Baseline and Additionality Assessment

The baseline and additionality assessment is a requirement for eligibility under the Puro Standard. The assessment is made by the CO2 Removal Supplier and verified by the independent 3rd party auditor. The assessment made in this document will be publicly available in the Puro Registry.

The Puro Standard only certifies durable carbon removals from the atmosphere that are net-negative and does not certify emissions reductions or avoidance. The CORCs (Carbon dioxide removal certificates), issued therefore represent a net carbon removal (1 tCO2eq. net) from the atmosphere to a durable storage of minimum 100 years, from which are subtracted any supply-chain emissions from the project, any re-emissions over the guaranteed storage time, and any baseline removals taking place in a baseline scenarios.

The CO2 Removal Supplier must in this assessment:

- **Define** and quantify all reasonable **baseline alternatives** to the proposed project activity to remove carbon with carbon financing. A baseline is a scenario that reasonably represents the natural and anthropogenic carbon removals to a permanent storage (storage durability over 100 years) in the absence of the carbon removal activity proposed by the CO2 Removal Supplier. Although anthropogenic emissions may take place in the baseline scenarios, these emissions do not constitute a reference point for the quantification of CORCs (only the baseline removals do).
- Demonstrate **carbon additionality to the baseline**, meaning that the project must convincingly demonstrate that it is resulting to higher volumes of carbon removals than the likely baseline alternatives (question A1.).
- Demonstrate **regulatory additionality,** meaning that the project is not required by existing laws, regulations, or other binding obligations (question A2.).
- Demonstrate **financial additionality**, meaning that the CO2 removals achieved are a result of carbon finance and that the project activity would not be economically viable without the carbon finance. The project activity can have substantial other non-carbon income sources, if the carbon finance through CORCs is significant for the economic viability of the project. To demonstrate financial additionality, CO2 removal Supplier must provide the responses in this form and must be able to provide full project financials for verification.

Reference documents: Puro Standard general Rules v3.0, rule 2.1.3 and Additionality Assessment requirements

Activity name	Activity description	Removals to storage (100+ yr) due to project activity (human activity)	Natural removals to storage (100+ yr)
Baseline: *Biochar production*	*Sale of biochar as animal feed, animal litter and soil amendment*	None / Some *(please quantify)*	None / Some *(please quantify)*
Alternative scenario 1: *[Name]*	*(Other likely activity that can replace the baseline activity, if none leave blanc)*	None / Some *(please quantify)*	None / Some *(please quantify)*
Alternative scenario 2: *[Name]*	*(Other likely activity that can replace the baseline activity, if none leave blanc)*	None / Some *(please quantify)*	None / Some *(please quantify)*
Alternative scenario 3: *[Name]*	*(Other likely activity that can replace the baseline activity, if none leave blanc)*	None / Some *(please quantify)*	None / Some *(please quantify)*
Project activity: *[Name]*	*(Other likely activity that can replace the baseline activity, if none leave blanc)*	None / Some *(please quantify)*	None / Some *(please quantify)*

A1. Does the project lead to higher volumes of carbon removal than the baseline?	Yes / No
Carbon Cycle took a decision to invest in a 200% capacity increase in 2021, based on assumptions about revenue from Carbon Credits and from biochar. To do so, infrastructure is being established which will increase biochar production. The revenue from carbon credit sales not only supports infrastructure expansion but supports Carbon Cycle in marketing their product to farmers.	YES

A2. Is the project required by existing laws, regulations, or other binding obligations ?	Yes / No
There are no regulations that mandate use of wood chips as biochar.	NO

A3. Is the project first-of-its-kind?	Yes / No
[Information]	NO

A4. Is the project dependent on carbon finance?	Yes / No
In particular the expansion	Yes

A5. Does the project need a large investment to achieve carbon removal ?	Yes / No
Investments have been made into human capital and new competences, but these investments are not considered large investments	NO

A6. If investment is needed, is/was carbon finance considered when the investment decision is/was made?	Yes / No
The net value realised by Carbon Cycle from the sales of the biochar only, is not sufficient to cover the production cost, and ongoing maintenance or expansion of the biochar production facility.	YES

Some projects may demonstrate additionality through simple cost analysis: this is applicable for projects where ex-ante investment analysis is not applicable, because a large investment is not needed. Example of such project could be charcoal producers starting to produce biochar for soil applications using existing equipment with minor adaptations.

Financial Additionality – large investment is not needed (Answer to A5 is "no")	Project response
Please describe adaptations needed and the related cost items and include evidence in attachment.	To manage the biochar production and sales business, the family-run company has had to develop considerable human capital and new competences. Operation and production of biochar requires skill and knowledge which Carbon Cycle has had to develop. The site is in a rural, agricultural economy. Revenues from the sale of CORCs have been re-invested in repairs, improvements, and expansion of the facility. The existence of the carbon revenue reduces the price risk from biochar sales and helps offset rising costs of production.
Please summarize the simple cost analysis here and provide additional calculation spreadsheet in attachment. All formulas used in the spreadsheet shall be readable to the verifier and all relevant cells shall be viewable and unprotected. Mark confidential when needed.	The carbon finance is very important. The limiting factor for Carbon Cycle's growth is the sale of its biochar. The carbon revenue therefore enables Carbon Cycle to partially subside the price of biochar which can enable farmers who may not otherwise be able to afford it, to try it with their operations. The producer hopes that this strategy will be beneficial in the long run for its business and that it will create customer loyalty that increases the value of the business and provides a solid base for investment decisions in further biochar production capacity.

If large investment is needed, , CO_2 Removal Suppliers can be guided by the CDM Methodological Tool 27 of the UNFCCC Clean Development Mechanism "Investment Analysis" to demonstrate financial additionality.

Financial Additionality – large investment is needed (Answer to A5 is "yes")	Project response
Please show your calculations to determine the benchmark rate for either equity IRR or WACC, whichever you are using. Please include documentation of how the rate is suitable for the technology and region.	
Please state how CORC revenues change the expected IRR or NPV of the project.	
Please conduct a sensitivity analysis in relation to the investment analysis and summarize the results here.	
Please provide full calculation spreadsheet file as an attachment. All formulas used in the spreadsheet shall be readable to the verifier and all relevant cells shall be viewable and unprotected. Mark confidential when needed.	

I hereby declare that all information provided is truthful and precise to the best of my knowledge.

Gregor Morrison

Date, Place:
November 9th 2023, Rome, Italy
Gregor Morrison, Accend, PoA CarbonCycle