collection.

The questionnaire is structured in the following sections:

1. COVER page

The Cover page allows the user to introduce its country name and the reference year. Some basic instructions are included in this sheet.

2. DATA

This page includes the table that countries need to fill out, together with some basic instructions (with a colour code for mandatory and voluntary data points) and definitions for all products and flows used in the table.

INSTRUCTIONS TO COMPLETE THE BIOMASS QUESTIONNAIRE

This section explains the main steps that need to be carried out to complete the questionnaire and officially transmit it to Eurostat.

The country is asked to fill out the cells that are mandatory according to the Governance Regulation (with a white background in the table). If more information is available, please fill in this information as detailed as possible (in green cells). Black cells indicate not applicable combinations and grey cells are showing the results in energy units (if conversion factors are reported).

All products need to be reported in m³, with the exception of black liquor and crude tall oil, which need to be reported in tonnes. These units are included in the requirements of the Governance Regulation. If average calorific values are available, please fill in the appropriate column so that volumes can be transformed into energy units (TJ) and be easily compared with energy statistics under Regulation (EC) 1099/2008.

If data are available with different units of measurement, conversion factors should be applied. No conversion factors / calorific values are enforced at this moment. Eurostat relies on the pilot and the first voluntary data collections to receive information from countries on which conversion factors / calorific values are being used at national level and establish more concrete guidelines before the first mandatory data collection. In the meantime, the national authorities filling in the Joint Forest Sector Questionnaire could provide some advice to reporting countries.

The Governance Regulation indicates in its considerandum number 22 the need for synergies and coherence with reporting under other legal instruments, in particular [...] Regulation (EC) No 1099/2008 of the European Parliament and of the Council [...]. Therefore, to ensure consistency with energy statistics reported under the Energy Statistics Regulation, please do not report the feedstocks used to produce biofuels or biogas. Only quantities used to produce directly electricity and heat should be reported, and not quantities transformed into a different energy product (which are not reported as solid biofuels in the ESR, but under biofuels or biogas).

Once all the required information has been filled in and the final file is ready, please send the questionnaire to Eurostat via eDAMIS, using the following data collection: ENERGY_BIOMASS_A.

GEOGRAPHICAL NOTES

Denmark excludes the Danish Faroes and Greenland;

France includes Monaco and excludes the French overseas territories Guadeloupe, Martinique, Guyane, Reunion, St.-Pierre and Miquelon, New Caledonia and French Polynesia

Italy includes San Marino and the Vatican;

The Netherlands excludes Suriname and the Netherlands Antilles;

Portugal includes the Açores and Madeira;

Spain includes the Canary Islands, the Balearic Islands, and Ceuta and Melilla;

Switzerland does not include Liechtenstein