**SBP Audit Report (SAR)**

**on Energy and Carbon Data for Pellets**

 **for Biomass Producers producing pellets[[1]](#footnote-1)**

|  |
| --- |
| **SBP certificate holder number: [in format XX-YY]****SBP certificate holder name:** Please visit [www.sbp-cert.org](http://www.sbp-cert.org) for more information about the biomass producer**Reporting period. Reporting period (should be based on 12 months) and the start date should not be older than 18 months from the audit date.** **From: DD/MM/YYYY**  **To: DD/MM/YYYY** |

|  |
| --- |
| **SAR expiry date: DD/MM/YYYY** |

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1. Generalities
	1. General information on the Biomass Producer

|  |  |
| --- | --- |
| **Company name** |  |
| **Contact person on site** |  |
| **Contact person’s function**  |  |
| **E-mail address** |  |
| **Address** (physical location of the biomass production unit, pellet plant or woodchips processing unit) |  |
| **Telephone** |  |
| **DBSD enabled?** (has BP established the system for feedstock groups and is allowed to use the 99 code in DTS) | Yes/No |

* 1. Justifications for data provided and methodologies used

This space made be used to provide additional information appropriate to the whole SAR, for example selection of a reference period other than 12 months or how recording of data has been undertaken for a recently commissioned plant.

* 1. Basic information on the Certification Body (CB)

|  |  |
| --- | --- |
| **Date of the audit closing meeting (on site)** | DD/MM/YYYY |
| **Name of the Certification Body** |  |
| **Audit team members** |  |
| **Qualifications of team members** |  |
| **Contact details of the auditor (email)** |  |

1. Feedstock data
	1. Feedstock Groups – as defined by local industry practice

**Guidance: please click on the row and then click on “+” button on the right to add another row.**

**In case of multiple transport steps for a Feedstock Group proceed by adding one line and merging other columns.**

**It is not required to include feedstock that is ONLY used as biomass fuel, but optionally this can be done if data are available and verifiable.**

**If part of the Feedstock Group is diverted as biomass fuel, then consider the TOTAL mass here and add also a corresponding line in Table 3.5**

|  |  |  |
| --- | --- | --- |
| Give the **total** raw mass of feedstock as received used **for biomass production** on the reporting period, **including** shares diverted as biomass fuel.1 | ………..…….………… | metric tonne as received |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** |
| **#** | **Feedstock type for biomass production** | **Origin** | **Physical Description** | **Country of harvest (new row for each country)4** | **Raw mass as received in metric tonnes** | **Moisture % as received (weighted average, single figure)2** | **Weighted average distance (km)** | **Maximum distance (km)** | **Vehicle** | **Powered by**  | **Weighted average load of the vehicle** | **Specify any pre-processing. (chipping, drying, none)3** |
| 1 | Choose an item. | Choose an item. | Choose an item. |  |  |  |  |  | Choose an item. | Choose an item. |  |  |
| 2 | Choose an item. | Choose an item. | Choose an item. |  |  |  |  |  | Choose an item. | Choose an item. |  |  |

1**Sum all values in column F of the Table (Letter ID’s refer to Instruction Document 5E)**

**2Where the moisture content of the feedstock is not recorded, the BP may provide an estimate or use a default value.**

**3 If chipping outside the forests or drying takes place then please specify the information in the relevant sections 3.3 and 3.4**

**4 Nation or large region of nation (like State of USA, Province of Canada, Region of Russia)**

* 1. Use of energy and chemicals in forests or plantations for biomass feedstock (optional1)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Feedstock Group number2** | **Energy use in forestry operations including mobile chipping** | **Diesel used****(l/metric tonne of feedstock)** | **In forest use of chemicals?** | **Fertiliser type used** | **Active substance used (kg/metric tonne of feedstock)** |
|  | Choose an item. |  | Choose an item. | Choose an item. |  |
|  | Choose an item. |  | Choose an item. | Choose an item. |  |

1See instruction Document 5E for default values, which can be used if the table is not filled in

