

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

Board Meeting Date: Tuesday, June 17, 2025

***Request to Approve Project for a Sales and Use Tax Exclusion<sup>1</sup>***

**Fuse Energy Technologies Corp  
Application No. 25-SM016**

Prepared By: *Willy Chen, Program Analyst*

**SUMMARY**

**Applicant:** Fuse Energy Technologies Corp

**Location:** San Leandro, Alameda County

**Industry:** Power Modules Manufacturing

**Project:** Expansion of an Existing Pulsed Power Modules Manufacturing Facility  
(Advanced Manufacturing)

**Project Pool:** Small

Value of Qualified Property	Estimated Sales and Use Tax Exclusion (“STE”) Amount <sup>2</sup>
\$1,040,162	\$88,206

Estimated Net Benefit <sup>3</sup>	Dollar Value	Points Earned
Estimated Fiscal Benefits	\$138,410	1,569
Estimated Environmental Benefits	N/A	52
Additional Benefits	N/A	155
<b>Total</b>	<b>\$138,410</b>	<b>1,776</b>
<b>Estimated Quantifiable Net Benefit</b>	<b>\$50,204</b>	<b>N/A</b>

**Competitive Criteria Score:** 75

**Staff Recommendation:** Approval

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

<sup>2</sup> This amount is calculated based on the average statewide sales tax rate of 8.48%.

<sup>3</sup> 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**

Fuse Energy Technologies Corp (the “Applicant”), formed in Delaware as a corporation, in 2018, is headquartered in San Leandro, California. The Applicant specializes in developing pulsed power drivers utilizing a magnetized liner inertial fusion (MagLIF) approach to advance fusion energy commercialization. Its core product, the "TITAN" module, generates fast pulses of high energy essential for creating fusion environments, serving as a critical infrastructure component for fusion research and energy applications.

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

- Jean-Cristoph Btaiche (16%)

**The corporate officers of the Applicant are:**

- Jean-Cristoph Btaiche, CEO
- James Owen, Head of Federal Business
- Laura Thomas, Chief Strategy Officer
- Liam Corrigan, Head of Finance
- Sam Yarosh, Head of Commercial Operations

**THE PROJECT**

Fuse Energy Technologies Corp requests a sales and use tax exclusion (“STE”) award to expand its existing power modules manufacturing facility located in San Leandro (the “Project”).

The Project focuses on producing the TITAN pulsed power drivers, a critical infrastructure component necessary for achieving high-energy fusion environments. According to the Applicant, the TITAN is an advanced version of the standard Marx Generator, an electrical device used to generate high-voltage pulses first made over a century ago. The Applicant has pioneered its Marx Generator architecture, the Impedance Matched Marx Generator (IMG), which it states will significantly improve energy delivery efficiency, enhance system durability, and optimize performance for fusion applications. The Applicant states that at full scale, TITAN pulsed power drivers will play a critical role in achieving a net energy-positive fusion reaction, producing more energy than is drawn from the grid.

The Project incorporates cutting-edge advancements in plasma physics, switch technology, radiation simulation, and high-precision engineering. To support the manufacturing of TITAN devices, the Applicant has developed custom materials and components that exceed the tolerances and performance capabilities of off-the-shelf alternatives. This includes in-house precision machining of insulating materials, high-voltage switches, and specialized capacitors that are essential for sustaining repeated high-energy pulses. Advanced materials such Tungsten Copper alloy is used to allow repeated high energy firing of the switches without material degradation. Additionally, the Applicant is investing in robotic assembly automation to improve production rates,

reducing manual assembly of complex components while ensuring precision and scalability.

**Anticipated Costs of Qualified Property**

<b>Anticipated Qualified Property Purchases</b>	<b>Cost</b>
Facility Organization Equipment	\$55,370
Facility Warehousing Equipment	\$42,192
General Purpose Machinery Equipment	\$33,000
TITAN General Machinery Equipment	\$240,000
Titan Metal Machinery Equipment	\$669,600
<b>Total</b>	<b>1,040,162</b>

*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**

According to the Applicant, it currently has one furnished facility in San Leandro. The Project involves expanding its manufacturing capabilities through the development of a newly acquired 25,000-square-foot facility adjacent to the current facility. The Applicant began facility setup and equipment procurement in March 2025 and expects full-scale assembly of the first TITAN device to commence in June 2025.

**Status of Permits/Other Required Approvals**

According to the Applicant's current understanding of the manufacturing process and facility requirements, no additional permits are needed at this time.

