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CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

California Energy Commission

COMMISSION REPORT

Assembly Bill 209 Clean Energy Programs — 2024 Annual Report

Gavin Newsom, Governor

August 2025 | CEC-500-2025-033-CMF

California Energy Commission

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ABSTRACT

The California Energy Commission (CEC) is the state's primary energy policy and planning agency and plays a critical role in creating a clean energy system of the future and administering programs to meet California's ambitious energy and climate goals. Assembly Bill 209 (Ting, Chapter 251, Statutes of 2022) called for the CEC to establish and administer the following five Clean Energy Programs:

- Industrial Grid Decarbonization and Improvement of Grid Operations Program
- Food Production Investment Program
- Clean Hydrogen Program
- Equitable Building Decarbonization Program
- Offshore Wind Waterfront Facility Improvement Program

Section 25660.2 of the California Public Resources Code mandates that the CEC publish a report on these Clean Energy Programs annually until all appropriated funds are spent. This reporting must include the following information:

- Funds spent for each program, balance remaining to be spent, and geographic distribution of the funds
- Funds spent on administrative, technical, or scientific services for each program
- Estimates on how expended funds are achieving the specific purposes of the program
- Estimates of additional electrical capacity during critical grid conditions made available as a result of the program
- Estimated reductions in greenhouse gas and criteria air pollutant emissions
- Description of how the funds were used and a description of the industries receiving funding

This report provides an update on the progress and funding of CEC activities in support of Assembly Bill 209 Clean Energy Programs from January 1, 2024, through December 31, 2024. The report was prepared in accordance with section 25660.2 of the California Public Resources Code.

Keywords: Assembly Bill 209 Clean Energy Programs, Industrial Decarbonization and Improvement of Grid Operations Program, Food Production Investment Program, Clean Hydrogen Program, Equitable Building Decarbonization Program, Offshore Wind Waterfront Facility Improvement Program

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Introduction

Assembly Bill 209 (Ting, Chapter 251, Statutes of 2022) established five Clean Energy Programs to be administered by the California Energy Commission (CEC):

- Clean Hydrogen Program
- Equitable Building Decarbonization Program
- Food Production Investment Program
- Industrial Decarbonization and Improvement of Grid Operations Program
- Offshore Wind Waterfront Facility Improvement Program

Chapter 7.6, Article 1, section 25660.2 of the California Public Resources Code directs the CEC to publish a report on these programs on its website and submit it to the Legislature annually until all funds appropriated in the statute have been encumbered. This report provides updates on each program, including information on the projects funded and how each program is achieving the specific purposes of the statute.

Chapter 1 provides an introduction, update on fiscal status, and geographic distribution. Chapters 2 through 6 highlight 2024 program-specific activities and respond to the following required reporting items listed in section 25660.2:

- Funds spent for each program, balance remaining to be spent, and geographic distribution of the funds
- Funds spent on administrative, technical, or scientific services for each program
- Estimates on how spent funds are achieving the specific purposes of the program
- Estimates of additional electrical capacity during critical grid conditions made available as a result of the program
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- Description of how the funds were used and a description of the industries receiving funding

CEC staff has made significant efforts to develop robust programs, consult with tribal governments, and engage with a wide variety of interested members of the public. These efforts provide transparency for program development processes and ensure the programs will provide benefits and meaningful results to help California reach its clean energy and decarbonization goals. All programs have released solicitations to encumber project funds. Summaries of the activities for each program are given below.

Program Activities in 2024

The **Clean Hydrogen Program** implemented activities with the goal of increased production and use of clean hydrogen, which refers to hydrogen produced from water using renewable energy resources or produced directly from renewable energy resources. CEC staff adds eligible federal funding opportunities as they are released to the Clean Hydrogen Program's cost-share solicitation. Awards under the solicitation provide a commitment for a portion of the federal cost share requirement to selected applicants, improving their chance of receiving a federal award for projects that align with AB 209 priorities. The CEC added a new federal funding opportunity to this solicitation in Quarter (Q) 4 of 2024.

In 2024, the program also developed competitive solicitations to demonstrate or scale up clean hydrogen production and use. These solicitations include the release of a solicitation for large-scale hydrogen projects and a notice to release a solicitation for distributed-scale hydrogen projects with onsite use. Both solicitations were placed on hold due to budget changes but are anticipated to be updated and released once funding is available. In addition to these milestones, the program directly engaged with more than 60 interested parties including federal, state, and local agencies, researchers, utilities, technology and project developers, and environmental justice organizations.

The **Equitable Building Decarbonization Program** achieved key milestones in 2024. In March, staff held a workshop on the draft solicitation for regional administrators. The CEC released a competitive solicitation in April for the three regional administrators of the Statewide Direct Install Program focused on decarbonizing homes in under-resourced communities (defined in statute as disadvantaged communities or low-income communities). The agreements were presented and approved at a CEC Business Meeting on November 13. The regional administrators are the Association for Energy Affordability in the northern region, the Center for Sustainable Energy in the central region, and the County of Los Angeles in the southern region. The Statewide Direct Install Program will receive partial funding from the federal Inflation Reduction Act-funded Home Efficiency Rebates Program. This program, administered by the United States Department of Energy, helps households save on energy bills, improve energy efficiency, reduce greenhouse gas emissions, and improve indoor air quality by providing rebates for home energy upgrades.

To fulfill the statutory direction to provide a statewide incentive program to increase adoption of low-carbon building technologies considering state budget constraints, CEC leveraged the federally funded Home Electrification and Appliance Rebates (HEEHRA) Program. In January 2024, CEC submitted their application to the United States Department of Energy and in October CEC launched the HEEHRA Phase I rebate program through the established Technology and Equipment for Clean Heating (TECH) Clean California Program. The HEEHRA Program provides rebates to income-qualified owners of single-family, multi-family, and manufactured homes for new, efficient electric equipment. The TECH Clean California Program is a contractor point-of-sale program that offers electric appliance incentives, technical assistance, and installer training to address barriers associated with building decarbonization market transformation.

In September, the CEC partnered with the State Treasurer's Office to provide funds to the California Alternative Energy and Advanced Transportation Financing Authority's GoGreen Home Financing Program to reduce the costs of financing decarbonization retrofits. The CEC also advanced the Tribal Direct Install Program by holding two roundtables with tribes in August 2024 to inform draft guidelines.

The **Food Production Investment Program** provided incentives for advanced energy and decarbonization technologies that support electrical grid reliability and greenhouse gas emissions reductions at food processing and supporting facilities. The program released a competitive solicitation in Q1 of 2024 for projects that will demonstrate commercially available, cutting-edge technologies, or a combination of both, at food production facilities. These projects will maximize greenhouse gas emissions reductions, reduce energy use, provide grid reliability benefits, and benefit under-resourced communities.

Eight projects were proposed for funding in Q2 of 2024, with five projects executed in Q4 of 2024. In addition to these milestones, the program continues to foster collaboration with diverse interested parties, including state and federal agencies, researchers, entrepreneurs, California food processors, equipment manufacturers, and industrial trade associations.

The **Industrial Decarbonization and Improvement of Grid Operations Program** provides financial incentives for cutting-edge technologies in industrial projects that promote electrification, load flexibility, and reduced fossil fuel and thermal energy use. This program prioritizes projects in and benefiting under-resourced communities, ensuring direct engagement with these communities and reducing air pollutants. In Q2 of 2024, the CEC released a solicitation to deploy technologies at or near commercial readiness, aimed at promoting electrification and ensuring replicability across industrial facilities. This solicitation resulted in the awarding of three projects. Round 2 for the remaining funds was announced in Q3 of 2024. Furthermore, a separate solicitation yielded two project awards in Q3 of 2024, aimed at providing cost-share funding for federal grants aligned with the program.

The **Offshore Wind Waterfront Facility Improvement Program** (referred to in Article 6 as the "Program to Support Offshore Wind Infrastructure Improvements") implemented the provisions of AB 209 by publishing a solicitation titled "Offshore Wind Energy Waterfront Facility Improvement Program" on September 30. The purpose is to fund projects that will plan for offshore wind energy infrastructure improvements that advance the capabilities of California waterfront facilities to support the development and operation of floating offshore wind projects. CEC staff held a pre-application workshop for the solicitation on October 16 prior to the December 20 application deadline.

CHAPTER 1:
Introduction, Funding, and Distribution

Assembly Bill (AB) 209 (Ting, Chapter 251, Statutes of 2022) called for the California Energy Commission (CEC) to establish and administer the following five Clean Energy Programs:

- Clean Hydrogen Program (CHY)
- Equitable Building Decarbonization Program (EBD)
- Food Production Investment Program (FPIP)
- Industrial Decarbonization and Improvement of Grid Operations Program (INDIGO)
- Offshore Wind Waterfront Facility Improvement Program (OSW)

Chapter 7.6, Article 1, section 25660.2 of the California Public Resources Code (PRC) directs the CEC to publish a report on these programs on its website and submit it to the Legislature annually by March 1 until all funds appropriated in the statute have been encumbered. The following list provides required reporting items listed in section 25660.2:

- Funds spent for each program, balance remaining to be spent, and geographic distribution of the funds
- Funds spent on administrative, technical, or scientific services for each program
- Estimates on how spent funds are achieving the specific purposes of the program
- Estimates of additional electrical capacity during critical grid conditions made available as a result of the program
- Estimated reductions in greenhouse gas (GHG) and criteria air pollutant emissions
- Description of how the funds were used and a description of the industries receiving funding

Clean Energy Programs Funding

Tables 1, 2, and 3 summarize AB 209 program expenditures and leveraged funding. Dual-funded programs are indicated in Appendices A and B. The federally funded Home Electrification and Appliance Rebates (HEEHRA) Program leveraged to meet EBD legislative intent is not included in this section.

Table 1: Administrative, Technical, or Scientific Services Expenditures — Cumulative through December 31, 2024

Program	Expenditures
CHY	$1,469,863
EBD	$4,319,690
FPIP	$610,000
INDIGO	$1,015,311
OSW	$1,552,800
Total	**$8,967,664**

Source: CEC

Table 2: Project Funding Encumbered and Unencumbered — Cumulative through December 31, 2024

Program	Project Budget	Encumbered	Unencumbered
CHY	$4,000,000	$0	$4,000,000
EBD	$472,950,000	$442,950,000	$30,000,000
FPIP	$23,890,000	$14,180,036	$9,709,964
INDIGO	$36,000,000	$30,504,284	$5,495,716
OSW	$42,750,000	$0	$42,750,000
Total	**$579,590,000**	**$487,634,320**	**$91,955,680**

Source: CEC

Table 3: Federal Match Funds Received — Cumulative through December 31, 2024

Program Name	Project Number	Project Title	Federal Match Funds
EBD	EBD-24-002	EBD Direct Install Central Region	$29,308,070
EBD	EBD-24-003	EBD Direct Install Northern Region	$35,478,190
EBD	EBD-24-004	EBD Direct Install Southern Region	$89,466,740
INDIGO	IND-24-001	Deployment of a Steam-Generating Heat Pump for Deep Industrial Decarbonization and Improvement to Grid Operations	$15,000,000
INDIGO	IND-24-002	Demonstrating Hybrid Glass Furnace Technology to Support the Decarbonization of the United States Glass Industry	$75,000,000
	Total		**$244,253,000**

Source: CEC

Geographic Distribution

The majority of AB 209 clean energy programs administered by CEC are funded and governed by statutes that require investments benefit California communities that will be impacted first and most severely impacted by the effects of climate change. In this report, the term "under-resourced communities" is used to describe such communities and encompasses designated disadvantaged communities and designated low-income communities. A detailed glossary is provided in this report with complete definitions of these terms.