**2**Feedstock Groups to be populated from the previous table

* 1. Other relevant information, including justifications for data provided and methodologies used
	2. Validation by the Certification Body

|  |  |
| --- | --- |
| **Parameter** | **Comments/information** |
| **Distance and origin of feedstock** | What evidence was available on site to confirm this origin? (for example, CMR, supplier invoices, supplier contracts, registers)…………………………Are the average distances validated by checking locations on a map?………………………… |
| **Types of feedstock** | What evidence was available on site to confirm what type of feedstock is used? (for example, CMR, supplier invoices, supplier contracts, registers, physical evidence on site)………………………. |
| **Transport systems** | Was the auditor able to confirm the type of vehicles / transport facilities used to transport the feedstock to the production site? (visual checking?)………………………. |

1. Biomass production

Please see appendix 1 for photos and full description of the production process.

Biomass product can be wood pellets or woodchips or energy logs

* 1. Total production

|  |  |  |
| --- | --- | --- |
| **Annual production** | **Actual biomass production on the reporting period****(1)** | Production during reporting period |
| …………………………. | metric tonnes for the reporting period |
| **Design capacity:** | …………………………. | metric tonnes of biomass product/year |
| **Average lower heating value:** | ….……………………… | MJ/kg (wet basis) average for the reporting period |
| **(CB)** What evidence is available to substantiate the reported annual biomass production?Options include: internal registers or annual reports. | ………………………….………………………….………………………….………………………….………………………….…………………………. |

* 1. Electricity use

**Not applicable** [ ]

|  |  |  |
| --- | --- | --- |
| Give the origins of the **electricity** used in the biomass production process during the reporting period (2) | [ ]  from network | …………kWh |
| [ ]  on-site generation | …………kWh |
| [ ]  **fossil** cogeneration plant | …………kWh |
| [ ]  **bio-**cogeneration plant | …………kWh |
| [ ]  wind or solar farm | …………kWh |
| [ ]  other (specify) …………. | …………kWh |
| Total specific electricity use sum of (2)/(1) | …..……………kWh/metric tonne |
| Explain **how** this energy consumption has been **evaluated**: *The* ***calculation method*** *based on electricity i****nvoices*** *is the most accurate and reliable one. This method must be used if feasible.* *Please provide the calculation itself* | [ ]  invoices of external electricity supplier and biomass production achieved, [ ]  specific fuel consumption and electrical efficiency of installed cogeneration plant and biomass production [ ]  a theoretical evaluation based upon specific consumption of installed machinery and nominal production capacity of the plant [ ]  Other explanation: ....................................................................Calculation …………………….. |

* + 1. Other relevant information, justifications for data provided and methodologies used
		2. Validation by the CB

|  |
| --- |
| **(CB)** What evidence / explanation was made available to the auditor……………………………….. |

* 1. Moisture content and drying

**Is feedstock dried as part of the biomass production process? If no, complete table 3.3.a. If yes, complete table 3.3.b.**

|  |
| --- |
| **3.3.a No drying** [ ]  **Only complete this table if no drying is undertaken.**  |
| **Feedstock Moisture content** | Initial moisture of the feedstock, as received | ………………………… | % (wet basis) |
| Explain, with reference to its origin, why the moisture content of the feedstock is sufficiently low to enable the production of biomass product without prior drying. |  |
| Explain how it is monitored / evaluated? | [ ]  weighted average of moisture measurements performed on each individual feedstock shipment (one measurement per delivery)[ ]  typical values based on some moisture measurement (frequency of measurements = .............)[ ]  supplier / process specifications (documents available: ...............................)[ ]  other explanation: ........................................................................... [x]  no evidence or explanation available |
| **Biomass moisture content** | Moisture of biomass as produced  | …………………………. | % (wet basis) |

