

Low-Income Weatherization Program Guidelines

SINGLE-FAMILY ENERGY EFFICIENCY
SMALL MULTI-FAMILY ENERGY EFFICIENCY
SINGLE-FAMILY SOLAR PHOTOVOLTAICS

Final



Department of Community Services and Development

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DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT

LOW-INCOME WEATHERIZATION PROGRAM (LIWP)

PROGRAM GUIDELINES

Single-Family Energy Efficiency
Small Multi-Family Energy Efficiency
Single-Family Solar Photovoltaics

Preface

This amended version of the Program Guidelines provides updated information reflecting program developments since the release of the initial Guidelines in 2014 and subsequent amendments. These Guidelines apply to CSD's initial Single-Family/Small Multi-Family Energy Efficiency Program and Single-Family Solar Photovoltaics Program, initial service providers, and allocations to date. CSD subsequently pursued more sustainable modes of program administration and implementation through program redesign. New Program Guidelines that apply to the redesigned Single-Family Energy Efficiency and Solar Photovoltaics Programs, and new providers selected through a competitive procurement process (State Fiscal Year [SFY] 2015-16 appropriation procurements), are available at <http://www.csd.ca.gov/Resources/ProgramGuidelines.aspx>.

I. Introduction

The California Department of Community Services and Development (CSD) developed the following Program Guidelines for the implementation of its Low-Income Weatherization Program (LIWP). With program oversight and direction provided by the California Air Resources Board (CARB), CSD and a network of LIWP Providers will offer services to reduce Greenhouse Gas (GHG) emissions and provide important co-benefits to qualifying low-income households in designated *disadvantaged communities*, as identified by the California Environmental Protection Agency (CalEPA), unless otherwise authorized or required by law.

LIWP is part of California Climate Investments, a statewide program that puts billions of cap-and-trade dollars to work reducing greenhouse gas emissions, strengthening the economy and improving public health and the environment—particularly in disadvantaged communities. The cap-and-trade program also creates a financial incentive for industries to invest in clean technologies and develop innovative ways to reduce pollution. California Climate Investment projects include affordable housing, renewable energy, public transportation, zero-emission vehicles, environmental restoration, more sustainable agriculture, recycling and much more. At least 35 percent of these investments are made in disadvantaged and low-income communities. For more information, visit www.caclimateinvestments.ca.gov.

The Guidelines describe how and where CSD will initially implement LIWP. Though CSD's allocations for LIWP include funding for Large Multi-Family dwellings, these guidelines do not include that program component. CSD issued separate Program Guidelines for the Large Multi-Family portion of LIWP, later renamed as the Multi-Family Energy Efficiency and Renewables Program, in 2015.

II. Guidelines' Scope

The purpose of these Guidelines is to define CSD's LIWP. The purpose of LIWP is to install cost-effective energy efficiency measures and solar photovoltaics (PV) in the residences of qualifying low-income households to reduce energy use and GHG emissions. In addition, LIWP will provide other co-benefits to the state such as reducing air pollution, improving public health, helping achieve air quality standards, reducing energy costs and water usage, stimulating the economy, and creating jobs.

In 2012, the Legislature passed and Governor Brown signed into law three related bills—AB 1532 (Perez, Chapter 807), SB 535 (De Leon, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39). Among other things, these bills establish the Greenhouse Gas Reduction Fund (GGRF) and mandate a portion of the funds be invested to benefit disadvantaged communities. Every three years, the California Department of Finance (DOF) submits a plan to the Legislature, identifying priority investments that will help achieve greenhouse gas reduction goals. Each fiscal year, the Legislature appropriates monies from the GGRF in accordance with this 3-year investment plan. The plan applying to the initial program components is the *“Cap and Trade Auction Proceeds Investment Plan: Fiscal Years 2013-14 through 2015-16.”*

In the SFY 2014/15 budget, a total of \$832 M was appropriated from the GGRF to 12 State Agencies, including \$75 M to CSD for the implementation of LIWP. CSD received additional appropriations of \$78.8 M in SFY 2015/16, \$20 M in SFY 2016/17, \$18 M in SFY 2017/18 and \$10 M in SFY 2018/19.

III. Program Description and Overview

a. CSD's History and Programs

CSD has been serving low-income communities for 50 years. Originally known as the “State Office of Economic Opportunity,” the office was created as a result of the federal Economic Opportunity Act of 1964.

