

Green Gold Label Standard GGLS6 Power company criteria

Requirements for power companies as
end-users in GGL supply-chains



Standard GGLS6

Power company criteria

Version 1-3

Valid from 1 January 2026 (Adoption date)

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Document navigation

This document is part of the Standards from the Overall documents. It concerns Standard GGLS6 of the GGL scheme and applies to all regulatory frameworks.

The Overall documents comprise the GGL Setup and Governance, GGL Standards and GGL Operating documents. Additionally, the GGL scheme offers Instructions and Guidances for specific regulatory frameworks (RED, FIT/FIP, SDE+/++), which can supersede clauses in the Overall documents. This applies only when explicitly stated in the relevant Instructions and Guidances.

Refer to the **GGL Document Structure** (as part of the GGL Setup and Governance documents) for more detailed information on navigating and interpreting GGL documentation.

GGL Setup and Governance - Articles of association GGL foundation - GGL Document structure - GGL Regulation - GGL Scope definitions - GGL CB agreements - GGL Partner Code of Conduct - GGL Operating Agreement	GGL Standards - GGLS1 – Chain of custody criteria - GGLS2 – Agricultural source criteria - GGLS4 – Transaction and Product Certificate - GGLS5 – Forest management criteria GGLS6 – Power company criteria	RED – Instructions - Instruction A.0 – RED Module - Instruction A.1 – RED Reporting duties - Instruction A.2 – RED Internal monitoring - Instruction A.3 – RED Auditor requirements - Instruction A.4 – RED GHG emissions - Instruction A.5 – RED Additional Agricultural source and Forest management criteria	RED – Guidances - Guidance A.0.i – RED Raw materials statement template - Guidance A.0.ii – RED Transaction certificate template - Guidance A.0.iii – RED Audit template - Guidance A.4.iv – RED GHG default values - Guidance A.5.v – RED Level A Risk assessments	GHG Guidance Guidance ABC.1 – GHG calculator
		FIT / FIP – Instructions - Instruction B.0 – FIT/FIP Module - Instruction B.1 – FIT/FIP Endorsed schemes - Instruction B.2 – FIT/FIP GHG emissions	FIT / FIP – Guidances - Guidance B.0.i – FIT/FIP Raw materials statement template - Guidance B.0.ii – FIT/FIP Transaction certificate template - Guidance B.0.iii – FIT/FIP Audit template - Guidance B.0.iv – FIT/FIP Supplier verification checklist for residues - Guidance B.2.v – FIT/FIP LCGHG default values	
	GGL Operating documents - GGL Participant fees - GGL Logo and tradename use - GGL List of prohibited materials	SDE++ – Instructions - Instruction C.0 – SDE++ Module - Instruction C.1 – SDE++ Endorsed schemes - Instruction C.2 – SDE++ GHG emissions	SDE++ – Guidances - Guidance C.0.i – SDE++ Raw materials statement template - Guidance C.0.ii – SDE++ Transaction certificate template - Guidance C.0.iii – SDE++ Audit template	

The GGL standards are applicable as per indicative illustration i below.

