

**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>***

**Mango Materials, Inc.  
Application No. 25-SM018**

Prepared By: *Jeannie Yu, Program Analyst*

**SUMMARY**

**Applicant:** Mango Materials, Inc.

**Location:** Elmira, Solano County

**Industry:** Biopolymer Pellets Manufacturing

**Project:** Update and Expansion of an Existing Biopolymer Pellets Manufacturing Facility  
(Advanced Manufacturing)

**Project Pool:** Small

Value of Qualified Property	Estimated Sales and Use Tax Exclusion (“STE”) Amount <sup>2</sup>
\$23,065,760	\$1,995,976

Estimated Net Benefit <sup>3</sup>	Dollar Value	Points Earned <sup>4</sup>
Estimated Fiscal Benefits	\$4,014,278	2,052
Estimated Environmental Benefits	N/A	120
Additional Benefits	N/A	135
<b>Total</b>	<b>\$4,014,278</b>	<b>2,307</b>
<b>Estimated Quantifiable Net Benefit</b>	<b>\$2,058,301</b>	<b>N/A</b>

**Competitive Criteria Score:** 45

<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).)

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

**Staff Recommendation:** Approval

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**THE APPLICANT**

Mango Materials, Inc. (the “Applicant”) is a Delaware corporation that formed in 2012 and headquarter in Elmira, Solano County.

The Applicant received a BioMADE contract administered by the Department of Defense in the amount of approximately \$1.5 million. The Applicant signed an agreement for the contract award in July of 2024.

The Applicant received a notice of intent from the Department of Energy to receive an award in the amount of \$1 million on June 1, 2025. According to the Applicant, the contract has not been signed yet.

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

- Molly Morse (16.52%)
- Anne Schauer-Gimenez (12.814%)
- Allison Pieja (12.814%)

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

- Molly Morse, Chief Executive Officer
- Anne Schauer-Gimenez, Chief Operating Officer
- Allison Pieja, Chief Technology Officer
- Kristen Barton, Chief Business Officer

**THE PROJECT**

Mango Materials, Inc. requests an STE award to update and expand its existing biopolymer pellets manufacturing facility located in Elmira (the “Project”).

The Applicant processes biopolymer polyhydroxyalkanoate (“PHA”) into pellet form for use in various applications, such as injection-molded products and textile fibers. According to the Applicant, it utilizes a novel gas fermentation, biomanufacturing technology that converts methane gas into PHA. PHA utilizes methane-consuming bacteria, known as methanotrophs, which are provided with methane and oxygen gases. These bacteria convert these gases into a biopolymer that serves as a biodegradable plastic.

The Applicant is an industrial biotech business that is sustainable due to methane gas being an abundant, low-cost feedstock. The Applicant states its system is fully automated through the fermentation, compounding, extruding, and pelletizing phases. Compared to the Applicant’s old PHA manufacturing process, the new system will handle all processes from start to finish with much more efficiency. In addition, the

Applicant will utilize specialized tools such as gas chromatography to evaluate its fermentation process and a differential scanning calorimeter to assess pellet quality.

### **Anticipated Costs of Qualified Property**

<b>Anticipated Qualified Property Purchases</b>	<b>Cost</b>
Polymer Extruder	\$886,500
Material Handling Equipment for Extrusion	\$858,820
Pelletizing and Bagging Equipment	\$254,576
Auxiliary Equipment	\$186,558
Structure and Structural Infrastructure	\$233,783
Electrical Equipment	\$65,000
Bioreactors	\$4,850,411
Media Preparation Equipment	\$2,043,778
Seed Fermentation Equipment	\$684,139
Tanks	\$379,195
Downstream Processing Equipment	\$9,623,000
Utility Equipment	\$3,000,000
<b>Total</b>	<b><u>\$23,065,760</u></b>

*Note: The Qualified Property purchases reported in the Application and shown here in staff's 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, 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 its timeline is as follows:

#### **Compounding Equipment**

- 3Q 2025: Begin compounding site preparation
- 4Q 2025: Commission compounding equipment and begin production
- 1Q-2Q 2026: Ramp-up period for compounding equipment
- 2Q 2026: Achieve steady-state compounding production

#### **Expansion of Manufacturing Plant**

- 1Q 2026: Complete frontend loading 2 engineering phase
- Early 2027: Begin construction of expanded manufacturing operation
- 2Q 2027: Place order for PHA manufacturing equipment
- Early 2028: Equipment placed into operation
- 2Q 2028: Achieve steady-state production for expanded operation

**Status of Permits/Other Required Approvals**

According to the Applicant, it is currently working on the permitting process for the build out of the compounding operation. The Applicant will begin the permitting for the expansion of the PHA manufacturing operation by 2026, aiming to secure approvals in time to start construction in early 2027.