A State department under the California Health and Human Services Agency, CSD partners with a network of private, non-profit and local government organizations, dedicated to reducing poverty by helping low-income individuals and families achieve and maintain self-sufficiency, meet their home energy needs, and reduce their utility costs through energy efficiency upgrades and access to clean renewable energy.

CSD administers the following federal programs intended to reduce poverty and improve the lives of low-income Californians:

- U.S. Department of Health & Human Services Community Services Block Grant (CSBG)
- U.S. Department of Health & Human Services Low-Income Home Energy Assistance Program (LIHEAP)
- U.S. Department of Energy Weatherization Assistance Program (DOE WAP)

Leveraging these existing resources with LIWP will allow more energy efficiency measures to be installed.

b. LIWP Providers

Under its existing federal weatherization programs, CSD allocates federal funding to the statewide network of providers described in Section III (a), above. For the initial implementation

of LIWP, CSD expanded both the scope of its current weatherization program and the number of entities that will provide those services. A provider was selected to provide single-family solar PV services, and CSD selected an additional provider to administer its large multi-family program. In addition, CSD is administering a single-family solar PV pilot project in nine counties. Those entities that will provide LIWP services are referred to in this document as LIWP Providers (or simply “Providers”).

Additional information on Providers covered by these Program Guidelines and available services can be found at:

<http://www.csd.ca.gov/Services/FindServicesinYourArea.aspx>

IV. Disadvantaged Communities

SB 535 (De Leon, Chapter 830) required that at least 25 percent of the GGRF must be invested to benefit disadvantaged communities and at least 10 percent be invested within the disadvantaged communities.

The CalEPA’s Office of Environmental Health Hazard Assessment (OEHHA) developed CalEnviroScreen. In October 2014, the California Secretary of Environmental Protection used CalEnviroScreen 2.0 to identify the top 25 percent of census tracts as “disadvantaged communities” for the purpose of investing GGRF.

Maps of disadvantaged community census tracts and other related information can be viewed at:

<http://www.calepa.ca.gov/EnvJustice/ghginvest>

CalEnviroScreen 2.0 uses 19 indicators divided into two broad categories: “burden of pollution,” which includes exposures as well as environmental effects, and “population characteristics,” which includes sensitive populations and socioeconomic factors, specifically:

POLLUTION INDICATORS:	POPULATION INDICATORS:
Air Quality: Ozone	Children and elderly
Air Quality: PM 2.5	Low birth weight
Diesel Particulate Matter	Asthma emergency visits
Pesticide Use	Educational attainment
Toxic Releases from Facilities	Linguistic Isolation
Traffic Density	Poverty
Cleanup Sites	Unemployment
Groundwater Threats	
Hazardous Waste Facilities and Generators	
Impaired Water Bodies	
Solid Waste Sites and Facilities	
Drinking Water	

Each “census tract” in the state was assigned a value for each of the indicators relative to all other census tracts. A census tract is a small, subdivision of a county. In general, each census tract contains an average of about 4,000 people, though they may range from 1,200 to 10,000. There are over 8,000 census tracts in California. The census tract indicator scores were totaled to determine an overall CalEnviroScreen Score - the higher the score, the greater the impact.

In October 2014, CalEPA identified the top 25 percent of these census tracts as “disadvantaged communities” for the purpose of investing auction proceeds. The top 25% of the census tracts equal 1,993 individual tracts, containing 9.4 million people, and distributed amongst 29 California counties. These counties are shown below, but only the designated disadvantaged community census tracts in these counties are currently eligible for LIWP:

Alameda	Butte	Contra Costa	Fresno	Imperial
Kern	Kings	Los Angeles	Madera	Merced
Monterey	Orange	Riverside	Sacramento	San Bernardino
San Diego	San Francisco	San Joaquin	San Mateo	Santa Barbara
Santa Clara	Santa Cruz	Solano	Stanislaus	Tehama
Tulare	Ventura	Yolo	Yuba	--

While CalEnviroScreen 3.0 has now replaced 2.0, the program components covered by these Program Guidelines were designed prior to the release of 3.0, so 2.0 continues to be utilized. More information on CalEnviroScreen is available at:

<https://oehha.ca.gov/calenviroscreen>

AB 1550 (Gomez, Chapter 369, Statutes of 2016), increased the percent of California Climate Investment funds for projects located in disadvantaged communities from 10 to 25 percent and added a focus on investments in low-income communities and households. However, the program components covered by these Program Guidelines continue to make investments exclusively in disadvantaged communities.

