

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

Board Meeting Day: Tuesday, June 17, 2025

Request to Approve Project for a Sales and Use Tax Exclusion¹

**Vast Space, LLC
Application No. 25-SM025**

Prepared By: *Joshua Moua, Program Analyst*

SUMMARY

Applicant: Vast Space, LLC

Location: Long Beach, Los Angeles County

Industry: Space Station Modules Manufacturing

Project: Upgrade of an Existing Space Station Modules Manufacturing Facility
(Advanced Manufacturing)

Project Pool: Small

Value of Qualified Property	Estimated Sales and Use Tax Exclusion (“STE”) Amount ²
\$8,200,000	\$695,360

Estimated Net Benefit ³	Dollar Value	Points Earned
Estimated Fiscal Benefits	\$2,242,015	3,224
Estimated Environmental Benefits	N/A	25
Additional Benefits	N/A	164
Total	\$2,242,015	3,413
Estimated Quantifiable Net Benefit	\$1,546,655	N/A

Competitive Criteria Score: 79

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 8.48%.

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).)

THE APPLICANT

Vast Space, LLC (the “Applicant”), a Delaware limited liability company formed in 2021, is headquartered in Long Beach. The Applicant manufactures a zero-gravity space station used for artificial gravity experiments to further establish humanity’s place in space.

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

- Jed McCaleb (90.42%)

The company officers of the Applicant are:

- Maxime Haot, Chief Executive Officer
- Sid Hariharan, Chief Financial Officer

THE PROJECT

Vast Space, LLC requests a sales and use tax exclusion (“STE”) award to upgrade its existing space station modules facility located in Long Beach (the “Project”).

The Applicant states the Project consists of three buildings that function as a single campus. The Applicant is manufacturing its Haven-1 Module, a zero-gravity space station designed to support research and human habitation in space. The objective of the Haven-1 is to provide an alternative to the International Space Station. The space station modules will feature dedicated lab and testing space, larger crew quarters and livable space with greater connectivity for communications with Earth. According to the Applicant, the Haven-1 will have greater payload capacity, while being safer and more reliable, cost effective, and versatile than current technologies.

The Applicant’s process will integrate Computer Numerical Control (“CNC”) machines to produce module parts with tolerances of one thousandth of an inch, and Variable Polarity Plasma Arc Welding, which offers superior control over thermal input, resulting in higher quality welding, integrity, and reducing costs when compared to traditional welding methods. The Applicant states it will use additive technology, specifically laser powder bed fusion, to enable engineers to produce net-shape parts from digital models instead of machining components from large pieces of raw material to minimize material waste. Moreover, the Applicant indicates that there are a number of advanced materials being used such as Dyneema composites, PTFE-coated screens, activated carbon, thermal paints, and specialized insulation materials. The Applicant intends to prioritize sustainability by recycling materials, using sustainable chemicals and materials, and optimizing resource consumption.

Anticipated Costs of Qualified Property

Anticipated Qualified Property Purchases	Cost
Sapphire Metal 3D Printer	\$700,000
Friction Stir Weld Machine	\$5,000,000
Oven	\$600,000
CNC Machines	\$1,750,000
Crane for Multiax Cell	\$150,000
Total	<u>\$8,200,000</u>

Note: The Qualified Property purchases reported in the Application and shown here in the staff report are estimated costs. In accordance with 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, 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's facility is operational and will not require significant construction to install projected Qualified Property. The Applicant anticipates procurement throughout 2025 and having Qualified Property placed in service no later than March 2026.

Status of Permits/Other Required Approvals

The Applicant is awaiting final inspection from the City of Long Beach for approval of two business licenses.

COMPETITIVE CRITERIA SCORE

The Applicant received 79 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 (4 of 50 points)**. The Applicant's Project is located in Los Angeles County, which has an average annual unemployment rate of 5.5%.⁴ When compared to the statewide average annual unemployment rate of 5.3%, the Project location earned the Applicant four points.

⁴ Unemployment rates are based on data available in October 2024.