**COMPETITIVE CRITERIA SCORE**

The Applicant received 45 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's is located in Solano County, which has an average annual unemployment rate of 5.2%.<sup>5</sup> When compared to the statewide average annual unemployment rate of 5.3%, the Project location earned the Applicant zero points.
3. **Job Creation (30 of 75 points)**. The Applicant anticipates the Project will support a total of 45 production-related jobs at its Facility. CAEATFA estimates that approximately 3.62 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 30 points.
4. **California Headquarters (15 of 15 points)**. The Applicant maintains its corporate headquarters in Elmira, 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.

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<sup>5</sup> Unemployment rates are based on data available in October 2024.

## **PROJECT EVALUATION**

### **Project Benefits**

The Project received a Total Score of 2,307 points, which exceeds the required 1,000-point threshold, and includes an Environmental Benefits Score of 120 points, exceeding the 20-point threshold.

1. **Fiscal Benefits (2,052 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 \$4,014,278, resulting in a Fiscal Benefits score of 2,052.
2. **Environmental Benefits (120 points)**. The Project earned an Environmental Benefits Score of 120. The Applicant received points in the following categories:
  - A. **Energy Consumption (25 of 30 points)**. The Applicant anticipates the Project will result in a 49% reduction in energy consumption compared to the industry standard manufacturing process. This is due to less energy being consumed to process PHA versus polyethylene or polypropylene.
  - B. **Solid Waste (30 of 30 points)**. The Applicant anticipates the Project will result in a 75% reduction in solid waste produced relative to the industry standard manufacturing process. This is achieved by producing a product free of fossil fuels.
  - C. **Hazardous Waste (30 of 30 points)**. The Applicant anticipates the Project will result in a 90% reduction in the hazardous waste produced relative to the industry standard manufacturing process. This is achieved by using mechanical lysis techniques to recover PHA compared to solvent extraction.
  - D. **Air Pollutants (30 of 30 points)**. The Applicant anticipates the Project will result in an 80% reduction in air pollutants produced relative to the industry standard manufacturing process of producing polypropylene.
3. **Additional Benefits (135 points)**. Applicants may earn "Additional Benefits" points in the categories listed below. The Applicant received 135 Additional Benefits points.
  - A. **Production Jobs (30 of 75 points)**. The Applicant anticipates the Project will support a total of 45 production-related jobs at its Facility. CAEATFA estimates that approximately 3.62 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 30 points.
  - B. **Construction Jobs (30 of 75 points)**. The Applicant anticipates the Project will support a total of 33 construction jobs at its Facility. CAEATFA estimates that

approximately 2.69 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 30 points.

- C. Unemployment (0 of 50 points).** The Applicant's Project is located in Solano County, which has an average annual unemployment rate of 5.2%. 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 the production of PHA pellets.
- E. Industry Cluster (25 of 25 points).** The City of Vacaville identified the industry associated with this Application as an industry cluster for the Project location's region.
- F. Benefits and Fringe Benefits (25 of 25 points).** The Applicant states it provides medical, health, dental & vision benefits, bonuses, retirement contributions, dependent care & assistance reimbursement, transportation subsidies, education reimbursement, 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>6</sup> the Applicant paid CAEATFA an Application Fee of \$10,000 and will pay CAEATFA an Administrative Fee of up to \$92,263.04 should the Applicant be approved for an award.

#### **RECOMMENDATION**

Staff recommends the approval of Resolution No. 25-SM018-01 for Mango Materials, Inc.'s purchase of qualifying tangible personal property in an amount not to exceed \$23,065,760, anticipated to result in an approximate STE value of \$1,995,976.<sup>7</sup> 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 seven years and six months, until December 17, 2032, for providing annual compliance reports.

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<sup>6</sup> California Code of Regulations Title 4, Division 13, Section 10036

<sup>7</sup> Partial STE values may not add up correctly to the total STE value due to rounding issues between the different pool allocations.

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A  
REGULATORY AGREEMENT WITH MANGO MATERIALS, INC.**

**June 17, 2025**

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the Application of **Mango Materials, 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 \$23,065,760 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.23**  
**Resolution No. 25-SM018-01**

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