



# Air Resources Board



**Matthew Rodriguez**  
Secretary for  
Environmental Protection

**Mary D. Nichols, Chairman**  
1001 I Street • P.O. Box 2815  
Sacramento, California 95812 • [www.arb.ca.gov](http://www.arb.ca.gov)

**Edmund G. Brown Jr.**  
Governor

TO: Dave Ashuckian  
Deputy Director  
Efficiency Division  
Local Assistance and Financing Office  
California Energy Commission  
1516 Ninth Street  
Sacramento, California 95814

FROM: Cynthia Marvin, Chief  
Transportation and Toxics Division

DATE: March 25, 2015

SUBJECT: GREENHOUSE GAS REDUCTION FUND: CALIFORNIA ENERGY  
COMMISSION EXPENDITURE RECORD FOR FISCAL YEAR 2014-15

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Thank you for submitting the final expenditure record (attached) on behalf of the California Energy Commission (CEC) on March 23, 2015, to satisfy the requirements of Senate Bill 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012) for expenditures from the Greenhouse Gas Reduction Fund (Fund). We appreciate the iterative consultation process with CEC staff on the development of this record to support expenditures from the Fund for the Energy Efficiency and Renewable Energy Projects in Public Buildings Program.

This memorandum documents that Air Resources Board (ARB) staff concurred on March 24, 2015 that the attached record is consistent with the statutory requirements of Government Code Section 16428.9 and with ARB's expectations, as documented in the August 6, 2014 final ARB *Interim Guidance to Administering Agencies on Expenditure Record and Fiscal Procedures*.

The CEC Expenditure Record for Fiscal Year 2014-15, along with this memorandum, will be published on the ARB Cap-and-Trade Auction Proceeds website at: [www.arb.ca.gov/auctionproceeds](http://www.arb.ca.gov/auctionproceeds).

If you have any questions concerning this memorandum, please call me at (916) 324-0062 or via email at [Cynthia.Marvin@arb.ca.gov](mailto:Cynthia.Marvin@arb.ca.gov).

## Attachment

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

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**Greenhouse Gas Reduction Fund: Expenditure Record**

**Fiscal Year: 2014-15**

California Energy Commission  
 Energy Efficiency and Renewable Energy Projects in Public Buildings  
 2014-15 Expenditure Record to  
 Expend \$20 Million in Greenhouse Gas Reduction Funds

The purpose of the Energy Commission’s Greenhouse Gas Reduction Fund (GGRF) program is to reduce greenhouse gas emissions by providing low interest loans for energy efficiency and renewable energy generation projects in State buildings including the University of California and the California State University systems. The following is the Energy Commission’s FY 2014-15 expenditure record for GGRF funds.

**1. A description of each expenditure proposed to be made by the state agency pursuant to the appropriation.**

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| Authorizing legislation             | Budget Act of 2014 (Chapter 25, Statutes of 2014), Item 3360-404. The Energy Conservation Assistance Act (ECAA) Program is an existing low-interest loan program administered by the Energy Commission since creation of the Program in 1979. The ECAA Program is authorized by Public Resources Code Section 25410 et. seq. The GGRF expansion of the Program is specifically authorized in Public Resources Code Section 25416(h), which provides GGRF loans for projects in buildings owned and operated by a state agency or entity, including, without limitation, the University of California and California State University. |
| Agency that will administer funding | California Energy Commission.   |
| Amount of proposed expenditure      | \$20 million was appropriated from the GGRF to the Energy Commission’s ECAA Account in the Budget Act of 2014, (Chapter 25, Statutes of 2014, Item 3360-404). Funds in the ECAA Account are continuously appropriated pursuant to Public Resources Code Section 25416(h).   |
| Intended recipients                 | State agencies, the University of California, and the California State University systems.  |
| Project category                    | Energy efficiency and renewable energy generation projects.   |

CEC Expenditure Record for Energy Efficiency and Renewable Energy Projects in Public Buildings

