

Additionality Questionnaire

Puro Standard – Compliance requirement: 2.1.3 Additionality

Additionality questions for suppliers

1.2.3. CO₂ Removal Supplier shall be able to demonstrate additionality, meaning that the project must convincingly demonstrate that the CO₂ removals are a result of carbon finance. Even with substantial non-carbon finance support, projects can be additional if investment is required, risk is present, and/or human capital must be developed. To demonstrate additionality, CO₂ removal Supplier must provide full project financials and counterfactual analysis based on Baselines that shall be project-specific, conservative and periodically updated. Suppliers must also show that the project is not required by existing laws, regulations, or other binding obligations. ¹³

Note: In Puro Standard and related verification, a project specific additionality assessment is required. Puro Standard does not work with automatic additionality criteria or positive lists.

Notice. These answers are public information

Question	No/yes	Project response
Is the project required by existing laws, regulations, or other binding obligations	No	There are no regulations that require us to land-apply biochar.
Is the Project dependent on carbon finance?	Yes	Without carbon finance, the economic reality is that we would not be able to continue to land-apply the current quantities of biochar and would divert it for re-firing. With carbon finance, we can continue to landfill it, and pursue other options, including forest application and sale of biochar as a soil amendment, and potentially increase the total quantity. We are currently evaluating alternatives.
Is investment required	Yes	See Attached financial analysis.
Is there a need to develop human capital, is there lack of skilled activity locally?	Yes	Application of biochar on forest land would require the hiring of a full-time employee with a Commercial Driver's License for Heavy Tractors, training in specialized equipment, and knowledge of beneficial application rates. Development of a bagged soil product requires specialized agronomic expertise, marketing segment knowledge, and logistics expertise to handle material effectively. This would be highly reliant on 3rd party knowledge and participation.

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		Concrete mixes are also outside of our area of expertise and would rely on partnerships with knowledgeable 3rd parties. See attached documentation.
Is your project first-of-its-kind?	No	We believe we are one of two facilities in our region to produce and market biochar.
How is the project economically not feasible without carbon finance?		<p>For years, we have screened the biochar and re-fired any material over than ¼ inch (~6mm) in diameter. The resulting ash/biochar mix (less than ¼ inch, ~6mm) has been transported and applied as landfill cover. The cost has increased by 133% over the past 4 years. As a result, we are considering other options for the biochar portion of this mix.</p> <p>The simplest and cheapest option is reducing the screen to 20 mesh (0.03 inch, ~0.9mm), separating more biochar from the fine ash, and re-firing all the biochar in our cogeneration facility. This is the most cost-effective alternative, with the lowest investment costs and no transport costs.</p> <p>However, we want to prevent greenhouse gas emissions and use biochar more beneficially. We are exploring two options: either applying the biochar to forests or packaging it and distributing it as a soil amendment or concrete amendment. The revenue from carbon removal credits is required to finance these options, or the current landfilling operation.</p> <p>See attached financial analysis</p>
Attach a simple cost analysis and sensitivity analysis.		See attached financial analysis.
What are the key variables impacting the cost analysis?		The key variables are tipping fees, transportation costs, cost of equipment, and development of human capital.
What else is preventing your project implementation? For example, do you have to change industry norms or market practises or to build		<p>In order to switch to forest application or sale of biochar as a soil amendment, we will need to change industry norms, both in our industries and those we would be partnering with, as well as contract negotiations that would make cooperation financially beneficial to all parties.</p> <p>Development of new markets is always fraught with risk, and capital investments in this space are expensive.</p>

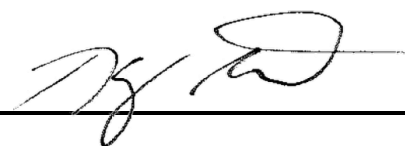
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new infrastructure to carry out the project?		
What is the baseline activity and related emissions and removals that would occur if this activity did not take place (business-as-usual, counterfactual)?		The counterfactual case, without carbon revenue, is to re-fire all the biochar. This is the most cost effective and simplest solution.
Attach a simple emission and removal analysis.		See LCA.

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

Date, Place: June 5th, 2023
Lyons, Oregon, USA

X 

Representative name, title, organization