

# Baseline and Additionality Assessment

The baseline and additionality assessment is a requirement for eligibility under the Puro Standard. The assessment is made by the CO<sub>2</sub> Removal Supplier and verified by the independent 3<sup>rd</sup> 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 tCO<sub>2</sub>eq. net) from the atmosphere to a durable storage of minimum 100 years, from which any supply-chain emissions are subtracted from the project, any re-emissions over the guaranteed storage time, and any baseline removals taking place in a baseline scenarios.

The CO<sub>2</sub> 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) without the carbon removal activity proposed by the CO<sub>2</sub> 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 in 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 CO<sub>2</sub> 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, CO<sub>2</sub> 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), not man-made |
|---|--|--|---|
| Baseline: <i>No agricultural waste valorization</i>         | <p>The seasonal open-air burning of agriculture residue in the region's fields is a current practice. Guanajuato's corn fields generate approximately 1.3M tons of corn stubble and 87K is burned as a common practice to prepare the land for the next crop. Consequently, this action generates GHG, soil erosion and air pollution-related diseases in the communities due to the bad air quality.</p> <p>On the other hand, the proper disposal of this agricultural waste is not affordable for the farmers, so they usually decide to leave it in the field for its degradation. However, it can cause environmental problems and burn during the times of fields drying.</p> <p>Thanks to the biochar project, agricultural waste burning is reduced and the increase in environmental problems is avoided.</p> | None   | None  |
| Project activity: <i>Production of biochar from biomass</i> | <p>The production of biochar at GBS Irapuato facility can remove CO2 and GHG from the environment, using agricultural residues instead of burning this biomass. This biochar captures and stores carbon effectively acting as a carbon sink, thanks to this process, GBS contributes to the removal and reduction of negative carbon impacts.</p> <p>There are many abandoned quarry pits in Guanajuato, which represent an environmental problem for the state. According to the environmental technical standard NTA-IEE-002/2007, quarry pits must be filled and remediated to avoid pollution and erosion. Biochar produced at the GBS facility can be use as a material for quarry pits regeneration and take advantage of its properties to regenerate the optimal environmental conditions of this land.</p>    | Around 10,800 tons per year  | None  |

| A1. Does the project lead to higher volumes of carbon removal than the baseline? | Yes / No |
|--|----------|
| Baseline scenario has no carbon removal  | Yes      |

| A2. Is the project required by existing laws, regulations, or other binding obligations?  | Yes / No |
|---|----------|
| The biochar produced by GBS Irapuato facility is not necessarily required by Mexican laws, regulations, or other binding obligation. However GBS voluntarily collaborates with the authorities initiative to reduce the environmental problems generated by agriculture waste management and sustainable practices. | No       |

| A3. Is the project first-of-its-kind?  | Yes / No |
|--|----------|
| Yes, it is. There is no other facility in Mexico that produces biochar from agricultural waste to be used in remediation of quarry pits. | Yes      |

| A4. Is the project dependent on carbon finance?   | Yes / No |
|---|----------|
| The project depends on financing from the carbon market, without this it would not be economically viable, due to the need to cover operating costs to achieve the production and final use objectives of biochar and thus the projected environmental benefits. Monetizing carbon removal and storage through carbon offsets or carbon credit trading makes carbon finance possible. | Yes      |

| A5. Does the project need a large investment to achieve carbon removal ? | Yes / No |
|--|----------|
|--|----------|

|  |     |
|--|-----|
| 5.2 million dollars have been invested up to date to establish the management team, strategic planning, acquire the equipment, adapt the facility, as well as cover operating costs. | Yes |
|--|-----|

| A6. If investment is needed, is/was carbon finance considered when the investment decision is/was made?   | Yes / No |
|---|----------|
| Yes, it was. Carbon financing from the voluntary market was considered when making the investment decision because the project requires sales of carbon credits to have a source of income and be profitable. | 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.  |                  |
| 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. |                  |

If large investment is needed, CO<sub>2</sub> 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 |
|--|------------------|
|--|------------------|

|   |   |
|---|---|
| <p><b>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.</b></p> | <p>The project is anticipated to yield an internal rate of return (IRR) of 15.8%. Comparatively, the baseline IRR for climate-focused early-stage projects in Latin America typically hovers around 20%, while infrastructure projects in private equity are known to deliver an IRR ranging between 11% and 15%.</p>   |
| <p><b>Please state how CORC revenues change the expected IRR or NPV of the project.</b></p>   | <p>The internal rate of return (IRR) without Carbon Offsetting and Reduction Certificate (CORC) revenue is not ascertainable, and the net present value (NPV) is negative. This is primarily attributed to the fact that CORC revenue is the sole revenue source currently considered for the factory, owing to the absence of a biochar market in Latin America.</p> |
| <p><b>Please conduct a sensitivity analysis in relation to the investment analysis and summarize the results here.</b></p>  | <p>The IRR is sensitive to the following factors:</p> <ul style="list-style-type: none"> <li>CORC Price</li> <li>CORC Factor</li> <li>Biochar Price</li> <li>Plant Capacity</li> <li>Biochar Yield</li> </ul>   |

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.

All the information is attached in the spreadsheet model. This information is confidential.

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

**X**   
\_\_\_\_\_

Date, Place: Geneva, 29/04/24

Representative name, title, organization

Constantin Ekierman, Managing Partner, The Next 150 SA