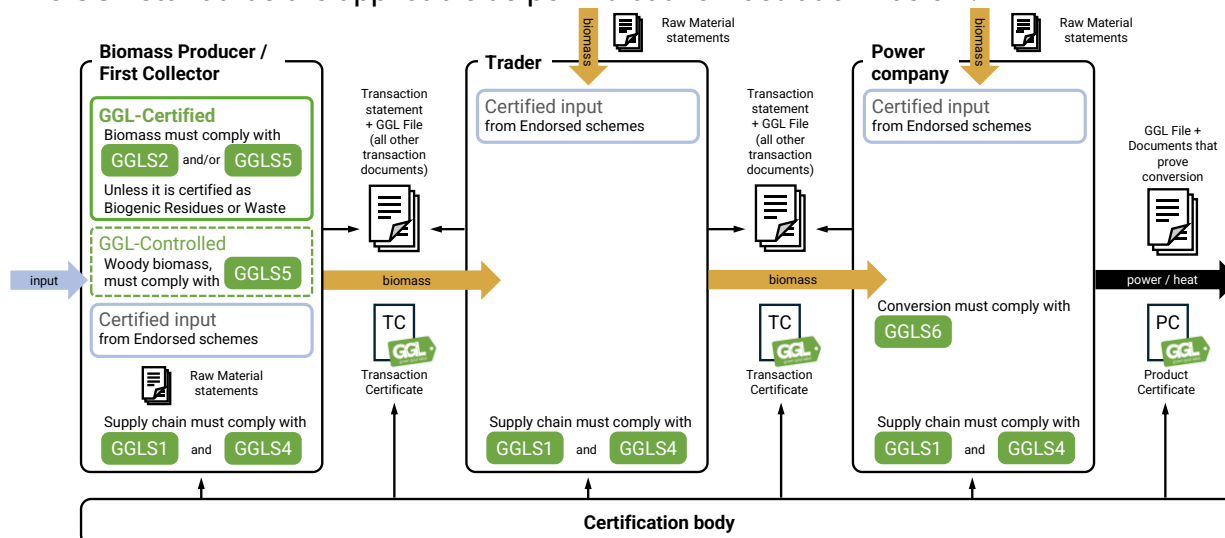


Illustration i – applicability of GGL Standards

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Changes and transitioning

This section lists the key changes in this version 1-3 from version **GGLS6 - Power Company Criteria - Version 1-2 (August 2017)**.

No.	Change type	Section reference	Details of change
1	Content	Principle 7	Periodicity defined for issuing Product certificates
2	Text feature	Document navigation	Included document navigation
3	Text feature	Changes and transitioning	Included changelog and transitioning procedure between previous and current version
4	Text feature	Glossary	Included glossary
5	Formatting	All	Changed and edited formatting, text and wording for clarity and readability
6	Formatting	All	Converted layout to new templates for GGL Documents

In transitioning to this current version of this document, the following applies to Certification bodies, Participants and Certificates:

Publication date	7 November 2025
Adoption date	This document version <u>applies only</u> for the GGL Scope with FIT/FIP-Module as of: 1 January 2026
Effective date	The previous version of this document <u>becomes ineffective</u> for the GGL Scope with FIT/FIP-Module as of: 2 March 2026
Transition period	Certification decisions prior to Effective date based on the previous version of this document <u>lose their validity</u> for the GGL Scope with FIT/FIP-Module as of: 31 December 2026

To clarify: For GGL Scopes with the **SDE+ Module**, only the previous version of this document can be used and remains effective until further notice.

Glossary

Term	Definition
Adoption date	New (versions of) GGL documents state their Adoption date in the transitioning section. This is the date after which certification against the GGL Scheme and the specific document to which the Adoption date applies, is possible. Certification against previous versions remain valid until the Effective date of such document.
Amount of GGL Biomass	This is the amount of GGL Biomass in metric ton (MT).
Biomass	Biomass means the biodegradable fraction of products, waste and residues from biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin.
Default value	Greenhouse gas emission value attached to a batch of biomass material, and listed as "default value" in the applicable GGL Module, and that may, in circumstances specified in that GGL Module, be used in place of an actual value.
Effective date	New (versions of) GGL documents state their Effective date. This is the date after which only certification against the GGL Scheme and the specific document to which the Effective date applies, is effective. Certification against previous versions of such document is no longer valid.
FMU / Forest Management Unit	A well defined and demarcated land area, predominantly (i.e., >50%) covered by forests, with planned human intervention in a forest ecosystem to achieve specific goals and objectives.
GGL Biomass	Biomass that has been certified with a GGL-Certified or GGL-Controlled claim as the case may be.
GGL Categories	Biomass from 1 of the 5 categories that GGL recognizes being: 1) Woody biomass from large FMU's (> 500 hectares) 2) Woody biomass from small FMU's (< 500 hectares) 3) Residues from natural site and landscape management 4) Agricultural biomass 5) Biogenic residues and waste
GGL Module	These are the Instructions and Guidance documents based on which GGL has been approved and recognized as a Certification scheme under different legal and voluntary frameworks (e.g., RED in Europe, FIT/FIP in Japan).
GGL Scope	Means the scope of a Certification Body's license to perform certification services or Participants to trade biomass within GGL, and use the GGL Trademark. A GGL Scope is a combination of (a) regulation(s) under which GGL is recognized per its different modules and (b) types of biomass. Each GGL Participant and each CB is limited to perform activities under the GGL Scheme by the GGL Scope for which it is recognized. GGL Scopes are defined in the GGL Scope definitions document.