To confirm that an address is located in a shaded disadvantaged community census tract, you can access the link to the SB 535 Online Mapping Application of the Disadvantaged Communities (CalEnviroScreen 2.0), that includes an address look-up tool, at:

<http://www.calepa.ca.gov/EnvJustice/ghginvest>

Since all LIWP investments need to benefit disadvantaged communities, local service providers need to ensure that their projects are implemented in accordance with the disadvantaged community criteria in CARB’s Funding Guidelines.¹

¹ Disadvantaged community criteria are contained in CARB’s “Funding Guidelines for Agencies that Administer California Climate Investments”, Volume 2, Table 2.A-4, dated December 2015, available at: www.arb.ca.gov/ccifundingguidelines.

V. LIWP Goals

a. Goal #1: Maximize GHG Reductions

The reduction of GHG emissions is the primary goal of LIWP. Assembly Bill 32 (AB 32), also known as the California Global Warming Solutions Act of 2006—mandates the return of state GHG emissions to 1990 levels by the year 2020. AB 32 established California as a global leader on reducing greenhouse gases and prescribes a comprehensive and long-term approach to addressing climate change in a way that aims to improve the environment and natural resources while maintaining a robust economy.

As the long-time administrator of California’s low-income weatherization funds for DOE WAP and LIHEAP, CSD modeled its weatherization programs to deliver both energy efficiency and health and safety services to eligible low-income residences. Each dwelling is comprehensively assessed and evaluated both visually and through the use of diagnostic tools to identify health and safety concerns and to determine a suite of GHG-reducing energy efficiency measures for installation.

Health and Safety issues are common in low-income households due to the presence of older and poorly maintained appliances. Leaking gas appliances can be deadly, as can non-functioning heating and cooling systems when temperatures dramatically rise or fall. Remedying these Health and Safety issues can actually cause a rise in energy use and GHG production - however, the importance of protecting the health, safety and well-being of occupants requires that such safety hazards be promptly mitigated and not go unaddressed. For this reason, CSD will continue to assess and remediate Health and Safety issues, leveraging LIHEAP to pay for Health and Safety measures in homes receiving LIWP energy efficiency measures.

LIWP will be used exclusively for the installation of energy efficiency measures that save energy and reduce GHGs. This leveraging approach will allow CSD to maximize GHG emission reductions from LIWP activities and provide for more comprehensive services to California’s most vulnerable households.

All homes receiving solar PV will be assessed for energy efficiency services to further reduce GHGs.

b. Goal #2: Maximize Co-Benefits to Disadvantaged Communities

While GHG reduction is the primary goal of the GGRF and, therefore, a primary goal of CSD’s LIWP, the Investment Plan described in Section II of this document also places great emphasis on “co-benefits” to be achieved. Specifically, the Investment Plan establishes the following goals, among others, for the use of the proceeds:

- Maximize economic, environmental and public health benefits
- Foster job creation
- Direct investment toward the most disadvantaged communities and households (These “Disadvantaged Communities” are discussed in detail in Section IV of this document).

Energy efficiency measures installed as part of LIWP are well-suited to provide direct and meaningful benefits to disadvantaged communities. LIWP measures will achieve GHG reductions by increasing energy efficiency or renewable energy generation and will be installed in buildings in the identified disadvantaged community census tracts.

GHG reduction, energy efficiency and renewable energy go hand in hand—the less energy used as a result of energy efficiency upgrades, or the more energy generated by PV, the less GHG is

produced. And when a household has lower energy bills, it leaves more money in their pockets for necessities like food, transportation, housing and medicine. Likewise, when households have more money available, they usually spend those dollars in their local community, compounding the benefits of local economic investment.

For each census tract served, CSD will estimate and report the annual dollar savings to households in that census tract.

In addition to reducing energy costs in disadvantaged communities, LIWP Providers will provide opportunities for jobs, job-training and the realization of economic benefits in disadvantaged communities. The methods used will vary based on the demographics and needs of their local communities, and Providers who receive small allocations may not have separate workforce development goals. Many Providers have existing workforce development programs and will work within those programs to identify individuals to be trained and/or employed. Others will work with their local Workforce Development Boards or other local workforce agencies to identify those individuals.

CSD will work with Providers to determine the most appropriate ways to achieve these goals in their local areas. It will be the responsibility of the Provider to track and report project information to CSD in accordance with the recordkeeping and reporting guidance being developed by CARB (e.g., hours trained, hours worked, individuals employed and whether employees are residents of disadvantaged communities, amount of LIWP funding used to provide job training and employment) and consistent with local, State and Federal law.

