

September 7, 2023

Ms. McKenzie Smith
Climate Action Reserve (CAR)
600 Wilshire Boulevard, Suite 202
Los Angeles, CA 90017
Submitted electronically via msmith@climateactionreserve.org

RE: 3Degrees Group Inc.'s Public Comments on CAR's U.S. Low-Carbon Cement Protocol v1.0

Dear Ms. McKenzie Smith,

3Degrees Group Inc. ("3Degrees") appreciates the Climate Action Reserve's rigorous protocol development process, engaging stakeholders to identify areas of improvement to ensure its smooth and successful implementation. The below sections are 3Degrees' public comments on v1.0 of the U.S. Low-Carbon Cement Protocol. We look forward to further discussion on any of the topics listed below.

Additionality Requirements

3Degrees understands and appreciates CAR's desire to implement stringent additionality requirements for this protocol and to require strict adherence to additionality in the voluntary carbon market. In the protocol's current state, a project is additional in the scenario where no regulation requires the use of or emissions cap on the production of supplementary cementitious materials (SCMs) or alternative cementitious materials (ACMs), and a performance standard threshold where the market penetration of SCMs/ACMs must remain under 5% of the total cementitious market in the United States. The protocol does not allow a project to report emissions reductions if at any point the project no longer complies with either of the additionality requirements. We see a risk of this rule significantly decreasing the incentive for investment in new projects due to an uncertain time frame for credit generation. Low carbon cement projects require capital investments in new infrastructure. If that investment decision is made while the market penetration of the technology is low, the investor should be given confidence that they will receive at least a full crediting period of carbon revenue. Therefore, we recommend that upon registration, a project should be allowed to fulfill its crediting period, given that the project complies with all other requirements of the protocol. The California Air Resources Board provides precedent for this. The California Air Resources Board's Cap & Trade Regulation § 959739(a)(2)(G) writes, "If any law, regulation, or legally binding mandate requiring GHG emission reductions or GHG removal enhancements comes into effect in California, in a linked jurisdiction pursuant to section 95943, or in a jurisdiction outside California, affecting the offset project, during an offset project's crediting period, then the offset project is eligible to continue to receive ARB offset credits for those GHG emission

reductions and GHG removal enhancements for the remainder of the offset project’s crediting period, but the offset project may not renew that crediting period.”

While market penetration allows for ease of registration for early adoption of nascent technologies, 5% market share remains a low level of adoption and discourages growth before the protocol has had a chance to make a significant impact on the market. In addition, other voluntary carbon registries have seen the risk of 5% market penetration halting additionality; the activity is unlikely to become self-sustaining at this level and the restriction on the methodology poses an unacceptable risk to projects expecting to see 10+ years of financial return on investment. Verra Standard 4.5 (released in August 2023) reevaluated their activity method requirement, in which a methodology is inactivated once the methodology’s project activity surpasses the 5% market threshold, at which point the methodology is to undergo a revision where it adopts a new method of demonstrating additionality.

We recommend that CAR consider allowing projects to generate credits for the remainder of the crediting period they are reporting in in the instance where the regulations change or market penetration is reached during the crediting period.

Mineralization

As the primary purchasers of voluntary carbon credits, corporations are key drivers of the overall market demand. Guidance from leading corporate frameworks such as the Science-Based Targets Initiative’s (SBTi) Corporate Net-Zero standard continues to place an emphasis on reducing emissions within corporations’ value chains where possible and shifting to purchasing carbon credits that represent a net “removal” of carbon from the atmosphere for unavoidable emissions. Leading market forecasts expect that over time the majority of demand for carbon credits will be for credits that represent a removal from the atmosphere.