Figure 1 displays the locations of FPIP and INDIGO demonstration project sites in 2024. Most sites are located in under-resourced communities. Regions for the EBD Statewide Direct Install Program are shown in Figure 2 in Chapter 3.

Figure 1: FPIP and INDIGO Demonstration Project Sites

Source: CEC

CHAPTER 2:
Clean Hydrogen Program

Hydrogen is a zero-carbon energy carrier that can replace fossil fuels in certain hard-to-electrify applications, particularly for the transportation, industrial, and electricity generation sectors. To achieve sustainable wide-scale deployment, hydrogen must be produced cleanly at increased scale and reduced cost. The CHY Program, established under AB 209 and Section 25664 of the California PRC, aims to stimulate increased production and use of clean hydrogen through strategic demonstration and deployment. Projects will demonstrate or scale up hydrogen projects. Specifically, those projects that will produce, process, deliver, store, or use hydrogen derived from water using eligible renewable energy resources[1] or hydrogen produced from these eligible renewable energy resources. Projects must reduce sector-wide emissions; benefit geographically diverse areas of the state; and maximize air quality, equity, health, and workforce benefits. The program uses funding from Greenhouse Gas Reduction Fund (GGRF) funding from the California Climate Investments (CCI) Program.[2]

The California Air Resources Board (CARB) *2022 Scoping Plan for Achieving Carbon Neutrality* estimates that by 2045, demand for low-carbon hydrogen will increase by nearly double the current levels of fossil hydrogen production. This increase represents a 1,700-fold increase in existing low-carbon hydrogen supply, and it is expected to be needed to support emerging end uses[3] such as heavy-duty vehicles, power generation, industrial process heat, and synthetic fuels for aviation.

Hydrogen produced from water using renewable energy resources or produced directly from renewable energy resources, referenced by this program as "clean hydrogen," can provide low-carbon energy and act as an alternative to fossil gas. Clean hydrogen usage will help meet California's GHG reduction goals of 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.[4] However, clean hydrogen is not yet deployed at scale in California due to the prevalence of incumbent technology (fossil-based hydrogen) and high barriers to entry. Barriers to achieving clean hydrogen deployment and uptake include high production costs, inadequate demand for clean hydrogen, limited delivery and storage infrastructure, and competing demands for renewable energy resources. Multidisciplinary solutions are required to

1 Eligible renewable resources are defined in California Public Utilities Code section 399.12. Examples include biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current subject to requirements of this code and of PRC section 25741.https://california.public.law/codes/ca_pub_util_code_section_399.12.

2 For more information on the California Climate Investments Program, visit the CARB California Climate Investments website. https://ww2.arb.ca.gov/our-work/programs/california-climate-investments

3 The term "end uses" refers to the final applications for which clean hydrogen is ultimately used.

4 The California Global Warming Solutions Act of 2006: emissions limit, (Pavley, Chapter 249, Statutes of 2016) required that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

address these challenges and achieve sustainable wide-scale deployment. These solutions include investments in delivery and storage infrastructure, rapid scale-up of equipment and technologies, commercialization of domestic manufacturing capacity, and expansion of the hydrogen workforce.[5]

When the CHY Program was established in 2022, it was originally appropriated $100 million from the General Fund (GF). However, California's 2024–2025 Enacted State Budget reduced CHY Program funding from $100 million to $40 million and postponed most of the funding until Fiscal Year (FY) 2025–2026. Of the $40 million, $1 million is available from the original GF appropriation. The balance of funding ($39 million) now comes from the GGRF from the CCI Program:

- A total of $6 million is available for encumbrance or expenditure by the CEC. A total of $2 million of these funds is reserved for administrative costs. A total of $4 million is available for encumbrance or expenditure for projects.
- A total of $34 million is not available as of 2024 and is subject to future appropriations and possible budget changes. Once available, the intent is to use approximately $30.6 million for projects from publicly announced program funding areas, with $3.4 million for administrative costs.

2024 Milestones and Project Highlights

- Released a solicitation (Grant Funding Opportunity [GFO] GFO-22-903 "Cost Share for Federal Funding Opportunities Clean Hydrogen Program") in October 2024 offering to provide up to $4 million of cost-share funding for those applying for and receiving a federal grant award for projects that are aligned with the CHY Program. Providing a portion of the required cost share could enhance an applicant's chances of securing a federal grant.
- Developed competitive grant solicitation(s) for a total of $30.6 million to demonstrate or scale up clean hydrogen production and use in California.
- The CEC released one solicitation for large-scale centralized hydrogen projects in March 2024 but canceled the solicitation for later release because of budget changes.
- The CEC announced the intent to release another solicitation for distributed hydrogen projects with onsite use, targeting May 2024, but did not officially release the solicitation because of budget changes.
- Updated solicitation(s) are anticipated to be released once funding is available. The awards will fund projects that help reduce sector-wide emissions and maximize air quality, equity, health, and workforce benefits. Solicitations will include preference points for projects that benefit under-resourced communities. Applicants must provide a meaningful explanation for how the project meets criteria for providing benefits to, and not placing substantial burdens on, under-resourced communities.

5 United States Department of Energy (U.S. DOE). 2024. "Pathways to Commercial Liftoff: Clean Hydrogen." U.S. DOE, https://liftoff.energy.gov/clean-hydrogen/

Annual Reporting Requirements

This section addresses the reporting elements required by AB 209.

a) Funds Spent for the Program, Balance Remaining to Be Spent, and Geographic Distribution of the Funds

- Given United States Department of Energy (U.S. DOE) award selections to date, no funds have been committed or expended out of the $4 million in available funding for the federal cost share solicitation.
- In California's FY 2024–2025 Enacted State Budget, funding for the program was reduced from $100 million to $40 million, and the funding source is the GGRF. About 86.5 percent of these funds ($34.6 million) will be used to provide grants for clean hydrogen production, delivery, storage, and end-use projects, which will include CEC-sponsored grants and federal cost-share grants. No funds have been spent on grants.

b) Funds Spent on Administrative, Technical, or Scientific Services for the Program

Expenditures through December 31, 2024: $1.5 million

Program administrative activities in 2024:

- **March 8, 2024**: Released a solicitation titled "Large-Scale Centralized Clean Hydrogen Production (H2CENTRAL)" (GFO-23-307), with an original deadline of June 3, 2024.
- **March 20, 2024**: Hosted a pre-application workshop to provide information and answer questions on GFO-23-307. The workshop was attended by more than 120 people, and CEC staff received more than 50 questions.
- **April 4, 2024**: Announced, via an email notice, the intent to release a solicitation for distributed hydrogen projects with onsite use in May 2024.
- **May 21, 2024**: Announced, via an email notice, that all CHY Program solicitations are paused until further notice because of budget changes.
- **August 2, 2024:** Formally canceled GFO-23-307 due to budget changes via an email notice and updates to the CEC Solicitation webpage.
- **October 22, 2024**: Released Addendum 1 to GFO-22-903, "Cost Share for Federal Funding Opportunities Clean Hydrogen Program," to add a new U.S. DOE funding opportunity eligible for cost share.
- **October 28, 2024**: Released Addendum 2 to GFO-22-903 to add a new U.S. DOE funding opportunity eligible for cost share.
- **November 15, 2024**: Released Addendum 3 to GFO-22-903 to extend the deadline for application to the most recent U.S. DOE funding opportunity eligible for cost share.
- **Ongoing**: Direct engagement with more than 60 entities, including U.S. DOE, CARB, Governor's Office of Business and Economic Development, researchers, utilities, technology and project developers, and other interested members of the public to inform program and solicitation development. Work directly with CARB CCI Program staff to understand and integrate CCI Program requirements into solicitations.

c) Estimates on How Spent Funds Are Achieving the Specific Purposes of the Program

CEC staff anticipates awarding funding for federal cost-share ($4 million) and solicitation(s) ($30.6 million). Funding preference is anticipated for projects that focus on AB 209 priorities, such as helping reduce sector-wide emissions and maximizing air quality, equity, health, and workforce benefits. Once awarded, projects will be closely monitored and required to provide updates on meeting AB 209 priorities.

d) Estimates of Additional Electrical Generation or Storage Capacity at Net Peak Hours or During Critical Grid Conditions Made Available as a Result of the Program

No estimates at this time. This information will be posted on the CHY website once the CEC has finalized funding awards.

e) Estimated Onsite Reductions of the Emissions of GHG and Criteria Air Pollutant Emissions as a Result of the Program

No estimates at this time. Priority consideration will be given to projects that help reduce sector-wide emissions and maximize air quality benefits. Information will be posted on the CHY website once the CEC has finalized funding awards.

f) Description of How the Funds Were Used and a Description of the Industries Receiving Funding

This information will be posted on the CHY website once the CEC has finalized funding awards.

CHAPTER 3:
Equitable Building Decarbonization Program

California has 14 million homes and 7 billion square feet of commercial space. These buildings account for about 25 percent of the state's GHG emissions. The combustion of gas for space and water heating is the single largest source of GHG emissions from buildings as a category. While retrofits to existing buildings offer the greatest potential for emission reductions, they also face more barriers, including upfront costs, split incentives[6] between tenants and building owners, structural issues, and space constraints. Furthermore, older buildings with minimal insulation, air gaps, and nonexistent or low-performing space heating and cooling are not equipped to adequately withstand extreme heat and protect occupants.

To address these obstacles, AB 179 (Ting, Chapter 249, Statutes of 2022) appropriated $922 million over five years to develop and implement a statewide Equitable Building Decarbonization (EBD) Program, established under section 25665.1 of the PRC. The primary goals of the EBD Program are to reduce GHG emissions and advance energy equity in under-resourced communities, which are defined in statute as disadvantaged communities or low-income communities.[7] The EBD Program includes a Statewide Direct Install Program focused on decarbonizing homes in under-resourced communities and a Statewide Incentive Program to accelerate the deployment of low-carbon building technologies. The Statewide Direct Install Program installs energy-efficient electric appliances, energy efficiency measures, and related upgrades directly to consumers at no cost. The Statewide Incentive Program promotes residential building decarbonization by leveraging private capital to increase consumer access to efficient electric equipment.