|  |
| --- |
| **3.3.b Drying applicable** [ ]  **Only complete this table if drying is undertaken.****This table must be completed for each type of dryer.** |
| **Moisture content** | Initial moisture of the feedstock, as received |  | % (wet basis) |
| Explain how it is monitored / evaluatedTick all boxes that apply and provide additional information in 3.3 as required | [ ]  weighted average of moisture measurements performed on each individual feedstock shipment (one measurement per delivery)[ ]  typical values based on some measurements (frequency of measurements = .............)[ ]  supplier / process specifications (documents available: ...............................)[ ]  default values e.g. for round wood[ ]  other explanation: [ ]  no evidence or explanation available |
| Moisture of feedstock at the dryer outlet, if measured (target moisture) | ……………………… | % (wet basis) |
| Moisture of the finished biomass product (as produced) | ……………………… | % (wet basis) |
| **Dryer** | Type | [ ]  drum dryer[ ]  belt dryer[ ]  other (specify)………………………… |
| Energy carrier(The energy carrier is the transfer medium circulated in pipes and used to transport the heat from the boiler/burner to the dryer.) | [ ]  steam[ ]  hot water[ ]  hot air / flue gases[ ]  other (specify)………………………… |
| Heat consumptionIf a heat meter is installed, calculate how much heat energy from the boiler is provided to the dryer and give details of the calculation. | [ ]  heat meter installed: consumption = ......................kWh[ ]  no heat meter installed |
| Detailed calculation of the heat consumption  | ……………………….. |
| Origin of the heat used in the drying process | [ ]  burner[ ]  conventional boiler[ ]  CHP (combined heat and power) |

**3.3.c Information if a conventional boiler is used**

**Not applicable** [ ]

|  |  |  |
| --- | --- | --- |
| Share of fossil fuels in primary energy from fossil/biomass fuels | ………… | % |
| Total heat output from boiler that is effectively recuperated and used in an application during reporting period | ………… | kWh |
| Total heat output from boiler that is used in drying during reporting period | ………… | kWh |
| How has this data been calculated (e.g. metered data, theoretical calculation based on specific consumption of installed machinery) |  |

**3.3.d Information if a CHP is used**

**Not applicable** [ ]

|  |  |  |
| --- | --- | --- |
| Share of fossil fuels in primary energy from fossil/biomass fuels | ………… | % |
| CHP efficiency (net conversion efficiency of the input fuels into (1) heat(2) heat that is effectively recuperated and used in the plant(3) net electricity) / primary energy input | ……………………………… | %%% |
| Temperature of the energy carrier at the point of use | ………… | °C |
| Total heat output from CHP that is effectively recuperated and used in an application during reporting period | ………… | kWh |
| Total heat output from CHP that is used in drying  | ………… |
| Total electricity output of CHP  | ………… |
| Total electricity from CHP exported from site (e.g. to local network)  | ………… |
| How has this data been calculated (e.g. metered data, theoretical calculation based on specific consumption of installed machinery) |  |

* + 1. Other relevant information, justifications for data provided and methodologies used
		2. Validation by the CB

|  |
| --- |
| **(CB)** What evidence / explanation was made available to the auditor to substantiate the Biomass production chain moisture content of the feedstock and drying of feedstock:………………………………………………. |

* 1. Use of fossil fuels

**Not applicable** [ ]

Each fossil energy source must be described in detail in the table hereunder. Use as rows as necessary in order to cover each fossil fuel. If any responses are marked as ‘other’, please include further detail in the box below (also for offsite chipping by third party)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of fossil fuels** | **Total consumption on the reporting period (value)** | **Units**  | **For gas in Nm3 only specify high or low heating value from invoices** | **Processing step using fossil fuels** | **How has this energy consumption been calculated:**  |
| Choose an item.  |  | Choose an item.  | Choose an item. | Choose an item.  | Choose an item. |
| Choose an item.  |  | Choose an item.  | Choose an item. | Choose an item.  | Choose an item. |

* + 1. Other relevant information, justifications for data provided and methodologies used
		2. Validation by the CB

|  |
| --- |
| **(CB)** What evidence / explanation was made available to the auditor……………………………………. |

* 1. Use of biomass fuels

**Not applicable** [ ]

**Use as many rows as necessary** in order to cover each type of biofuel and each process.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Feedstock ID Group in Table 2.1 if applicable or NA1** | **Biomass type2** | **Total consumption on the reporting period(value)** | **Units**  | **Moisture content %as received, point of use** | **Processing step using biomass fuels** | **How has this energy consumption been calculated:**  |
|  | Choose an item. |  | Choose an item. |  | Choose an item. | Choose an item. |
|  | Choose an item. |  | Choose an item. |  | Choose an item. | Choose an item. |

1If biomass fuel is diverted from Feedstock Groups, please mention them in column 1.