Term	Definition
GGL-Certified	Biomass that has been certified against all applicable GGL criteria, or against a certification scheme other than GGL which has been endorsed & approved by the relevant authorities (e.g., EU for REDII, METI for FIT/FIP) to holds the equivalent status. GGL-Certified biomass meets all criteria for sustainability and legality.
GGL-Controlled	Woody biomass that has been certified against some of the applicable GGL criteria, or against a certification scheme other than GGL which has been endorsed & approved by the relevant authorities (e.g., EU for REDII, METI for FIT/FIP) to holds the equivalent status. GGL-Controlled biomass can only be from GGL-categories 1, 2 or 3 for Woody biomass, and only meets specific key criteria for sustainability. The sustainability of GGL-Controlled woody biomass has therefore been certified to a lesser extent than GGL-Certified woody biomass.
GHG (Greenhouse Gas) Emissions	Greenhouse gases constitute a group of gases contributing to global warming and climate change. It includes - according to the Kyoto Protocol - seven gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, nitrogen trifluoride. Converting them to carbon dioxide equivalents (CO ₂ eq) makes it possible to compare them and to determine their individual and total contributions to global warming.
Mass balance	Mass balance is a chain of custody approach that allows tracking the net amount of sustainable materials as they move through a system or supply chain and ensures an appropriate allocation of these materials to the finished goods based on auditable bookkeeping.
Normative	Normative elements are those that are prescriptive, that is they are to be followed in order to comply with scheme requirements.
Participant / GGL Participant	Economic operator that has been certified under GGL per GGL Regulation Section G or against a certification scheme other than GGL which has been endorsed & approved by the relevant authorities (e.g., EU for REDII, METI for FIT/FIP) to hold the equivalent status, such as forest and agricultural biomass producers, waste and residue producers, first gathering points, collectors, suppliers, traders, processing plants and conversion plants (end-users).
PC / Product certificate	A certified statement of a final conversion of GGL Biomass by GGL Participants that meets requirements of GGLS4 - Transaction and product certificate .
Publication date	New (versions of) GGL documents state their Publication date. This is the date at which that version is published. Certification against the new version of such document is not possible until after its Adoption date.
TC / Transaction certificate	A certified statement of a transaction between GGL Participants that meets requirements of GGLS4 - Transaction and product certificate .
Transition period	New (versions of) GGL documents state their Transition period. This is the period within which (re-)certification decisions taken prior to the Effective date against the previous version of the current document, remain valid. Initial audits, renewal audits and surveillance audits by a Certification Body during the Transition period shall only take place against the current version of the GGL Scheme document to which the Transition period applies.

Term	Definition
Useful heat	Useful heat shall mean heat generated to satisfy an economical justifiable demand for heat, for heating or cooling purposes.

A. Introduction

A.1

This standard is applicable to power producing companies and power trading companies that want to receive or trade the Green Gold Label product certificates. The aim of the Green Gold Label (GGL) criteria for End-users like Power companies is to prove (a part of) the power generated is the product of processed GGL-Certified or GGL-Controlled biomass.

A.2

This Standard is part of the Green Gold Label certification system as described below in Figure i.

