

**CALIFORNIA ALTERNATIVE ENERGY AND
ADVANCED TRANSPORTATION FINANCING AUTHORITY**

Request to Approve Project for a Sales and Use Tax Exclusion¹

**Heirloom Carbon Technologies, Inc.
Application No. 23-SM030**

Tuesday, July 18, 2023

Prepared By: *Stefani Wilde, Program Analyst*

SUMMARY

Applicant – Heirloom Carbon Technologies, Inc.

Location – Tracy, San Joaquin County

Industry – Sequestered Carbon Manufacturing

Project – New Sequestered Carbon Manufacturing Facility (Advanced Manufacturing)

Value of Qualified Property	Estimated Sales and Use Tax Exclusion (“STE”) Amount ²
\$5,232,013	\$437,396

Estimated Net Benefit ³	Dollar Value	Points Earned ⁴
Estimated Fiscal Benefits	\$404,682	925
Estimated Environmental Benefits	N/A	30
Additional Benefits	N/A	219
Total	\$404,682	1,175
Estimated Quantifiable Net Benefit	-\$32,714	

Competitive Criteria Score – 84

Staff Recommendation – Approval

¹ All capitalized terms not defined in this document are defined in the STE Program’s statutes and regulations.

² This amount is calculated based on the average statewide sales tax rate of 8.36%.

³ Applications that earn a Total Score of at least 1,000 points and an Environmental Benefits Score of over 20 points may be recommended for approval. (California Code of Regulations Title 4, Division 13, Section 10033(c)(6).)

⁴ Dollar values and point values in the staff summary may not add up correctly due to rounding in the Application worksheet.

THE APPLICANT

Heirloom Carbon Technologies, Inc. (the “Applicant”) is a Delaware corporation that formed in 2020. The Applicant is a climate technology company located in Brisbane that uses direct air capture (“DAC”) technology to permanently remove carbon dioxide (“CO₂”) at a billion-ton scale, and as a result, produces carbon credits that can be sold to businesses to help offset generated greenhouse gas emissions.

The major shareholders (10.0% or greater) of the Applicant are:

- Shashank Samala (43.9%)
- Breakthrough Energy Ventures (12.3%)

The corporate officers of the Applicant are:

- Shashank Samala, CEO
- Max Scholten, Head of Commercialization
- Albert Luu, Head of Finance

THE PROJECT

The Applicant is requesting a sales and use tax exclusion (“STE”) award to build a new sequestered carbon manufacturing facility located in Tracy (the “Project”). The Applicant states its DAC technology enhances a natural process to permanently remove carbon from the atmosphere using a minimal land footprint to manufacture sequestered carbon. It uses limestone powder to absorb the CO₂ captured from the atmosphere. Once it has been absorbed, the CO₂ is heated in a renewable energy powered kiln to be separated and then transported offsite to be permanently sequestered in underground wells, and the limestone powder is reused several times over. The Applicant also states in its pilot operations, it plans to use concrete as another form of sequestration. According to the Applicant, it anticipates capturing 500-1000 tons of CO₂ per year.

The Applicant states its process of removing CO₂ improves on the current industry standards by using automated advanced technology, as well as limestone, an abundant natural substance. Currently, other DAC companies use expensive chemicals to do the same thing its process uses limestone for. The Applicant states its use and reuse of limestone reduces the number of deliveries of raw materials required for production. The Applicant also expects to achieve almost a 40% reduction in its energy consumption when compared to its previous technology.

ANTICIPATED COSTS OF QUALIFIED PROPERTY

The anticipated Qualified Property purchases are listed below:

Indoor Scissor Lifts	\$70,000
Outdoor Scissor Lift	\$75,000
Forklift	\$75,000
Site IT Equipment	\$100,000
Shelves, Trays, Cables	\$1,218,538
Distributors	\$360,000
Caddies & Docks	\$120,000

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Electrical & Controls	\$180,000
Assisted Air Flow - Fans	\$480,000
Guarding	\$96,000
Central Processing Line	\$50,000
Central Filling Station	\$50,000
Central Collection Station	\$25,000
Vehicle Network	\$150,000
Caddy	\$50,000
CO2 Compression & Liquefaction	\$681,920
CO2 Storage Tank	\$176,147
Gas Separation Skid	\$323,358
Water Skid	\$241,050
Compressed Air Skid	\$60,000
Material Conveyance	\$650,000
Total	\$5,232,013

Note: The Qualified Property purchases reported in the Application and shown here in staff's report are estimated costs. At the termination of the Regulatory Agreement, a finalized Project equipment list will be prepared detailing the value of the Project equipment actually acquired, and the estimated tax benefit realized pursuant to Revenue and Tax Code Section 6010.8. Variance from the costs shown in the Application and in this report may occur prior to the closing due to increased costs of certain components of the Project over original estimates, and other reasons. In addition, those costs may vary after closing due to increased costs, as well as common design and equipment modifications during construction, differences in equipment due to future changes in statute or regulation, or for other reasons.