In 2024, SB 108 (Wiener, Chapter 35, Statutes of 2024) reduced the EBD Program budget by $396.5 million. To mitigate program impacts from budget changes, the CEC applied for federal Home Efficiency Rebates (HOMES) Program and Home Electrification and Appliance Rebates (HEEHRA) Program funding. The application included $154.3 million in HOMES funding for the EBD Statewide Direct Install Program and $100 million to support the EBD legislative goals through a HEEHRA Phase I incentive program. The HOMES Program helps households save on energy bills, improve energy efficiency, reduce GHG emissions, and improve indoor air quality by providing rebates for whole home energy upgrades. The HEEHRA Program provides point-

6 A split incentive occurs when the costs and benefits of an investment are not shared by the same people. Energy efficiency upgrades in rental homes face split incentives where the building owner pays for energy efficiency upgrades, but the tenant pays the energy bills and benefits from the energy savings. This creates a barrier to the deployment of energy efficiency measures, as the landlord or owner has no financial incentive to invest in them.

7 PRC section 25665 states that an under-resourced community is "defined by Public Resources Code section 71130," which "means a community identified pursuant to section 39711 of the Health and Safety Code, subdivision (d) of section 39713 of the Health and Safety Code, or subdivision (g) of section 75005. For definitions of disadvantaged and low-income communities, refer to the glossary.

of-sale rebates to income-qualified owners of single-family, multi-family, and manufactured homes for new, efficient electric equipment.

In January, staff submitted an application to the U.S. DOE for $290 million in HEEHRA funds to provide a statewide incentive program to increase adoption of low-carbon technologies in line with the legislative direction for the EBD. The CEC held a workshop in March to gather input on a draft solicitation for the Statewide Direct Install Program. The CEC released a competitive solicitation in April for the Statewide Direct Install Program, and the CEC approved agreements in November. A separate, tribal-focused direct install program was created in addition to the Statewide Direct Install due to statutory direction and previous input received during the EBD Program scoping workshops. The CEC advanced the Tribal Direct Install Program by holding two roundtables with tribes in August to inform draft guidelines.

In June, CEC was awarded $290 million in HEEHRA funds and in October received U.S. DOE approval to launch the $100 million HEEHRA Phase I rebate program. Subsequently, CEC launched the HEEHRA Phase I TECH Clean California rebate program and began taking reservation requests from income-qualified owners of single-family, multi-family, and manufactured homes for new, efficient electric equipment. In addition, in September, the CEC entered into an agreement with the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to expand the existing GoGreen Home Financing Program statewide and fulfill the statutory requirement to implement an incentive program. The GoGreen Home Financing Program promotes home decarbonization by leveraging private capital. This $30 million agreement will provide a loan loss reserve and an interest rate buydown to homeowners to reduce risk and provide more attractive loan terms, such as lower interest rates and longer repayment terms.

The 2024–2025 Budget made changes to the EBD Program budget. Specifically, the program budget was reduced by $396.5 million for a total funding amount of $525.5 million through FY 2027–2028. To minimize impacts from the 2024–2025 budget changes, the CEC applied to the U.S. DOE to incorporate $154.3 million in federal Inflation Reduction Act HOMES Program funding into the Statewide Direct Install Program and to use the $290 million HEEHRA Program award to support and advance a Statewide Incentive Program. The CEC's applications were approved, increasing the total funding available for the EBD Program to $969.8 million. Of that total, $567.2 million was awarded to the Statewide Direct Install Program. The CEC continues to maintain its $30 million allocation in state funding to the Tribal Direct Install Program.

Appendix A provides additional detail on the EBD funding awards.

2024 Milestones and Project Highlights

- In January, the CEC was one of the first four states to submit its application for the U.S. DOE HEEHRA rebates.
- GFO-23-404 "Equitable Building Decarbonization Program Direct Install" was released on April 30, 2024, seeking three program administrators for the Statewide Direct Install Program. Proposed awardees were announced in August 2024.
- The CEC submitted its application for HOMES funding to the U.S. DOE in August.
- Two tribal roundtables were held on August 29 and 30 to gather input on the Tribal Direct Install Program guidelines and design.
- An agreement for $30 million was entered into with CAEATFA, on September 5, 2024, to implement the Statewide Incentive Program through the GoGreen Home Financing Program.
- Regional administrators of the Statewide Direct Install Program were approved at the November 13, 2024, CEC Business Meeting. Three agreements totaling $567,203,000[8] were entered into with the Association for Energy Affordability, Center for Sustainable Energy, and Los Angeles County.
- A total of $100,816 in EBD funds supported 82 GoGreen Program Loan Loss Reserve loans to borrowers who enrolled in the program during November and December.

Annual Reporting Requirements

This section addresses the reporting elements required by AB 209.

a) Funds Spent for the Program, Balance Remaining to be Spent, and Geographic Distribution of the Funds

1. The current 2024–2025 Budget provides the EBD Program $525.5 million through the 2027–2028 FY. The EBD Program has a remaining balance of $10,000 from the General Fund allocation and $30 million from the GGRF allocation for program activities, and $38,920,310 from the GGRF allocation for CEC administrative expenses.

    a. In November 2024, $567.2 million was encumbered for the Statewide Direct Install Program under three regional program administrators in Northern, Central, and Southern California. The funds are divided among the regions based on the proportion of under-resourced communities as follows in Table 4. A map of the three regions is shown in Figure 2 below.

8The budget for the EBD Statewide Direct Install Program includes $413 million in state funds and $154.3 million in HOMES federal funding for a total of $567.3 million in funding. In addition to the $413 encumbered for the Statewide Direct Install Program, $30 million was encumbered for the GoGreen Home Financing Program for a total encumbrance of $443 million in state funding for both EBD Programs.

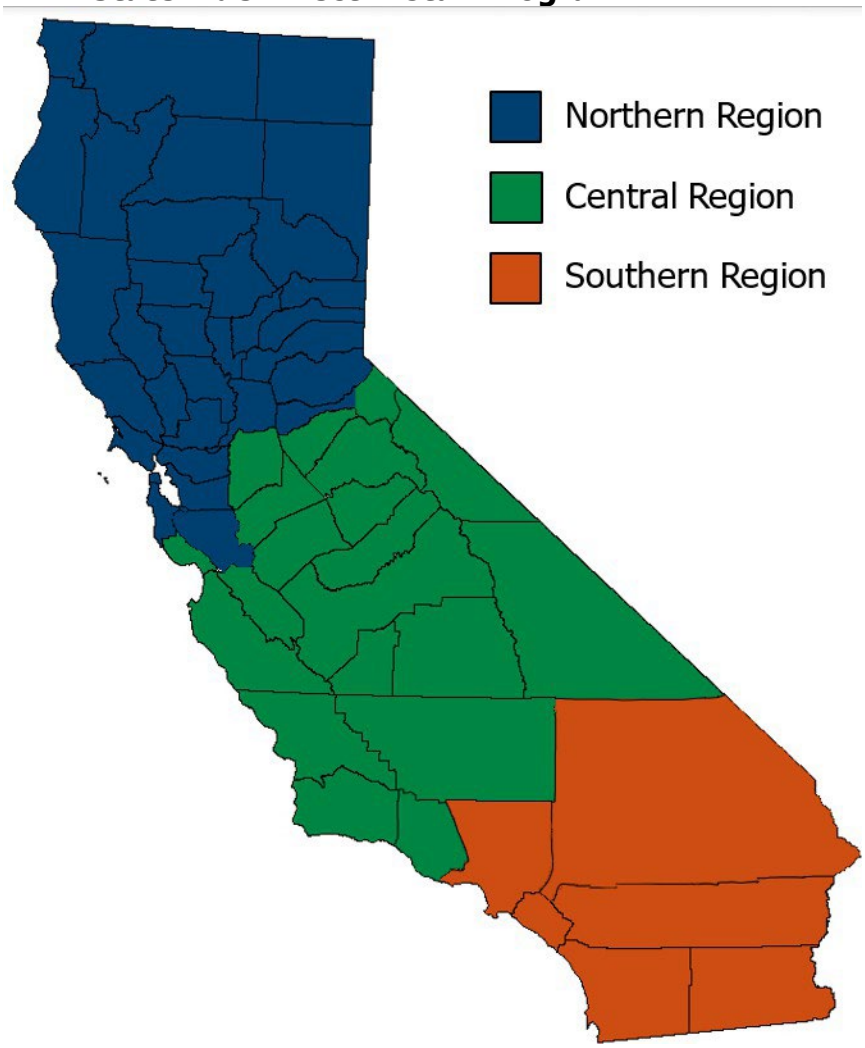
Table 4: EBD Program Administrator Budget Breakdown

Region & Administrator	Population of Under-resourced Communities (millions)	State Funding (millions)	U.S. DOE HOMES Funding (millions)*	Total Funding (millions)
Northern (Association for Energy Affordability)	5.3	$95.0	$35.5	$130.5
Central (Center for Sustainable Energy)	4.3	$78.5	$29.3	$107.8
Southern (Los Angeles County)	13.6	$239.5	$89.5	$329.0
Total	**23.2**	**$413.0**	**$154.3**	**$567.2**

Source: CEC

*Funding for EBD is contingent upon the awarding of HOMES funding by the U.S. DOE.

Figure 2: Map of Northern, Central, and Southern California Regions for the EBD Statewide Direct Install Program



b. The CEC entered into an agreement on September 5, 2024, with the State Treasurer's Office CAEATFA GoGreen Program to provide $30 million to increase consumer access to efficient electric equipment and fulfill the statutory requirement to offer statewide incentives for low-carbon building technologies. An advance payment totaling $7.5 million has been provided to CAEATFA as of December 31, 2024. CAEATFA utilized $100,816 in EBD funds to support 82 GoGreen Program Loan Loss Reserve loans to borrowers during November and December.

c. Up to $30 million of the remaining program funding is allocated to fund a Tribal Direct Install Program. The Tribal Direct Install Program will be a separately administered program to serve residential buildings owned or managed by California Native American tribes or California tribal organizations and buildings owned by

members of California Native American tribes. Tribal Direct Install Program guidelines are currently being developed through a public process.

b) Funds Spent on Administrative, Technical, or Scientific Services for the Program

1. Expenditures through December 31, 2024: $4.3 million

   Administrative activities to date include outreach with tribal members and interested members of the public, releasing the competitive solicitation for program administrators, partnering with other state agencies to implement the incentive program, and completing the application to the federal HOMES Program. Timeline of activities:

   a. **March 14, 2024**: Workshop on draft solicitation for Statewide Direct Install Program's regional administrators.
   b. **April 30, 2024**: Posting of solicitation for program administrators.
   c. **May 10, 2024**: Pre-application workshop for the Statewide Direct Install Program regional administrators' solicitation.
   d. **August 7, 2024**: Notice of proposed awards for program administrators posted.
   e. **August 29 and 30, 2024**: Tribal roundtables for the Tribal Direct Install Program scope.
   f. **September 5, 2024**: Entered into an agreement with CAEATFA for GoGreen Home Financing Program.
   g. **September 12, 2024**: CEC approved an invoice from CAEATFA for an initial 25 percent of the award, totaling $7.5 million.
   h. **October–December 2024**: Tribal guideline development.
   i. **November 13, 2024**: Regional program administrators approved at CEC Business Meeting.
   j. **Quarterly**: Meetings with environmental justice groups, manufacturers, local governments, and other interested parties to understand the concerns and needs of their communities.

