Puro Standard, **Compliance requirement**: 2.1.3 Additionality

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. [i8]

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.

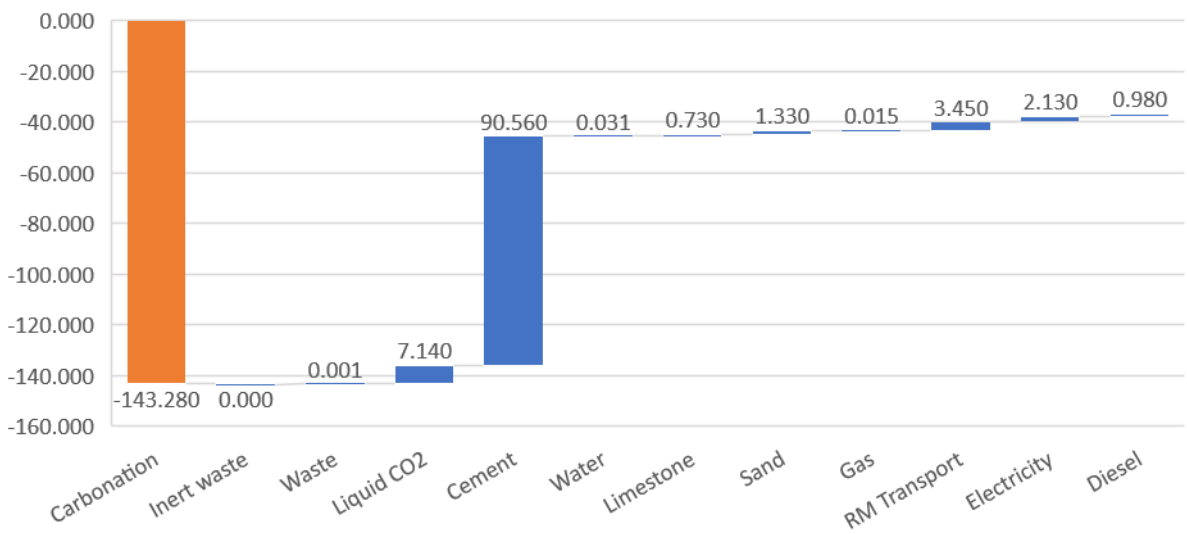
Notice. These answers are public information

#	Additionality	No/yes. If yes, describe	Project response
	Is the project required by existing laws, regulations, or other binding obligations	NO	
	Is the Project dependent on carbon finance?	YES	Carbon finance will allow the business to grow within existing UK and European markets as well as develop in new, overseas markets. In these developing overseas markets, carbon finance will be important in supporting the business case for investment.
	Is investment required	YES	See responses in other sections for detail.
	Is there a need to develop human capital, is there lack of skilled activity locally?	YES	The rapid growth of the business has highlighted a need to recruit and develop more technical experts – both in carbon chemistry and engineering specialisms. The unique nature of the business means we require people with excellent academic credentials who can utilise and apply their expertise to rapidly evolving, 'real world' challenges. Overseas expansion will require the development of local teams and management structures, entailing the recruitment of individuals with a broad range of technical, engineering and commercial skills.
	Is your project first-of-its-kind?	YES	O.C.O is the first business to successfully apply the patented Accelerated Carbonation Technology to a range of waste and other materials at a commercial scale. We believe we are the first business to

			produce a carbon negative aggregate at commercial scale; the first business to recycle flue gas thermal residues into a product; the first business to sequester significant volumes of carbon dioxide using mineralisation; the first business to offer for sale high quality, carbon mineralisation credits at scale.
	How is the project economically not feasible without carbon finance?	----------	<u>UK Scenario:</u> The O.C.O carbonation technology requires significant levels of capital investment and facility processing costs are relatively high. O.C.O is competing with other landfill based businesses for contracts with energy from waste facilities. It is becoming increasingly difficult to win new business, in part due to the escalation of energy, CO_2, cement and labour costs that are either unique to, or proportionally higher for, O.C.O compared to landfill businesses. Securing carbon finance will allow O.C.O to compete more effectively in the UK market by: 1. Providing cost effective finance for the expansion of existing sites and the development of new facilities. O.C.O has plans to increase processing capacity by 50% at the Avonmouth site and has secured land use permission for the construction of a large facility at Wretham that will provide a 30% increase in the total UK processing capacity. 2. Enabling recruitment of the high calibre people we require to support business growth and the technical development of the concept. 3. Further developing the concept of utilising DAC carbon dioxide from site based units - O.C.O Technology moves to pilot plant for next stage of DAC programme | OCO Technology 4. Partially off-setting the cost of switching to renewable energy sources with very low levels of embedded carbon. This in turn will result in an improved carbon footprint of the aggregate. 5. Enabling development of a higher degree of internal self-sufficiency, notably: a. Procurement of biogenic CO_2 from independent sources, at lower cost than fossil CO_2 from traditional suppliers and with better guarantees on security of supply. b. Purchase of the associated infrastructure – storage tanks, pipelines and control systems – for the new CO_2 supply. c. Development of in-house capability for the transport of input materials (CO_2, raw materials) as well as aggregate outputs. Overseas Scenario: O.C.O is actively and successfully developing a number of projects in Europe and globally e.g. a new plant is being commissioned in Japan under licence to Kobelco Eco Solutions; O.C.O is partnering Repsol to develop a plant in Spain - New O.C.O Technology partnership will see first carbon negative

