Clarifications for Application of Puro Standard and Methodologies

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1. Introduction

This document provides clarifications applicable to the Puro Standard and related Methodologies. Where it has been necessary to clarify application of the Puro Standard rules and requirements, they are consolidated in this document for transparency and ease of access. This document is updated as new clarifications are needed according to Methodology Development Requirements rules 2.4.1 – 2.4.4. Clarification shall be considered and addressed in the next revision of the Methodology or Standard Document concerned.

Puro Standard documents and associated Methodologies are available in the Document Library. The purpose of this document is to complement the information contained in those documents and help to apply the standard as intended. Each clarification includes reference to the Standard document and the rule it addresses. Clarifications are applicable to the document version stated in the clarification.

Validation and verification bodies and CO2 Removal Suppliers shall interpret Puro Standard documents consistent with the clarifications set out in this document.

If you have comments or questions to this document, please send those by email to contact@puro.earth referring the numbered clarification in this document.

2.List of Clarification

Number	Clarification title	Standard document, version	Rule
001 BCH	Eligibility of mixed waste as biochar feedstock, when it contains plastics and other non-biogenic waste fractions	Biochar methodology, edition 2022, all versions	1.1.2
002 BCH	Need for PAH testing of Biochar when local regulation does not require it	Biochar methodology, edition 2022, all versions	1.1.7
003 BCH	Need for PAH testing of Biochar when local regulation does not exist	Biochar methodology, edition 2022, all versions	1.1.7
004 TSB	Eligibility of Biomass sourced from land clearing for agriculture	Terrestrial Storage of Biomass, edition 2023, all versions	4.1.6 (e)
005 ADD	Financial additionality requirements for first-of-its-kind facilities	Additionality Assessment Requirements	2.3.3 3.1.3

Number	Clarification title	Standard document, version	Rule
		v2.0	
006 BCH	Eligibility of Forest biomass with existence and enforcement of local forest management plans	Biochar methodology, edition 2022, all versions	5.2.1
007 CAM	Eligibility of processes where the carbonation reaction does not occur within the Production Facility	Carbonated Materials, edition 2022, all versions	3.1.1
008 BCH	Biochar for non-soil applications and permanence quantification	Biochar methodology, edition 2022, all versions	4.2
009 GR3	Output time limit for Certificate Issuing	General Rules, version 3.1.	3.2.5
010 CAM	Eligibility of ash from coal power plants as feedstock	Carbonated Materials, edition 2022, all versions	2.1.2
011 GR4	Vintage definition	General Rules, version 4.2	Definition
012 GR4	Procedural requirement for reevaluation of the project during renewal of crediting period.	General Rules, version 4.2	2.4.1
013 GR4	Procedure to reactivate a deregistered facility.	General Rules, version 4.2	3.1.5
014 GSC	Clarification of the term E_reversal from the CORC calculation equation	Geologically Stored Carbon, edition 2024, all versions	4.3 4.7
015 BCH	Accounting boundaries for project emissions when biochar is mixed before soil application	Biochar, edition 2022	4.5
016 GR3	Clarification on the determination of the crediting period (former registration period) based on its Registration date (Facility Audit)	General Rules, version 3	2.1.5-7 2.3.3
017 GSC	Clarification on the determination of biomass feedstock category to	Geologically Stored Carbon,	6.2.7

Number	Clarification title	Standard document, version	Rule
	determine the applicable leakage mitigation option	edition 2024, all versions	
018 TSB	Clarification on the adoption of a project specific re-emission factor (fraction of degradable organic carbon which decomposes (DOC$_f$))	Terrestrial storage of Biomass, edition 2023, version 1	6.5.7
019 GR4	Explicit prohibition of simultaneous registration of a CO2 Removal Activity in Puro and another crediting program.	General Rules, version 4.x	3.5.3.1
020 ERW	Use of US EPA and EU EFSA for ERA education	Enhanced Rock Weathering, edition 2022, all versions	4.5.5
021 GSC	Clarification on the possible modes of use of renewable low-carbon energy supply schemes for calculation of the footprint of material inputs along the supply-chain of a GSC removal activity	Geologically Stored Carbon, edition 2024, all versions	5.2.19
022 GSC	Eligibility of biogenic CO2 emissions from cement clinker production that co-fires coal and eligible biomass.	Geologically Stored Carbon, edition 2024, all versions	3.2.3
023 CAM	Usage of renewable energy certificates or similar in project emissions accounting	Carbonated Materials, edition 2022, and all Methodologies, all versions	5.3
024 BCH	External Energy Use for Leakage Mitigation	Biochar, Edition 2025, all versions	8.2.4(b)
025 GR4	No removal activity for a period	General Rules 4, all versions, General Rules 3, all versions	2.4.2 2.4.3 2.3.2.1
026 TSB	Eligibility of pruning residues from pomology and viticulture	Terrestrial Storage of Biomass, edition 2023, all versions	4.1.6(d)

Number	Clarification title	Standard document, version	Rule
027 BCH	Definition of "similar" technology and design	Biochar, edition 2025, all versions	2.2.1(a) and 3.1.6(a)
028 GR4	Clarification on site visits conducted on Output Audits	General Rules, version 4.0 – 4.4	Rule 2.3.2.3
029 BCH	Baseline for simultaneous equipment retrofit and capacity expansion	Biochar, edition 2025, all versions	3.2.5 and 8.1.6
030 BCH	Grinding biochar to a fine particle size	Biochar, edition 2025, all versions	Table 3.2, R3
031 GSC	Clarification on the use of renewable energy certificates	Geologically Stored Carbon, edition 2024, all versions	5.2.19
032 BCH	Clarification on the use of renewable energy certificates	Biochar, edition 2025, all versions	7.1.11

3. Clarifications

Number	Clarification title	Standard document, version	Rule
001 BCH	Eligibility of mixed waste as biochar feedstock, when it contains plastics and other non-biogenic waste fractions	Biochar methodology, edition 2022, all versions	1.1.2

Date: 15 October 2024

Rule 1.1.2 *Biochar must be produced from sustainable biomass: sustainably sourced biomass, or waste biomass such as agricultural waste, biodegradable waste, urban wood waste or food waste. […]*

Clarification: The Biochar methodology edition 2022 defines eligible feedstock as biomass. We recognize the value of using pyrolysis to treat mixed wastes where biomass is present with other waste fractions such as plastics and other non-biogenic municipal waste. Pyrolyzing or gasifying mixed waste can generate positive impacts through electricity generation and a char product. We understand that it is possible with modern technology to measure the share of biomass-based fraction in the mixed waste.

The biochar methodology was designed to set rules for biomass conversion to durable biochar. All environmental safety, quantification and permanence requirements are based on biochar made of biomass. Inclusion of mixed waste in the methodology scope introduces a complexity and potentially risks to environment. Therefore, we take the conservative approach and maintain only biomass as eligible feedstock. As a conclusion, mixed waste containing both fossil and biogenic carbon pyrolyzed together **is not allowed.** Mixed nature of the feedstock under the Biochar methodology **is not eligible**.

Number	Clarification title	Standard document, version	Rule
002 BCH	Need for PAH testing of Biochar when local regulation does not require it	Biochar methodology, edition 2022, all versions	1.1.7

Date: 15 October 2024

Rule 1.1.7 *The biochar produced must meet any product quality requirements existing in the jurisdiction where biochar is used and for the specific applications considered. In other words, the biochar produced must be legal to use in the manner proposed. For instance, for use in soil products, biochar may be subject to legal requirements in terms of heavy metal, polyaromatic hydrocarbon (PAH), and other organic contaminant contents. In jurisdictions where no requirements exist* ***for the intended applications*** *[…]*

Clarification: The Biochar methodology edition 2022 defines in rule 1.1.7 that local jurisdiction requirements prevail over other recommendations. If national or sub-national regulation exists and it does not require PAH testing of biochar for soil applications, then the local biochar producers can follow that national or sub-national regulation. Our interpretation for the USA is that the national regulation Code 336 prevails over the IBI guidelines, and hence PAHs testing is not required if the USDA **for soil applications**. However, note that the USDA Code 336 regulation is specific to

biochar application to soil as a direct amendment or co-amendment, but it does not apply to for animal feed where we then would need PAHs testing as per EBC benchmark. Conclusion, **local** jurisdiction requirements regarding PAH testing of biochar **prevail** over other recommendations.