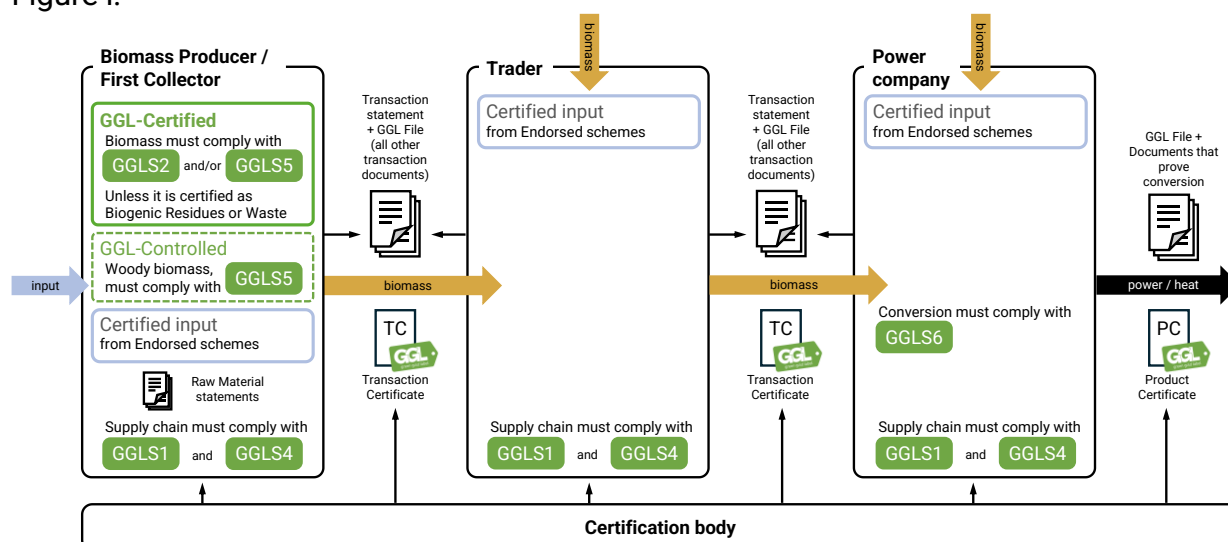


Figure i – applicability of standards in the GGL Scheme

A.3

Under this standard, GGL biomass can be converted into electricity and / or heat by Power companies. End-users like Power companies have to be certified against this standard **GGLS6 – Power company criteria**, which is verified by a GGL Certification Body.

Note - Conversion of GGL biomass into energy by other GGL Participants than Power companies is not possible under this standard.

A.4

All GGL Standards are normative unless stated otherwise.

B. Principles

Principle 1. Authorizations and responsibilities are in place

- 1.01 The responsibilities, authorizations and interrelations of all personnel who manage, perform and verify work at the Participant affecting quality shall be recorded in writing.
- 1.02 The definition and documentation of responsibilities and authorizations shall also make reference to the documentation relating to mass-balance and GHG emissions of GGL biomass and the power or useful heat produced with GGL biomass.
- 1.03 The Participant should record the responsibility structure in an organization chart.
- 1.04 The Participant's management shall appoint a management representative who, irrespective of other responsibilities, shall have a defined authority:
 - a) to ensure that a quality system, complying to the requirements of this **GGLS6 – Power company criteria** is set up, implemented, maintained and distributed, and;
 - b) to report to management on the operation of the quality system, to allow review of and improvements to the system.

Principle 2. Quality policy and management objectives shall be focused on traceability of GGL biomass

- 2.01 The management shall define and document its policy and objectives for, and commitment to, quality, including an accessible bookkeeping needed for GGL traceability.
- 2.02 Management will demonstrate commitment by means of quality objectives. This will be achieved (as a minimum) by the following items:
 - Importance attached to compliance to the GGL rules shall be known throughout the organization;
 - Written Quality Policy, which includes correct bookkeeping and traceability of GGL biomass and the power produced with the GGL biomass, the organization's awareness of its position in regard to make rightful claims about electricity produced with GGL certified biomass;
 - Directors' Declaration, which includes a commitment from management to supervise the correct development, implementation and maintenance of the GGL Scheme at all levels in the organization;
 - Records of relevant quality;
 - Management assessments for the necessary resources are being made available;
 - Internal audits, for which documented procedures for planning and carrying out internal audits shall be established.
 - The object of these audits is to determine whether the quality system functions adequately to meet the basic quality standards.
 - Internal quality audits shall be planned at least once a year and carried out by personnel who are independent from those directly responsible for the activity on which the audit is to be carried out, and may be performed by subcontractors;
 - The results of the internal audits shall be recorded and brought to the attention of personnel who are responsible for the area in which the audit is

carried out. With regard to any shortcomings observed during the audit, corrective measures must be taken promptly. The implementation and effectiveness of the measures taken shall be verified and recorded;

