

TO: Greenhouse Gas Reduction Fund Program

FROM: Jared Blumenfeld
Secretary for Environmental Protection 

Richard Corey
Executive Officer
California Air Resources Board 

DATE: December 3, 2019

SUBJECT: GREENHOUSE GAS REDUCTION FUND:
CALIFORNIA AIR RESOURCES BOARD

EXPENDITURE RECORD [FOR FISCAL YEAR 2019-20]
FLUORINATED GASES EMISSION REDUCTION INCENTIVE PROGRAM

This Attestation Memorandum documents that the Research Division of the California Air Resources Board completed the attached Expenditure Record on October 27, 2019, for the Fluorinated Gases Emission Reduction Incentive Program. The Expenditure Record is consistent with the statutory requirements of Government Code Section 16428.9 to support expenditures from the Greenhouse Gas Reduction Fund.

This Attestation Memorandum and Expenditure Record will be submitted to CARB for public posting on CARB's website at: www.arb.ca.gov/caclimateinvestments. Questions on this Attestation Memorandum or Expenditure Record may be directed to Aanchal Kohli by email at Aanchal.Kohli@arb.ca.gov or by phone at (916) 323-1510.

Attachment

cc: Aanchal Kohli
Air Resources Engineer
Research Division

California Air Resources Board Expenditure Record for the Fluorinated Gases Emission Reduction Incentive Program

Greenhouse Gas Reduction Fund: Expenditure Record

California Air Resources Board
Fluorinated Gases Emission Reduction Incentive Program

Authorizing legislation: Item 3900-101-3228 of the Budget Act of 2019, as amended by Assembly Bill (AB) 74 (Chapter 23, Statutes of 2019) appropriates to the State Air Resources Board \$1,000,000 for the Fluorinated Gases Emission Reduction Incentive Program.

Element (1) A description of each expenditure proposed to be made by the administering agency pursuant to the appropriation.

<ul style="list-style-type: none"> Agency that will administer funding 	<ul style="list-style-type: none"> California Air Resources Board (CARB)
<ul style="list-style-type: none"> Amount of proposed expenditure and appropriation reference 	<ul style="list-style-type: none"> The total expenditure is \$1,000,000 per Section 3900-101-3228 of the Budget Act of 2019 (Chapter 23, Statutes of 2019). Senate Bill (SB) 1013 (Chapter 375, Statutes of 2018) establishes the Fluorinated Gases Emission Reduction Incentive Program, to be administered by the state board, to promote the adoption of new refrigerant technologies to achieve short- and long-term climate benefits, energy efficiency, and other co-benefits, as specified.
<ul style="list-style-type: none"> Estimated amount of expenditures for administering agency administrative costs 	<ul style="list-style-type: none"> The total expenditure includes \$1,000,000 for Local Assistance costs. Administering agency administrative costs are statutorily limited to \$50,000 or 5% of the program funds.
<ul style="list-style-type: none"> If applicable, identify laws or regulations that govern how funds will be used 	<ul style="list-style-type: none"> SB 1013 (Chapter 375, Statutes of 2018) establishes the Fluorinated Gases Emission Reduction Incentive Program, to be administered by the state board and provides direction on program priorities. All funds will be allocated and managed in accordance with these priorities. SB 1383 (Chapter 395, Statutes of 2016) mandates the reduction of hydrofluorocarbons (HFCs) or fluorinated gases by 40% below 2013 levels by 2030. These emission reduction targets are based on the Short-Lived Climate Pollutant (SLCP) strategy developed pursuant to SB 605

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(Chapter 523, 2014). The SLCP strategy identifies the adoption of low global warming potential (GWP) refrigerant technologies among the most effective measures to reduce HFC emissions and meet the legislative mandates of SB 1383.

<ul style="list-style-type: none"> ▪ Continuation of existing Expenditure Record 	<ul style="list-style-type: none"> ▪ This is a new program that does not have an existing Expenditure Record.
<ul style="list-style-type: none"> ▪ Project type(s) 	<ul style="list-style-type: none"> ▪ Low-GWP refrigerant technologies. ▪ Recycling, recovery, reclamation, or destruction of high-GWP refrigerants.
<ul style="list-style-type: none"> ▪ Describe the projects and/or measures that will be eligible for funding 	<ul style="list-style-type: none"> ▪ Grant funding for new low-GWP refrigerant technologies; retrofitting existing high-GWP refrigerant systems to low-GWP systems; and other low-GWP technology projects that incorporate improved recycling, reclamation, and recovery of high-GWP refrigerants and workforce training.
<ul style="list-style-type: none"> ▪ Intended recipients 	<ul style="list-style-type: none"> ▪ California businesses that are users of refrigerant technology systems.
<ul style="list-style-type: none"> ▪ Program structure and process for selecting projects for funding 	<ul style="list-style-type: none"> ▪ The administering agency will establish a competitive solicitation process with scoring criteria as the principal method of approving projects. The scoring criteria will be designed with preference to projects that: <ul style="list-style-type: none"> ▪ Are demonstration/pilot projects utilizing innovative new low-GWP technology; ▪ Utilize technologies that are scalable and can be used by other stakeholders to meet CARB's future regulations; ▪ Utilize a combination of measures identified for eligible funding; ▪ Maximize GHG reductions with the least amount of resources (i.e., high cost-effectiveness); ▪ Secure matched funding from other partners; and ▪ Are located in and benefitting priority populations¹

¹ Priority populations include residents of: (1) census tracts identified as disadvantaged by California Environmental Protection Agency per SB 535; (2) census tracts identified as low-income per AB 1550; or (3) a low-income household per AB 1550. See Section VII.B for more information on the definitions of priority populations.