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| <p>Type of projects that will be eligible for funding</p> | <p>Projects with proven energy and demand savings are eligible, provided they meet the eligibility requirements. Examples of fundable projects include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Installation of energy efficient lighting systems including interior and exterior lights;</li> <li>• Heating, ventilation, and air conditioning equipment to reduce energy demand;</li> <li>• Energy management systems and equipment controls;</li> <li>• Energy efficient pumps and motors;</li> <li>• Building insulation;</li> <li>• Energy generation including renewable energy (e.g., PV) and combined heat and power projects with renewable fuel; and</li> <li>• Load shifting projects, such as thermal energy storage.</li> </ul>  |
| <p>Process for selecting projects for funding</p>         | <p>Projects will be considered on a first-come, first-served basis. Technically feasible and economically viable projects that reduce greenhouse gas (GHG) emissions will be funded by providing loans at one percent (1%) interest provided they meet the following criteria:</p> <ul style="list-style-type: none"> <li>• Projects must be technically feasible. A technical feasibility (engineering) study is required to estimate energy savings from the proposed projects that will result in GHG emission reductions.</li> <li>• Projects must be economically viable. The loan can fund up to 100% of the project cost. There are two concepts for economic viability. First, the loan must have a simple payback of a maximum of 17 years. This means that there must be enough annual energy cost savings to repay the project costs (principal) with energy savings, within 17 years. Second, the loan must have a maximum repayment term of 20 years pursuant to Public Resources Code Section 25415. This means that principal and interest must be repaid within a maximum of 20 years. The loan shall be repaid with energy cost savings.</li> </ul> |

**2. A description of how a proposed expenditure will further the regulatory purposes of Division 25.5 (commencing with Section 38500) of the Health and Safety Code, including, but not limited to, the limit established under Part 3 (commencing with Section 38550) and other applicable requirements of law.**

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| <p>How the expenditure is reflected in the three-year Investment Plan</p> | <p>The 2013 Cap-and-Trade Auction Proceeds Investment Plan identified energy efficiency and the clean energy sector for GGRF investments as California’s energy sector is the second largest source of GHG emissions in the state. The Energy Commission’s investments will improve energy efficiency and renewable energy use, resulting in reduced grid connected energy consumption, lower energy costs, and reduced GHG emissions.</p> <p>The First Update to the Climate Change Scoping Plan, released in May 2014, identified key strategies and recommendations to continue reducing GHG emissions and achieve the goals and purposes of AB 32. The recommended actions for the energy sector include near-zero carbon buildings.</p> |
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**3. A description of how a proposed expenditure will contribute to achieving and maintaining greenhouse gas emission reductions pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.**

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| <p>Expected time frame when reductions will be achieved and how expenditure will maintain GHG reductions</p> | <p>Energy efficiency and renewable energy projects at state buildings will provide immediate as well as long-term GHG emission reductions by reducing electricity consumption and natural gas use. Generally, such projects take six months to a year to complete, and provide energy benefits for many years. It is anticipated that projects will start reducing energy consumption and GHG emission beginning the first quarter of 2016 for up to 25 years depending on type and life of the equipment.</p> |
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**4. A description of how the State agency considered the applicability and feasibility of other non-greenhouse gas reduction objectives of Division 25.5 (commencing with Section 38500) of the Health and Safety Code.**

