

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

From: California Energy Commission
715 P Street
Sacramento, CA 95814

Project Applicant: Lawrence Berkeley National Laboratory

Project Title: Line Impedance Network Estimator (LINE) for Grid Mapping via Smart Meters

Project Location:

Address	City	County
180 Turk St	San Francisco 94102	San Francisco
174 Ellis St	San Francisco 94102	San Francisco
TBD	San Jose	
TBD	Oakland	

Description of Nature, Purpose and Beneficiaries of Project:

UC Lawrence Berkeley National Laboratory (UC LBNL) would continue to collaborate with government agencies, including the California Energy Commission; academic institutions, including other UC campuses; and with public and private research facilities to participate in pilot-level planning, design, installation and operational support, and monitoring of energy-saving and/or low-emission equipment and materials on single or small numbers of existing buildings and facilities. Equipment may include building-level electrical distribution, HVAC, solar energy, heat pump, and plumbing systems. Materials may include insulation, windows, and exterior- and roofing-skins.

The purpose of these pilot-level tests would be to advance building technology for superior outcomes in energy savings, human health, and environmental performance at lower costs. Work would typically take place indoors or on the exterior of existing buildings and facilities as well as in established laboratory settings, engineering and assembly shops, or other appropriately designed research facilities. Activities would be consistent with the missions and permitted uses of such settings and would conform to all applicable health, safety, and environmental rules and regulations.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: Lawrence Berkeley National Laboratory

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; Cal. Code Regs., tit. 14, § 15302; Cal. Code Regs., tit. 14, § 15306

- ☐ Statutory Exemptions. State code number.
- ☐ Common Sense Exemption. (Cal. Code Regs., tit. 14, §15061(b)(3))

Reasons why project is exempt:

Authority cited: Sections 21083 and 21110, Public Resources Code. Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.
Lawrence Berkeley National Laboratory

California Code of Regulations, title 14, section 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act (CEQA). The project consists of equipping advanced metering infrastructure (AMI) smart meters with distributed machine learning algorithms and installing them to extrapolate the capacity and topology of secondary distribution lines. The project would involve "minor alteration of existing public or private structures, facilities, mechanical equipment" in a manner consistent with the smart meters' designed and on-going use. These modifications will not result in any expansion of capacity. For these reasons, the proposed work will not have any significant effect on the environment and falls under section 15301.

California Code of Regulations, title 14, section 15302 provides that the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced is categorically exempt from CEQA. This exemption includes the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. Consistent with CEQA Guidelines Section 15302, the project consists of designing and developing a smart meter-based toolset combining machine learning, simulation, and decision support to map distribution line capacity and streamline utility load approvals in existing electrical meters. These modifications will result in negligible and no expansion of capacity to the existing meters. The project would include the installation of electric utility smart meters to passively monitor electric usage in the building. The project therefore involves the "replacement or reconstruction of existing utility systems and/or facilities involving negligible expansion of capacity" and falls under Section 15302.

California Code of Regulations, title 14, section 15306 provides that basic data collection, research, experimental management, and resource evaluation activities which do not result in serious or major disturbance to an environmental resource are categorically exempt from CEQA. This project consists of the installation of electric utility smart meters to passively monitor electric usage in an apartment building at the project site. The data collected will be used for a paper study of a novel method of estimating the capacity of secondary distribution networks through smart meter data acquisition and machine learning. The project will validate and finalize a software tool suitable for large-scale utility deployment including through over-the-air updates to existing smart meters. All applicable health, safety, and environmental rules and regulations would be followed; activities would be conducted by appropriately trained and qualified technicians and researchers. Energy use and emissions of existing facilities would generally be lowered by project implementation.

CEQA Guidelines Section 15300.2 describes a number of exceptions to categorical exemptions, which include the following: location, cumulative impact, significant effect, scenic highway, hazardous waste sites, and historical resources. These exceptions have been determined not to apply to the Project. This Categorical Exemption would not be used in cases where research activities might trigger one or more of the Section 15300.2 exceptions.

Public Agency

Contact Person: Pooya Khodaparast **Area code/Telephone/Ext:** 916-258-2956

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: Pooya Khodaparast **Date:** 7/16/2026 **Title:** CAM

Authority cited: Sections 21083 and 21110, Public Resources Code. Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.
Lawrence Berkeley National Laboratory

☒ Signed by Public Agency

☐ Signed by Applicant

Date received for filing at OPR: _____