TIMELINE

The Applicant states construction began in January 2023 and anticipates completion in June 2023, with all equipment being installed from May until August of 2023, and final ramp up being completed by the end of December 2023.

STATUS OF PERMITS/OTHER REQUIRED APPROVALS

According to the Applicant, all required permits have been secured with the exception of one permit with the City of Tracy that has been delayed, although the Applicant states it is working daily with the City of Tracy to get that secured.

COMPETITIVE CRITERIA SCORE

The Applicant received 84 Competitive Criteria points as follows:

1. **Environmental Benefits (0 of 100 points)**. The Application does not have a Recycled Resource Extraction Project or Project that produces an Advanced Transportation Technology or an Alternative Source product, component, or system. Therefore, no points are awarded.

2. **Unemployment (29 of 50 points)**. The Applicant’s Project is located in Tracy County, which has an average annual unemployment rate of 5.6%.⁵ When compared to the statewide average annual unemployment rate of 4.3%, the Project location earned the Applicant 29 points.
3. **Job Creation (40 of 75 points)**. The Applicant anticipates the Project will support a total of six production-related jobs at its Facility. CAEATFA estimates that approximately 2.03 of these jobs will be attributable to a marginal increase in jobs created due to the STE. Based on the amount of STE per estimated number of jobs created, the Applicant earned 40 points.
4. **California Headquarters (15 of 15 points)**. The Applicant has a California Corporate Headquarters, and, therefore, 15 points are awarded.
5. **Natural Disaster Relief (0 of 50 points)**. The Project is not to rebuild or relocate the Applicant’s Facility due to a fire, flood, storm, or earthquake identified in a state of emergency proclaimed by the Governor within two years of the time of application, and, therefore, zero points are awarded.
6. **Eligibility for Manufacturing and Research and Development Equipment Exemption (0 of 50 points)**. The Applicant is eligible to use one or more of the exemptions established pursuant to Section 6377.1 of the Revenue and Taxation Code, and, therefore, zero points are awarded.
7. **Emerging Strategic Industry (0 of 75 points)**. The Project’s industry is not in an Emerging Strategic Industry, and, therefore, zero points are awarded.

PROJECT EVALUATION

PROJECT BENEFITS

The Project received a Total Score of 1,175 points, which exceeds the required 1,000-point threshold, and a total Environmental Benefits Score of 30 points, which exceeds the 20-point threshold.

- A. **Fiscal Benefits (925 points)**. The net present value of the total fiscal benefits over the lifetime of the Qualified Property is derived from the Applicant’s sales and use taxes, personal income taxes paid by the firm’s employees, firm taxes on profits, property taxes, and other indirect fiscal benefits of the Applicant. The total fiscal benefits amount to \$404,682, resulting in a Fiscal Benefits score of 925.

⁵ Unemployment rates are based on data available in October 2022.

B. Environmental Benefits (30 points). The Project earned an Environmental Benefits Score of 35. The Applicant received points in the following categories:

1. **Energy Consumption (30 of 30 points)**. The Applicant anticipates the Project will result in a 39% reduction in energy consumption compared to the Applicant’s previous pilot scale manufacturing process.

C. Additional Benefits (219 points). Applicants may earn additional points for their Total Score. The Applicant received 219 additional points.

1. **Production Jobs (40 of 75 points)**. The Applicant anticipates the Project will support a total of six production-related jobs at its Facility. CAEATFA estimates that approximately 2.03 of these jobs will be attributable to a marginal increase in jobs created due to the STE. Based on the amount of STE per estimated number of jobs created, the Applicant earned 40 points.

2. **Construction Jobs (75 of 75 points)**. The Applicant anticipates the Project will support a total of 61 construction jobs at its Facility. CAEATFA estimates that approximately 20.65 of these jobs will be attributable to a marginal increase in jobs created due to the STE. Based on the amount of STE per estimated number of jobs created, the Applicant earned 75 points.

3. **Unemployment (29 of 50 points)**. The Applicant’s Project is located in San Joaquin County, which has an average annual unemployment rate of 5.6%. When compared to the statewide average annual unemployment rate of 4.3%, the Project location earned the Applicant 29 points.

4. **Research and Development Facilities (25 of 25 points)**. The Applicant has verified that it has a facility located in California that performs research and development functions related to carbon dioxide capture and sequestration.

5. **Industry Cluster (25 of 25 points)**. The industry associated with this Application has been identified by the City of Tracy as a clean/green tech industry cluster of the region of the Project’s location.

6. **Benefits and Fringe Benefits (25 of 25 points)**. The Applicant states it provides medical, health, dental, and vision benefits, bonuses, education reimbursement, gym subsidies and paid leave to its employees, earning the Applicant 25 points.

LEGAL QUESTIONNAIRE

Staff reviewed the Applicant’s responses to the questions contained in the Legal Status portion of the Application. The responses did not disclose any information that raises questions concerning the financial viability or legal integrity of this Applicant.