3. **Job Creation (60 of 75 points)**. The Applicant anticipates the Project will support a total of 1,284 production-related jobs at its Facility. CAEATFA estimates that approximately 12.41 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 60 points.
4. **California Headquarters (15 of 15 points)**. The Applicant maintains its corporate headquarters in Long Beach, California, 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, as defined by CAEATFA, zero points are awarded.

PROJECT EVALUATION

Project Benefits

The Project received a Total Score of 3,413 points, which exceeds the required 1,000-point threshold, and includes an Environmental Benefits Score of 25 points, exceeding the 20-point threshold.

1. **Fiscal Benefits (3,224 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 \$2,242,015 resulting in a Fiscal Benefits score of 3,224.
2. **Environmental Benefits (25 points)**. The Project earned an Environmental Benefits Score of 25. The Applicant received points in the following categories:
 - A. **Environmental Sustainability Plan (5 of 5 points)**. The Applicant has an environmental sustainability plan that encompasses using sustainable materials, waste management, conserving energy, and emissions reduction.
 - B. **Solid Waste (20 of 30 points)**. The Applicant anticipates the Project will result in a 20% reduction in solid waste produced relative to Applicant's previous manufacturing process. This is achieved by using aluminum for its product, which requires less consumption than materials such as stainless steel.

3. **Additional Benefits (164 points)**. Applicants may earn “Additional Benefits” points in the categories listed below. The Applicant received 164 Additional Benefits points.
- A. **Production Jobs (60 of 75 points)**. The Applicant anticipates the Project will support a total of 1,284 production-related jobs at its Facility. CAEATFA estimates that approximately 12.41 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 60 points.
 - B. **Construction Jobs (0 of 75 points)**. The Applicant anticipates the Project will support zero construction jobs at its Facility. CAEATFA estimates that zero 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 zero points.
 - C. **Unemployment (4 of 50 points)**. The Applicant’s Project is located in Los Angeles County, which has an average annual unemployment rate of 5.5%. When compared to the statewide average annual unemployment rate of 5.3%, the Project location earned the Applicant four points.
 - D. **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 developing the space station modules.
 - E. **Workforce Partnerships (25 of 25 points)**. The Applicant has a partnership with the UCLA Space Medicine Fellowship Program for the purpose of assisting in the training of potential future workers.
 - F. **Industry Cluster (25 of 25 points)**. Los Angeles County identified the industry associated with this Application as an industry cluster for the Project location’s region.
 - G. **Benefits and Fringe Benefits (25 of 25 points)**. The Applicant states it provides medical, health, dental, & vision benefits, bonuses, retirement contributions, dependent care and assistance reimbursement, gym subsidies, employee discounts, and paid leave to its employees, earning the Applicant 25 points.

LEGAL STATUS QUESTIONNAIRE

Staff has reviewed the Applicant’s responses to the questions contained on the Legal Status Questionnaire. The Executive Director, in consultation with legal counsel, has determined that the legal issues disclosed do not affect the financial viability or legal integrity of the Applicant.

CAEATFA FEES

In accordance with STE Program regulations,⁵ the Applicant paid CAEATFA an Application Fee of \$4,100 and will pay CAEATFA an Administrative Fee of \$32,800 should the Applicant be approved for an award.

RECOMMENDATION

Staff recommends the approval of Resolution No. 25-SM025-01 for Vast Space, LLC's purchase of qualifying tangible personal property in an amount not to exceed \$8,200,000, anticipated to result in an approximate STE value of \$695,360. The initial term of the Regulatory Agreement will be for a period of three years, until June 17, 2028, and the remainder shall be for a period of five years, until June 17, 2030, for providing annual compliance reports.

⁵ California Code of Regulations Title 4, Division 13, Section 10036

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A
REGULATORY AGREEMENT WITH VAST SPACE, LLC**

June 17, 2025

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the Application of **Vast Space, LLC** (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 \$8,200,000 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 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

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the date of this Resolution. The Executive Director may extend the thirty (30) days if necessary.