Principle 3. A quality management system is in place

- 3.01 A documented quality management system shall be drawn up and recorded in writing as a means of ensuring that the quality and quantity of all biomass, the quality and quantity of GGL-Certified or GGL-Controlled biomass is measured and recorded, as well as the quantity of the power and / or useful heat produced with the biomass, the GGL-Certified or GGL-Controlled biomass as well as any other fuels.
- 3.02 The quality system shall indicate the methods by which the organization will ensure to make rightful claims about electricity produced with GGL-Certified or GGL-Controlled biomass, and cover the procedures within the quality system and explain the structure of the documentation used in the quality system. Changes in the GGL criteria are to be appropriately incorporated into the quality management system.
- 3.03 Documented quality management system procedures shall be established to comply with the GGL Scheme requirements. These procedures must include:
- (external) storage of biomass;
 - incoming biomass and other fuels used for power registration;
 - registration of quality and quantity of GGL and non-GGL certified biomass;
 - procedure for the burning of biomass;
 - registration of power produced with GGL and non-GGL certified biomass;
 - registration of power produced with other fuels;
 - safety procedures;
 - environmental procedures;
 - procedures for the handling, transport and storage of biomass and other fuels;
- 3.04 Documented procedures shall be established to ensure that purchased GGL-Certified or GGL-Controlled biomass meets all GGL requirements. Demonstrable agreements with service providers relating to compliance with the GGL criteria must be in place.
- 3.05 A procedure to establish, document and implement corrective and preventive measures shall be maintained. The corrective and preventive measures are aimed at achieving basic quality and the standards mentioned in this standard. Changes that arise from the corrective and preventive measures must be implemented and recorded.
- 3.06 The quality system, including documented procedures with tasks, responsibilities and authorities for personnel are to be implemented in an effective way. This also applies to temporary personnel. The procedures making up the quality system are to be matched to the complexity of the work and the level of the personnel involved. Where there is any deviation from the GGL Standard, the client should demonstrate that its alternative measures have the same quality level.
- 3.07 Personnel must have sufficient knowledge and expertise for their assigned tasks in the context of achieving the quality needed for traceability and correct claims

for the GGL biomass used.

- 3.08 A procedure shall be drawn up to cover authorizations to approve and issue documents and data. Documents and data must be approved by an appropriately authorized person before issue.

Principle 4. Quality management is continuously improved

- 4.01 A procedure shall be drawn up for document management (including digital documents) to identify the applicable revision status of documents to prevent the use of invalid and/or obsolete documents. A reference list or similar document may be used.
- 4.02 A method is to be devised for updating and managing documents for service providers which are significant. Each page should show the date of the last revision. The system of managing the quality system must ensure that:
- c) the relevant issues of appropriate documents are available at all locations where operations essential to the effective functioning of the basic quality system are performed;
 - d) invalid or obsolete documents are immediately removed from all points of issue or use, or otherwise prevented from being used unintentionally;
 - e) any obsolete document that is retained for legal reasons and/or for reference purposes is identified as such; and,
 - f) where possible the nature of the change should be identified within the document.

Principle 5. Record-keeping systems are in place

- 5.01 Appropriate records shall be maintained of the experience, expertise and (required) training of the employees concerned.
- 5.02 The manner in which (quality) records are collected, identified, filed and stored shall be established in writing and/or digitally. Quality records shall be maintained to demonstrate that the mass balance requirements of with GGL-Certified or GGL-Controlled biomass produced power or useful heat are adhered to. Quality records shall be stored and maintained in such a way that they are readily retrievable.
- 5.03 The results of checks, measurements, sampling and inspections shall be recorded and filed. The records must show clearly which service-provider has performed the inspections and tests, as well as their accreditation. Analyses of materials must be performed by an ISO-17025 accredited laboratory.
- 5.04 Records of all orders and commissions of purchase are to be maintained to allow traceability of orders, during a period as described under “control of documents and records” below.
- 5.05 Records and documents relating the GGL quality system must be kept at least 10 years.