2 Each type of biomass used as a fuel must be described per type

* + 1. Other relevant information, justifications for data and methodologies used
		2. Validation by the CB

|  |
| --- |
| **(CB)** What evidence / explanation was made available to the auditor……………………………………………….. |

1. Transport of biomass

|  |  |
| --- | --- |
| Static Data Indicators (SDIs) included in this report: [In format XX-YY-ZZ] | Description of SDI(This should include geographic location, and where appropriate type of facility (e.g. port) and means of transport to location and any other identifier (e.g. FOB or transfer of ownership)) – 40 characters limit |
| XX-YY-ZZ | To factory gate |
| XX-YY-ZZ (+1) |  |
| XX-YY-ZZ (+2) |  |

Please add the number of SDIs as required.

* 1. General transport data

Please complete a column for each SDI.

If the SDIs do not match the format of the table below please change the orientation of the page or transposition the table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **DATA** | **XX-YY-ZZ** | **XX-YY-** **ZZ (+1)** | **XX-YY- ZZ (+2)** |
| Transport leg 1 | SDI starting point |  |  |  |
| Distance (km) |  |  |  |
| Transported to? |  |  |  |
| Mode of transport | Choose an item. | Choose an item. | Choose an item. |
| Transport powered by? | Choose an item. | Choose an item. | Choose an item. |
| Transport capacity (tonnes) |  |  |  |
| Actual fuel use if known (litres) |  |  |  |
| Backhaul if known |  |  |  |
| Transport leg 2 (if needed) | Starting location |  |  |  |
| Distance (km) |  |  |  |
| Transported to? |  |  |  |
| Mode of transport | Choose an item. | Choose an item. | Choose an item. |
| Transport powered by? | Choose an item. | Choose an item. | Choose an item. |
| Transport capacity (tonnes) |  |  |  |
| Actual fuel use if known (litres) |  |  |  |
| Backhaul if known |  |  |  |
| Transport leg 3 (if needed) | Starting location |  |  |  |
| Distance (km) |  |  |  |
| Transported to? |  |  |  |
| Mode of transport | Choose an item. | Choose an item. | Choose an item. |
| Transport powered by? | Choose an item. | Choose an item. | Choose an item. |
| Transport capacity (tonnes) |  |  |  |
| Actual fuel use if known (litres) |  |  |  |
| Backhaul if known |  |  |  |
|  | Scope end point | Factory gate |  |  |

* 1. Storage of biomass

Please indicate address of off-site storage, handling or trans-shipment facility,

**Not applicable** [ ]

|  |  |
| --- | --- |
| **Physical address**  |  |
| **Description of activity occurring at this location** |  |
| **Maximum time of storage** | ……………………………………………..days/months |
| **Relevant contact person** |  |
| **Telephone / Fax company office** |  |

* 1. Regional map demonstrating biomass producer and location of SDIs

(One map may be used for multiple SDIs where appropriate)

* 1. Other relevant information, including justifications for data provided and methodologies used
	2. Validation by CB

|  |
| --- |
| The CB must review the information delivered above and verify the data focusing on two parameters that play an important role in the CO2 emissions: * type of vehicles used for transport (*visual check of vehicles / transport facilities on site*)
* destination and distances (*to be checked on a map*)

The CB should comment on the validation of the transport scheme as necessary. ……………………………………………………………. |

1. Dynamic Batch Sustainability Data (DBSD)

Record all biomass with DBSD during the reporting period that have been shared to the DTS (as defined in Instruction Document 5D section 2.1, 3.3, 4.1 and 5.2).

|  |  |
| --- | --- |
| Biomass Category | Metric tonnes |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |
| Choose an item. | …………………mt |

* + 1. Validation by the CB

|  |
| --- |
| **(CB)** What evidence / explanation was made available to the auditor. Has corresponding DTS data been verified??……………………………………………….. |