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| <p>Expected co-benefits, particularly environmental, economic, public health and safety</p>                                      | <p>Energy efficiency and renewable energy projects, such as upgrading interior and exterior lights and lighting systems; heating, ventilation, and air conditioning (HVAC) equipment; energy management systems and equipment controls; pumps and motors; building insulation; renewable energy generation; and combined heat and power using renewable fuel, will yield economic, environmental, and public health co-benefits by providing employment and job training opportunities, lowering energy costs, and improving building comfort.</p>  |
| <p>Disadvantaged community benefits, if applicable, as defined in ARB guidelines</p>   | <p>Loan recipients funded by the Energy Commission using GGRF are State agencies, the University of California, and the California State University systems.</p> <p>The Energy Commission’s outreach process includes encouraging eligible applicants to identify projects in DACs and projects providing benefits to DACs including employment opportunities. Further, when the Energy Commission receives inquiries from potential loan applicants, we encourage them to apply for loans to upgrade buildings that are located in disadvantaged communities. When applications are received, if the building is not located in a disadvantaged community, the Energy Commission will seek information from applicants on how the project can benefit a disadvantaged community with economic opportunities for disadvantaged community residents.</p> |
| <p>Percentage of total funding that will be expended for projects that benefit disadvantaged communities, per ARB guidelines</p> | <p>Since the solicitation seeking loan applications has not yet been released, the percentage of funding for projects in or benefitting disadvantaged communities is unknown at this time. The Energy Commission accepts applications from all eligible entities (state agencies, University of California, and California State University). If the project is technically and economically feasible, funds are awarded on a first-come first-served basis. During the application process, the Energy Commission will work with applicants to gather information on disadvantaged community benefits.</p>   |
| <p>How the project will support other AB 32 objectives</p>   | <p>Energy efficiency upgrades and renewable energy projects will reduce electricity and natural gas consumption and thus GHG emissions.</p>   |

**5. A description of how the State agency will document the result achieved from the expenditure to comply with Division 25.5 (commencing with Section 35800) of the Health and Safety Code.**

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| <p>Approach that will be used to document net GHG reductions before and after project completion. Include citations for references that support methodology.</p> | <p>The Energy Commission has over 30 years of experience implementing similar programs and projects. Initial estimates of GHG emission reduction will be based on the feasibility study provided by the applicant, which includes baseline energy consumption, proposed energy efficiency and renewable energy measures, post project electricity and natural gas use reduction, and associated GHG emission reductions. To verify the energy savings and GHG emission reductions, all the borrowers will be required to provide their annual post-project energy consumption for three years. The Energy Commission will report pre- and post-project energy use data and supporting GHG reduction calculations to ARB. The Energy Commission will coordinate with ARB to estimate GHG reductions using an ARB approved methodology</p> <p>The ECAA Program loan terms already require reporting during project construction, and for three years following project construction, to verify continued energy savings. In addition, GGRF-funded loans will include special terms that require borrowers to provide reporting on a schedule and in a format using the data methodology provided by the Energy Commission. In addition, the GGRF loan terms provide that ARB will have specific guidance for reporting requirements. At a minimum, the GGRF loan terms require reporting in three customized categories: greenhouse gas reductions, job creation benefits, and disadvantaged communities.</p> |
| <p>Type of information that will be collected to document project results, as described in ARB guidelines</p>  | <p>For on-going similar programs and projects, the Energy Commission collects data on project location, facility type, existing conditions of lighting and mechanical systems, existing energy consumption, suggested upgrades and/or replacements, project costs, and post-project energy and cost savings. Such information and estimates are backed by a thorough feasibility study completed by a professional engineer. The Energy Commission will collect this same level of information for projects funded through Greenhouse Gas Reduction Fund. The Energy Commission will work with ARB to ensure the captured data and documentation required to support GHG emission reductions calculations, energy savings, and other applicable co-benefits meet the requirements specified in ARB's guidelines.</p>  |
| <p>How the agency will report on program status</p>  | <p>The Energy Commission will provide regular updates on types of projects, project status, expenditures, and benefits in reports prepared according to ARB guidelines. The reports will include project location, expenditure amounts, energy (kWh) and demand</p>   |

CEC Expenditure Record for Energy Efficiency and Renewable Energy Projects in Public Buildings

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|  | (kW) savings, gas savings (therms), energy cost savings, estimates of GHG emission reductions, and quantification of other applicable co-benefits (e.g., jobs created, number and types of renewable energy systems installed, etc.). |
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