Number	Clarification title	Standard document, version	Rule
003 BCH	Need for PAH testing of Biochar when local regulation does not exist	Biochar methodology, edition 2022, all versions	1.1.7

Date: 15 October 2024

Rule 1.1.7 *The biochar produced must meet any product quality requirements existing in the jurisdiction where biochar is used and for the specific applications considered. In other words, the biochar produced must be legal to use in the manner proposed. For instance, for use in soil products, biochar may be subject to legal requirements in terms of heavy metal, polyaromatic hydrocarbon (PAH), and other organic contaminant contents. In jurisdictions where no requirements exist for the intended applications the biochar produced must be benchmarked against quality thresholds defined in voluntary quality standards for biochar, namely the International Biochar Initiative (IBI) guidelines or the European Biochar Certificate (EBC) guidelines . Other standards will need to be approved by Puro. Acceptability of any deviation from threshold values defined in these product quality standards must be motivated by the CO2 Removal Supplier, approved by the issuing body, and made publicly available (e.g. on website, product information sheets, and information to end-user).*

Clarification: The Biochar methodology edition 2022 defines in rule 1.1.7 a stepwise approach to quality requirements for biochar. The PAH-limits are set for safety reasons when biochar is being used as soil-amendments or for animal feed. Polycyclic aromatic hydrocarbons (PAH) are formed whenever biomass is burned. Some PAHs may cause cancer, and therefore limits are set for biochar use types where people or animals can be exposed to PAHs.

Step 1: Always follow the local regulation for biochar. The supplier shall be knowledgeable of the local rules and recommendations and operate their biochar production and application accordingly including any requirements for PAH levels in biochar.

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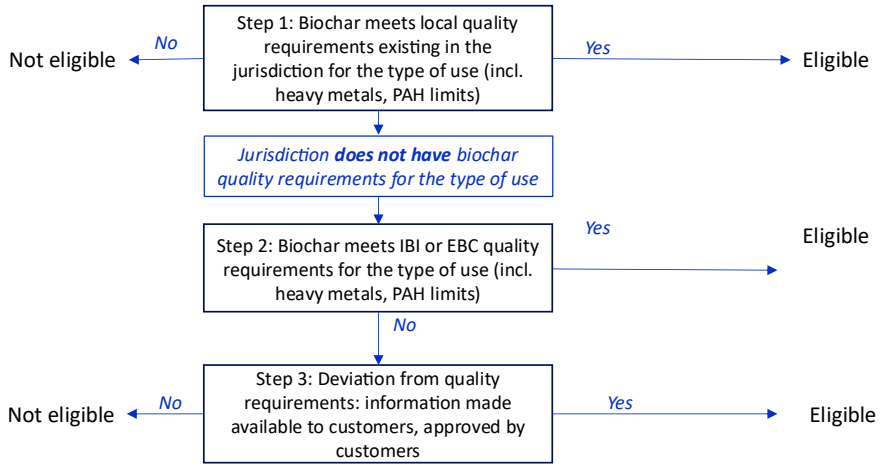
Biochar quality requirements



Step 2: Many jurisdictions have not yet set regulations for biochar use and application to soil or non-soil environments. In that case rule 1.1.7 defines that the biochar producer must test the biochar for PAH contents and meet the PAH-limits set by EBC or IBI guidelines. Other guidelines for biochar quality can be proposed, but those are subject to Puro.earth approval. You will need to submit the laboratory test results with PAH values for the verifier (VVB) to review.

Step 3: If your biochar PAH levels did not meet the limits set by IBI or EBC, but you have informed your customers and they have acknowledged it, you can still receive CORCs for the volume of biochar produced and applied. You will need to submit records on how customers have been informed and records of their acknowledgement for the verification.

Biochar can be produced with a low PAH content even with basic kilns. As a biochar producer you are required to adjust your process so that your biochar PAH-limits remain below the limits set by IBI or EBC or another similar biochar quality standard that is applicable to your location and your use case, whether it is application to soil or other applications.

If your country or jurisdiction does not have regulations for biochar, we require you to perform PAH-testing for your biochar and meet the limits set by EBC or IBI. You will need to submit the laboratory test results with PAH values for the verifier (VVB) to review. If the verifier finds your biochar production regular, also the past volumes before PAH-testing for the same monitoring period are considered eligible.

Going forward, if local regulation does not exist, you will need to do the PAH-tests if your biochar is being used as soil-amendments or for animal feed.

Number	Clarification title	Standard document, version	Rule
004 TSB	Eligibility of Biomass sourced from land clearing for agriculture	Terrestrial Storage of Biomass, edition 2023, all versions	4.1.6 (e)

Date: 15 October 2024

Rule 4.1.6 (e). *If the biomass is sourced from land clearing in construction projects* ***or for agriculture****:*

- *The land use change and related emissions are attributed to the construction project* ***or the agricultural products****. The biomass arising from land clearing is technically classified as non-renewable.*
- *Carbon storage additionality relative to baseline: the baseline assumes that the construction project* ***or the agricultural land clearing*** *would take place in any case, and that the biomass is treated as a waste product similar to biomass of type D. Depending on the local context, it is likely that a fraction of the biomass is economical to use as material (e.g. timber, plywood) or energy, while another fraction is not suited for any use and* ***will*** *be either burnt or disposed of.*
- *Economic leakage prevention: only the fractions not suited or not economic to use as material and energy are eligible.*
- *Authorisation of operations: the construction project* ***or the agricultural land clearing*** *must have a valid construction permit* ***or other approval*** *that allows land clearing.*

In summary, biomass in subrule (e) is eligible provided that i) the construction project ***or the agricultural land clearing*** *has a valid permit* ***or approval****, and ii) the economically usable fractions of the cleared biomass are not used for storage.*

Clarification: The Terrestrial Storage of Biomass, edition 2023 defines in rule 4.1.6 eligible biomass types from (a) to (e). Land clearing is covered in biomass type (e) and the text explicitly references trees being cut for construction. Land clearing for agriculture, farming, food cultivation or animal husbandry is not explicitly mentioned. Both the construction of roads or buildings as well as agriculture are services that societies need. Land clearing for both of those purposes is also regulated by societies. That said, the societies find also situations where land use change is not sustainable, and the local regulation would not approve or permit land clearing. Land clearing is typically not allowed if the land is classified as protected area, high-value ecosystem, high carbon stock area, a biodiversity conservation area or where deforestation is already a problem. Cleared biomass from illegal or unapproved land clearing is not considered eligible under the Puro Standard.

If a project developer can demonstrate that the agricultural land clearing is compliant with all other conditions in subrule 4.1.6 (e), we consider it eligible biomass. The project will need to submit evidence on

i) Land clearing taking place in any case,
ii) Land clearing having a valid permit or approval,
iii) the economically usable fractions of the cleared biomass are not used for storage, and
iv) the land clearing does not affect an area that was classified as protected area, high-value ecosystem, a primary forest or old growth forest

The submission is reviewed by the verifier (VVB) in the audit. The biomass is eligible if it meets the requirements in rule 4.1.6 (e) with the amendments above.

Number	Clarification title	Standard document, version	Rule
005 ADD	Financial additionality requirements for first-of-its-kind facilities	Additionality Assessment Requirements v2.0	2.3.3 3.1.3

Date: 15 October 2024

Rule 2.3.3 *The CO2 Removal Supplier shall use the requirements in the relevant Puro Standard Methodology to determine the baseline of durable carbon removal. If the methodology has no such requirements, the CO2 Removal Suppliers can be guided by the CDM Methodological Tool 02 "Combined tool to identify the baseline scenario and demonstrate additionality. Version 7.0" to conduct the baseline determination.*

Rule 3.1.3 *Puro Standard allows three different ways of demonstrating financial additionality. The CO2 Removal Suppliers shall perform one of the following:*
a) Simple cost analysis, if the CO2 Removal Supplier complies with the criteria laid out below,
b) Investment analysis or
c) Barrier analysis.

Clarification: The Additionality Assessment Requirement, v2.0 defines in rule 2.3.3 that CDM Methodological Tool 02 can be used for demonstration of additionality. In that CDM tool the assessment steps for a first-of-its-kind project are described in figure 2. In the CDM approach not all first-of-its-kind projects need to make a financial analysis of the additionality. The Puro Standard Additionality Requirements have no explicit mention of First-of-its-kind facilities. Our interpretation is that First-of-its-kind facilities and projects are not exempt from demonstrating financial additionality. First-of-its-kind facilities, like any other project, **shall assess financial additionality** according to one of the three options defined in clause 3.1.3.