Principle 6. A quality control plan is in place

- 6.01 A quality control plan shall be developed to document how the critical points are controlled, following the same sequence as the production process. The following matters shall at least be considered in drawing up the quality control plan:

- information flow within the organization
- the physical biomass to power flow within the organization

In order to perform adequate tracking of the biomass and the power and / or useful heat produced, the production process shall be described in appropriate detail considering the scope of the process, including the critical points.

- 6.02 Procedures and instructions shall be drawn up for the monitoring of critical points and for the monitoring of the basic quality of production. In these schemes adequate information shall be provided on methods of controlling safety aspects of the process/ operations. These schemes shall take into account all the relevant steps in the process. The verification of the process schemes must be repeated with every change in the process, so that changes and/or innovations in the operations/production process can be set out and assessed with regard to risks.
- 6.03 The Participant shall identify and evaluate the potential hazards of all operations/processes. This identification and hazard analysis by the legal owner of the material shall include all aspects of the operations/processes that might have an adverse effect on the safety of the personnel
- 6.04 A risk analysis must be performed for each identified hazard. The results of the analysis shall be documented, including the assumptions and principles used in determining/estimating the risk. Permissible levels of risk shall be defined and these standards must comply as a minimum with the legal requirements. When conducting the risk analysis, practical experience, experimental data, literature, etc. shall be taken into account where applicable. A risk assessment should demonstrably be available for every type of biomass to be purchased or received.
- 6.05 As a result of the hazard identification and risk analysis, control measures to reduce risks to an acceptable level must be identified, implemented and, where appropriate, documented.

Principle 7. Transport and shipments of biomass are controlled and monitored

- 7.01 For all shipments received as GGL-Certified or GGL-Controlled biomass a GGL transaction certificates must be available that meet requirements from **GGLS4 – Transaction and product certificate**.
- 7.02 All relevant licenses, registrations and certificates required as a consequence of national or EU legislations must be available.
- 7.03 In case of transportation of GGL biomass by an external transport company, this should demonstrably comply with the requirements of **GGLS1 – Chain of custody requirements**.
- 7.04 Contracts for GGL biomass must be drawn up in such a way to ensure that biomass that carries a GGL claim is indeed either GGL-Certified or GGL-Controlled. This includes provision of all necessary documents for the chain of custody system and can possibly be performed by hiring a third-party inspection company.
- 7.05 A reliable administrative system shall be operated to include:
- the amount and quality of the biomass;
 - the amount and quality of the GGL-Certified and GGL-Controlled biomass;
 - the amount and quality of the other fuels used to produce power and useful heat;

- the power and useful heat produced with the biomass;
 - the power and useful heat produced with the GGL-Certified and GGL-Controlled biomass;
 - the energy produced with the use of other fuels;
 - the link between the incoming fuels used to the power and useful heat produced;
 - any associated documentation, guarantees, certificates, etc. which accompany the biomass.
- 7.06 The agreements to guarantee the basic quality of the purchased biomass shall be laid down in writing.
- 7.07 For each quantity of GGL Biomass that is converted into power and/or heat, the Power company issues a product certificate per **GGLS4 – Transaction and product certificate** to confirm that that quantity of GGL biomass is no longer available for trade. Power companies shall issue such product certificate every 3 months after conversion of a mass balance, or more frequent e.g., monthly which is considered best practice.

Principle 8. Subcontractors of the Participant shall adhere to requirements

- 8.01 Subcontractors shall be evaluated at least once per year. This evaluation must focus to the accreditation and ability of the subcontractor to comply to the GGL criteria as well as to the necessary certificates, like e.g., ISO-17020 for inspection companies and ISO-17025 for laboratories.
- 8.02 Any external storage shall be considered a part of the facility, and rules applicable to the facility shall be applicable to the storage. In case a Participant makes use of an external storage facility, the Participant shall demonstrably make sure that the external storage facility complies in full with all applicable requirements of **GGLS1 – Chain of custody criteria**. The Participant shall in such cases include the requirements in a contractual agreement with the landlord of the facility or its legal representative.
- 8.03 Quality and quantity of the biomass delivered shall be analysed and measured arriving at the gate, which may be performed by an accredited subcontractor.

