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:	*Complete combustion of the feedstock through the biomass power plant*	None	None
Alternative scenario 1: *Combustion from fires*	*Combustion of the feedstock in natural fires generating no carbon removal*	None	None
Alternative scenario 2: *Decomposition*	*Decomposition of feedstock through natural processes generating methane*	None	None
Alternative scenario 3: *Production of biocoal*	*Transformation of feedstock into biocoal for usage in steel manufacturing or energy*	None	None

A1. Does the project lead to higher volumes of carbon removal than the baseline?	Yes / No
The project's purpose is to produce biochar destined to applications sequestering carbon for 100+ years, diverting feedstock decomposition, combustion or transformation yielding no removals. The biomass power plant was modified by preventing biochar reinjection, captured through implemented screens and additional capture equipment. Prior to the installement of these equipments, the power plant facility only produced ash with little to no fixed carbon contained within.	Yes

A2. Is the project required by existing laws, regulations, or other binding obligations ?	Yes / No
No, the project is not required under any local, state or federal law, regulation or other binding obligation.	No

A3. Is the project first-of-its-kind?	Yes / No
The Oregon Biochar project was the first biomass power plant to produce biochar on-purpose for carbon sequestration applications. The biochar project was implemented in 2017, and the carbon project was registered in 2020.	Yes

A4. Is the project dependent on carbon finance?	Yes / No
Yes, to make the production of biochar economically viable, the project requires carbon credits as a revenue source.The biochar production costs are higher than the current market price for biochar given buyers in sequestration applications eligible to generate carbon removals are uninterested in biochar at the real price, if carbon finance was not there to compensate partially. Additionally, the biomass power plant will depend on the carbon project to continue its operations beyond 2027.	Yes

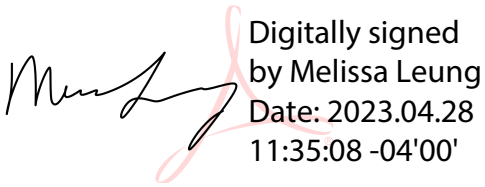
A5. Does the project need a large investment to achieve carbon removal ?	Yes / No
The project has already invested significant sums into modifying the existing equipment to render it eligible to carbon removal certification. Hence, there is no current need for a large investment, rather there is a need for carbon financing to cover operational and production costs.	No

A6. If investment is needed, is/was carbon finance considered when the investment decision is/was made?	Yes / No
[Information]	

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.	The project has invested $30,000 in the equipment preventing reinjection of the biochar screenings in the system and the measurement, several thousands in external labor and also several thousands in internal labour. Everything is confidential.
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	You will also find a feedstock cost of approximately $65/t on a energy basis based on the operation's feedstock purchases average costs. Maintenance and trucking for the biochar screenings to the landfill are high, and tipping fees are increasing. For the first 2 periods (which have already been audited by ELS), a price of $157.90 is required to cover corc production costs. Overall the sequestration from biochar screenings which did not happen prior to producing biochar requires a CORC price of $147.80 approximately (if we amortized capital investment on the first 2 periods only, Tab Subseq.). Everything is confidential.

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



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