Number	Clarification title	Standard document, version	Rule
006 BCH	Eligibility of Forest biomass with existence and enforcement of local forest management plans	Biochar methodology, edition 2022, all versions	5.2.1

Date: 15 October 2024

Rule 5.2.1 *Proof of origin and sustainability of the biomass feedstock used must be kept in records, be submitted to Puro, and made available for Output audits. The following sustainability certificates must be presented: In the case of forest biomass:*

- *Forest Stewardship Council (FSC) Forest Management Certification; or - Sustainable Forestry Initiative (SFI) Forest Management Certification; or*
- *Programme for the Endorsement of Forest Certification (PEFC) Sustainable Forest Management Standard; or*
- ***Evidence of forest management plans approved by a government, state or regional authority from a country where the Corruption Perception Index13 is 50 or above; or***

- *Other reputable sustainable forest certification programs with high scientific standards and market recognition, regardless of whether they are public or private in nature. Puro.Earth reserves the right to make the determination of eligibility of the certification program.*

Clarification: The Biochar methodology edition 2022 defines in rule 5.2.1 four options for forest biomass sustainability evidence. Forest certification is not common in many forested areas, but the forest biomass can be sustainable. The third option can be used to demonstrate sustainable source of forest biomass in countries where the enforcement of regulation is strong. The rule 5.2.1 set the limit to Corruption Perception Index (CPI) above or equal to 50. For those countries, the project biochar shall demonstrate the existence and enforcement of local forest management plans, policies, or programs, guidelines or recommendations whether emanating from governmental, regional, or local authorities. In many countries the authorities do not explicitly approve individual forest plans, but set regulations or guidelines which forest managers abide by. Some authorities enforce the regulation by requiring forest managers to submit a logging notice.

The project shall demonstrate with evidence to the auditor and Puro.earth the existence and enforcement of local forest management practices that result in sustainable forest biomass. The evidence shall focus on presenting

a) The CPI index of the country;

b) Who is the local authority overseeing forest management

c) What are the local requirements in essence that evidence the sustainability of your biomass

d) The type of local requirements (mandated or recommendation), and type of oversight performed by the local authority (logging notices, approvals of plans beforehand, inspections, etc.)

The documents and linked websites can be in local languages, but the project is asked to summarize the evidence in English and give reference to the place in the documents for the auditor to review. For ease of reading, it can be useful to copy parts of the text from the local regulations. Add links to where the data can be found publicly. Optionally, you can provide a letter from the local authority with the responses to the points a-d and a contact person for the auditor.

Note that the added evidence option based on "*forest management plans approved by a government, state or regional authority from a country where the Corruption Perception Index is 50 or above*", is different from "*Other reputable sustainable forest certification programs with high scientific standards and market recognition, regardless of whether they are public or private in nature". Under the latter option, national (public) certification schemes for forestry operations can be deemed eligible, regardless of the CPI.*

Number	Clarification title	Standard document, version	Rule
007 CAM	Eligibility of processes where the carbonation reaction does not occur within the Production Facility	Carbonated Materials, edition 2022, all versions	3.1.1

Date: 15 October 2024

Rule 3.1.1 *The point of creation of the CO2 Removal Certificate (CORC) is the production of the carbonated material that has absorbed CO2 at the eligible Production Facility.*

Clarification: The Carbonated Materials methodology, edition 2022 defines in rule 3.1.1 that the mineral carbonation reaction where the CO2 gas is reacting with the feedstock material takes place within the site i.e. the Production Facility. The carbonated material shall be possible to measure and quantify before it leaves the site.

If the reactive material (the feedstock) has not yet absorbed CO2 when it leaves the Production Facility, it is not quantifiable according to this methodology. If the CO2 absorption and carbonation reaction takes place later over time and outside of the facility in several application locations in the soil, this methodology is not applicable. Carbonated materials methodology is not designed to quantify carbonation reaction taking place later and outside of the Production Facility location. The monitoring and quantification of the carbon removal in the soils is very different from the MRV (Monitoring, Reporting and Verification) requirements set in the Puro methodology for Carbonated Materials. Carbonation reaction taking place outside of the Production

Facility **is not eligible**.

Number	Clarification title	Standard document, version	Rule
008 BCH	Biochar for non-soil applications and permanence quantification	Biochar methodology, edition 2022, all versions	4.2

Date: 15 October 2024

1.1.1. *Biochar must be used in applications that preserve its carbon storage property […]*

5.4.2. *Proof that the end-use […] exclude amount of biochar that is likely to end up in waste incineration and not in a mineral matrix (soil or construction use) from which it cannot be separated.*

Ch 4.2 *The term E_{stored} is calculated based on the methodology by Woolf and colleagues (2021) […] Regarding soil temperature TS, there are large differences in 100-year biochar carbon sequestration between climates. Therefore, the methodology must be applied for a mean annual soil temperature TS representative of the climate where the biochar is distributed and used. The global mean annual cropland temperature is about 14.9°C but can vary between 5°C and 25°C between world regions. […]*

Biochar used first in non-soil applications may have slower degradation rates. However, to date, no peer-reviewed methodology exists for estimating long-term carbon sink in such products. Therefore, the existing methodology for decomposition in soils is used even for non-soil applications, and it can be seen as a conservative estimate.

Clarification: The Biochar methodology edition 2022 states in rules 1.1.1 and 5.4.2 that the end-of-life for the non-soil application of biochar must be well known. If there is risk that the biochar-enriched material is likely to end up in waste incineration, it is not eligible. The CO2 Removal Supplier is required to document the expected end-of-life treatment type of the non-soil application.

The Biochar methodology edition 2022 defines in chapter 4.2 calculation of the permanence factor and the share of biochar that remains stored over 100 years. Biochar permanence factors for non-soil applications are calculated using the same equation as for biochar used in soils, using the average soil temperature of the location.

Puro Standard has decided to use this conservative approach, until there is permanence research available for biochar in construction use. It is under-estimating the permanence of biochar in concrete, asphalt or other non-soil application and thus under-crediting the carbon removal.

For the time that the biochar is in the construction material, it is not exposed to reversal risk. Most materials will experience physical breakdown, wearing, or crushing over their useful life or at end-of-life. This is likely leading to biochar particles ending up in a soil environment or in landfills in the use location or close to it. Therefore, we have decided to use the same local average soil temperature for the non-soil application of biochar for permanence quantification. It means using the national (or sub-national) average temperature of the location where the construction material is used in the calculations of biochar permanence for those volumes.

Number	Clarification title	Standard document, version	Rule
009 GR3	Output time limit for Certificate Issuing	General Rules, version 3.1.	3.2.5

Date: 30 December 2024

General Rules v3.1 ***3.2.5:*** *CORCs may be Issued for Output, which at the time of Issuing has*

i) not been sold in the form of or associated with the Underlying Product; and

ii) taken place maximum of 18 months in the past,

from Production Facilities registered. This may include time periods when the Production Facility was not registered into the System as long as the Output of that period may be verified according to the relevant Removal Method specific Methodology and the Environmental and Social Safeguards.

Background: The calendar time spent between the submission of Output Report and the issuance of credits depends on multiple parties' execution of their respective activities. We have seen cases where the time elapsed between reporting and issuance increased by several months due to activity delays of the 3rd party auditor (VVB) or the Issuing Body (crediting program). With the rule 3.2.5 ii), the supplier, without any possibility to influence, could lose big part of their originally reported eligible Output due to delays by other parties. That has not been the intention of the rule.

For reference: General Rules v4.0 *2.4.2: An Output Report shall be submitted to each Production Facility once every 12 months throughout the Crediting Period. An Output Report may consider Production Facility performance for up to 18 months.*

Clarification: The time limits in Puro Standard General Rules 3.1 and 4.0 have been introduced to ensure regular reporting by the project over the crediting period. The extension of exceeding the annual cadence by 6 months is introduced to allow some flexibility for the project to compile the Output Report. The intention was not to sanction the project for delays caused by other parties. We consider that Rule 3.2.5 in General Rules 3.1 should have the same effect that rule 2.4.2 in the General Rules 4.0. The rule should give flexibility of 6 months to the normal reporting cadence of 12 months and in that case allow issuance for the past 18 months of the reported eligible Output. In the rule 3.2.5 the "maximum 18 months in the past" shall be calculated from the date when the Issuing Body has received an Output report that is deemed complete.

Interpretation of the rule 3.2.5 shall be:

General Rules v.3.1: ***3.2.5*** *CORCs may be Issued for Output, which at the time of ~~Issuing~~* ***acknowledging receipt of complete final Output Report*** *has*

i) not been sold in the form of or associated with the Underlying Product; and

ii) taken place maximum of 18 months in the past,

Number	Clarification title	Standard document, version	Rule
010 CAM	Eligibility of ash from coal power plants as feedstock	Carbonated Materials, edition 2022, all versions	2.1.2

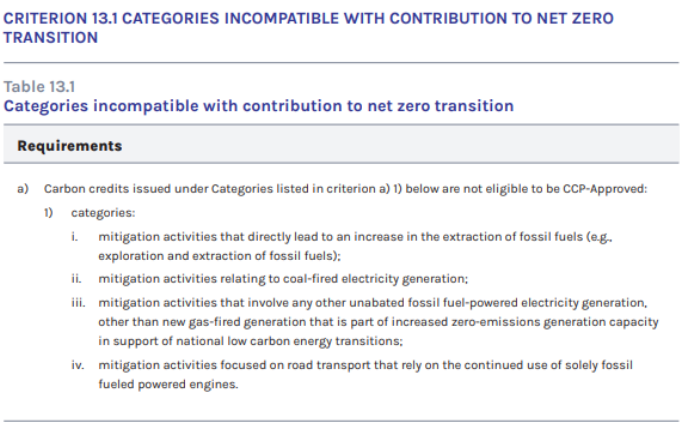
Date: 30 December 2024

Rule 2.1.2 *The raw materials used in the carbonated material production must be of eligible types, and EU or national legislation must be followed in the sourcing and extraction of the raw materials used.*

Background: Multiple industrial residues and waste materials can be used as feedstock due to their content of alkali and alkaline earth metals such as Ca, Mg, Na, and K and their oxides, which are transformed into carbonates upon contact with CO_2. Examples of materials that can have the right characteristics for carbon removal are mine tailings, steels slags, ashes and flue gas treatment residues.