Principle 9. Health and safety standards are adhered to

- 9.01 The Participant must provide and see to the use of all the necessary personal safety gear for its employees according to the legal standards in that country.
- 9.02 All measures necessary to ensure adequate industrial tidiness shall be devised and implemented. Industrial cleaning programs and registration of such activities must be set down in writing, stating methods, frequencies and times.

Principle 10. Contamination of biomass is prevented at all times

- 10.01 Methods of handling GGL biomass must prevent contamination with other biomass and non-biomass materials. Before handling activities start, the equipment used for handling should be inspected on cleanliness, state and suitable to handle the material by qualified personnel.
- 10.02 Storage silos or storage areas for GGL biomass must prevent contamination with other biomass or non-biomass material. Before filling the storage space should be inspected by qualified personnel on cleanliness and to be intact and to be

suitable for storing biomass. External storage space also should be inspected; this may be performed by qualified subcontractors.

- 10.03 Transport of the GGL biomass within the facilities of the Participant (for example from external storage to the power station) must be inspected. Transportation facilities must be inspected by qualified personal or qualified subcontractor on cleanliness, the state and to be suitable for transport of biomass.

Principle 11. Power companies shall use calibrated values for calculating GHG emissions for fuel and efficiency rates

- 11.01 Where applicable national and international legislative and regulatory requirements shall be followed concerning the energy and carbon balance calculation methodology reflected in each GGL Module
- 11.02 Calculations shall use calibrated values for at least the following items, to determine GHG emission values in a specific utility located in a specific country, which are to be verified case by case:
- The “marginal value”: this is power and useful heat produced from an average (country’s) mix of fossil fuels only (excluding renewable sources and nuclear energy).
 - The “fossil fuel comparator”: this is the actual GHG emissions per unit of power or useful heat produced. The fossil fuel comparator should be derived from the official (representative) authority or government in the country of the Power company.
 - Actual efficiency of co-firing pellets in a specific utility (e.g. by using previous annual data). The default efficiency factor of co-firing a certain share of wood pellets is set on 39.2%.
- 11.03 Only calibrated values as per 11.01 can be used for calculating GHG emissions that have been verified case by case.
- 11.04 GHG emissions of GGL-Certified or GGL-Controlled biomass that validly enters GGL supply-chains under the certification of an Endorsed scheme, should also include all GHG emissions that have been incurred under the scope of the Endorsed scheme.
- 11.05 If no or incomplete data for Endorsed schemes are available per 11.04, an additional GHG calculation should be made at these suppliers, according to the applicable GHG emissions calculation methodology of that GGL Module.

Principle 12. Mass balance shall be maintained across the entire supply-chain

- 12.01 A mass balance of GGL-Certified and GGL-Controlled biomass of the power and useful heat produced shall be maintained in the following manner for both the incoming total amount of fuel (I.) and the total amount of energy produced (II.):

$$(A / B) C = D$$

Where, for the total amount of fuel used (I.):

A = Total incoming annual mass of GGL-Certified or GGL-Controlled biomass

B = Total incoming annual mass of fuel

C = 100%

D = percentage of GGL-Certified or GGL-Controlled biomass

And, where for the total amount of energy produced (II.):

A = Power and useful heat produced with the total incoming annual mass of GGL-Certified and GGL-Controlled biomass.

B = Power and useful heat produced with the total incoming annual mass of fuel

C = 100%

D = percentage of power and useful heat produced with GGL-Certified and GGL-Controlled biomass

12.02 Units for the calculations of mass balance can be calorific content (e.g., MJ or GJ) or mass (MT). The metric D in 12.01 can be used to compare to the minimum amount of GGL-Certified or GGL-Controlled biomass needed to comply with the GHG emissions per specific GGL Module.