CAEATFA FEES

In accordance with STE Program regulations,⁶ the Applicant has paid CAEATFA an Application Fee of \$2,616.01 and will pay CAEATFA an Administrative Fee of up to \$20,928.05.

RECOMMENDATION

Staff recommends the approval of Resolution No. 23-SM030-01 for Heirloom Carbon Technologies, Inc.'s purchase of qualifying tangible personal property in an amount not to exceed \$5,232,013 anticipated to result in an approximate STE value of \$437,396.

⁶ California Code of Regulations Title 4, Division 13, Section 10036

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A
REGULATORY AGREEMENT WITH HEIRLOOM CARBON TECHNOLOGIES, INC.**

July 18, 2023

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the Application of **Heirloom Carbon Technologies, Inc.** (the “Applicant”) for financial assistance under the Sales and Use Tax Exclusion Program, as established in Public Resources Code Section 26011.8; and

WHEREAS, the Applicant qualifies as a Participating Party under Public Resources Code Section 26011.8 and Revenue and Taxation Code Section 6010.8; and

WHEREAS, the Applicant’s qualifying tangible personal property meets the requirements of a Project under Public Resources Code Section 26011.8 and Revenue and Taxation Code Section 6010.8 (the “Project”); and

WHEREAS, after the Authority approves an Application, the Authority enters into a Regulatory Agreement, as described in Authority Regulations Section 10035(a), with the Applicant for the Project; and

WHEREAS, the Applicant has stated the Project has an estimated cost not to exceed \$5,232,013 over a period of three (3) years; and

WHEREAS, the Applicant asserts that this form of financial assistance will enable it to avail itself of the benefits of an exclusion from sales and use taxes relative to the Project pursuant to Revenue and Taxation Code Section 6010.8; and

WHEREAS, the approval of the terms of the Regulatory Agreement and authority for the Executive Director or Chair of the Authority to execute the necessary documents to effectuate the Regulatory Agreement is now sought;

NOW, THEREFORE, BE IT RESOLVED by the California Alternative Energy and Advanced Transportation Financing Authority, as follows:

Section 1. The Regulatory Agreement includes a Project within the meaning of Public Resources Code Section 26003(a)(8)(B).

Section 2. The Regulatory Agreement constitutes financial assistance within the meaning of Public Resources Code Section 26003(a)(6).

Section 3. The Applicant is a participating party within the meaning of Public Resources Code Section 26003(a)(7).

Section 4. The Executive Director or Chair of the Authority (the “Authorized Signatories”) are hereby authorized for and on behalf of the Authority to approve any changes to the Project as the Authorized Signatories deem appropriate, provided that the amount of the

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qualifying tangible personal property to be purchased for the Project may not be increased above the amount approved by the Authority.

Section 5. The proposed form of the Regulatory Agreement between the Applicant and the Authority, as filed with the Authority prior to this public meeting, is hereby approved. For, on behalf and in the name of the Authority, the Authorized Signatories are hereby authorized and directed to execute, acknowledge, and deliver to the Applicant the Regulatory Agreement in substantially the form filed with or approved by the Authority.

The Regulatory Agreement may contain insertions, deletions or changes as the Authorized Signatories executing the Regulatory Agreement may require or approve, including particular information inserted in substantial conformance with the staff summary and in the Application to the Authority. The approval of the Regulatory Agreement will be conclusively evidenced by the execution and delivery of the final Regulatory Agreement.

The Authority understands and agrees that, pursuant to the terms of the Regulatory Agreement, the obligations of the Applicant, under some circumstances, may be carried out or assumed by a successor or assignee entity, or by an affiliate of the Applicant.

Section 6. Each of the Authorized Signatories, acting alone, is hereby authorized and directed to do any and all ministerial acts, including, without limitation, the execution and delivery of any and all documents and certificates they may deem necessary or advisable to consummate the Regulatory Agreement and otherwise effectuate the purposes of this Resolution.

Section 7. The Applicant shall ensure that all of the qualifying tangible personal property acquired as part of the Project that is listed in the semi-annual reports provided to the Authority pursuant to the Regulatory Agreement will be installed, maintained and operated in compliance with all applicable local, state and federal laws.

Section 8. The Regulatory Agreement shall only apply to qualifying tangible personal property acquired as part of the Project that the Applicant certifies will be installed, maintained and operated at facilities physically located within the State of California.

Section 9. Neither the adoption by the Authority of this Resolution for the Applicant nor the Regulatory Agreement may be referred to in any application before any governmental agency as evidence of the feasibility, practicality or suitability of the Project and may not be referred to in any application for any required permission or authority to acquire, construct or operate the Project.

Section 10. This Resolution is effective immediately and will remain in full force and effect unless the Regulatory Agreement is not executed within thirty (30) days of the date of this Resolution. The Executive Director may extend the thirty (30) days if necessary.