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Element (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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| <ul style="list-style-type: none">▪ How the expenditure is consistent with the Investment Plan and the Scoping Plan | <ul style="list-style-type: none">▪ AB 1532 (Chapter 807, Statutes of 2012) requires that monies from the Greenhouse Gas Reduction Fund be appropriated in a manner that is consistent with the three-year Investment Plan. The “Cap-and-Trade Auction Proceeds Third Investment Plan: Fiscal Years 2019-20 through 2021-22” recommends that “action to reduce these powerful ‘super pollutants’ [black carbon, methane and fluorinated gases] today will provide immediate benefits and complement policies to reduce longer-lived GHGs.” SLCPs are one of the seven funding priorities for California Climate Investments. Therefore, the expenditures covered by this record are consistent and align with the priorities expressed in the Investment Plan.
▪ California’s 2017 Climate Change Scoping Plan (Scoping Plan) identified key strategies and recommendations to continue reducing GHG emissions and achieve the goals and purposes of AB 32, SB 32 and related statutes. HFCs are the fastest growing GHGs in California and globally. The Scoping Plan and the SLCP strategy highlights that HFCs represent one of the biggest opportunities to reduce GHGs in the State through 2030 due to their high climate impact. |
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Element (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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| <ul style="list-style-type: none">▪ Describe how expenditures will facilitate the achievement of GHG emission reductions in the State | <ul style="list-style-type: none">▪ Expenditures will achieve net GHG benefits by providing funding for the high upfront cost of low-GWP refrigerant technologies, such as those used for commercial refrigeration. The cost premium for these systems is the biggest barrier to their adoption. Expenditures will fund new systems as well as retrofits of existing systems. This will result in GHG emission benefits of direct refrigerant emissions and indirect electricity associated emissions. |
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- Direct GHG emission benefits: Many of the conventional refrigerants used in new and existing systems have GWPs that are hundreds and thousands of times higher than innovative low-GWP solutions available on the market. Low-GWP solutions funded through this program are expected to have significantly lower carbon dioxide equivalent (CO_{2e}) emissions compared to traditional technologies.

Expenditures will fund low-GWP solutions for new and remodeled systems. Additionally, expenditures will fund the retrofit of existing old leaky refrigeration systems that use very high-GWP refrigerants. Expenditures provided for retrofit projects will also require the destruction or proper recovery and recycling of the old refrigerant, thus preventing the refrigerant from being vented into the atmosphere.

- Indirect emission benefits: Many of the technologies used in new systems are more energy efficient than conventional technologies and thus will reduce energy consumption, which results in fewer emissions associated with the generation of electricity over the lifetime of these systems. Some of the drop-in replacement refrigerants are also more energy efficient and will result in lower electricity-associated emissions.
- The program will not only help establish the new technologies by demonstrating them, building capacity to install and service them, and bringing the price down over time, but will be essential to future regulations requiring low-GWP technology. In addition to new technologies, significant GHG savings can be demonstrated for the existing market base, which is responsible for the majority of emissions of fluorinated gases.

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- Explain when GHG emission reductions and/or co-benefits are expected to occur and how they will be maintained

- GHG emission benefits are expected to occur immediately once a low-GWP system is in place and are expected to occur over the lifetime of the systems (i.e., 15-30 years for new systems and 10-15 years for retrofitted systems).
 - Commercial refrigeration systems leak 15-20% of their refrigerant annually. They are also very energy intensive. Once a new or retrofitted low-GWP system is in place, and even if the system continues to leak, the impact of the direct refrigerant emissions is much lower because the GWP of the refrigerant is much lower. Indirect electricity-associated
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emissions will go down as these systems are more energy efficient.

- There is a lack of trained technicians for low-GWP refrigerant technologies. Incentive funding for this program requires installation and maintenance by trained technicians. As more of these systems are installed, there will be more trained personnel available for work on these newer technologies. Training and workforce development will be encouraged as part of the scoring process for applications.
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Element (4) A description of how the administering 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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| <ul style="list-style-type: none">▪ Expected co-benefits, particularly environmental, economic, public health and safety, and climate resiliency | <ul style="list-style-type: none">▪ New or retrofitted low-GWP refrigerant systems will yield economic and environmental co-benefits. These projects will alleviate the lack of trained technicians by requiring the installation and maintenance of these projects by trained personnel. Reducing energy use will save businesses money, particularly small businesses, and will improve air quality by reducing criteria pollutant emissions from electricity generation. |
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- Successful installation of low-GWP refrigerant systems will build confidence in these technologies and help drive down costs as these systems reach economies of scale over time with increased adoption. Increased adoption of these low-GWP technologies will lay the foundation to mandate the use of low-GWP refrigerants in thousands of systems statewide beginning in 2022.