1. Contact details and audit report signature
	1. Signature of the Certificate Holder

|  |  |
| --- | --- |
| **Date** | DD/MM/YYYY |
| **Name, signature and optional stamp of representative filling in the declaration** | …………………………………………………………………….. |

* 1. Signature of the Certification Body

|  |  |
| --- | --- |
| **Date** | DD/MM/YYYY |
| I certify that the data gathered in this form has been checked and validated in compliance with SBP Standard #5 and SBP certification procedures.**Signature** |  |

* 1. Signature of the verification service provider

|  |  |
| --- | --- |
| **Date** | DD/MM/YYYY |
| **Name of the reviewer** | ………………………………………………………….…… |
| I certify that the data gathered in this form has been checked and validated in compliance with SBP Standard #5 and SBP certification procedures.**Signature** |  |

* 1. Signature of SBP (and indicate expiry date on the front page)

|  |  |
| --- | --- |
| **Date**  | DD/MM/YYYY (also update the expiry date at the front page) |
| **Name of the Certification decision maker** | ………………………………………………………….…… |
| I certify that the data gathered in this form has been checked and validated in compliance with SBP Standard #5 and SBP certification procedures.**Signature** |  |

Appendix 1 Photographs/illustrations

This shall include photographs/illustration/pictures of at least the following:

* + - Feedstock storage
		- Overview of biomass manufacturing plant
		- Dryer(s) (if any)
		- Wood chippers (green island, dry island)
		- Press(es) if wood pellets
		- Biomass storage and handling

A ground plan of the facilities and / or a flowchart shall also be included if available.

Appendix 2. Production process

Describe the on-site biomass production process, focusing on any variation from best practices, and including a detailed description of the processes undergone by feedstock.

|  |  |  |
| --- | --- | --- |
| Feedstock delivery | Weighbridge or other volume measuring | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable |
| Moisture monitoring | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable |
| Unloading | [ ]  truck tipping[ ]  live bottom truck[ ]  moving floor[ ]  grab/front end loader/crane[ ]  hopper/conveyor belt[ ]  blowpipe[ ]  other (specify) | applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr…… |
| Feedstock storage | [ ]  wood yard[ ]  warehouse[ ]  silo[ ]  other (specify)[ ]  no storage | applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr……applicable to feedstock group nr…… |
| Feedstock handling | [ ]  rolling stock[ ]  conveyor[ ]  blowpipe[ ]  other (specify) |
| Feedstock preparation | Debarking | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable | energy source[ ]  electricity [ ]  diesel[ ]  other(specify)  |
| Chipping | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable | energy source[ ]  electricity [ ]  diesel[ ]  other(specify)  |
| Drying | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable | [ ]  drum dryer (number: …)[ ]  belt dryer (number:….)[ ]  other(specify) [ ]  hot air[ ]  hot water[ ]  steam  | Energy source(s)[ ]  biomass burner/boiler[ ]  fossil fuel burner/boiler (specify fuel)[ ]  own biomass CHP[ ]  third party fossil fuel CHP (specify fuel)[ ]  own fossil fuel CHP (specify fuel)[ ]  third party biomass CHP[ ]  steam from biomass CHP[ ]  other(specify)  |
| Sizing (hammer mill) | Before dryer (green) | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable |
| After dryer | [ ]  applicable to all feedstock groups[ ]  applicable only to feedstock group nr……[ ]  not applicable |
| Pelletising | number of presses | design capacity of each press ... tonnes/hour |
| Product handling | [ ]  rolling stock, [ ]  conveyor belt. [ ]  blowpipe, [ ]  forklift, [ ]  other (specify) … |
| Product storage | [ ] warehouse[ ]  silo[ ]  open air (woodchips or black pellets)[ ]  dome (for pellets)[ ]  other (specify)[ ]  no storage | maximum storage capacity: … tonnes |

In this appendix, please concentrate on elements that might influence the calculation of the net fossil CO2 emissions (anything which will contribute >1% of the total Carbon emissions).

**Other relevant information to the biomass production process not captured anywhere else**

|  |
| --- |
|  |

1. and woodchips if both stationary chipping and thermal treatment are carried out on a separate processing site. [↑](#footnote-ref-1)