

Ocean Alkalinity Enhancement Engineering Award

Request for Pre-Proposals

Additional Ventures is partnering with Ocean Visions and a consortium of philanthropic funders to announce the Ocean Alkalinity Enhancement (OAE) Engineering Award. This request for proposals (RFP) is part of the [Ocean Alkalinity Enhancement R&D Program](#), an ambitious effort to accelerate understanding of OAE as a potential method for large-scale carbon dioxide removal (CDR). The OAE Engineering Award complements the recently announced [OAE Research Award](#), which assesses whether OAE can safely, and permanently sequester atmospheric CO₂ at scale.

We invite concise pre-proposals (max 2000 words) to develop prototypes that could enable safe, cost-efficient, and scalable OAE. These prototypes may include, but are not limited to:

- Mechanisms to efficiently prepare and/or disperse alkaline substances into seawater (e.g., mechanical hardware, chemical processes, etc.).
- Designs, technologies, and supporting software to integrate OAE deployment and MRV into existing marine and coastal industries, such as transoceanic shipping, desalination, offshore wind, and commercial fishing.
- Sensors and platforms to support monitoring, reporting, and verification (MRV) of OAE.

Pre-proposals should describe how a proof-of-concept prototype will be developed and tested in **≤18 months with a budget of \$750k - 1.5M**, and how the technology could subsequently be further developed and scaled to global impact in a timely manner. This RFP is open both to small-scale prototypes (i.e., a key component or breadboard validation) that are tested in a laboratory environment ([TRL 4](#)) and to larger prototypes that can be tested in the intended environment ([TRL 5](#)).

After winning teams have completed their prototypes, we will continue to provide tailored support to advance the technological readiness and deployment of the most promising projects.

Key Dates (*updated*)

Informational Webinar	June 9, 2022
Pre-Proposals Due	August 5, 2022
Invitations for Full Proposals	September 2022
Full Proposals Due	November 2022
Funding Decision	January 2023

Eligibility Requirements

- Individuals, companies, or other organizations anywhere in the world are invited to apply.
- **Updated:** Each project should identify a project lead, a person responsible for day-to-day and overall project execution, who must dedicate at least 80% of their time to this effort. Project collaborators, which can include team members and advisors, can be listed at <80% time.
- All grantees will be expected to participate in a cohort, which requires collaboration in-person and in virtual settings to share learning and collectively advance OAE technology development. We will work with grantees to enable them to participate in this process without compromising their IP.

Intellectual Property

- Pre-proposals will be kept confidential.
- We are committed to making information and technologies produced using our funds widely accessible to the relevant public. At the same time, we wish to attract a range of high-quality applicants, including those who may bring their own proprietary IP, and we recognize that a one-size-fits-all open licensing approach may not always be the right answer. We will therefore provide awardees with a template IP agreement but will take the facts and circumstances of each proposal into consideration to determine if a more tailored approach is warranted. We will share more specific IP expectations when we invite teams to submit full proposals.

Guidance for Pre-Proposals

By August 5th please submit your pre-proposal via the [Submittable grant application portal](#) (link also available on the Additional Ventures RFP page). Please use the bulleted prompts below as guidelines for each proposal section.

Pre-Proposal Outline:

1. Concept Summary (Up to 250 words + up to one visual)

- Clearly identify the problem to be solved with the proposed technology concept.
- Describe the proposed concept in simple language and explain how it addresses the objectives of the RFP.
- Describe how the proposed solution is innovative and potentially transformational compared to current practice (e.g., technical feasibility, comparative advantage, permissions, development time and cost, scaling rate, cost reduction curves, revenues, environmental co-benefits, risk reduction).
- If your proposal focuses on a key component of a larger solution, explain why the component is critical to the larger solution.
- Include a representative image if possible.

2. Innovation (Up to 1000 words + up to three visuals)

- Sketch out current hardware solutions to the problem described and highlight limitations.
- Describe the background, theory, simulation, modeling, experimental data, or other sound engineering and scientific practices or principles that support the proposed approach, where available. Provide specific examples of supporting data and/or appropriate citations to the scientific and technical literature as appropriate.
- Discuss alternative approaches considered, if any, and why the proposed approach is most appropriate for the project objectives.
- Describe the current technology readiness level of the proposed technology and how you plan to advance to proof-of-concept prototype.
- Identify techno-economic challenges to be overcome for the proposed technology to be commercially relevant, and over what time frame the technology may become viable.
- Briefly tell us if you have any specific concerns about openly licensing IP developed with this grant.