Additionally, CSD will also quantify economic investment and impacts generated through Provider expenditures for energy efficiency measures and specialty contractor services within disadvantaged communities.

Though each Provider will have a unique approach to promoting workforce development in their local communities, some methods may include:

- Partnering with the local Workforce Investment Board to offer internships/hands-on training to individuals who have received classroom or other training elsewhere;
- Directly hiring workers from disadvantaged communities to fill existing vacancies or positions created as a result of LIWP;
- Negotiating employment agreements with hired subcontractors to hire one or more individuals from the disadvantaged community and;
- Giving preference to subcontractors from the disadvantaged community areas.

VI. Project Types

LIWP funds will be used to install energy efficiency measures and solar PV in single-family, small multi-family and large multi-family dwellings.

“Weatherization” is the process of making a home more energy efficient, resulting in lower energy use and costs, and includes the installation of energy efficiency measures. Solar PV adds a roof-top PV system that generates electricity from the sun. Both energy efficiency measures and Solar PV help reduce GHG emissions.

Under CSD’s existing federally-funded weatherization programs, Health and Safety measures (such as the repair or replacement of unsafe combustion appliances) go hand in hand with weatherization and energy efficiency upgrades.

When installing energy efficiency measures under LIWP, CSD will continue its focus on Health and Safety by leveraging funding from LIHEAP’s weatherization program, while using LIWP for energy

efficiency upgrades. Since certain energy efficiency measures are also included as eligible LIHEAP weatherization measures, energy efficiency upgrades in most projects will be funded through a combination of LIHEAP and LIWP funds.

(See Chart of Eligible LIWP Energy Efficiency Measures located on the last page of this document)

a. Project Types – Description

LIWP will serve three different types of low-income, residential dwellings:

1. Single-Family Homes – Defined as dwellings having 1 – 4 units with respect to energy efficiency measures.
Note: Eligible units with respect to Solar PV services are subject to special requirements, as set forth in paragraph c. below.
2. Small Multi-Family Dwellings – Defined as dwellings having 5 to 19 units in a single building, and apartment complexes with multiple buildings, providing that no single building has 20 or more units.
3. Large Multi-Family Dwellings – “Large” multi-family typically refers to those larger apartment complexes with at least one building having 20 or more residential units. As stated previously, program criteria for large multi-family dwellings are addressed in separate Program Guidelines, and the program component is now simply referred to as the Multi-Family Energy Efficiency and Renewables Program.

b. Single-Family and Small Multi-Family Energy Efficiency

Each single-family home and apartment unit will be assessed independently to determine the measures to be installed under both LIHEAP and LIWP. LIHEAP will be leveraged to fund the cost of assessments, diagnostics and health and safety improvements, and only those measures that are both cost-effective and that are expected to yield the highest GHG reductions / energy savings per dollar will be installed using LIWP funds.

Some factors that affect the feasibility of LIWP measures include:

- Must be located within a Disadvantaged Community (See Section IV)
- Local climate – for example, an air conditioning unit that may prove cost-effective in the Central Valley, may not be cost-effective on the coast where temperatures are more moderate
- Housing type – stucco, wood-frame, etc.
- Existing levels of insulation
- Condition of existing appliances and other systems that use energy
- The number of occupants in the home and their existing energy use patterns
- Solar Water Heater (SWH) installation is a measure offered within the LIWP single-family and small multi-family program components. Installation of this measure may be feasible on a percentage of homes based on the following:
 - Proper orientation of home
 - Available unshaded roof space
 - Condition of roof

A listing of the eligible LIWP energy efficiency measures can be found on page 14.

c. Single-Family Solar PV

Single-family homes will be assessed independently to determine whether the home qualifies for solar PV under LIWP. Some factors that will be considered include:

- Must be located within a Disadvantaged Community (See Section IV)
- Adequate, unshaded space on the roof for the placement of PV panels
- Proper orientation of home
- In areas where the Single-Family Affordable Solar Homes Program (SASH) is available, compatibility with SASH program requirements.

VII. Allocation of Dollars

The table below shows LIWP project types, as described above, and the amount of funding allocated to each project type from the SFY 2014/15 and 2015/16 appropriations under these Program Guidelines². Select providers will continue to provide services under the Single-Family and Small Multi-Family Energy Efficiency and Solar Water Heating Program through December 2017. CSD completed competitive procurements and allocated funding to two Providers for Single-Family Solar PV, and to one state-wide Large Multi-Family Energy Efficiency and Renewables Provider. A solar pilot project coordinated by Fresno Economic Opportunities Commission and the state-wide Single-Family Solar Photovoltaics Provider (GRID Alternatives) will continue through June 2018. GRID Alternatives received supplemental funding from the SFY 2015/16 appropriation. The remainder of that appropriation (approximately \$57.6 M) has been allocated to agencies selected through a competitive procurement process, and new 2015/16 Program Guidelines apply, so that amount is not included in the table below. These providers are commencing service provision in regions covering all disadvantaged communities in the state.