2. Technical and scientific services expenditures through December 31, 2024: $500,000

   A total of $500,000 in funds were encumbered for a technical support contract with Recurve Analytics, Inc. The contract resulted from a competitive solicitation and was approved at a CEC Business Meeting. This contract will assist the CEC and its regional administrators by using data to better focus the program for specific households.

c) Estimates on How Expended Funds are Achieving the Specific Purposes of the Program

Following project implementation, data will be collected to quantify and qualify project outcomes, including, but not limited to, estimated GHG emission reductions, locations of homes retrofitted to ensure energy equity, criteria air pollution reductions, energy savings, type and number of appliances installed, including heat pumps, and job creation.

d) Estimates of Additional Electrical Generation or Storage Capacity at Net Peak Hours or During Critical Grid Conditions Made Available as a Result of the Program

This program is not expected to directly result in additional electrical generation or storage capacity, but program staff is expecting the program will generate additional load shift potential. Staff will be able to estimate and share this potential after the program is launched and projects are completed.

e) Estimated Onsite Reductions of the Emissions of GHG and Criteria Air Pollutant Emissions as a Result of the Program

This program will reduce GHG emissions and air pollutants from the replacement of fossil fuel-burning equipment (for example, equipment used for water and space conditioning, cooking, and clothes drying) with efficient electric equipment. Staff will be able to estimate and share this potential after the program is launched and projects are completed.

f) Description of How the Funds Were Used and a Description of the Industries Receiving Funding

For the EBD Statewide Direct Install Program, CEC allocated $443 million in state funds across four agreements, with an additional $154.3 million in federal funds received in January 2025 supporting the Statewide Direct Install Program.

The Association for Energy Affordability was awarded $130.5 million to administer the Northern Region of the Statewide Direct Install Program. The Association for Energy Affordability, who will be leading multifamily-focused activities in this region, is partnering with a network of subcontractors and vendors that will support these efforts, each bringing specialized expertise. These include The Ortiz Group, who will be leading efforts on single-family activities. Other subcontractors include Frontier Energy, California Housing Partnership Corporation, People Organizing to Demand Environmental and Economic Rights (PODER), Asian Pacific Environmental Network, GRID Alternatives, Rising Sun, and Vermont Energy Investment Corporation. Together, they will provide essential capabilities ranging from community engagement to direct project implementation. Specifically, PODER and Asian Pacific Environmental Network will serve as co-leads in community outreach, recruiting and training additional community-based organizations to support local outreach and intake activities.

The Center for Sustainable Energy was awarded $107.8 million to administer the Central Region of the Statewide Direct Install Program. Joining the Center for Sustainable Energy to support implementation are Franklin Energy, who will play a critical role leading the direct install efforts and overseeing the installation vendors for all housing types. Community-based organizations, including Self Help Enterprises and Fresno Economic Opportunities Commission, will lead outreach efforts by supporting the creation of culturally appropriate marketing materials and making initial contact with prospective program participants. Earth Advantage will provide technical assistance and develop quality assurance and quality control policies and procedures. Lastly, Peninsula Clean Energy, who will serve as the Rapid Start Community partner, is helping roll out the EBD Program in the Central Region through the existing Peninsula Clean Energy Home Energy Upgrade Program.

The County of Los Angeles was awarded $329 million to administer the Southern Region of the Statewide Direct Install Program. Los Angeles County developed a team consisting of community-based organizations, community choice aggregators, regional energy networks, local government councils, tribal organizations, and implementation experts that have been actively engaged in residential decarbonization efforts over the past several years. Through a sub-regional approach, Los Angeles County will provide strategic direction, and ICF (a consultant) will oversee program implementation along with more than 30 partnering organizations.

For the EBD Statewide Incentive Program, CAEATFA was awarded $30 million to enhance the GoGreen Home Financing Program. Through December 2024, a total of 82 loans have been issued in the Loan Loss Reserve Program using $100,816 in EBD funds.

Further information on the number and type of retrofits will be available once projects begin later in 2025. When available, information will be posted on the CEC's Equitable Building Decarbonization Program website and included in the EBD Program Report to be submitted to the Legislature by September 1 of each year (SB 306, Caballero, Chapter 387, Statutes of 2023).

CHAPTER 4:
Food Production Investment Program

The food manufacturing sector is highly energy- and carbon-intensive and significantly contributes to the state's GHG emissions. Food manufacturing is a critical area of opportunity for advancing industrial decarbonization and electrification efforts, but it faces many barriers and challenges because of the diversity of products produced. Food processing and production costs tend to be higher in California, making it difficult for in-state companies' products to compete with similar products produced out of state. Investments in updates and improvements to food production facilities with technologies that are energy-efficient, decarbonizing, or both, reduce operating costs and GHG emissions. These investments help ensure California's food processing industries remain competitive, operational, and within California.

FPIP was established in 2018 and initially funded by AB 109 (Ting, Chapter 249, Statutes of 2017) and Senate Bill (SB) 856 (Mitchell, Chapter 30, Statutes of 2018). In 2022, FPIP received additional funding from AB 209 to continue program implementation. The program uses GGRF monies from the CCI Program and GF monies to advance the purposes of reducing GHG emissions and energy use and sustaining grid reliability.

FPIP's goals accelerate the adoption of advanced energy efficiency, decarbonization, and renewable energy technologies and support electrical grid reliability (PRC §§ 25663–25663.6). The technologies funded by FPIP help reduce energy demand and costs, maintain product quantity and quality, reduce GHG emissions associated with food production, and improve public health and the environment in surrounding communities. FPIP strives to:

- Help California food processors work toward a low-carbon future.
- Demonstrate reliability and effectiveness of advanced energy and decarbonization technologies and strategies.
- Enhance and benefit the electrical grid, especially during net peak periods.
- Benefit public health and the environment, particularly in under-resourced communities.

Prior to receiving AB 209 funding, the program provided $117.8 million in grants to assist food producers in reducing GHG emissions through the adoption of advanced energy technologies. This initial funding supported a wide range of energy efficiency and renewable energy projects aimed at reducing GHG emissions across the food production sector in California. For example, one of the projects funded during this initial phase supported Pacific Coast Producers in installing an advanced evaporation system at its Woodland, California facility. That facility is the largest tomato canning facility in the U.S., processing more than 10 million tons of tomatoes annually. The project significantly reduced fossil gas and water consumption by recycling waste steam for reuse in the evaporation process, which is critical for converting tomato juice into tomato paste. As a result, Pacific Coast Producers is achieving annual savings

of approximately 1.6 million therms of fossil gas, more than 70,000 kilowatt-hours (kWh) of electricity, and more than $1 million in energy costs. Cumulatively, FPIP has implemented 60 projects with significant benefits, including estimated annual savings of 173,000 metric tons of CO_2 equivalent ($MTCO_2e$).

The 2024–2025 May Revision to the Governor's Budget reduced the program's GF allocations from $25 million to $6.2 million. Additionally, the 2024–2025 Enacted State Budget further reduced the original $40 million GGRF allocations by $20 million, resulting in a total reduction of $38.8 million in program allocations. The specific funding allocations are as follows:

- In the FY 2022–2023 budget, $6.2 million is available from the GF. Five percent of these funds is reserved for administrative costs, with the remaining funds allocated for projects.
- In the FY 2023–2024 budget, $20 million is available from the GGRF. Ten percent of these funds is reserved for administrative costs, with the remaining funds allocated for projects.

2024 Milestones and Project Highlights

In January, FPIP released a competitive solicitation (GFO-23-305 "Food Production Investment Program (FPIP) 2024") for a total of $36 million (later reduced to $23.9 million due to budget cuts under the 2024–2025 Enacted State Budget). The solicitation focused on the demonstration of commercially available or cutting-edge technologies at food production facilities that maximize GHG emissions reduction, reduce energy use, provide grid reliability benefits, and provide benefits to under-resourced communities. The solicitation yielded eight proposed awards, announced in June 2024, and later resulted in five projects totaling $14.2 million, which were launched in Q4 of 2024. These projects help food processors accelerate the adoption of advanced energy and decarbonization technologies to support electrical grid reliability and reduce GHG emissions.

Awarded Projects

The CEC awarded five projects for FPIP in 2024. Brief project descriptions are provided below, and additional funding details are included in Appendix B.

Project 1: Agreement FPI-24-002, "Refrigeration System Upgrade at Innovative Cold Enterprise," with Innovative Cold Storage Enterprises, Inc., for a $4 million grant to replace two aging refrigeration systems with energy-efficient units, featuring low-charge ammonia systems with air-cooled condensers at a cold storage facility in San Diego. The facility stores a variety of food products, primarily from local sources. The upgraded systems are expected to reduce approximately 1,800 $MTCO_2e$ emissions per year, eliminate over 10,000 pounds of high-global warming potential (GWP)freon (R-22) refrigerant and lower peak energy demand by 24 percent. Additionally, the project will conserve 1.1 million gallons of water annually.

Project 2: Agreement FPI-24-005, "R-22 Refrigeration System Conversion at Aspire Bakeries Facility," with Aspire Bakeries, LLC, for a $710,463 grant to replace an aging and inefficient freon (R-22) refrigeration system with a new ammonia refrigeration system at a bakery facility in Van Nuys (Los Angeles County). The facility specializes in producing artisanal frozen baked goods. The upgraded system will remove 2,500 pounds of high-GWP R-22 refrigerant, reduce

electricity consumption by 18 percent, and cut approximately 2,000 $MTCO_2e$ emissions annually.

Project 3: Agreement FPI-24-006, "Refrigeration and Compressed Air Systems Optimization at the Producers Dairy Facility," with Producers Dairy Foods, Inc., for a $2 million grant to install a new high-efficiency ammonia refrigeration and compressed air system at a dairy processing facility in Fresno. The facility is a dairy producer that processes and packages milk, cream, and other dairy products. The new ammonia refrigeration system will replace outdated and inefficient equipment, and the compressed air system upgrade will enhance operational efficiency. The improvements are expected to reduce approximately 900 $MTCO_2e$ emissions per year, decrease fossil gas consumption by 62,000 therms, decrease electricity consumption by an estimated 2.5 million kWh annually, and remove 450 pounds of high-GWP refrigerant.