At the same time, the ICVCM has determined that mitigation activities related to unabated coal-fired electricity generation (13.1 ii) are **not eligible** because they are not contributing towards net zero emissions.

For reference the ICVCM requirement (page 49):



CRITERION 13.1 CATEGORIES INCOMPATIBLE WITH CONTRIBUTION TO NET ZERO TRANSITION

Table 13.1
Categories incompatible with contribution to net zero transition

Requirements
a) Carbon credits issued under Categories listed in criterion a) 1) below are not eligible to be CCP-Approved:
1) categories:
i. mitigation activities that directly lead to an increase in the extraction of fossil fuels (e.g., exploration and extraction of fossil fuels);
ii. mitigation activities relating to coal-fired electricity generation;
iii. mitigation activities that involve any other unabated fossil fuel-powered electricity generation, other than new gas-fired generation that is part of increased zero-emissions generation capacity in support of national low carbon energy transitions;
iv. mitigation activities focused on road transport that rely on the continued use of solely fossil fueled powered engines.

Clarification: Ash or other waste materials resulting from coal-fired electricity generation (coal power plants) are **not an eligible feedstock type** under rule 2.1.2 in Carbonated Materials methodology, regardless of when the ashes or waste materials were originally produced

Number	Clarification title	Standard document, version	Rule
011 GR4	Definition of Vintage	General Rules, version 4.2	Definition

Date: 11 July 2025

DEFINITION *Vintage – The calendar year in which the Carbon Removal occurred. If carbon Removal occurred across multiple years, the latest year is determined as Vintage.*

Clarification:

The carbon removal activity is assessed during a monitoring period. If the monitoring period spans multiple calendar years, then, according to the definition above, the latest year is the determinant for the Vintage. For example, if the monitoring period is mid-2024 through mid-2025, then the latest year is 2025, and that will be the year that determines the vintage (vintage 2025).

Number	Clarification title	Standard document, version	Rule
012 GR4	Procedural requirement for reevaluation of the project during renewal of crediting period.	General Rules, version 4.2	2.4.1

Date: 11 July 2025

Rule 2.4.1. *"The first date of the first Monitoring Period marks the beginning of a Crediting Period. The Crediting Period lasts 5 years unless otherwise stated in the applicable Methodology. The Crediting Period can be renewed twice by successfully undergoing a new Production Facility Audit. The Crediting Period shall not overlap with another Crediting Period."*

Clarification: "In order to renew a Crediting Period as established in clause 2.4.1, the CO2 Removal Supplier needs to submit evidence for the re-evaluation of all the items covered in a Production Facility Audit as established in clause 2.2.4.

This includes all procedures, methodological evidence, and underlying assumptions used for the quantification, monitoring, and verification of carbon removal activity. This explicitly includes the reassessment of baseline scenarios (and related parameters) at the time of the crediting period renewal. This is done to ensure continued alignment with the latest scientific, regulatory, and methodological developments."

Number	Clarification title	Standard document, version	Rule
013 GR4	Procedure to reactivate a deregistered facility.	General Rules, version 4.2	3.1.5

Date: 11 July 2025

Rule 3.1.5. *"Where a CO2 Removal Supplier seeks to deregister a Production Facility from the Registry it may do so by notifying the Issuing Body. The deregistration is activated within a calendar month of the receipt of this information by the Issuing Body. The CO2 Removal Supplier shall receive a document of deregistration from the Registry stating from which date the CO2 Removal activity is no longer certified under the Puro Standard. In such a case, the CO2 Removal Supplier is responsible for completing any Audits still due and to pay any fees still due."*

Clarification:

"For a facility to be reactivated after being de-registered according to clause 3.1.5 of the General Rules, the CO2 Removal Supplier needs to undertake the entire registration process anew as established in clause 3.1.2 of the General Rules"

Number	Clarification title	Standard document, version	Rule
014 GSC	Clarification of the term E_reversal from the CORC calculation equation	Geologically Stored Carbon, edition 2024, all versions	4.3.1 4.7

Date: 22 July 2025

Rule 4.3.1. *"The overall number of CORCs (i.e. the total net amount of CO2 removed) during a monitoring period shall be calculated as follows (see also figure 3 for an illustration):*

CORCs = Cstored - Eproject - Eleakage - Ereversal (1)

[term defined as] Ereversal [is] Total GHG emissions from the geological storage reservoir, if any. Further requirements on the calculation of this term are given in section 4.7. [in] tCO2e"

Clarification:

"The term E_reversal in equation 1 of the GSC 2024 methodology **does not** quantify a reversal event as described in the General Rules v4.2, rule 6.7.2., but covers a release of carbon from the storage **before** the issuance of CO2 Removal Certificates (CORCs). As such, Puro plans to substitute the parameter in the equation in the next update of the methodology with:

C_loss: *Total GHG emissions from the geological storage reservoir incurred before the issuance of CORCs. Further requirements on the calculation of this term are like those used to calculate reversals in section 4.7.*

Thus, the term C_loss does not double-count a reversal event."

Number	Clarification title	Standard document, version	Rule
015 BCH	Accounting boundaries for project emissions when biochar is mixed before soil application	Biochar, edition 2022	4.5

Date: 21 August 2025

Background:

Biochar use (E_{use}) "...describes the life cycle greenhouse gas emissions that occur along the distribution of the biochar up to its point of final use." (Rule 4.1. Overall equation of net carbon sequestration over 100 years", with further guidance for its calculation under rule 4.5.

***Rule 4.5.** Biochar use (E_{use}) "The term E_{use} should be derived from a life cycle assessment of the expected biochar uses, to the extent that it is known by the biochar producer. This term should include at least all greenhouse gas emissions from the transportation and handling of biochar until it is used in a mineral matrix (soil or concrete) from which it cannot be separated."*

Clarification:

"The term E_{use} calculated following the guidelines in rule 4.5 of Biochar ed.2022, **shall** include all greenhouse gas emissions from activities (e.g., transportation and handling) necessary to mix the biochar in a mineral matrix (soil, manure, concrete or other material) from which it cannot be separated, and results in a final product with a biochar content below 50% (v/v) that can be corroborated with documented evidence.

By meeting these conditions, downstream emissions from the point of mixing **may** be excluded from the calculation of the term E_{use}. Otherwise, downstream emissions **shall** be accounted for in the term E_{use} for products that cannot demonstrate biochar content less than 50% v/v or have equal or more than 50% v/v and require transportation and handling until proof that the end-use of the product does not cause CO2 to return to the atmosphere in accordance with rule 5.4.2. "

Number	Clarification title	Standard document, version	Rule
016 GR3	Clarification on the determination of the crediting period (former registration period) based on its Registration date (Facility Audit)	General Rules, v3.1	2.1.5 2.1.6 2.1.7 2.3.3

Date: 07 August 2025

Background:

Under General Rules v3.1 (v3.0, v2.7), the activation of a Production Facility in the Registry takes place after the approval by the Issuing Body (rule 2.1.5) and passing a Facility Audit (rule 2.1.6); this activates the Production Facility in the Registry and its Output becomes eligible to receive CORCs from the **registration date** and is valid for

up to five years (rule 2.3.3), which is extendable under conditions noted in the same rule.

General Rules v4.2 aligns the start of the Crediting Period with the beginning of the first Monitoring Period (GRv4.2 rule 2.4.1), which depends on a successful Production Facility Audit that validates the Monitoring and Reporting Plan (GRv4.2 rule 2.2.4.2.vii).

A request for clarification was made to confirm that the five-year period during which the Output of active Production Facilities can receive CORCs starts at the **registration date** or up to a full year before registration when verified Output is eligible to produce CORCs (GRv3.1 rule 2.2.1).