**COMPETITIVE CRITERIA SCORE**

The Applicant received 75 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 (0 of 50 points).** The Applicant's Project is located in Alameda County, which has an average annual unemployment rate of 4.7%.<sup>4</sup> When compared to the statewide average annual unemployment rate of 5.3%, the Project location earned the Applicant zero points.

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<sup>4</sup> 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 33 production-related jobs at its Facility. CAEATFA estimates that approximately 1.42 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 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, as defined by CAEATFA, zero points are awarded.

## **PROJECT EVALUATION**

### **Project Benefits**

The Project received a Total Score of 1,776 points, which exceeds the required 1,000-point threshold, and includes an Environmental Benefits Score of 52 points, exceeding the 20-point threshold.

1. **Fiscal Benefits (1,569 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 \$138,410, resulting in a Fiscal Benefits score of 1,569.
2. **Environmental Benefits (52 points)**. The Project earned an Environmental Benefits Score of 52. The Applicant received points in the following categories:
  - A. **Energy Consumption (17 of 30 points)**. The Applicant anticipates the Project will result in a 17% reduction in energy consumption compared to the Applicant's previous manufacturing process. This will be achieved by implementing more efficient machinery that reduces the total machining time required for each TITAN device. The new process lowers the number of machines needed while increasing operational hours per day, leading to improved throughput and optimized energy use. Additionally, the upgraded equipment enhances precision

and reliability, reducing waste and rework, further contributing to overall energy savings.

- B. Solid Waste (19 of 30 points).** The Applicant anticipates the Project will result in a 19% reduction in solid waste produced relative to the industry standard manufacturing process. This will be achieved by bringing key manufacturing processes in-house, including the production of switches, polycarbonate discs, and other machined components. By controlling these processes directly, the Applicant can optimize material usage, minimize defective parts, and reduce excess scrap. Additionally, improved machining precision and customized production techniques will further decrease material waste.
- C. Air Pollutants (17 of 30 points).** The Applicant anticipates the Project will result in a 17% reduction in air pollutants produced relative to the Applicant's previous manufacturing process. This will be achieved by bringing the production of key equipment in-house, which reduces the reliance on external suppliers. By manufacturing locally, the Applicant can eliminate several supply chain steps, notably those related to the transportation of materials and components, which otherwise contribute to air pollution through fossil fuel consumption.
- 3. Additional Benefits (155 points).** Applicants may earn "Additional Benefits" points in the categories listed below. The Applicant received 155 Additional Benefits points.
- A. Production Jobs (60 of 75 points).** The Applicant anticipates the Project will support a total of 33 production-related jobs at its Facility. CAEATFA estimates that approximately 1.42 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 (20 of 75 points).** The Applicant anticipates the Project will support a total of three construction jobs at its Facility. CAEATFA estimates that approximately 0.12 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 20 points.
- C. Unemployment (0 of 50 points).** The Applicant's Project is located in Alameda County, which has an average annual unemployment rate of 4.7%. When compared to the statewide average annual unemployment rate of 5.3%, the Project location earned the Applicant zero 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 pulsed power modules.

- E. Workforce Partnerships (25 of 25 points).** The Applicant has a partnership with the University of California, Berkeley for the purpose of assisting in the training of potential future workers.
- F. Benefits and Fringe Benefits (25 of 25 points).** The Applicant states it provides medical, health, dental, & vision benefits, bonuses, profit sharing, gym subsidies, and paid leave to its employees, earning the Applicant 25 points.

**LEGAL STATUS QUESTIONNAIRE**

The Applicant had nothing to report on the Legal Status Questionnaire.

**CAEATFA FEES**

In accordance with STE Program regulations,<sup>5</sup> the Applicant paid CAEATFA an Application Fee of \$662.08 and will pay CAEATFA an Administrative Fee of \$15,000 should the Applicant be approved for an award.

**RECOMMENDATION**

Staff recommends the approval of Resolution No. 25-SM016-01 for Fuse Energy Technologies Corp's purchase of qualifying tangible personal property in an amount not to exceed \$1,040,162, anticipated to result in an approximate STE value of \$88,206. 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.

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<sup>5</sup> California Code of Regulations Title 4, Division 13, Section 10036

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A  
REGULATORY AGREEMENT WITH FUSE ENERGY TECHNOLOGIES CORP**

**June 17, 2025**

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the Application of **Fuse Energy Technologies Corp** (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 \$1,040,162 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



**Agenda Item – 4.A.21**  
**Resolution No. 25-SM016-01**

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