This table does not include the funding leveraged from LIHEAP, other potential leveraging sources, or CSD’s state operations’ allocations. All funds will stay wholly within the disadvantaged communities and be used to serve qualifying low-income households.

Task/Project Type	Est. Number of Dwellings	Allocation of 2014-15 LIWP Funds*	Allocation of 2015-16 LIWP Funds*
Single-Family/Small Multi-Family Energy Efficiency and Solar Water Heating	9,200	\$12.4 M	n/a
Single-Family Solar PV	3,590	\$40 M	\$10.9 M
TOTAL		\$52.4 M	\$10.9 M

*For the purpose of this chart, numbers are rounded to the nearest \$100,000

² These updated Guidelines reflect a redistribution of LIWP funds across program components. Redistribution of funds has been based on evaluations of LIWP production levels to determine whether they were meeting the performance estimates that were developed prior to the start of the program. Based on these evaluations, CSD shifted LIWP funding from the Single-Family/Small Multi-Family Energy Efficiency Program component to Single-Family Solar Photovoltaic installations.

VIII. Quantification of Benefits and Co-Benefits

- a. Approach and method for quantifying GHG reduction for energy efficiency measures.

CSD has worked with CARB to establish GHG reduction methodologies that provide guidance on data collection and describe how GHG reductions will be quantified for LIWP projects. The quantification methodology for the program component covered by these Program Guidelines is the Low-Income Weatherization Program Quantification Methodology for FY 2014-15. Quantification Methodologies are available at:

<http://www.arb.ca.gov/cci-quantification>

In order to generate consistent data for LIWP, CSD will perform all calculations to quantify energy savings and GHG emission reductions. CSD will determine energy savings and the associated GHG reduction estimates using data reported to CSD by LIWP Providers during program implementation as well as existing data and tools established under previous energy efficiency programs.

For example, LIWP Providers are required to electronically report completed measures and measure information to CSD each month. Reported measure details combined with historical energy consumption data (either actual or estimated) would form the basis for determining per-building energy and GHG savings.

Section XII contains a preliminary list of data reporting expectations.

Preliminary energy savings and GHG reduction estimation approaches are identified below:

Determining Energy Savings

CSD has worked with CARB to identify methods for quantifying energy savings for LIWP measures. These methods may include a “deemed savings approach,” which uses energy industry standards and data to calculate savings averages for commonly-installed measures, or an “actual savings” approach using actual utility billing data to quantify energy efficiency over a defined period of time (e.g. twelve months prior and twelve months post weatherization), or a combination of both. CSD and CARB may utilize both approaches due to the challenges in obtaining actual utility billing data, the highly mobile nature of many low-income households, and variances which impact residential energy consumption such as changes in the climate, household composition, and consumer behavior.

For energy efficiency measures, the deemed savings approach relies on the Database for Energy Efficient Resources (DEER). DEER is a California Energy Commission (CEC) and California Public Utilities Commission (CPUC) sponsored database available at <http://deeresources.com>. DEER is designed to provide well-documented estimates of energy and peak demand savings values, measure costs, and effective useful life (EUL). When individual measures are not available in DEER, other industry standard resources may be utilized, as outlined in CARB’s Low-Income Weatherization Program Quantification Methodology for FY 2014-15.

For Solar Water Heaters, the California Solar Initiative’s (CSI) solar thermal calculator is the methodology used for estimating annual energy savings. The CSI solar thermal calculator is an online calculation tool that provides an estimate of the energy displacement for SWH systems based upon performance of the SWH system, location, and system design. CSI solar thermal calculator inputs are outlined in CARB’s Quantification Methodology for CSD.

For Solar PV, the National Renewable Energy Laboratory's (NREL) PVWatts calculator is the methodology used to estimate electricity savings from LIWP solar PV installations. NREL's PVWatts Calculator is a web application that estimates the electricity production of a grid-connected roof or ground-mounted photovoltaic system based on inputs outlined in CARB's Quantification Methodology for CSD.

Utility billing data would be used if an energy audit tool required billing data to establish a baseline and predict future energy savings. Utility bills could also potentially be used for verifying the energy savings estimates.