Clarification:

For Production Facilities audited under General Rules v3.1 (v3.0, v2.7), the five years of "valid" registration under which projects may become eligible to receive CORCs is determined by the "registration date" after the approval of the Issuing Body (GR3.1 – 2.1.5-6) and passing Facility Audit by an Auditor (GR3.1 – 2.1.6). Additionally, the Issuing Body requires the Production Facility to upgrade to the latest version of the General Rules (e.g., GR v4.2 or later) and Methodology during the next crediting period renewal cycle. For biochar projects, this would enable upgraded facilities under the 2025 edition of the Methodology to utilise the 10-year crediting period, aligning with current market norms on crediting periods and up-to-date scientific research in the field.

Number	Clarification title	Standard document, version	Rule
017 GSC	Clarification on the determination of biomass feedstock category to determine the applicable leakage mitigation option	Geologically Stored Carbon, edition 2024, all versions	6.2.7

Date: 18 September 2025

Background:

The Geologically Stored Carbon (GSC) methodology enables the mitigation of leakage from the use of biomass feedstock that may compete with food/feed use when the "primary/main product" of the CDR activity is a food product, such as distilleries producing beverages (see GSC rule 6.2.7.c). Similarly, the Biomass Sourcing Criteria (BSC) provide an exception to the determination of **competing use for food/feed** (a determinant of leakage through land-use change) if the resulting commodity (main product) of the CDR pathway is for food/feed.

However, it is unclear in the methodology and the BSC how the "primary/main product" is defined, particularly in processes that result in multiple products. For example, the processing of sugarcane as a biomass feedstock may result in two co-products with distinct end uses: sugar for food and ethanol for fuel/energy. Therefore, it is necessary to clarify how the "primary/main product" of the CDR pathway is determined to ensure whether leakage can be deemed mitigated or needs to be quantified.

Clarification:

A primary/main product is the end-product resulting from feedstock processing that uses most of the input feedstock by mass (>50%) in the conversion process.

Therefore, when the primary product of agricultural crop biomass conversion in a CDR pathway is a food or feed commodity, it is assumed that the main product does not exert pressure for indirect land-use change to meet demand for the commodity and generate leakage emissions. Thus, this condition allows Suppliers to mitigate the source of leakage of such biomass feedstock if they can demonstrate meeting this condition.

Nonetheless, when the conversion of the eligible feedstock is not primarily a food/feed product as described under rule 6.2.7.c of the GSC, "...the CO2 Removal Supplier shall quantify and account for this leakage source in accordance with rule 6.3.5".

Number	Clarification title	Standard document, version	Rule
018 TSB	Clarification on the adoption of a project specific re-emission factor (fraction of degradable organic carbon which decomposes (DOC$_f$))	Terrestrial storage of Biomass, edition 2023, version 1	6.5.7

Date: 19 September 2025

Background:

The Terrestrial Storage of Biomass (TSB) methodology allows Suppliers to adopt a **project specific re-emission factor** (DOC*f*) instead of the default value of 8.8%. This has the potential of reducing the estimated value of re-emitted CO2.

A clarification request was submitted to determine if the DOC*f* could be determined from a single chamber of the Production Facility and be adopted for future storage chambers within the same project or other similar projects managed by the Supplier.

Clarification:

The process for adopting a **project specific re-emission factor** instead of the default emission factor shall be conducted for each storage chamber separately following the guidelines provided in rule 6.5.7.

Specifically, rule 6.5.7 states that "...The evidence shall contain **data sourced directly from the storage chambers** over a period of at least 12 months...". The intended meaning, clarified here, is to develop DOC*f* based on evidence that reflects the conditions of the specific storage chamber. Moreover, the determination of DOC*f* **does not** extend to other chambers built based on the same validated design as there can be unforeseen risks like construction defects or other faults that may impact the chamber's performance, altering the DOC*f*.

Number	Clarification title	Standard document, version	Rule
019 GR4	Explicit prohibition of simultaneous registration of a CO2 Removal Activity in Puro and another crediting program.	General Rules, v4.2, V4.1, v4.0	3.5.3.1.

Date: 24 September 2025

Background:

The intention of rules 3.5.3.1 – 3.5.3.6 is to prevent the simultaneous registration of any mitigation activity in Puro and another crediting program that issues carbon removal credits. In particular,

"3.5.3.1 The Issuing Body shall control that the same Account Holder has not registered the same CO2 Removal activity for the same period with another carbon-crediting program. The same CO2 Removal activity can register with another carbon crediting program for a different Monitoring period."

Clarification:

Rule 3.5.3.1 shall be interpreted as follows:

The Registry does not allow simultaneous registration of the same CO2 Removal activity with another carbon removal crediting program.

Number	Clarification title	Standard document, version	Rule
020 ERW	Use of US EPA and EU EFSA for ERA education	Enhanced Rock Weathering, edition 2022, all versions	4.5.5

Date: 06 October 2025

Rule 4.5.5 *The environmental risk assessment performed by the CO_2 Removal Supplier shall follow the guidance from the US EPA,[1] the EU EFSA,[2] other locally relevant institutions. The environmental risk assessment shall contain the follow the outline below (see details in subsection Risk assessment outline of section 4.2):*

- *Step 1. Problem Formulation*
- *Step 2.1. Hazard characterization*
- *Step 2.2. Exposure characterization*
- *Step 3. Risk characterization*
- *Step 4. Risk mitigation measures*
- *Step 5. Conclusions regarding the ERW activity*

Background: The intention of rule 4.5.5 references to US EPA and EU EFSA in the footnotes on page 27 in the ERW methodology had been to point project developers to readily available, regularly updated learning material on risk assessment from trusted institutions. These linked webpages had been intended as sources for inspiration and general guidance for CO_2 Removal Suppliers.

Clarification: In rule 4.5.5, the sentence

"The environmental risk assessment performed by the CO2 Removal Supplier shall follow the guidance from the US EPA, the EU EFSA, other locally relevant institutions."

should be interpreted as directing the CO2 removal supplier to utilize the learning and general guidance materials from these institutions. In particular, the intention is **not to**

[1] About Risk Assessment | US EPA
[2] Environmental risk assessment | EFSA

require compliance with all guidance from these organizations pertaining to the contents and structure of an environmental risk assessment where such compliance is not mandated by local regulation.

Number	Clarification title	Standard document, version	Rule
021 GSC	Clarification on the possible modes of use of renewable low-carbon energy supply schemes for calculation of the footprint of material inputs along the supply-chain of a GSC removal activity	Geologically Stored Carbon, edition 2024, all versions	5.2.19

Date: 30 October 2025

Rule 5.2.19 *"Whenever external energy inputs are used along the supply chain (e.g. electricity from the grid or steam/heat from a local network), the CO2 Removal Supplier may utilize renewable energy certificates (REC), guarantees of origin (GOO), direct purchase agreements (DPA), and similar renewable low-carbon energy supply schemes, and thereby correspondingly adjust the emission factors used in the LCA, provided that all of the following conditions are fulfilled: [...]"*

Background: A request for clarification was made on rule 5.2.19 to determine whether renewable energy credits or similar instruments may be used to lower the carbon footprint of upstream project emissions. The rule is primarily intended for 2 types of energy vectors (electricity from a grid and heat from a network) as can be seen in the example given and the terminology used. However, the rule implies that it may also apply to other energy vectors, e.g. gaseous fuel for stationary combustion (supplied via gas pipe network or supplied via vehicles to user), vehicle fuel for transportation, liquid fuel for stationary combustion. Here, the rule is unclear on what eligibility conditions would apply, e.g. in terms of temporal and geographical matching.

Clarification:

"Regarding the scope of rule 5.2.19, the committee decides that the use of renewable energy certificates (REC), guarantees of origin (GOO), direct purchase agreements (DPA), and similar renewable low-carbon energy supply schemes for the use of energy in the entire supply-chain **is allowed**. This applies both for the direct use of energy during the capture, transport, and injection stages, as well as the indirect use of energy in the procurement of materials, such as sorbent, steel, concrete, who's manufacturing also includes energy consumption.

This may be implemented through an "Up-front in-full use of REC" mode, where the amount of energy consumed via a specific vector and in a specific manufacturing process of a given material input is replaced by an equivalent amount of RECs, timed with the date of manufacturing or purchase of the material input, whether a short-lived or long-lived consumable (e.g. sorbent) or a constituent of the infrastructure (e.g. steel, concrete). This includes also the use of RECs in EPDs. Other modes of implementation may be explored.

Regarding the proposed amendments to the Geologically Stored Carbon methodology concerning other possible modes of use of RECs, conditions applicable to different energy vectors, and point of reference for temporal matching, whenever required, the

committee decides that these aspects of the requirements **must be clarified through a new methodology version and subject to the approval of the Advisory Board**.