3. Proposed Work (Up to 500 words + up to three visuals)

- Describe the technical approach to building the prototype.
- Provide estimates for cost and energy intensity per-ton of carbon removed at different levels of scale (in \$ and MWh), including key drivers and assumptions (not required for sensors and other MRV prototypes).
- Describe associated analysis and modeling work required to a) build and test the proof-of-concept prototype and b) to establish that it could be further developed into a scalable commercial product.
- Describe how the technology will be tested and provide clear metrics to evaluate success or failure of the testing.
- Describe the final deliverable(s) for the project (e.g., hardware prototypes, software, models, analytical results).

4. Environmental Risks (up to 250 words)

- Describe potential environmental risks that are distinctive to your proposed technology (not those that are generic to OAE).
- Describe how you would further evaluate and mitigate these risks during the prototyping process.

5. Team and Team Structure (up to 250 words + up to one visual; there will also be a table in the Submittable portal to list your team)

- **Updated:** List project lead and all project collaborators. Note: Project leads must dedicate at least 80% of their time on this effort. Project collaborators can be listed at <80% time.
- Finalists invited to submit full proposals will need to provide supporting information to verify that they can meet the necessary effort requirements.

- Explain why the team is well-suited to lead this work, with specific reference to expertise, experience with specific methodological approaches, and abilities to deliver a complex project in a short timeframe.

6. Project budget

- € A simple budget template is provided on the Submittable grant application portal.

Application & Evaluation Process

Ocean Visions and Additional Ventures will run a four-step application and review process.

- 1) Pre-Proposal:** Pre-proposals must be submitted through [Submittable](#) by 11:59pm PT on August 5th. They will be evaluated by independent experts convened by [Ocean Visions](#). Experts will base their reviews on eligibility requirements, scientific and technical feasibility, potential impact of the solution, team, and budget.
- 2) Full Proposal:** In early September, Additional Ventures will invite a subset of teams to submit full proposals, which will be due in November. Funding will be available for teams that need financial support to write full proposals.
- 3) Evaluation & Funding Decision:** Ocean Visions will re-convene independent experts to evaluate full proposals. Based on these evaluations, Additional Ventures will make award decisions in January 2023. Additional Ventures and Ocean Visions will provide feedback to all teams whose full proposal is not selected for funding.

Terms of Grant / Use of Funds

Each funded organization will be required to sign and agree to the grant terms within thirty (30) days from receipt of notice of the award and prior to the funds being released. The grant terms will be available upon submission of a full proposal.

Commitment to Responsible R&D

The Ocean Alkalinity Enhancement R&D Program is an ambitious effort to evaluate the technical feasibility of alkalinity enhancement as an efficient method for sequestering atmospheric CO₂, and to identify under what conditions it could be deployed safely. Additional Ventures is committed to funding R&D in a responsible manner that accords with all applicable laws and regulations. We recognize that modification of seawater carbonate chemistry may have undesired environmental impacts, and that further research may show that these outweigh the benefits of alkalinity enhancement in permanently removing CO₂ from the atmosphere. We believe that OAE R&D needs to be conducted with a prudent, step-by-step approach and that the nature, scale, duration, and intensity of experimentation and technology development should be proportionate to the current state of knowledge about potential adverse effects.

Funding Awarded at Our Discretion

Responding to this RFP, submitting a pre-proposal and/or submitting a full proposal does not entitle any individual or institution to receive funding from Additional Ventures or any other funder. Funding, if any, would be provided at Additional Ventures' sole discretion pursuant to the terms of a written grant agreement executed by Additional Ventures or other funders and the selected grantee organization, the terms of which Additional Ventures may require to be acknowledged by the recipient.

Questions?

For all inquiries, please contact us at climate@additionalventures.org.

About Additional Ventures

Additional Ventures is a purpose-driven organization focused on climate action, biomedical research, and strengthening democracy and communities. Our climate work seeks to accelerate responsible efforts to remove carbon from the atmosphere, including through ocean pathways.

Partners



BUILDERS INITIATIVE

