

Notice of Exemption**Form D**

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: General Engineering & Research, L.L.C.

Project Title: Scale-up of Magnetocaloric Materials for High Efficiency Magnetic Refrigeration

Project Location – Specific: 10459 Roselle Street, Suite A

Project Location – City: San Diego, CA 92121

Project Location – County: San Diego

Description of Nature, Purpose and Beneficiaries of Project:

Nature. Under grant Agreement EPC-18-025 with with General Engineering & Research L.L.C., the California Energy Commission will provide a grant of \$1,088,188 to scale-up manufacturing of magnetocaloric materials used in magnetic refrigeration. The grant project includes:

- Install equipment and develop procedures to accommodate 1kg/day production;
- Work with Pacific Northwest National Laboratory to develop new heat treatment technique to reduce processing time/cost;
- Develop processes to form magnetocaloric materials into spheres and thin plates; and
- Optimize processing to meet cost and performance requirements.

Purpose. Magnetic refrigeration can reduce energy consumption over traditional vapor-compression refrigeration technologies, while also eliminating refrigerants with high global warming potential. However, magnetic refrigeration has been limited by the cost, performance, and availability of magnetocaloric materials. This project is intended to demonstrate manufacturing capabilities needed to supply magnetocaloric materials capable of enabling magnetic refrigeration systems as a viable and attractive option for customers.

Beneficiaries. Beneficiaries will include California's electric utilities and their customers (i.e., ratepayers), along with the public at large and the environment. Benefits are intended to include:

- Energy demand reduction, particularly during peak demand for air conditioning on warm days;
- Greater electricity reliability and lower costs, by reducing the energy demand.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: General Engineering & Research, L.L.C.

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.
- Common Sense Exemption. (Cal. Code Regs., tit 14, §15061(b)(3))

Reasons why project is exempt:


The proposed grant project includes installation and demonstration of four systems for low-rate production of magnetocaloric material to be used in refrigeration. These systems are an arc melt rotating disk atomization furnace, vacuum hot press, anneal furnace, and heat treatment technology. The Recipient's existing production facility contains a smaller scale operation having equipment of lower capacity. The new equipment would add to, or replace, existing equipment. Only small modifications to the building interior would be necessary. The CEQA existing facilities exemption applies to operation and minor alteration of existing private structures, facilities, and mechanical equipment involving negligible or no expansion of existing or former use. The proposed project entails minor alteration of an existing private structure and its equipment, and no expansion of the facility in square footage terms. Therefore, this project is exempt under California Code of Regulations, title 14, section 15301, Existing Facilities.

Lead Agency

Contact Person: James Lee **Area code/Telephone/Ext:** 916-445-5301

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:  **Date:** 7/11/2019 **Title:** ECSEI

- Signed by Responsible Agency
- Signed by Lead Agency
- Signed by Applicant

Governor's Office of Planning & Research

JUL 11 2019

Date received for filing at OPR: STATE CLEARINGHOUSE