Number	Clarification title	Standard document, version	Rule
022 GSC	Eligibility of biogenic CO2 emissions from cement clinker production that co-fires coal and eligible biomass.	Geologically Stored Carbon, edition 2024, all versions	3.2.3

Date: 30 October 2025

Rule 3.2.3 *"The CO2 injected into the geological storage reservoir shall be captured directly from the atmosphere or from a sustainable biogenic source as further detailed in subrules a and b (see also rules 3.2.4 and 3.2.5).*

[…]

*(b) The following are considered **ineligible sources** of CO2:*

- *Any CO2 from fossil sources (i.e. any non-biogenic CO2).*
- *Any CO2 (even biogenic) captured from activities relating to coal-fired electricity generation (e.g. a BECCS facility which co-fires biomass with coal)."*

Background: A request for clarification was made on rule 3.2.3.b to determine if cement producers may use carbon removal credits to finance carbon capture from biogenic emissions resulting from the co-firing of coal and eligible biomass in the production of cement clinker.

The spirit of rule 3.2.3.b is to align with ICVCM net-zero transition criterion 13.1. "Categories incompatible with contribution to net zero transition", and it's focused on avoiding an increase in the extraction of fossil fuels, coal-fired electricity generation, and other unabated fossil-fuel powered electricity generation.

These conditions do not apply to cement clinker production, where co-firing biomass with coal helps reduce the amount of coal required, and it is not linked to electricity production. In addition, CORC issuance only results from biogenic carbon captured and durably stored.

Clarification: Rule 3.2.3.b, shall not be interpreted as making non-eligible for CORC issuance the use of biogenic carbon resulting from the co-fire of coal and eligible biomass in cement clinker production.

Number	Clarification title	Standard document, version	Rule
023 CAM	Usage of renewable energy certificates or similar in project emissions accounting	Carbonated Materials, edition 2022, and all Methodologies, all versions	5.3

Date: 17 December 2025

Background: In Carbonated Materials 2022v2, Section 5.3 governs computation of E(prod). Footnote 8 of this section cites the need to include emissions from sourcing of energy. However, there is no mention of how (and conditions for) to incorporate use of REC, GOO or similar to correspondingly adjust the emission factors used in the LCA – unlike in the case of methodologies like GSC 2024.3 (section 5.2.19), where such use is explicitly addressed.

Clarification: In the Puro Standard, under both General Rules 3.x and 4.x, for all the methodologies that do not have requirements explicitly defining the use of renewable energy schemes in the calculation of project emissions, the following clarification is made:

- The use of renewable energy schemes, such as power-purchase agreements (PPAs), renewable energy certificates (RECs), Guarantees of origins (GOOs) and similar contractual energy procurement, in an LCA to alter the calculation of project emissions has been and is allowed, under the following conditions:
- The electricity or energy is sourced within the same physical or national grid/energy network as where the project operates.
- The electricity or energy is sourced within the same calendar year as when used.
- The climate impact of the sourced energy is not set to 0 gCO2-eq / kWh, but to a value representative of what type of energy is sourced (solar, hydro, wind, biomass have low but non-0 climate impacts, related to their infrastructure/maintenance/end-of-life requirements).
- The use of such mechanism must be clearly stated in the LCA documentation and calculation files
- Evidence of purchase of such renewable energy schemes (e.g. certificates) must be provided as part of the Output Audit documentation, in an amount corresponding to the amount reported in the LCA calculations.
- In case the project stops buying such certificates, or if the nature of the certificates purchased varies (different mix with different climate impact), the LCA shall be updated accordingly for each Output Audit.

Number	Clarification title	Standard document, version	Rule
024 BCH	External Energy Use for Leakage Mitigation	Biochar, Edition 2025, all versions	8.2.4(b)

Date: 07 May 2026

Rule 8.2.4 *(Biochar, 2025) For biochar activities under the New Built baseline, the procedure detailed in subrules a and b shall be applied to mitigate market and activity shifting leakage in the material and energy sector, relating to the use of land or* ***biomass that were already utilized for other productive purposes****: […]*

***Rule* 8.2.4.b.i** *(Biochar, 2025) "If the biomass feedstock used for biochar production is also used for bioenergy in the project area (e.g. via combustion for heat or power generation), the leakage source is deemed mitigated, and thereby set to zero in the quantification of CORCs, if one of the following conditions can be demonstrated by the CO_2 Removal Supplier:*

> *i. The Production Facility delivers bioenergy for external uses (i.e. beyond internal use for supporting carbonization or drying the biomass feedstock)*

ii. The biomass was not being used for bioenergy prior to sourcing, but instead left to decay.

If the above condition cannot be demonstrated, leakage remains unmitigated and must be quantified according to rule 8.3.3"

Background: Suppliers may interpret Rule 8.2.4.b.i ("the Production Facility delivers bioenergy for external uses (i.e. beyond internal use for supporting carbonization or drying the biomass feedstock)" as meaning that **(A)** any energy use other than carbonization support or drying biomass feedstock qualifies as "external", irrespective of whether the use is directly or indirectly related to the removal activity, and as meaning that **(B)** it is sufficient that only part of the excess recoverable bioenergy is delivered for external use while the rest may remain non-recovered (e.g. flared).

Clarification A: For the purposes of Rule 8.2.4.b.i, "external use" should be interpreted as the provision of energy to a system or activity that is clearly distinct from, and not operationally connected to, the biochar activity. In the rule, the "i.e." should be read as "e.g." (such as, for instance).

Qualifying external use are:

- Supplying heat or power to a separate on-site or nearby facility that **operates independently from the biochar activity** (e.g. a neighboring greenhouse or plant nursery);

Non-qualifying use (deemed internal, or connected to the biochar activity):

- Energy uses that directly or indirectly supports the biochar activity, like supporting carbonization, drying the biomass feedstock, or use of recovered heat to provide hot water for facility employees

Clarification B: For the purposes of Rule 8.2.4.b.i, "*The Production Facility delivers bioenergy*" should be interpreted as the whole excess recoverable bioenergy is valorised, **not leaving a non-recovered (e.g. flared) part**.

Any energy use that does not meet the above interpretation shall not be considered eligible for mitigating biomass feedstock diversion leakage sources.

Number	Clarification title	Standard document, version	Rule
025 GR4	No removal activity for a period	General Rules 4, all versions, General Rules 3, all versions	2.4.2 2.4.3 2.3.2.1

Date: 07 May 2026

Rule 2.4.2. *(GR v4.3) An Output Report shall be submitted to each Production Facility at minimum once every 12 months throughout the Crediting Period. An Output Report may consider Production Facility performance for up to 18 months.*

Rule 2.4.3. *(GR v4.3) A delay in submitting the Output Report at least once in 12 months shall result in the Production Facility being suspended. Delay in submitting the Output Report beyond 18 months shall result in the Production Facility being deregistered.*

Rule 2.3.2.1. *(GR v4.3) An Output Audit may start when the CO2 Removal Supplier has submitted an Output Report for a Production Facility for a given Monitoring Period.*

Background: In certain circumstances, a Carbon Removal production site does not produce Output (i.e. no Carbon removals occur) therefore their production reported would be zero. If a certified Production Facility does not generate any removals during a 12-month Monitoring Period, is it still required to undergo an Output Audit with zero CORCs report?

Clarification: In such cases, rule 2.4.2 shall be followed, and an Output Report with a defined Monitoring Period reporting zero output shall be submitted. If the submitted Output Report indicates no output for the period, an Output Audit will not be conducted. Puro will keep the Output Report in the internal data management system.

The Monitoring Period with the zero Output Report shall be audited in the next Output Audit.

The Output Report with no output cannot be amended later to indicate Output volume for that Monitoring Period.

Submitting an Output Report with no output does not impact or change the Crediting Period dates or any other obligations with defined cadence.

Number	Clarification title	Standard document, version	Rules
026 TSB	Eligibility of pruning residues from pomology and viticulture	Terrestrial Storage of Biomass Methodology, edition 2023, all versions	4.1.6(d)

Date: 07-07-2026

Rule 4.1.6 For the biomass to be considered sustainably sourced, for the carbon storage to be additional relative to the baseline, and for economic leakage to be adequately addressed, the following rules apply for the different categories of biomass sources described in subrules (a)–(e) below.

4.1.6(d) *If the biomass is a waste from industrial or post-consumer activities:*

- *This category includes biomass waste such as wood from construction and demolition works, wood from urban landscaping, urban wood waste, and woody biomass residue from pomology and viticulture.*

Background: Pomology and viticulture residues are eligible under Rule 4.1.6(d) because they represent non-hazardous woody residues arising from routine management of existing orchards and vineyards, such as pruning and maintenance activities. This clarification is aligned with the intent of Rule 4.1.6(d), which addresses urban wood waste and urban landscaping woody biomass residue streams whose historical fate and hazardous nature can be determined and assessed. In this context, eligible pomology and viticulture residues are understood as by-products of ongoing agricultural production activities and are not intended to include biomass from land use changing activities, like orchard removal, or vineyard removal. Rule 4.1.6(d) was open to such extensions as indicated by the use of the term "such as", denoting a non-exhaustive list of options.