Project 4: Agreement FPI-24-007, "Microgrid at Primex Farms," with Primex Farms, LLC., for a $5 million grant to install a solar-powered microgrid and a battery energy storage system at a pistachio processing plant in Wasco (Kern County). The facility processes approximately 200 million pounds of pistachios annually. Currently, energy limitations force the facility to rely on fossil gas backup generators to maintain operations. The new 3-MW solar array system, paired with a 1.6-MW battery energy storage system, will allow the facility to operate in grid-connected or island mode, eliminating the need for backup generators. The microgrid system will reduce grid electricity consumption, lower energy costs, enable on-peak demand reductions, and reduce GHG emissions by approximately 2,700 $MTCO_2e$ annually.

Project 5: Agreement FPI-24-008, "Joseph Gallo Farms Net-Zero Refrigeration System Optimization Project," with Joseph Gallo Cheese Company, LP, for a $2.5 million grant to replace aging and inefficient freon refrigeration systems with a high-efficiency carbon dioxide refrigeration system at a dairy production facility in Atwater (Merced County). The facility produces a variety of cheeses, including traditional and organic varieties. The new refrigeration system will improve energy efficiency, capture waste heat to reduce fossil gas use, and eliminate 6,900 pounds of high-GWP refrigerants. This project is expected to annually reduce emissions by approximately 4,500 $MTCO_2e$ and fossil gas consumption by 170,000 therms and support the company's goal of achieving net-zero production while enabling energy returns to the grid during peak hours.

Figure 3 shows the geographic distribution of FPIP project demonstration sites. All the projects are located in under-resourced communities.

Figure 3: Location of FPIP Demonstration Project Sites

Source: CEC

Annual Reporting Requirements

This section addresses the reporting elements required by AB 209.

a) Funds Spent for the Program, Balance Remaining to Be Spent, and Geographic Distribution of the Funds

- Project funds encumbered for FPIP: $14.2 million
- In the FY 2024–2025 budget, funding for FPIP was reduced from $65 million to $26.2 million. The funding source includes $20 million in GGRF and $6.2 million in GF. 91.2 percent of the $26.2 million (or $23.9 million) is being used to provide grants for grid reliability and decarbonization projects at food production facilities. The remaining 8.8 percent of program funds is being used for program administration.
- The CEC committed $5.9 million to provide cost share for projects applying for and receiving a federal grant award for demonstrating advanced energy and decarbonization technologies that support reductions in GHG emissions and increased electric grid reliability. However, no viable cost-share projects were identified, and the funds were reallocated and committed to an FPIP competitive grant solicitation (GFO-23-305 — "FPIP 2024").
- The CEC committed $36 million (later reduced to $23.9 million because of budget reductions) to solicitation GFO-23-305. The solicitation was released January 19, and proposed funding awards were announced in June. Five projects, totaling $14.2 million, were awarded in September 2024 and began in Q4 of 2024.
- The balance of remaining funds ($9.7 million) will be committed to an additional FPIP solicitation.

b) Funds Spent on Administrative, Technical, or Scientific Services for the Program

Expenditures through December 31, 2024: $610,000

The program held public workshops and participated in outreach events with interested organizations and parties, including:

- **January 19, 2024**: Released FPIP competitive grant solicitation GFO-23-305, "FPIP 2024," for $36 million and later reduced it to $23.9 million because of budget reductions under the 2024–2025 Enacted State Budget. The solicitation sought to accelerate the adoption of advanced energy efficiency, decarbonization, renewable energy technologies and support the electrical grid reliability in the California food industry.
- **February 6, 2024:** Pre-application workshop to provide information and answer questions on GFO-23-305. The workshop was attended by more than 90 people and collected written questions from potential applicants through February 16, 2024.
- **March 29, 2024**: CEC staff published a questions-and-answers document in advance of the May 9, 2024, deadline to submit applications.
- **June 28, 2024:** GFO-23-305 notice of proposed awards released. Eight awards were recommended for funding.

- **July 31, 2024:** Released an amended awards announcement for GFO-23-305.
- **August 30, 2024:** Hosted Dairy Decarbonization public workshop to explore innovative solutions to reduce GHG emissions in California's dairy sector. The workshop was attended by more than 200 people. Attendees included representatives from the dairy processing industry, food trade associations, equipment manufacturers, heat pump technology experts, academia, state agencies, and others.
- **September 9, 2024:** Seven of the eight proposed awards were presented and approved at the CEC Business Meeting, of which two awards were canceled prior to project execution.
- **November 2024**: Five awarded projects were executed.
- **Ongoing**: Coordination with U.S. DOE, CARB, academia, researchers, entrepreneurs, California food processors, equipment manufacturers, industrial trade associations, and other interested members of the public to inform FPIP activities and funding opportunities.

c) Estimates on How Expended Funds Are Achieving the Specific Purposes of the Program

Funding awards were announced in July 2024, and priority was given to projects that focus on AB 209 priorities, such as reducing GHG emissions, supporting electric grid reliability, and maximizing air-quality benefits. Of the eight projects recommended for funding, five were awarded in September 2024. Information on the awarded projects is provided in the "Awarded Projects" section above. Funding details on these projects are included in Appendix B.

d) Estimates of Additional Electrical Generation or Storage Capacity at Net Peak Hours or During Critical Grid Conditions Made Available as a Result of the Program

A generation capacity of 910,000 kWh per year during peak hours will be made available as a result of Project 4, as described in the "Awarded Projects" section above. During project selection, priority consideration was given to projects that support electrical grid reliability.

e) Estimated Onsite Reductions in GHG and Criteria Air Pollutant Emissions as a Result of the Program

The five projects described in the "Awarded Projects" section above are estimated to result in total annual onsite GHG emissions reductions of 7,600 $MTCO_2e$ and 3,200 pounds of criteria air pollutants. Moreover, these projects are expected to achieve additional annual *offsite* reductions of 3,800 $MTCO_2e$ in GHG emissions and 2,700 pounds of criteria air pollutants due to increased energy efficiency gains and onsite renewable electric generation. Future awards are expected to increase these estimated benefits. During project selection, priority consideration was given to projects that help reduce GHG emissions and maximize air quality benefits in under-resourced communities.

f) Description of How the Funds Were Used and a Description of the Industries Receiving Funding

FPIP allocated $14.2 million across five projects in Q2 of 2024, leveraging cutting-edge technologies to reduce GHG emissions and enhance grid reliability in California's food production sector. Funded food processing industries include a bakery, a dried nuts and fruits processing plant, an industrial food cold storage facility, and two dairy processing facilities. These projects demonstrate innovative solutions, such as high-efficiency, low-charge ammonia systems, carbon dioxide refrigeration systems, and solar-powered microgrids, driving sustainability and efficiency in California's food production.

Additional funding opportunities and announcements for FPIP will be posted on the FPIP website, and awarded project information will be posted on Energize Innovation.

CHAPTER 5:
Industrial Decarbonization and Improvement of Grid Operations Program

The industrial sector, responsible for more than 20 percent of California's and a third of national GHG emissions,[9] holds significant potential for decarbonization. Decarbonization opportunities include fuel switching, electrification of process heat, renewable fuels for high-heat applications (for example, concentrating solar-thermal power for steam generation in food production), nonthermal separations to replace energy-intensive methods, and load flexibility to manage peak electricity demand.

California's industrial sector is also a key economic driver, supporting domestic and global markets by providing jobs and manufacturing a wide range of goods, including minerals, cement, and glass. Green or clean technologies, for example, create well-paying jobs in local communities, with manufacturers employing 1.3 million Californians at wages averaging more than $25,000 higher than other nonfarm employers in the state.[10] The sector is also the second largest emitter of GHG emissions in California.[11] Many industrial facilities have high energy demands, particularly for process heat, which rely on fossil-fuel combustion. This reliance is a major contributor to GHG emissions and criteria air pollutants that burden neighboring communities.

The INDIGO Program was established under PRC section 25662 to provide grants for industrial projects that benefit the electrical grid and reduce GHG emissions and local air pollution. INDIGO is a first-of-its-kind program in California focused exclusively on industrial decarbonization, addressing a sector with difficult-to-decarbonize operational processes and long equipment lifecycles, resulting in limited opportunities for intervention before 2045 to meet California's carbon neutrality goals.

While other CEC programs, such as the Electric Program Investment Charge Program and the Gas Research and Development Program, have supported industrial initiatives, INDIGO is uniquely focused on this sector. By prioritizing demonstration projects with broad applicability, INDIGO helps de-risk emerging technologies and accelerate their adoption, strengthening California's industrial competitiveness while advancing the transition to a low-carbon economy.

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9 CARB. 2024 "Current California GHG Emission Inventory Data," CARB https://ww2.arb.ca.gov/ghg-inventory-data

10 California Manufacturers & Technology Association (CMTA). 2024 . National Association of Manufacturers (NAM). 2022. "California Manufacturing Facts," https://nam.org/state-manufacturing-data/2022-california-manufacturing-facts/

11 CARB. 2024 "Current California GHG Emission Inventory Data"(2024 Edition). CARB. https://ww2.arb.ca.gov/ghg-inventory-data

INDIGO drives the transformation of California's industry toward a decarbonized economy by:

- Demonstrating green or clean technologies that are scalable.
- Improving local air quality, especially in under-resourced communities.
- Achieving long-lasting and certain GHG emissions reductions.

The INDIGO Program uses GGRF monies from the CCI Program and provides incentives for industrial projects that provide benefits to the electrical grid as well as reduce emissions and local air pollution. Eligible projects:

- Enhance electrical grid reliability.
- Electrify processes that use fossil fuels.
- Incorporate energy storage or renewable resources.
- Increase energy efficiency.
- Develop and deploy novel decarbonization technologies and strategies.

Projects that benefit an oil or gas production, processing, or refining facility are not eligible.

2024 Milestones and Project Highlights

- On April 3, 2024, the CEC released a solicitation, Round 1 of GFO-23-313, "Deployment of Decarbonization Technologies and Strategies for California Industrial Facilities (INDIGO Program)," for up to $26 million to launch cutting-edge, emerging technologies at existing California industrial facilities. The goal is to promote electrification and load flexibility while reducing fossil fuel and thermal energy usage as well as criteria air pollutants and GHG emissions. The solicitation yielded three awards totaling $21 million. Round 2 for the remaining funds was announced on September 12, 2024, with a submission deadline of December 20, 2024. On June 27, 2024, two projects were announced for proposed awards and subsequently approved under solicitation GFO-22-902, "Cost Share for Federal Funding Opportunities." The solicitation aimed to strengthen California applicants' chances of securing federal funding aligned with the INDIGO Program and to maximize the impact of CEC funds.
- Five projects were awarded in 2024, totaling $30.5 million in CEC funds and 151,500 $MTCO_2e$/year in GHG reductions.