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| <ul style="list-style-type: none">▪ How the project will support other objectives of AB 32 and related statutes | <ul style="list-style-type: none">▪ Funded projects will consume less energy thus lowering electricity-associated emissions.▪ Small businesses will receive priority for the funding. To the extent possible, a portion of the projects selected for funding will be located in and benefit priority populations. |
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- This project will demonstrate how the existing base of commercial refrigeration systems can successfully transition to using low-GWP refrigerant technologies. Reducing SLCPs can have a significant impact on impeding climate change, a priority for AB 398.

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<ul style="list-style-type: none">▪ Percentage of total funding that will be expended for projects that are located in and benefit priority populations per CARB guidance	<ul style="list-style-type: none">▪ The Investment Targets for Agencies Administering FY 2019- 2020 Funds do not include a minimum target defined for the Fluorinated Gases Emission Reduction Incentive Program to locate projects within and provide benefits to priority populations, but some projects may meet the criteria for providing benefits to priority populations.▪ Where feasible and as part of a public process, administering agency staff will provide eligibility and scoring criteria to prioritize funding to projects located in and benefitting priority populations.
<ul style="list-style-type: none">▪ Describe the benefits to priority populations per CARB guidance	<ul style="list-style-type: none">▪ Projects located in and benefitting priority populations or small businesses will be selected for funding to the extent possible. Direct economic investments in these communities will increase access to local employment opportunities and training in low-GWP technologies. When financing makes a new system possible in an area with lack of access to fresh food, priority populations will benefit substantially through increased access to healthier foods and local employment opportunities.
<ul style="list-style-type: none">▪ Explain strategies the administering agency will use to maximize benefits to disadvantaged communities	<ul style="list-style-type: none">▪ To help maximize benefits to disadvantaged communities, the administering agency will coordinate with local and regional non-profit organizations to provide input on the types of projects that would be funded.▪ Projects that benefit priority populations and demonstrate that the project will meaningfully create local employment opportunities, increase access to fresh food and other associated benefits will receive additional points in scoring.
<ul style="list-style-type: none">▪ Explain how the administering agency will avoid potential substantial burdens to disadvantaged communities and low-income communities or, if unknown,	<ul style="list-style-type: none">▪ The administering agency will consult directly with communities through various means including workshops and public comments on program guidelines to inform programmatic adjustments to eligibility criteria, and ultimately funding decisions, as necessary to avoid potential substantial burdens to priority populations.

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explain the process for identifying and avoiding potential substantial burdens

Element (5) A description of how the administering 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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| <ul style="list-style-type: none">▪ How the administering agency will track / report progress to make sure projects are implemented per requirements in statute and CARB guidance | <ul style="list-style-type: none">▪ The administering agency will require funding recipients to maintain records and submit quarterly status reports. In addition, the administering agency will conduct periodic reviews of selected projects including potential site visits. If a funding recipient does not perform in accordance with program requirements, the recipient will be subject to the remedies for non-performance, as identified in the administering agency's guidelines and the grant agreement. |
| <ul style="list-style-type: none">▪ Describe the approach that will be used to document GHG emission reductions and/or other benefits before and after project completion. | <ul style="list-style-type: none">▪ The administering agency will calculate the GHG emission reductions and co-benefits expected and achieved from projects using a CARB-developed method and/or tool.▪ The administering agency will estimate GHG emission reductions and co-benefits (e.g., energy savings) using CARB quantification methodologies. Administering agency staff will review calculations prepared by applicants to ensure consistency with approved methodologies.▪ In addition, the administering agency will design each project to collect all data necessary to document the emission reductions achieved. Data collection and reporting requirements for funding recipients will be included as part of the project solicitations and grant agreements or other appropriate enforceable agreements. |
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▪ Type of information that will be collected to document results, consistent with CARB guidance

- To determine the job benefits, the agency will compile data from funding recipients on jobs provided, both the quality and quantity, consistent with CARB guidance.
- The administering agency will collect data on project location, refrigerant type used, baseline and estimated refrigerant and energy usage, costs, type of upgrade that was installed, expected quantification period, and other data, as applicable and as specified in CARB guidance.
- Once operational, the administering agency will collect information on project outcomes consistent with CARB guidance.

▪ How the administering agency will report on program status

- The administering agency will report on program status consistent with CARB guidance. The administering agency will provide regular updates on the program, including expenditure amounts, GHG emission reductions, and other benefits, as applicable (e.g., jobs supported, units retrofitted). Reports will also include information on project outcomes consistent with CARB guidance.
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