To whom it may concern: I'm an unplanned 56-year-old carbon removal startup founder committing the rest of my life to addressing climate change. I've been a regular voice within the CDR community for roughly 3 years. I've been studying climate and CDR for nearly a decade. I'm old enough to have seen a transition within the IPCC from prioritizing "decarbonization" to now prioritizing both "decarbonization AND carbon removal".

This transition is because we've cumulatively failed the past 3+ decades to bend the GHG emissions curve in our favor. I'm sufficiently immersed in the various CDR pathways to know that many of the solutions humanity is counting on to bail us out will not sufficiently scale in the time we have to impact the outcome. Nothing during my lifetime has emerged with the permanence, durability, resilience, additionality and scalability to suggest it will lead us to where we need to go. Humanity is pursuing an all hands-on-deck, buckshot approach but the sheer scale of our problem and the lateness of the game now requires a few large wins. I believe this to be a factual statement. As the Secretary General has made clear, wishful thinking is a waste of time and resources. However, I must disagree with him on the idea of technically feasible moonshots and silver bullets. To exclude their pursuit would limit the potential for step-change improvement – which is now required in order to accelerate our transition.

Innovation and risk-taking will lead us to victory in this fight (iteration down a cost curve is no longer adequate). Improving our chance of success means placing our future in the hands of new and technically viable but previously unimagined approaches to solving this problem because most legacy institutions have shown a clear lack of urgency and vision. The future of computing wasn't developed by the mainframe behemoths of the time, it was developed by a few guys in a garage with a radical vision.

I can only hope my words inspire you to embrace lesser-known pathways because they hold the most promise. Seeing startups emerge every day within the CDR community is my privilege. Sharing one idea with you today (as an example) is my honor.

Converting CO2 to elemental, solid carbon and using that carbon within a stationary battery will achieve multiple desirable objectives:

- Sequester the solid carbon left over from gaseous CO2, above ground, in a material.
- Enable revenue from both a stationary battery & carbon sequestration.
- Rapidly scale by leveraging one of the fastest growing global industries.
- ***Reduce*** & ***remove*** carbon, simultaneously – in a high value, durable ***product***.

Thinking smarter is how we'll win this fight. That means:

- Supporting emerging industries that meet the CDR objectives of the Paris Agreement.
- Supporting all actors who express sufficient urgency, purpose & good intention.
- Keeping the playing field level and open to new and novel ideas.
- Incentivizing business models that can rapidly scale, regardless of initial cost.

I appreciate that this is the decade of both action and the acceleration of ambition. I also appreciate that the Art 6.4 SB is a tool in the implementation of these objectives. But please don't lose sight of the fact that this is a global problem. And that innovative, rapidly scalable solutions developed anywhere on the planet can benefit everyone on the planet. This is not the time to fight traditional battles and to settle old scores. This is the time to embrace innovators and risk-takers with large visions and a commensurate sense of urgency. In my opinion, our stable civilization depends on the Article 6.4 Supervisory Body doing just this. Thank you for this opportunity to share my thoughts.

Regarding SB005-A02, I'd like to make a general comment about removals in long-lived materials embedded within products performing carbon sequestration. I can't speak intelligently about the risk of a lack-of-permanence for any other CDR sequestration pathways being pursued. But I can suggest elemental solid carbon (graphite, graphene, diamond, etc.) is widely regarded in the literature as both non-biodegradable and non-photodegradable for thousands of years. These materials are chemically inert in nature. Making sequestration within them an attractive pathway assuming MRV is regularly performed and an end-of-life protocol is tightly followed to ensure safe recyclability.

Regarding SB005-A02 section 2B, since the use-case is a stationary storage battery, 3rd party MRV – based on industry best practice or as the Article 6.4 SB deems appropriate – will have physical access to the sequestration material because it will reside "above ground". Effectively stacked like blocks at a client site. The material (envisioned as a composite made of roughly 80% graphitic-density-carbon) can also be sent in small batches to various labs for testing to ensure permanence claims. Because sequestration occurs within the material itself, the only risk of reversal is if (1) the material is not as permanent as implied (which can be determined via lab testing and on-site verification) and if (2) the storage blocks are structurally damaged such that they need recycled / replaced (a process that can be controlled internally).

From a standpoint of a crediting period and full chain of custody (SB005-A02 section 2D), the solid carbon feedstock for the envisioned batteries is derived from either direct air capture gaseous CO2 (then converted to solid carbon electro-chemically or thermo-chemically) or biomass converted to bio-graphite. Carbon-negative bio-graphite is already being produced commercially in small volumes via several innovative companies globally. The production of the envisioned sequestration batteries will only commence if the feedstock solid carbon is confirmed / tested to be carbon-negative (via a qualified 3rd party MRV process).

Regarding SB005-A02 section 2E &F, reversals and leakage are briefly discussed above and are easily mitigated against because sequestration is within a solid, accessible material, above ground. It's worth contemplating that sequestration in solid, elemental carbon is a potentially viable and more rapidly scalable alternative to geologic sequestration. Cost could ultimately become a non-issue because the solid carbon can be used as a feedstock for a high-value product (battery-grade-graphite) that simultaneously sequesters carbon. A financial mechanism that cannot be leveraged if you sequester the carbon deep underground.

Regarding SB005-A02 section 2G, because the end use case is within an industry (stationary storage batteries) that already includes feedstock graphite produced thru an environmentally unfriendly process, any transition toward a battery use case will be a social and environmental improvement. Battery production will be performed within areas already deemed as appropriate for industrial activities as designated by local planning and zoning authorities – helping ensure facilities don't locate near residential neighborhoods. A carbon negative manufacturing process and a carbon negative product will both be promoted. Additionality is ensured because no carbon-negative graphite is currently being used within the stationary storage battery industry. Carbon-negative graphite within batteries should be considered as a co-benefit in that reducing humanity's reliance on fossil fuels means a transition to more renewable sources of energy, in combination with batteries, which can now be partially made out of carbon-negative materials.

In the short term, bio-graphite derived from waste bio-mass will be considered as a potential feedstock. As a long-term solution, this could pose resource competition concerns. However, as soon as economically feasible, the intention is to move to a DAC + conversion processes that does not require waste biomass. Meaning resource competition concerns are limited to the scaling of facilities that make batteries.

Battery manufacturing is an endeavor the world currently can't build fast enough. Developing a dual-carbon battery architecture that ensures a high carbon concentration per volume translates to less land area being needed for sequestration (taking up the same land area being used for current stationary battery storage installations). Securing sufficient feedstock carbon means the potential to easily sequester GT's of CO_2-e, annually, with less than 20% of this emerging and rapidly growing market. The envisioned battery architecture eliminates a reliance on less environmentally friendly metals and ensures a nationally secure, abundant feedstock (atmospheric CO_2) for any country wishing to help develop this technology.

I envision no new negative side-effects from the development and scaling of our technology - on ecosystems, biodiversity, people, land, water, energy or food security. I envision no negative impact from waste products as a result of our process. I do envision both job and wealth creation for locals that embrace our approach - either in aiding the manufacture of our batteries or in deploying them.

In summary, there's promise here. For a potentially large win, relying on a pre-seed-stage idea, leveraging mostly existing technologies bolted together in a way that's novel. I implore you to support these types of ideas.