Clarification: For the purposes of applying Rule 4.1.6(d), pomology and viticulture residues are considered an eligible feedstock for a Terrestrial Storage of Biomass

activity where they arise as a by-product of an existing agricultural activity and are not purpose-grown for carbon storage.

Number	Clarification title	Standard document, version	Rules
027 BCH	Definition of "similar" technology and design	Biochar Methodology, edition 2025, all versions	2.2.1(a) and 3.1.6(a)

Date: 07 July 2026

Rule 2.2.1(a) *[...] In case the Production Facility comprises several reactors (e.g. multiple biochar production lines in the same factory), all reactors must be using* ***similar technology*** *and all reactors must be commissioned and operational at the time of the Facility Audit. [...]*

Rule 3.1.6(a) *The added reactors have a* ***similar design*** *to the existing reactors, and their installation follows the necessary environmental and social regulation (e.g. permits or impact studies required by the host jurisdiction have been obtained).*

Clarification: Reactors are considered **"similar"** where they rely on the **same core design**. Same core design shall be assessed by reference to Rule 3.5.3(a-d) and shall require, at minimum, the same:

a) mode of operation (*continuous, batch, semi-continuous*), as set out in sub-rule 3.5.3 (a);

b) carbonization process (*pyrolysis, gasification, combustion, other*), as set out in sub-rule 3.5.3 (b);

c) heating method (*indirect heating, direct heating, microwave heating, autothermal process*), as set out in sub-rule 3.5.3 (c); and

d) streams of biochar (*single stream, multi stream*), as set out in sub-rule 3.5.3 (d)

The Facility Audit documentation is required to be updated for design modifications and capacity expansions.

Notes on applying this clarification:

Note on Rule 3.5.3(e).
Energy recovery, gases and tars are not part of core design. Examples of accepted design modifications within the rule 3.5.3 (e) scope:

- A pilot facility may not include energy recovery to generate excess heat as a co-product, while the commercial facility may be designed to recover and use that heat.
- A pilot plant may produce tar as a co-product, requiring specific procedures for its handling, management, and disposal, while the commercial facility may be redesigned to avoid tar generation through improved process control or equipment design.

Note on rules 3.5.19 and 3.5.21:

Measurement of residual CH_4 emissions and N_2O emissions: The re-use of existing emission test reports for CH_4 and N_2O emissions is limited to same manufacturer's same technology. See the rules 3.5.19 (b, d) & Rule 3.5.21 (e, f) for full requirements.

Number	Clarification title	Standard document, version	Rules
028 GR4	Clarification on site visits conducted on Output Audits	General Rules, version 4.0 – 4.4	Rule 2.3.2.3

Date: 21-07-2026

Rule 2.3.2.3. *An Output Audit includes a desk study and a site visit by the Auditor to verify the performance of the Production Facility for the given Monitoring Period. The site visit may be conducted as a remote site visit. Verification is performed to determine that the reported volume of CO2 Removal has taken place, and the Production Facility conforms with the requirements of the Puro Standard General Rules and applicable Methodology.*

Background: We have introduced Puro Issuance Plus service which enables more frequent, batch-based issuance cycles when suppliers need them, reducing the time between production and credit availability. With Puro Issuance Plus Facilities are undergoing Output Audits more frequently: on quarterly, monthly or even weekly basis. Issuances remain based on completed third-party audits and verified volumes. With the increased Output Audit frequency, the need to include a site visit for each Output Audit is reduced. This has been reflected in the Puro Validation and Verification requirements.

Clarification: For the purpose of applying Rule 2.3.2.3 the need and extent of a site visit for Output Audit may be deemed by the Auditor, if the Issuing Body has not specifically required a site visit to be performed. The Auditor shall consider if a remote site visit is required to perform the verification for the Monitoring Period under audit and inform the CO2 Removal Supplier of the time and extent of the visit. The auditor can deem that a site visit is not required for an Output Audit.

Number	Clarification title	Standard document, version	Rules
029 BCH	Baseline for simultaneous equipment retrofit and capacity expansion	Biochar Methodology, Edition 2025, all versions	3.2.5 and 8.1.6

Date: 21-07-2026

Rule 3.2.5 *In other unforeseen situations, the CO_2 Removal Supplier shall together with the Issuing Body conduct a case-by-case analysis to define an appropriate baseline scenario for this Production Facility. The Issuing Body shall issue a rule clarification prior to certification of any such unforeseen situations.*

Rule 8.1.6 *In case the specifics of the removal activity proposed by the CO_2 Removal Supplier do not fully align with the situations described in this methodology (e.g. atypical pathways, mixed baseline), the CO_2 Removal Supplier shall re-assess potential sources of leakage in cooperation with the Issuing Body, who will in turn issue a rule clarification*

statement. For instance, this might apply to projects where a facility is retrofitted to both expand its biomass processing capacity, adding new biochar production reactors and retrofitting existing ones (see rule 3.2.5), or other unforeseen situations.

Context:
In the case where a Production Facility both retrofits equipment and simultaneously expands capacity to meet additional production needs, such as in the context of food processing and drying, a case-by-case analysis of the baseline scenario is necessary.
This clarification uses the following example situation: the Production Facility's core activity is corn seed production (i.e. a food or feed product), which requires separating seeds from corn shanks (i.e. a co-produced biomass residue) and drying the seeds using the resulting corn shanks residues as biomass fuel. Before the carbon removal activity, the facility operated an *end-of-life gasifier* and, absent of carbon finance revenues, would have replaced it with *a new combustion boiler* and installed *two additional combustion boilers* to expand corn processing capacity, continuing to use corn residues for heat without producing eligible biochar. Under the project scenario, the facility instead *retrofits the existing gasifier* and *installs two additional gasifiers*, providing the required drying service while producing biochar for durable carbon storage. Importantly, combustion boilers are more efficient for producing heat because they fully oxidise biomass, whereas gasifiers convert biomass into syngas and char. Therefore, the baseline would also have used less corn shanks residues as biomass fuel and sold the surplus for another productive purpose.

Clarification:
This clarification specifies how Rules 3.2.5 and 8.1.6 must be applied when a Production Facility both retrofits equipment and simultaneously expands capacity to meet additional production needs. At the time of the investment decision, the decision to pursue carbon finance affects the technology selected for both the replacement or retrofitting and the capacity expansion. For the purposes of applying these rules in this specific circumstance:

- The **baseline scenario** is the replacement of the end-of-life existing equipment with an *alternative technology*, together with the installation of additional units to meet increased production capacity needs, without, or less than in the project scenario, production of eligible biochar.
- The **project scenario** is the retrofit of the *existing equipment* by prolonging its operational lifetime, with or without modifications, combined with the installation of additional units for producing eligible biochar and to meet increased production capacity needs.

In the context described above, the alternative technology in the baseline scenario is a combustion boiler, while the project technology is a gasifier.

Demonstration of financial additionality. Financial additionality shall be assessed at the level of the combined investment decision: the project scenario (*project technology)*, comprising the retrofit of existing equipment **and** the installation of additional project-technology units, compared with the baseline scenario (*alternative technology)*, comprising replacement of the existing equipment **and** capacity expansion using the alternative technology.

The Supplier shall demonstrate that, without carbon finance, the realistic and conservative counterfactual would have been the replacement of the existing equipment and capacity expansion using the *alternative technology*. Relevant evidence may include

end-of-life assessments, investment decision records, quotations, engineering studies, capacity expansion plans, permitting or procurement documents, and financial comparisons between the *project technology* and the *alternative technology*.

Demonstration of carbon additionality and baseline removal. Carbon additionality shall be assessed against the unique alternative-technology baseline (baseline scenario). The Supplier shall determine whether the alternative technology would have generated a non-zero $C_{baseline}$, i.e., any eligible stored carbon. Where such baseline eligible stored carbon ($C_{baseline}$) would have occurred, it shall be estimated and deducted in the CORC calculation.

Assuming $C_{baseline}$ = 0 for the alternative technology is valid only where it is sufficiently demonstrated that the alternative technology would not have generated eligible biochar. Otherwise, $C_{baseline}$ must be calculated conservatively to safeguard climate impact.