			aggregate plant built in Europe by 2024 | OCO Technology; O.C.O is developing a facility in Australia - £8m investment as O.C.O Technology joins Australian Energy from Waste project | OCO Technology Such projects face similar challenges to those we encounter in the UK, but in addition overseas projects have other challenges associated with the different political, regulatory or legal structures in the various territories. O.C.O must necessarily incur significant, at-risk development costs when contemplating new projects. When a project progresses to meaningful negotiations the level of cost accelerates with legal, technical and engineering resource consumed – these costs are also usually at risk until a formal heads of terms is signed. The overseas projects involve a degree of commercial risk, as typically the overhead and infrastructure costs for a new overseas facility are high in relation to the initial volume of waste materials being treated. Full scale commercial profitability will typically require the procurement of additional waste volumes, which can only be secured when the O.C.O process has achieved regulatory and commercial acceptance in the local markets. Overseas projects also involve a high degree of regulatory and political risk. The UK and Europe has well developed regulatory frameworks for the classification of waste and the achievement of 'end of waste' or product status for the output from a facility. Oversea projects either face very different regulatory regimes, or regimes that are immature in respect of end of waste in particular. O.C.O is incurring significant legal and technical costs in developing proposals for regulatory authorities in order to procure land use and environmental permissions. For the reasons articulated above, carbon credit finance is therefore by necessity becoming an increasingly important component of the commercial appraisal for overseas ventures. O.C.O is actively researching options for pre-selling carbon credits in support of overseas projects, to help limit the financial risk. Whilst detailed operational budgets are still being developed, it seems likely that carbon credits will be an important element in making the ventures sufficiently profitable to justify the investment.
	Attach a simple cost analysis and sensitivity analysis.	----------	We are unable to provide any meaningful cost analysis due to either the commercial sensitivity of such information and / or the need to comply with NDAs. Based on our current understanding as at 1 November 2022, the anticipated annual value of the CORCs we are likely to generate will provide a

			meaningful sum of money in terms of the potential infrastructure investments O.C.O has planned in the UK and overseas in the next 12 months. The finance from carbon credits will either accelerate the projects identified above, or allow them to progress where before such progression might be limited by capital availability.
	What are the key variables impacting the cost analysis?	----------	In addition to be high level project variables and costs described above, the key variables at site specific level are: a. Energy, raw material and CO_2 costs b. Labour costs c. Equipment procurement costs are uncertain and escalating rapidly, reflecting global price rises for steel, electrical items and energy d. Site procurement and development costs
	What else is preventing your project implementation? For example, do you have to change industry norms or market practises or to build new infrastructure to carry out the project ?	----------	See above.
	What is the baseline activity and related emissions and removals that would occur if this activity did not take place (business-as-usual, counterfactual)?	----------	In the UK, flue gas residues have traditionally been treated with acid and subsequently landfilled. Although O.C.O has captured around 35% of the residues market in the UK, landfill remains the dominant end point. Typically the residues are transported from point of origin to a treatment facility. After treatment, the residues are transported again to the landfill end point. There will be emissions associated with both the transport of the residues and with the treatment process itself. The treatment process chemically transforms the residues so they are incapable of carbonation. Although it is impossible to accurately quantify the scale of the carbon emissions associated with treatment & landfill of residues by other operators, it is evident that there will be an overall positive carbon balance i.e. a range of direct and indirect emissions but no carbon removals.

	Attach a simple emission and removal analysis.	----------	Summary of annualised emissions and removals. Based on historic data and subject to re-evaluation on an annual basis (kg $CO_{2\,eq}$ per tonne of M-LS aggregate). 

Project signature and date

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

S. Roode

O·C·O TECHNOLOGY

17 November 2022