Both avoiding emissions and removing existing carbon emissions from the atmosphere are important, but the protocol as drafted only provides a path to crediting for the avoidance of emissions associated with cement production. While this serves to focus the scope of the protocol, it also significantly limits the potential adoption of the protocol, as project developers are increasingly focusing project development on project types that produce carbon removals in an effort to meet growing demand from corporate buyers. Given that protocols must be widely adopted in order to be effective at their ultimate goal of providing a standard for quantifying emission reductions for transactions in carbon markets, we strongly recommend that the protocol includes a mechanism for generating credits via the mineralization of carbon dioxide (CO₂) in the production of SCMs. This could be achieved by expanding Project Emissions to be more inclusive of all process emissions from SCM and ACM production. Mineralization would be considered a negative term in this scenario. For

instance, an adjustment to Equation 5.14 in the Project Emissions would add a term that recognizes the quantity of CO₂ stored in the SCMs themselves. This quantity of CO₂, if greater than the other emissions associated with production, could generate a negative term in the Project Emissions, which would in turn increase the overall emission reductions. Other methodologies, such as Verra's VM0043 - Methodology for CO₂ Utilization in Concrete Production, provide procedures for determining the carbon content of materials via testing procedures or metering, which could be utilized in the protocol to provide a framework for quantifying mineralized CO₂.

Adding this term would ultimately expand Project Emissions to be more inclusive and robust, while also placing some additional burden on the project developer to identify the source of CO₂ and include any emissions associated with mineralizing the CO₂. Either way, this information should be available to project operators that are utilizing CO₂ in the production of their SCMs. The protocol, if expanded in this way, could fairly place the onus on the project proponent to demonstrate that the CO₂ meets any requirements for sourcing and that the emissions associated with capturing, transporting, storing, and mineralizing the CO₂ are included.

Finally, any double-counting risk can be expected to be minimal as the storage of CO₂ is necessarily included within the project boundary of any project that portends to store CO₂. The Reserve might consider any number of mechanisms to ensure that double-counting does not occur, but at a fundamental level the CO₂ molecules stored in SCMs would need to be recorded under any protocol that seeks to credit those CO₂ molecules. The issue of preventing double-counting is therefore a manageable task of requiring projects to demonstrate that they are only claiming the stored CO₂ under one protocol by including the end storage within the project. This is in contrast to the CO₂ removals associated with biochar production, which we are not recommending for inclusion here, as other existing biochar methodologies are less specific about tracking biochar to an end location, so the potential for double-counting is greater. Also, biochar production on its own can generate removal credits because it inherently stabilizes carbon, while CO₂ removed from the atmosphere can only generate credits if properly stored via a mechanism such as mineralization.

SCM additives

We support the inclusion of emissions from the production and transportation of additives whose impact is above 5% materiality, to project emission calculations. Additives can be incorporated into SCM either in production or post-production at concrete mixing. Both scenarios are not represented in the protocol at its current state; if additives (above 5%) are incorporated after production and during concrete mixing, this would be outside of the project boundary and therefore not included in project emissions. We recommend that CAR consider the impact of additives either at all stages in which they could be added by

expanding the project boundary for additives or to remove additives from the protocol until CAR is able to adequately account for project emissions from additives in all scenarios.

Verifying SCM is replacing PC

Since the emissions reducing activity of this protocol relies on the production of SCMs or ACMs to replace PC, we are requesting additional clarification on the documentation required to verify that these activities are taking place. We have identified a potential risk that SCMs/ACMs may be replacing other SCMs/ACMs instead of replacing PC or may be entering into new contracts where the assumption would have been the replacement of PC but is unassured. Other than the Attestation of SCM/ACM Use form, sales receipt, and bill of lading, please clarify any additional requirements or if this would be specific to each verifier's review.

Expanding Applicability to Canada

We recommend expanding the applicability of the protocol to Canada, as well as the United States. There is significant movement in the low carbon cement and concrete space in both countries, and expanding the geography will allow greater uptake in an emerging market. The Climate Action Reserve has a precedent of expanding into Canada for methodologies where the baseline regional data set can be made inclusive of both areas.

Thank you for this opportunity to submit comments. We look forward to continued participation and discussion.

Sincerely,

/s/ Julie Kelleher

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