Awarded Projects

The CEC awarded five projects for INDIGO in 2024. Brief project descriptions are provided below. Additional details are provided in Appendix B.

Project 1: Agreement IND-24-001, "Deployment of a Steam-Generating Heat Pump for Deep Industrial Decarbonization and Improvement to Grid Operations," awards $5 million to Skyven Technologies Inc. to demonstrate steam-generating heat pump technology at Proctor & Gamble's Oxnard (Ventura County) plant to electrify steam production at the facility and reduce the steam-related carbon dioxide emissions by 76 percent. This project's goal is to highlight the technology's potential for widespread adoption across heat-intensive industries

that rely on conventional fossil-fired systems. This project leverages federal and private matching funds to achieve a 6:1 ratio on CEC funds.

Project 2: Agreement IND-24-002, "Demonstrating Hybrid Glass Furnace Technology to Support the Decarbonization of the United States Glass Industry," awards $5 million to Gallo Glass, which is a California-based, family-owned business and the largest glass plant in North America. This project, which leverages federal and private matching funds to achieve a 30:1 ratio on CEC funds, will support the installation of electric-driven glass-melting equipment at Gallo's Modesto (Stanislaus County) facility, transitioning from fossil gas to a hybrid solution that is expected to reduce fossil gas use by 70 percent and increase recycled content in glass bottles by 30 percent. The project aims to cut cradle-to-gate carbon intensity by over 40 percent compared to gas-powered furnaces. Gallo Glass will optimize low-carbon energy use and offer low-carbon glass bottles as a premium option, advancing decarbonization in California's wine and spirits industry.

Project 3: Agreement IND-24-003, "SVM Green Energy Transformation Initiative: Electrification, Solar Integration, and Battery Storage for a Sustainable Future," awards $8 million to Searles Valley Minerals to replace four steam turbine-driven boiler fans with solar photovoltaic-supported electric drives, install a battery energy storage system, and implement an energy management system at its Trona (San Bernardino County) mining plant. The plant processes minerals such as soda ash and borates, essential for manufacturing glass in solar panels, lithium carbonate for batteries, and sodium carbonate for flue gas desulfurization. These upgrades are expected to reduce coal and gas usage by 8 percent and 4.5 percent, respectively, while saving 102,240,000 gallons of water annually.

Project 4: Agreement IND-24-004, "Steam Generating Heat Pump at Industrial Laundry in Patterson," awards $4.5 million to Renewables Technology Development Inc. to harness a variety of waste heat sources for a steam-generating heat pump at an industrial laundry facility in Patterson (Stanislaus County) to supply heat to its dryers and ironers. The project includes balance of plant upgrades to enhance energy efficiency and eliminate gas consumption, incorporating onsite solar thermal energy to supplement steam-generating heat pump heat. The project aims to eliminate 250,524 therms of gas use annually and recycle/reuse 40,000 gallons of water per day back into the laundry through upgrades such as ceramic filtration and reverse osmosis. Successful demonstration could drive adoption of electric alternatives to gas-fired boilers in small to mid-sized industries.

Project 5: Agreement IND-24-005, "Hilmar Lactose System Electrification," awards $8 million to Hilmar Cheese Co., in Hilmar (Merced County), for the replacement of two mechanical vapor recovery evaporators with high-pressure reverse osmosis systems. This upgrade will significantly reduce onsite gas consumption. In addition, the installation of variable frequency drives and an industrial heat pump for product temperature control will enhance energy efficiency. The anticipated project benefits include reduced gas and electric usage, lower energy consumption per unit of product processed, and a decrease in water use by 7,902,050 gallons annually. High-pressure reverse osmosis and heat pump-based electrification create a cutting-edge, decarbonized liquid concentration system. This innovation could benefit over 100

California dairy processors and extend to the wastewater treatment and food processing industries.

Figure 4 shows the geographic distribution of INDIGO project sites. Two of them are located in under-resourced communities. Project 2 (IND-24-002, Gallo Glass) is not considered as benefiting these communities. Although the project would help reduce the current level of pollutants, this project involves combustion, and the CEC does not count such projects in under-resourced community benefit totals.

Figure 4: Location of INDIGO Demonstration Project Sites

Source: CEC

Annual Reporting Requirements

This section addresses the reporting elements required by AB 209.

a) Funds Spent for the Program, Balance Remaining to Be Spent, and Geographic Distribution of the Funds

Project funds encumbered for INDIGO: $30.5 million. The geographic distribution of funds is shown in Figure 4 above.

- In the FY 2024–2025 budget, funding for the program was reduced from $90 million to $40 million, and the funding source for the $40 million is the GGRF. This $50 million proposed reduction in the Governor's budget is from the GF. About 90 percent of the $40 million (or $36 million) will be used to provide grants for industrial decarbonization projects, which will include both CEC-sponsored grants and U.S. DOE cost-share grants described above.
- In the summer of 2024, GFO-22-902, "Cost Share for Federal Funding Opportunities INDIGO Program and FPIP," allocated $10 million in cost-share awards for two projects, though no funds were spent in 2024. The solicitation supports projects that were awarded federal grants to demonstrate advanced decarbonization technologies in California industries. These projects secured a total of $90 million in federal funds, achieving an average CEC funding leverage ratio of 17:1 through federal and private match funding.
- Round 1 of GFO-23-313, with up to $26 million for competitive grants, was released on April 3, 2024, to fund decarbonization technologies aimed at reducing or eliminating fossil fuel use in California industries. These efforts aim to reduce GHG emissions, pollutants, and peak electricity demand while providing grid support and delivering benefits to under-resourced communities where many industries operate. Three proposed awards totaling $20.5 million were announced on August 30, 2024, and approved at CEC's November 13, 2024, Business Meeting. No funds were disbursed in 2024.
- CEC announced Round 2 of GFO-23-313 for the remaining funds of $5.5 million on September 12, 2024, with a submission deadline of December 20, 2024.

b) Funds Spent on Administrative, Technical, or Scientific Services for the Program

Expenditures through December 31, 2024: $1 million

- **April 3, 2024:** Released GFO-23-313 — up to $26 million in grant funding for industrial decarbonization projects that electrify processes, maximize GHG reductions, enhance scalability, reduce peak electrical demand, and improve air quality for under-resourced populations.
- **April 26, 2024:** Held pre-application workshop to provide information and answer questions on GFO-23-313. More than 60 people attended the workshop, and the CEC collected written questions from potential applicants through May 1, 2024.
- **May 24, 2024**: Published a questions-and-answers document, in advance of the June 17, 2024, deadline to submit applications.
- **June 27, 2024:** Allocated $10 million in cost-share awards under solicitation GFO-22-902 for two projects, though no funds were spent in 2024. The solicitation supports projects

that were awarded federal grants to demonstrate advanced decarbonization technologies in California industries. These projects secured a total of $90 million in federal funds, achieving an average CEC funding leverage ratio of 17:1 through federal and private match funding.

- **August 30, 2024:** Released the notice of proposed awards for GFO-23-313 and recommended three awards totaling $20.5 million for funding.
- **September 11, 2024**: Presented and approved two proposed federal cost-share awards from GFO-22-902 at the CEC Business Meeting.
- **September 12, 2024**: Released Round 2 of Solicitation GFO-23-313 — up to $5.5 million in grant funding for industrial decarbonization projects.
- **October 14, 2024**: Published a questions-and-answers document for Round 2, in advance of the December 20, 2024, deadline to submit applications.
- **November 13, 2024**: Presented and approved three proposed awards from GFO-23-313 at the CEC Business Meeting.
- **Ongoing**: Coordination with U.S. DOE, CARB, academia, researchers, entrepreneurs, California industrial companies, equipment manufacturers, industrial trade associations, and other interested members of the public to inform INDIGO activities and funding opportunities.

c) Estimates on How Spent Funds Are Achieving the Specific Purposes of the Program

Priority for both CEC grants and U.S. DOE cost-share grants is given to projects that align with AB 209 priorities, including promoting electrification, reducing GHG emissions from the industrial sector, and benefiting under-resourced communities. To date, two U.S. DOE cost-share projects and three CEC-sponsored projects have been awarded.

d) Estimates of Additional Electrical Generation or Storage Capacity at Net Peak Hours or During Critical Grid Conditions Made Available as a Result of the Program

Priority consideration was given to projects that reduce net-peak electricity use. Together, the five projects described in the "Awarded Projects" section above are estimated to save more than 8 million kWh of grid electricity annually during peak hours. Future awards are expected to increase these estimated benefits.

Project 1 is expected to provide 10 MW of grid response. Project 3 includes the installation of a solar photovoltaic system estimated to generate more than 20 million kWh annually, along with a battery energy storage system and specialized control system to focus on reducing peak demand from 4:00 p.m. to 9:00 p.m.

e) Estimated Onsite Reductions of GHG and Criteria Air Pollutants Emissions as a Result of the Program

The CEC gave priority consideration to projects that help reduce GHG emissions and maximize air-quality benefits in under-resourced communities. The five projects described in the "Awarded Projects" section above are estimated to result in a total annual reduction of

151,500 $MTCO_2e$ and more than 868,000 pounds of criteria air pollutants. Future awards are expected to increase these estimated benefits.

f) Description of How the Funds Were Used and a Description of the Industries Receiving Funding

In 2024, INDIGO allocated $30.5 million across five projects at existing industrial facilities involving facility owners, equipment manufacturers, and energy service companies. Two projects received $10 million in CEC funds and leveraged $90 million in federal funding, with a specific focus on demonstrating industrial heat decarbonization.

The remaining three projects, totaling $20.5 million, focus on demonstrating cutting-edge emerging technologies that meet at least one of the following goals:

- Electrifying industrial processes
- Maximizing GHG reductions
- Enhancing scalability
- Reducing peak-period electrical demand
- Providing air-quality benefits to under-resourced communities

CHAPTER 6:
Offshore Wind Waterfront Facility Improvement Program

Offshore wind (OSW) energy developed in federal ocean waters off California's coast is poised to play an important role in diversifying the state's portfolio of clean and renewable energy resources as it complements the generation attributes of other clean energy resources. On July 10, 2024, the CEC approved the *AB 525* (Chiu, Chapter 231, Statutes of 2021) *Offshore Wind Energy Strategic Plan* (*AB 525 Strategic Plan*) for OSW energy development in federal waters off the California coast. As explained in the *AB 525 Strategic Plan*, ports and waterfront facilities will play a critical role in developing an OSW industry in California.[12]

Existing California port infrastructure is unable to support an OSW industry in the state. Individual OSW turbines deployed off the California coast are likely to be between 12 to 25 MW each, and projects could have 100 or more turbines. The only feasible way to transfer components from one location to another is over water. No single port site in California can serve all the needs of the OSW industry. Instead, multiple ports will be needed and could require upward of 16 large and 10 small port sites to support OSW development over the next decade or more. The *AB 525 Strategic Plan* identifies several port sites within the state that can be used for these OSW activities.

