

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

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

**Swift Solar, Inc.  
Application No. 22-SM021**

**Tuesday, June 21, 2022**

Prepared By: *Ashley Emery, Program Manager*

**SUMMARY**

**Applicant** – Swift Solar, Inc.

**Location** – San Carlos, San Mateo County

**Industry** – Solar Photovoltaic Manufacturing

**Project** – New Solar Photovoltaic Manufacturing Facility (Advanced Manufacturing)

<b>Value of Qualified Property</b>	<b>Estimated Sales and Use Tax Exclusion (“STE”) Amount<sup>2</sup></b>
\$8,490,000	\$721,650

<b>Estimated Net Benefit<sup>3</sup></b>	<b>Dollar Value</b>	<b>Points Earned</b>
Estimated Fiscal Benefits	\$671,440	930
Estimated Environmental Benefits	N/A	90
Additional Benefits	N/A	105
<b>Total</b>	<b>\$671,440</b>	<b>1,125</b>
<b>Estimated Quantifiable Net Benefit</b>	<b>-\$50,210</b>	

**Competitive Criteria Score** – 170

**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 8.5%.

<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**

Swift Solar, Inc. (the “Applicant”), is a Delaware corporation that formed in 2017 to develop perovskite solar cells. The Applicant has been developing its solar photovoltaic (“PV”) technology at its headquarters in San Carlos.

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

- Neon Rainbow LLC (21.4%)
- Sytse Sijbrandij (10%)

The corporate officers of the Applicant are:

- Joel Jean, CEO, Co-founder
- Tomas Leijtens, CTO, Co-founder
- Giles Eperon, CSO, Co-founder
- Max Hoerantner, VP Manufacturing Operations, Co-founder

**THE PROJECT**

Swift Solar, Inc., is requesting an STE award to build a new solar photovoltaic manufacturing facility located in San Carlos (the “Project”). The Applicant explains that its manufacturing process uses advanced materials, perovskite semiconductors, as the primary active layer in the solar cells, as well as proprietary metal oxide and organic small molecule films for its contact layers. According to the Applicant, perovskites can increase the power conversion efficiency, leading to lower installed PV system costs.

The Applicant also states its manufacturing process is more sustainable compared to traditional PV manufacturing processes. The Applicant explains the Project will use less energy compared to crystalline silicon solar cell manufacturing, which requires high temperatures and a slower process, and no water except for a closed-loop chill water, unlike traditional crystalline process, which requires large amounts of water. Additionally, the Applicant explains its dry process requires only small amounts of heavy metals that are easily compacted and recycled compared to crystalline silicon processes. Moreover, Applicant also states that its process can be designed to fully inline in a single, automated production line, with real-time monitoring and feedback, allowing the Applicant to improve production numbers and product performance more rapidly than with traditionally processes.

**ANTICIPATED COSTS OF QUALIFIED PROPERTY**

The anticipated Qualified Property purchases are listed below:

Facility buildout	\$2,200,000
Laser scribes	\$990,000
Physical vapor deposition tools	\$2,200,000
Solution coating tools	\$1,000,000
Chemical vapor deposition tools	\$900,000
Lamination tools	\$400,000

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Solar cell testing tools (solar simulator and electronics)	\$500,000
Environmental chambers	\$300,000
<b>Total</b>	<b><u>\$8,490,000</u></b>

*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 began with a small-scale pilot prototype manufacturing line in early 2022 and plans to begin procurement of long-lead equipment in late 2022, with construction taking place throughout 2023.

**STATUS OF PERMITS/OTHER REQUIRED APPROVALS**

The Applicant anticipates needing general building permits associate with buildout, business registrations and licenses, and hazardous waste generator permits, all of which are anticipated to be received in time for Project completion.

**COMPETITIVE CRITERIA SCORE**

The Applicant received 170 Competitive Criteria points as follows:

1. **Environmental Benefits (100 of 100 points)**. The Application has a Project that produces an Alternative Source product, component, or system, and, therefore, 100 points are awarded.
2. **Unemployment (0 of 50 points)**. The Applicant's Project is located in San Mateo County, which has an average annual unemployment rate of 4.8%.<sup>4</sup> When compared to the statewide average annual unemployment rate of 7.89%, the Project location earned the Applicant zero points.
3. **Job Creation (55 of 75 points)**. The Applicant anticipates the Project will support a total of 67 production-related jobs at its Facility. CAEATFA estimates that approximately six of these jobs will be attributable to a marginal increase in jobs

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<sup>4</sup> Unemployment rates are based on data available in December 2021.

created due to the STE. Based on the amount of STE per estimated number of jobs created, the Applicant earned 55 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 1,125 points, which exceeds the required 1,000-point threshold, and a total Environmental Benefits Score of 90 points, which exceeds the 20-point threshold.

- A. **Fiscal Benefits (930 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 \$671,440, resulting in a Fiscal Benefits score of 930.
- B. **Environmental Benefits (90 points)**. The Project earned an Environmental Benefits Score of 90. The Applicant received points in the following categories:
  1. **Energy Consumption (30 of 30 points)**. The Applicant anticipates the Project will result in a 90% reduction in energy consumption compared to the industry standard manufacturing process. The Applicant states perovskites via vapor transport requires significantly lower temperatures and, therefore, energy consumption.
  2. **Water Use (30 of 30 points)**. The Applicant anticipates the Project will result in a 90% reduction in water use relative to the industry standard

manufacturing process. The Applicant explains the Project does not use any water in the process except for closed-loop chill water.

- 3. Hazardous Waste (30 of 30 points).** The Applicant anticipates the Project will result in an 80% reduction in the hazardous waste produced relative to the industry standard manufacturing process. The Applicant explains the Project uses a dry process that require only small amounts of heavy metals that are easily compacted and recycled compared to crystalline silicon processes.
- C. Additional Benefits (105 points).** Applicants may earn additional points for their Total Score. The Applicant received 105 additional points.
- 1. Production Jobs (55 of 75 points).** The Applicant anticipates the Project will support a total of 67 production-related jobs at its Facility. CAEATFA estimates that approximately six 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 55 points.
  - 2. Construction Jobs (0 of 75 points).** The Applicant anticipates the Project will support a total of five construction jobs at its Facility. CAEATFA estimates that approximately 0.47 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 zero points.
  - 3. Unemployment (0 of 50 points).** The Applicant’s Project is located in San Mateo County, which has an average annual unemployment rate of 4.8%. When compared to the statewide average annual unemployment rate of 7.89%, the Project location earned the Applicant zero 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 solar PV manufacturing.
  - 5. Benefits and Fringe Benefits 25 of 25 points).** The Applicant states it provides medical, health, dental, vision, retirement contributions, dependent care and assistance reimbursement, transportation subsidies, education reimbursement, and paid leave benefits 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 CAEATFA regulations,<sup>5</sup> the Applicant has paid CAEATFA an Application Fee of \$4,245 and will pay CAEATFA an Administrative Fee of up to \$33,960.

**RECOMMENDATION**

Staff recommends the approval of Resolution No. 22-SM021-01 for Swift Solar, Inc.’s purchase of qualifying tangible personal property in an amount not to exceed \$8,490,000 anticipated to result in an approximate STE value of \$721,650.

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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 SWIFT SOLAR, INC.**

**June 21, 2022**

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the Application of **Swift Solar, 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 \$8,490,000 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

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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.