Testimony of Ben Tarbell, Founder and CEO
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before the

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Committee on Science, Space, and Technology
Joint Environment and Energy Subcommittees

Navigating the Blue Frontier: Evaluating the Potential of Marine Carbon Dioxide Removal Approaches

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Chairman Williams, Chairman Miller, Ranking Member Bowman, Ranking Member Ross, and members of the Subcommittees, thank you for the opportunity to testify today. My name is Ben Tarbell, and I am Co-founder and CEO of Ebb Carbon, a US-based marine carbon removal and ocean health company.

Ebb Carbon's mission is to remove billions of tonnes of excess CO_2 from the atmosphere. To achieve this, we are pioneering an approach called Ocean Alkalinity Enhancement which boosts the ocean's natural ability to safely capture and store carbon by removing excess acid from seawater. According to reports by both NOAA and the National Academy of Sciences, our approach offers one of the most scalable and cost-effective solutions of any durable carbon removal pathway.

Since 2023, Ebb Carbon has been demonstrating our technology in partnership with the DOE and NOAA at the Pacific Northwest National Laboratory in Sequim, WA. This work is designed to ensure that every step we take, from research to deployment, is grounded in rigorous science. At Ebb we say that how we remove the first 100 tonnes of CO2 will determine how we remove the next billion. We're following up our demonstration at Sequim with a pilot-scale project right down the road in Port Angeles, WA so we can translate what we've learned in the lab to real world operations. We are the first company to apply for a permit to operate a project like this under the Clean Water Act, and we are working closely with state and federal agencies and local communities as part of that process.

We founded Ebb because we saw the immense potential of marine CDR to mitigate climate change. Oceans cover over 70% of the Earth's surface and play a vital role in regulating our climate. The ocean has *already* removed billions of tonnes of excess atmospheric CO2. Yet, despite this potential, marine CDR has yet to receive investment proportionate to its potential. As such, our ability to advance the science and the industry is limited in the United States. But this can change. I know because I've seen it before from my previous work helping grow the solar energy industry.

In the early years, solar technology was promising but not widespread. By the 1970s, solar panels were available but cost over $100 per watt—too high for most practical uses. Despite its promise, the industry struggled to gain traction and it was decades before its dramatic "hockey stick" growth.

The breakthrough came from two key factors: public-private partnerships and smart policy enablement. While DOE labs like NREL were critical to enabling the foundational science, the cost trajectory was driven down by commercial demonstrations and deployments, which allowed the promise of solar to be realized beyond the lab and into the real world.

While the national labs provided answers that helped to unlock the market, smart federal policies accelerated the private capital investments required to deploy at scale. Key initiatives, such as the Investment Tax Credit provided financial incentives and market de-risking, making solar investments more attractive. As a result, industry flourished and the cost of solar panels plummeted to less than $0.50 per watt and what was once a niche technology has now become

a cornerstone of global energy production.

Today, DOE's PNNL and NOAA's PMEL alongside academic labs continue to lead the research so critical to advancing the field of mCDR. But as with solar, industry partnerships are critical to demonstrating in the real world and advancing the science required to deliver a planetary-scale solution. Unlike with solar, we don't have decades to get this right.

It is with this context that I'd like to suggest three areas of priority for consideration:

1. **Direct funding to marine CDR, proportionate to its potential as a climate solution.** This can and should include Federal funding for research & development as well as the expansion of incentives and enablements for industry deployments.
2. **Enable public-private partnerships to advance the field safely, effectively and responsibly.** Including accounting for the role of the private sector in creating business models that can scale climate impact.
3. **Create fit-for purpose regulatory pathways.** The basic science around OAE is well established - moving the field forward requires in-water pilots to advance our collective understanding and ultimately reach scale safely.

We are at an inflection point where we have a narrow moment to move from possibility to reality, from pilot-scale R&D to a scale where we can have a substantive positive effect on the climate. Congress has a unique opportunity to enable the burgeoning mCDR industry at this critical time. We know mCDR has a huge role to play in stemming the worst impacts of climate change, and we're excited to work with the Federal Government to move the field forward.