The California State Lands Commission's *AB 525 Port Readiness Plan* estimated that an investment of about $11 billion to $12 billion is needed to upgrade existing port infrastructure to meet the AB 525 OSW planning goal of 25 gigawatts by 2045.[13] Staging and integration sites are required to develop floating OSW, and few locations meet floating OSW port requirements. A collaborative port development strategy is needed to support various port upgrades, and programs are needed to encourage early-stage port development, including port readiness, concept design, and engineering, as well as permitting and environmental assessments.

The Offshore Wind Waterfront Facility Improvement Program, referred to in Article 6 as "Program to Support Offshore Wind Infrastructure Improvements," was established under PRC section 25666 as part of the Clean Energy Programs created by AB 209, and requires the CEC to establish and administer a program to support OSW infrastructure improvements to advance the capabilities of California ports, harbors, and other waterfront facilities. The Budget

12 On July 10, 2024, the CEC adopted the final reports *Assembly Bill 525 Offshore Wind Energy Strategic Plan Volumes I–III*. https://www.energy.ca.gov/data-reports/reports/ab-525-reports-offshore-renewable-energy

13 Lim, Jennifer and Matt Trowbridge (Moffat & Nichol). 2023.*AB 525 Port Readiness Plan*. California State Lands Commission, 221194/02, https://slcprdwordpressstorage.blob.core.windows.net/wordpressdata/2023/07/AB525-Port-Readiness-Plan_acc.pdf.

Act of 2022, as amended by AB 179, appropriates $45 million to the CEC with $42.75 million allocated for project incentives and $2.25 million for program administration.

Projects will support the buildout of OSW facilities and maximize the economic and environmental benefits of an OSW industry in California.

Below are the three categories of infrastructure improvements authorized by PRC section 25666:

- Category I activities support developing individual or regional retrofit concepts and investment plans.
- Category II activities support final design, engineering, environmental studies and review, and construction of retrofits.
- Category III activities include cost-share funding to an eligible applicant who receives a federal award for purposes consistent with Category I or Category II activities.

A program webpage and docket (23-MISC-01) are available on the CEC's website.

2024 Milestones and Project Highlights

- On September 30, 2024, CEC staff released GFO-24-701 "Offshore Wind Energy Waterfront Facility Improvement Program" to implement PRC section 25666. The purpose of the solicitation is to fund projects that will plan for OSW energy infrastructure improvements that advance the capabilities of California waterfront facilities to support the development and operation of floating OSW projects. The solicitation is the first competitive solicitation offered by the CEC for incentivizing the development of waterfront facility infrastructure to support the development of floating OSW. It makes $42,750,000 available for two of the funding categories (I and II) authorized in PRC section 25666. This solicitation is not seeking applications specifically for Category III activities; however, applicants who demonstrate that their project will contribute to securing funding from a federal award consistent with Category I or II activities will be eligible for preference points as described in GFO-24-701.
- On October 16, 2024, CEC staff held a pre-application workshop and collected written questions from potential applicants. CEC staff published a questions-and-answers document in December in advance of the deadline to submit applications. The CEC received four public comments at the workshop.
- In December, CEC staff received 13 proposals for evaluation and scoring.

Annual Reporting Requirements

This section addresses the reporting elements required by AB 209.

a) Funds Spent for the Program, Balance Remaining to be Spent, and Geographic Distribution of the Funds

The Budget Act of 2022, as amended by AB 179, appropriates $45 million to the CEC to administer ($2.25 million) and provide incentives ($42.5 million) to support OSW infrastructure improvements. Staff will include the geographic distribution of funds in future reports.

b) Funds Spent on Administrative, Technical, or Scientific Services for the Program

Expenditures through December 31, 2024: $1.6 million

Administrative activities included solicitation development activities described below.

- Development of a GFO to implement the program.
- Regular communication and consultation with state agencies on the solicitation approach.
- Supported the Department of Finance with various budget considerations for the original appropriation.
- Released GFO-24-701 on September 30, 2024.
- Held a public pre-application workshop on October 16, 2024, to present the solicitation, collect questions from potential applicants, and receive public comment.

c) Estimates on How Expended Funds are Achieving the Specific Purposes of the Program

CEC staff implemented the provisions of AB 209 by releasing a solicitation. The requirements indicated that priority will be given to projects that advance the capabilities of California ports, harbors, and other waterfront facilities to support the buildout of OSW facilities and maximize the economic and environmental benefits of an OSW industry in California.

d) Estimates of Additional Electrical Generation or Storage Capacity at Net Peak Hours or During Critical Grid Conditions Made Available as a Result of the Program

Though this program is not expected to directly result in additional electrical generation or storage capacity, it is expected that the development of OSW resources in California will reduce the need for fossil fuels for electricity generation.

e) Estimated Onsite Reductions in GHG and Criteria Air Pollutant Emissions as a Result of the Program

Though this program is not expected to directly result in a reduction in GHG and criteria air pollutants because there will be no additional electrical generation or storage capacity, it is expected that the development of OSW resources in California will reduce the need for fossil fuels for electricity generation. Further, the operations of port facilities developing OSW components could have impacts, including air quality, on nearby communities. Priority consideration will be given to projects that plan to maximize the reduction of GHG emissions and pollution in these communities, especially in under-resourced communities.

f) Description of How the Funds Were Used and a Description of the Industries Receiving Funding

Upon the awarding of project funding, staff will provide this information.

LIST OF TERMS/GLOSSARY

Term	Definition
AB	Assembly Bill
CAEATFA	California Alternative Energy and Advanced Transportation Financing Authority. CAEATFA is a state authority that provides financing solutions for projects that help reduce greenhouse gas emissions by increasing the development and deployment of renewable energy sources, energy efficiency, and advanced transportation and manufacturing technologies. CAEAFTA administers the GoGreen Home Financing Program with the support of funding from the CEC Equitable Building Decarbonization Program.
CCI	The California Air Resources Board's California Climate Investments Program is funded by proceeds that are deposited into the Greenhouse Gas Reduction Fund from the sale of state-owned allowances through quarterly Cap-and-Trade auctions. State agencies that receive appropriations from the Greenhouse Gas Reduction Fund for California Climate Investment Program use funding guidelines developed by the California Air Resources Board to design and implement programs that facilitate greenhouse gas emission reductions, benefit disadvantaged communities and low-income communities and households, and provide transparency and accountability regarding the use of funds.
CARB	California Air Resources Board
CEC	California Energy Commission
CHY	Clean Hydrogen Program

Decarbonization	Decarbonization refers to the process of reducing or removing carbon dioxide emissions from the atmosphere.
Direct Install Program	A program to provide energy efficiency, decarbonization, or load flexible upgrades directly to a consumer at no cost through a third-party implementer
Disadvantaged community	Per Senate Bill 535 (De León, Chapter 830, Statutes of 2012), the California Environmental Protection Agency[14] designated four categories of geographic areas as disadvantaged: 1. Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0 (https://oehha.ca.gov/calenviroscreen) 2. Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores 3. Census tracts identified in the 2017 Disadvantaged Community designation, regardless of their scores in CalEnviroScreen 4.0 4. Lands under the control of federally recognized Tribes These communities are included within the California Climate Investments Program Priority Populations[15] designation.
U.S. DOE	United States Department of Energy
EBD	Equitable Building Decarbonization Program

14 California Environmental Protection Agency (CalEPA). 2025 "California Climate Investments to Benefit Disadvantaged Communities," CalEPA https://calepa.ca.gov/envjustice/ghginvest/

15 CARB, 2024 "California Climate Investments Priority Populations 2024," CARB https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=e746df40e39144029cd1f9fd748c81b2&page=About-%26-Resources

Electrification	Electrification refers to replacing fossil gas-powered technologies or processes with those powered by grid or clean, renewable electricity
FPIP	Food Production Investment Program
FY	Fiscal Year
GF	General Fund
GFO	Grant funding opportunity
GGRF	Greenhouse Gas Reduction Fund. The Greenhouse Gas Reduction Fund is a fund that receives the state's portion of the Cap-and-Trade auction proceeds to be used for the California Climate Investments Program.
GHG	Greenhouse gas
GWP	Global Warming Potential
GoGreen Home Financing Program	The GoGreen Home Financing Program enables private lenders to provide loans for home energy upgrades to a broader base of borrowers. This goal is achieved by putting credit enhancement measures in place to reduce the risk of default, which lets participating lenders offer lower interest rates, longer repayment terms, and larger loan amounts. The California Alternative Energy and Advanced Transportation Financing Authority administers the program with funding support from the CEC Equitable Building Decarbonization Program.
HEEHRA	Homes Electrification and Appliance Rebates. This Federal Inflation Reduction Act-funded Program helps households save money on energy bills, improve energy efficiency, reduce greenhouse gas emissions, and improve indoor air quality. Funding is split into two phases, HEEHRA Phase I and HEEHRA Phase II. It is administered by the United States Department of Energy.

HOMES	Home Efficiency Rebates Program. The Federal Inflation Reduction Act-funded HOMES Program helps households save on energy bills, improve energy efficiency, reduce greenhouse gas emissions, and improve indoor air quality by providing rebates for home energy upgrades. It is administered by the United States Department of Energy.
INDIGO	Industrial Decarbonization and Improvement of Grid Operations Program
kWh	Kilowatt-hour
Load flexibility	Load flexibility, also called demand flexibility, is the practice of adjusting load (or energy usage) to match the supply of electricity.
Low-income community	Low-income communities and households are, per AB 1550[16] (Gomez, Chapter 369, Statutes of 2016), defined as the census tracts and households, respectively, that are either at or below 80 percent of the statewide median income or with median incomes at or below the threshold designated as low-income by the California Department of Housing and Community Development's list of state income limits[17] adopted pursuant to section 50093 of the Health and Safety Code. This definition is included within the California Climate Investments Priority Populations[18] designation.

