

**To:** Office of Planning and Research  
 PO Box 3044  
 1400 Tenth Street, Room 113  
 Sacramento, CA 95812-3044

**From:** California Energy Commission  
 1516 Ninth Street, MS-48  
 Sacramento, CA 95814

**Project Applicant:** Winston Cone Optics, Inc.

**Project Title:** Low-Cost Nontracking Asymmetric Shadeless Solar Thermal Collector for Industrial Process Heating

**Project Location:**

Address	City	County
4225 Hospital Rd	Atwater 95301	Merced
2411 Baumann Ave	San Lorenzo 94580	Alameda

**Description of Nature, Purpose and Beneficiaries of Project:**

The purpose of this project is to develop a low-cost, high-efficiency solar thermal collector for industrial process heating by using a unique asymmetric nonimaging optical design and scaling up the technology through iterative demonstrations at an existing University of California, Merced research facility located on a fully developed property in Atwater, California and an industrial host site owned by Tyson Foods in San Lorenzo, California. The project will consist of rapid iterative scale-ups starting with an approximately 5 square meter prototype at the research facility, building to a 50 square meter pilot array at the research facility, and culminating in the 500 square meter rooftop demonstration at the industrial host site. In addition, the project team will assess the best storage technology for the system, which may include pressurized hot water storage or a phase-change thermal energy storage. The solar array alone is expected to replace the steam heat source used to indirectly heat water for sanitation and processing and offset natural gas consumption of the plant by avoiding the natural gas boiler. Implementation of this system at the industrial site will generate approximately 350,000 kWh (11,945 therms), provide natural gas savings on the order of 411,764 kWh (14,053 therms), and gross savings of \$10,400 per year (simple payback of 7.2 years). Each square meter of installed collector area will avoid 329 pounds of equivalent carbon dioxide emissions, annually. The project is consistent with the California Energy Commission's mission of leading the state to a 100 percent clean energy future.

**Name of Public Agency Approving Project:** California Energy Commission

**Name of Person or Agency Carrying Out Project:** Winston Cone Optics, Inc.

**Exempt Status:** *(check one)*

- Ministerial Exemption (Pub. Resources Code § 21080(b)(1); Cal. Code Regs., tit. 14, § 15268);
- Declared Emergency (Pub. Resources Code § 21080(b)(3); Cal. Code Regs., tit. 14, § 15269(a));
- Emergency Project (Pub. Resources Code § 21080(b)(4); Cal. Code Regs., tit. 14, § 15269(b)(c));
- Categorical Exemption. State type and section number  
Cal. Code Regs., tit. 14, § 15301
- Statutory Exemptions. State code number. PRC § 21080.35
- Common Sense Exemption. (Cal. Code Regs., tit. 14, §15061(b)(3))

**Reasons why project is exempt:**

This project will involve solar thermal research conducted at an existing solar energy research laboratory, the University of California, Merced Castle Research Facility. Therefore, there will be negligible to no expansion of the existing use of the facility. For these reasons, the project will not have a significant effect on the environment. Therefore, the project is categorically exempt under California Code of Regulations, title 14 section 15301.

This project will involve the installation of a solar energy system on the roof of an existing building and pursuant to Public Resources Code section 21080.35 is exempt from CEQA. The installation of the solar thermal collectors will enable the generation of energy for onsite use at a food production facility in the city of San Lorenzo. Associated equipment will not occupy more than 500 square feet of ground surface and will be located on the same parcel as the solar collectors. The project does not involve a federal Clean Water Act permit; streambed alteration permit; or removal of specific required or native trees. For the reasons, this project is statutorily exempt from CEQA under Pub. Res. Code &sect; 21080.35.

The project will involve the installation of solar thermal collectors to provide renewable heat to an on-site boiler at an existing food production facility. The solar thermal system will be a minor alteration to existing facilities/paved areas within the interior of the property, with no expansion beyond the existing dairy processing operation and will not have a significant adverse effect on the environment. The installation and operation of the system will not result in a significant cumulative impact, damage resources within a scenic highway, cause substantial adverse change to the significance of a historical resource, or be located on a listed hazardous waste site. Therefore, the project is categorically exempt under California Code of Regulations, title 14 section 15301.


Each exemption is an independent basis for finding the project exempt.

**Lead Agency**

**Contact Person:**     Kaycee Chang     **Area code/Telephone/Ext:**     916-776-0740    

**If filed by applicant:**

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?  Yes  No

**Signature:**     , Kaycee Chang     **Date:**     04/15/2021     **Title:**     EGSS1    

**Signed by Responsible Agency**

**Signed by Lead Agency**

**Signed by Applicant**

**Date received for filing at OPR:** \_\_\_\_\_