Identification, mitigation and quantification of leakage sources. The following components should be assessed:

1. General leakage sources applicable to all baselines, as identified in rule 8.1.2, including ecological leakages and AFOLU-related leakage. Mitigation shall follow rules 8.2.1, 8.2.2, and 8.2.3.
2. Due to the addition on new-build project-technology units, the New Built Facility leakage logic applies, including assessment of whether biomass is diverted from other uses, consistent with feedstock diversion leakage under rule 8.1.3 (a). Mitigation shall follow rule 8.2.4 and shall be applied to the entire project facility, not only the new-build units. **Importantly, under this unforeseen baseline, it shall be noted that the comparison should not be between the pre- and post-retrofit facility, but rather between the baseline scenario (using an alternative technology) and the project scenario (using the project technology).**
3. Due to the existing equipment, Retrofit Facility leakage logic applies, including assessment of whether reduced bioenergy or biomaterial output due to retrofitting of the facility. Market and activity-shifting leakage in the material and energy sector, as identified in rule 8.1.4(a), shall be assessed. Mitigation shall follow Rule 8.2.5 and shall be applied to the entire project facility, not only the retrofitted equipment. **Importantly, under this unforeseen baseline, it shall be noted that the comparison should not be between the pre- and post-retrofit facility, but rather between the baseline scenario and the project scenario.**

If the leakage sources cannot be demonstrated to have been mitigated, the Supplier shall follow the applicable quantification procedures set out in the rules referenced above.

Quantification of embodied emissions and land-use change. Embodied emissions shall follow the mixed nature of the project. The original embodied emissions of existing equipment do not need to be counted where the asset was already operational, in line with rule 7.4.3(c). However, emissions from prolonging, repairing, upgrading, or retrofitting that equipment shall be included. Any direct land-use conversion from construction, expansion, or clearing shall also be assessed.

Number	Clarification title	Standard document, version	Rules

030 BCH	Grinding biochar to a fine particle size	Biochar Methodology, Edition 2025 (all versions)	Table 3.2, R3

Date: 26-08-2026

Rule: Table 3.2, row "R3", column "Conditions for low-risk cascading use, complementing rule 3.6.7, and other use-specific conditions": *Whenever reporting biochar used in this category, and to address re-emission and reversal risks, the CO2 Removal Supplier shall:*

1. *[....]*

2. *Ensure that retail biochar products are either formulated as a biochar blend that is suitable for eligible applications in line with rule 3.6.6.a (biochar content below 50% on a volume basis), or, if sold as pure biochar, are processed in a way that reduces diversion risks,* ***namely through grinding to a fine particle size with no more than 10% of the biochar passing a 20 mm sieve*** *and adding moisture to minimum level of 30% prior to packaging. Evidence of product formulation (e.g., blend composition, particle size, moisture content, packaging format) shall be provided at Output Audits for all retail product types across all distribution channels.*

2. *[...]*

Context:
A smaller particle size generally lowers the practical risk of diversion to fuel use, not the opposite. As currently drafted, the rule requires the reverse (no more than 10% passing the sieve, meaning the biochar must remain coarse), which contradicts the intended risk logic. This appears to be a drafting error, with the rule's requirement inverted from what was intended.

Clarification:
The requirement shall be interpreted as one of the following, both of which convey the correct, equivalent condition (fine particle size):

- At least 90% passing a 20 mm sieve; or
- No more than 10% retained on a 20 mm sieve.

Number	Clarification title	Standard document, version	Rules
031 GSC	Clarification on the use of renewable energy certificates	Geologically Stored Carbon, edition 2024, all versions	5.2.19

Date: 15-10-2026

Rule 5.2.19 *The CO2 Removal Supplier may* ***utilize*** *renewable energy supply schemes to adjust the emission factors used in the LCA, as further detailed in subrules a-g." [...]*

(e): "[...] the use of renewable energy supply schemes is allowed provided that the certificates procured for the utilized renewable energy supply scheme(s) fulfill all of the following conditions." [...]

Background: Rule 5.2.19 has raised questions whether "utilize" means use means that the GOO/REC-certificates can still be transferred to other parties and used by them or does it mean the final use i.e. retirement/cancellation of the GOO/REC certificate in the name of the user and for the purpose of the removal activity. The "utilization" means that those certificates are no longer available to any other users in the market and they are cancelled or retired according to the procedures defined in the renewable energy supply scheme they originate from.

Clarification: The "utilization" of a renewable energy supply scheme under rule 5.2.19 means the redemption, retirement or cancellation of the certificates for the purpose of the removal activity such that they are removed from circulation.

Number	Clarification title	Standard document, version	Rules
032 BCH	Clarification on the use of renewable energy certificates	Biochar, edition 2025, all versions	7.1.11

Date: 15-10-2026

Rule 7.1.11. *The CO2 Removal Supplier may* ***purchase and use*** *Guarantees of Origin (GOO), Renewable Energy Certificates (REC), or other similar certificates of energy attributes to claim lower GHG emission intensity for its direct energy consumption and use them to calculate the corresponding project emissions….[]*

Background: The text "purchase and use" has raised questions whether use means that the GOO/REC-certificates can still be transferred to other parties and used by them or does it mean the final use i.e. retirement/cancellation of the GOO/REC certificate in the name of the user and for the purpose of the removal activity. The "purchase and use" means that those certificates are no longer available to any other users in the market and they are cancelled or retired according to the procedures defined in the renewable energy supply scheme they originate from.

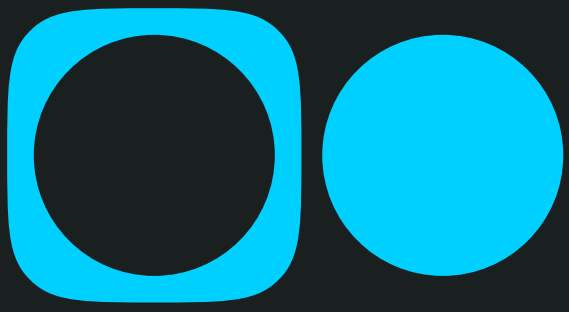
Clarification: The "purchase and use" of GOO, REC or other similar certificates of energy attributes under rule 7.1.11 means their redemption, retirement or cancellation of the certificates for the purpose of the removal activity such that they are removed from circulation.

4. Document History

The new version of the document is effective on Issue Date.

Version	Issue Date	Comment
15 October 2026	15/10/2026	Added Clarifications • 031 GSC Clarification on the use of renewable energy certificates • 032 BCH Clarification on the use of renewable energy certificates
31 August 2026	31/08/2026	Added Clarifications • 030 BCH Grinding biochar to a fine particle size
21 July 2026	21/07/2026	Added Clarifications • 028 GR4 Clarification on site visits conducted on Output Audits • 029 BCH Baseline for simultaneous equipment retrofit and capacity expansion
July 2026	07/07/2026	Added Clarifications • 026 TSB Eligibility of pruning residues from pomology and viticulture • 027 BCH Definition of "similar" technology and design
May 2026	07/05/2026	Added Clarifications • 024 BCH External Energy Use for Leakage Mitigation • 025 GR4 No removal activity for a period
Dec 2025	17/12/2025	Added Clarifications • 023 CMA Carbonated Materials and all other Puro approved methodologies • 021 GSC, 022 GSC to Geologically Stored Carbon methodology • 020 ERW Enhanced Rock Weathering methodology
Sep 2025	24/09/2025	Added Clarifications • 017 GSC Geologically Stored Carbon methodology • 018 TSB Terrestrial Storage of Biomass methodology • 019 GR4 General Rules
Aug 2025	21/08/2025	Added Clarifications • 015 BCH Biochar methodology, ed. 2022 • 016 GR3 General Rules
Jul 2025	11/07/2025	Added Clarifications • 011 GR4 General Rules • 012 GR4 General Rules • 013 GR4 General Rules • 014 GSC Geologically Stored Carbon methodology
Dec 2024	30/12/2024	Added Clarifications

		• 009 GR3 General Rules • 010 CAM Carbonated Materials methodology
Oct 2024	15/10/2024	Added Clarifications • 001 BCH, 002 BCH, 003 BCH, 006 BCH, 008 BCH to Biochar methodology • 004 TSB Terrestrial storage of biomass methodology • 007 CAM Carbonated Materials methodology • 005 ADD Other Standard documents



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Puro.earth is the world's leading market infrastructure provider for engineered carbon dioxide removal (CDR). We provide the certification frameworks, scientific standards, and digital systems that allow engineered CDR to scale as an investment-grade market.

At the core of this infrastructure is the Puro Standard - the world's first dedicated standard built for the needs of an engineered CDR market. We certify suppliers under the Puro Standard that durably store carbon dioxide for at least 100 years, and in many cases over 1,000 years. To date, we have certified over 100 engineered CDR projects, resulting in the issuance of over 1.5 million CO_2 Removal Certificates (CORCs) in the Puro Registry as verified, traceable, investable assets. Our infrastructure is trusted by over 700 companies worldwide to procure carbon removals with confidence.

Nasdaq has owned a majority stake in Puro.earth since 2021. This brings 50+ years of expertise in building and operating the world's most trusted markets, strengthening Puro.earth's ability to deliver the transparency, rigor, and operational capacity needed to make CDR an institutional-grade asset class.

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