16 2016."AB-1550 Greenhouse gases: investment plan: disadvantaged communities." California Legislative Information, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1550

17 California Department of Housing and Community Development. 2024. "State and Federal Income, Rent, and Loan/Value Limits," California Department of Housing and Community Development https://www.hcd.ca.gov/grants-and-funding/income-limits/state-and-federal-income-rent-and-loan-value-limits

18 CARB. 2024 "California Climate Investments Priority Populations 2024," CARB, https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=e746df40e39144029cd1f9fd748c81b2&page=About-%26-Resources

$MTCO_2e$	metric tons of CO_2 equivalent
MW	megawatt
Net peak hours	The hours when electricity demand is highest, minus any contributions from utility-scale solar and wind generation. The net peak typically occurs in the late afternoon and early evening when solar power generation decreases as the sun sets and wind generation may not be sufficient to meet the demand. Net peak hours are critical because the electricity grid is under the most strain and grid operators often rely on non-renewable sources like fossil gas to ensure there is enough electricity supply to meet the high demand. For more details, see https://www.energy.ca.gov/data-reports/energy-insights/peek-net-peak.
Non-thermal separation	Replacing thermal separation processes, such as evaporation and distillation, with processes that remove the thermal energy required for separation and strictly rely on electrified processes (for example, reverse osmosis).
OSW	offshore wind
PODER	California Housing Partnership Corporation, People Organizing to Demand Environmental and Economic Rights
PRC	Public Resources Code
Q	Quarter. Q1 includes January, February, and March. Q2 includes April, May, and June. Q3 includes July, August, and September. Q4 includes October, November, and December.
SB	Senate Bill
TECH Clean California	Technology and Equipment for Clean Heating Clean California is a contractor point of sale residential electrification rebate program that offers electric appliance incentives, technical

	assistance, and installer training to address barriers associated with building decarbonization market transformation.
Therm	Unit of energy, typically used for fossil gas
Tribal Direct Install Program	A program to provide home energy upgrades at no cost for residential buildings owned or managed by California Native American tribes or California tribal organizations and buildings owned by members of California Native American tribes.
Under-resourced community	These communities are described in California Public Resources Code section 25665, which states that an "under-resourced community is defined by PRC 71130," which means a community identified pursuant to section 39711 of the Health and Safety Code, subdivision (d) of section 39713 of the Health and Safety Code, or subdivision (g) of section 75005.[19] PRC section 75005 includes the following: "'Severely disadvantaged community' means a community with a median household income less than 60 percent of the statewide average." "Under-resourced community" is an umbrella term that includes low-income communities, priority populations, and disadvantaged communities as described in this glossary.

19 FindLaw. 2023 "California Code, Public Resources Code § 75005" FindLaw, https://codes.findlaw.com/ca/public-resources-code/prc-sect-75005/#:~:text=(g)%20%E2%80%9CDisadvantaged%20community%E2%80%9D,60%25%20of%20the%20statewide%20average

APPENDIX A:
2024 EBD Projects Awarded – Cumulative through December 31, 2024

Table A-1: 2024 EBD Projects Awarded — Cumulative through December 31, 2024

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
N/A	EBD-24-001	California Alternative Energy and Advanced Transportation Financing Authority	Equitable Building Decarbonization GoGreen Home Financing Program	EBD	FY 2022-23 EBD-GGRF Program Project Budget Plan	$54,000,000	$30,000,000	N/A	9/5/2024	6/30/2029	Active
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2022-23 EBD-General Fund Program Project Budget Plan	$1,800,000	$342,000	11/13/2024	12/16/2024	11/13/2029	Active
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2022-23 EBD-GGRF Program Project	$54,000,000	$4,560,000	11/13/2024	12/16/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2023-24 EBD-General Fund Program Project Budget Plan	$450,000	$85,500	11/13/2024	12/16/2024	11/13/2029	Active
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2023-24 EBD-GGRF Program Project Budget Plan	$310,500,000	$53,295,000	11/13/2024	12/16/2024	11/13/2029	Active
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2024-25 EBD-GGRF Program Project	$22,500,000	$4,275,000	11/13/2024	12/16/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-002	Center for Sustainable Energy	Equitable Building Decarbonization Statewide Direct Install Program - Central Region	EBD	FY 2027-28 EBD-GGRF Program Project Budget Plan	$83,700,000	$15,903,000	11/13/2024	12/17/2024	11/13/2029	Active
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2022-23 EBD-General Fund Program Project Budget Plan	$1,800,000	$414,000	11/13/2024	12/17/2024	11/13/2029	Active
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2022-23 EBD-GGRF Program Project	$54,000,000	$5,520,000	11/13/2024	12/17/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2023-24 EBD-General Fund Program Project Budget Plan	$450,000	$103,500	11/13/2024	12/17/2024	11/13/2029	Active
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2023-24 EBD-GGRF Program Project Budget Plan	$310,500,000	$64,515,000	11/13/2024	12/17/2024	11/13/2029	Active
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2024-25 EBD-GGRF Program Project	$22,500,000	$5,175,000	11/13/2024	12/17/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-003	Association for Energy Affordability, Inc.	Equitable Building Decarbonization Statewide Direct Install Program - Northern Region	EBD	FY 2027-28 EBD-GGRF Program Project Budget Plan	$83,700,000	$19,251,000	11/13/2024	12/17/2024	11/13/2029	Active
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2022-23 EBD-General Fund Program Project Budget Plan	$1,800,000	$1,044,000	11/13/2024	12/19/2024	11/13/2029	Active
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2022-23 EBD-GGRF Program Project	$54,000,000	$13,920,000	11/13/2024	12/19/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2023-24 EBD-General Fund Program Project Budget Plan	$450,000	$261,000	11/13/2024	12/19/2024	11/13/2029	Active
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2023-24 EBD-GGRF Program Project Budget Plan	$310,500,000	$162,690,000	11/13/2024	12/19/2024	11/13/2029	Active
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2024-25 EBD-GGRF Program Project	$22,500,000	$13,050,000	11/13/2024	12/19/2024	11/13/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program [2]	Budget Plan	Budget Plan Funding	Total CEC Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [3]
					Budget Plan						
GFO-23-404	EBD-24-004	County of Los Angeles	Equitable Building Decarbonization Statewide Direct Install Program - Southern Region	EBD	FY 2027-28 EBD-GGRF Program Project Budget Plan	$83,700,000	$48,546,000	11/13/2024	12/19/2024	11/13/2029	Active
Total Number of Agreements Awarded	**Total CEC Funding**										
4	**$442,950,000**										

1 Agreement Number: Agreement number may be repeated if it includes funding from multiple funding sources. Agreement Number will be counted only once.

2 Project Status:

Active: Executed Agreement end date is open in 2024.

APPENDIX B:
2024 FPIP and INDIGO Projects Awarded – Cumulative through December 31, 2024

Table B-1: 2024 FPIP and INDIGO Projects Awarded — Cumulative through December 31, 2024

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
GFO-23-305	FPI-24-002	Innovative Cold Storage Enterprises, Inc.	Refrigeration System Upgrade at Innovative Cold Enterprise	FPIP	FY 2022-23 FPIP-General Fund Program Project Budget Plan	$1,100,000	$3,967,972	$1,091,993	9/11/2024	9/11/2024	3/30/2029	Active
GFO-23-305	FPI-24-002	Innovative Cold Storage Enterprises, Inc.	Refrigeration System Upgrade at Innovative Cold Enterprise	FPIP	FY 2023-24 FPIP-GGRF Program Project Budget Plan	$2,867,972			9/11/2024	9/11/2024	3/30/2029	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
GFO-23-305	FPI-24-005	Aspire Bakeries LLC	R-22 Refrigeration System Conversion at the Aspire Bakeries Facility	FPIP	FY 2023-24 FPIP-GGRF Program Project Budget Plan	$710,463	$710,463	$566,292	9/11/2024	10/1/2024	6/30/2028	Active
GFO-23-305	FPI-24-006	Producers Dairy Foods, Inc.	Refrigeration and Compressed Air Systems Optimization at the Producers Dairy Facility	FPIP	FY 2022-23 FPIP-General Fund Program Project Budget Plan	$1,198,175	$2,010,400	$4,059,600	9/11/2024	10/1/2024	11/24/2028	Active
GFO-23-305	FPI-24-006	Producers Dairy Foods, Inc.	Refrigeration and Compressed Air Systems Optimization at the Producers Dairy Facility	FPIP	FY 2023-24 FPIP-GGRF Program Project Budget Plan	$812,225			9/11/2024	10/1/2024	11/24/2028	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
GFO-23-305	FPI-24-007	Primex Farms, LLC	Microgrid at Primex Farms	FPIP	FY 2022-23 FPIP-General Fund Program Project Budget Plan	$1,100,000	$4,999,376	$4,257,633	9/11/2024	9/20/2024	3/30/2029	Active
GFO-23-305	FPI-24-007	Primex Farms, LLC	Microgrid at Primex Farms	FPIP	FY 2023-24 FPIP-GGRF Program Project Budget Plan	$3,899,376			9/11/2024	9/20/2024	3/30/2029	Active
GFO-23-305	FPI-24-008	Joseph Gallo Cheese Company LP	Joseph Gallo Farms Net-Zero Refrigeration System Optimization Project	FPIP	FY 2022-23 FPIP-General Fund Program Project Budget Plan	$2,491,825	$2,491,825	$1,637,710	9/11/2024	10/1/2024	12/31/2027	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
GFO-22-902	IND-24-001	Skyven Technologies, Inc.	Deployment of a Steam-Generating Heat Pump for Deep Industrial Decarbonization and Improvement to Grid Operations	INDIGO	FY 2022-23 INDIGO-GGRF Program Project Budget Plan	$5,000,000	$5,000,000	$25,400,000*	9/11/2024	10/7/2024	7/31/2028	Pending Final Approval
GFO-22-902	IND-24-002	Gallo Glass Company	Demonstrating Hybrid Glass Furnace Technology to Support the Decarbonization of the United States Glass Industry	INDIGO	FY 2022-23 INDIGO-GGRF Program Project Budget Plan	$5,000,000	$5,000,000	$145,000,000*	9/11/2024	10/7/2024	3/30/2029	Pending Final Approval

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
GFO-23-313	IND-24-003	Searles Valley Minerals	SVM Green Energy Transformation Initiative: Electrification, Solar Integration, and Battery Storage for a Sustainable Future	INDIGO	FY 2022-23 INDIGO-GGRF Program Project Budget Plan	$8,000,000	$8,000,000	$12,278,284	11/13/2024	12/16/2024	3/6/2028	Active
GFO-23-313	IND-24-004	Renewable Technology Developments Inc	Steam Generating Heat Pump at Industrial Laundry in Patterson	INDIGO	FY 2022-23 INDIGO-GGRF Program Project Budget Plan	$4,504,284	$4,504,284	$1,540,974	11/13/2024	12/16/2024	3/30/2028	Pending Final Approval
GFO-23-313	IND-24-005	Hilmar Cheese Company, Inc.	Hilmar Lactose System Electrification	INDIGO	FY 2022-23 INDIGO-GGRF Program Project	$8,000,000	$8,000,000	$9,441,587	11/13/2024	12/16/2024	3/6/2028	Active

Solicitation #	Agreement # [1]	Recipient	Project Title	Program	Budget Plan	Budget Plan Funding	Total CEC Funding	Match Funding	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status [2]
					Budget Plan							
Total Number of Agreements Awarded	**Total CEC Funding**	**Total Match Funding***										
10	**$44,684,320**	**$205,274,073**										

1 Agreement Number: Agreement number may be repeated if it includes funding from multiple funding sources. Agreement Number will be counted only once.

* Project's match total includes federal match.

2 Project Status:

Active: Executed Agreement end date is open in 2024.

Pending Final Approval: In 2024, the agreement was approved at a CEC Business Meeting but was still in process for approval (execution).