Determining GHG Emissions Reductions from Energy Savings

CSD will calculate lifetime GHG reductions from electricity savings from energy efficiency measures by multiplying deemed savings by the emission factor in the 2014-15 Quantification Methodology for electricity of 0.000315³ Metric Tons of Carbon Dioxide equivalent (MTCO₂e) per kWh and the EUL of the measure. Lifetime GHG reductions from natural gas savings are calculated by multiplying deemed natural gas savings for the measure by the emission factor in the 2014-15 Quantification Methodology for natural gas of 0.005311 MTCO₂e per therm and the EUL of the measure.

For Solar Water Heaters, lifetime GHG reductions are calculated from the annual estimated energy savings from the CSI solar thermal calculator (kWh or therms) multiplied by the relevant emission factor outlined above and the length of the manufacturer's warranty, factoring in an annual rate of system degradation of 0.5 percent per year.

For Solar PV, lifetime GHG reductions are calculated from the PVWatts calculator's estimate of annual kWh generated, multiplied by the emission factor for electricity outlined above and the length of the manufacturer's warranty, factoring in an annual rate of system degradation.

b. Approach and method for quantifying workforce development

As discussed in Section V(b), participating LIWP Providers will provide opportunities for employment, job-training and economic benefits in their local disadvantaged communities. The methods the Providers use will vary based on the demographics and needs of their local communities. Many Providers have existing workforce development programs and will work within those programs to identify individuals to be trained and/or employed. Other Providers will work with local Workforce Development Boards or other local workforce agencies to identify those individuals.

Providers will be required to report both full-time jobs created, training hours provided and other information necessary to document benefits to disadvantaged communities.

c. Approach and method for quantifying Household Savings

To estimate household energy cost savings (dollars saved on energy bills on an annual basis), CSD will multiply anticipated energy savings by the household's blended utility rates to arrive at an estimated, annual dollar savings per household.

³ Electricity emission factors are updated by CARB for the purposes of California Climate Investments GHG Quantification Methodologies.

IX. Household Eligibility

In accordance with CSD's leveraging of federal LIHEAP weatherization funds, homeowners or renters that meet the eligibility requirements outlined in this section and specifically the income qualifications described in subsection (d) can apply for weatherization services and LIWP energy efficiency measures by contacting a LIWP Provider currently under contract with CSD. All measures installed and services provided to eligible homeowners or renters are provided at no cost to the applicant.

In most cases LIWP providers will offer services on a first-come first-served basis until their funding allocations have been exhausted. Dwellings will be prioritized for services based on low-income qualification, high-energy burden and if the home is occupied by members of a vulnerable population such as small children, elderly or disabled.

For solar PV services, single-family homeowners that meet the eligibility requirements outlined in this section and specifically the income qualifications described in subsection (e) may learn more about solar PV services at the following link:

<http://www.csd.ca.gov/Services/FindServicesinYourArea.aspx>

Energy Efficiency and Solar PV Eligibility Requirements:

- a. All LIWP projects must reduce GHG emissions.
- b. All households served must reside in a "disadvantaged community" as defined by the California Environmental Protection Agency. See Section IV of this document.
- c. Single-family dwellings occupied by qualifying low-income renters or qualifying low-income homeowners will qualify to receive energy efficiency measures. Only single-family dwellings occupied by qualifying low-income homeowners will qualify to receive solar PV.
- d. **Weatherization Income Qualification:** As described previously (see Sections III and V), CSD will leverage most LIWP work with its existing federal LIHEAP funds. LIHEAP income guidelines are set at 60% of State Median Income (or 60% SMI) and are updated each January, with each new LIHEAP contract. SMI is determined by the U.S. Department of Health and Human Services. Current Income Guidelines are available at:

<http://www.csd.ca.gov/Services/HelpPayingUtilityBills/EnergyIncomeGuidelines.aspx>

- e. **Solar PV Income Qualification:** Income eligibility for Solar PV is set at 80% of the area median income (or AMI) for owner-occupied single family dwellings (defined as dwellings with one unit for solar PV). AMI is subject to annual changes based upon the U.S. Department of Housing and Urban Development's income guidelines. Information on income eligibility for solar PV services in each county (up to 80% of AMI is deemed "low-income") is available at:

<http://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits.shtml>

- f. Each dwelling considered for weatherization or solar PV under LIWP will be assessed independently. There are many factors that can impact the cost-effectiveness of installing energy efficiency measures and solar PV. Eligibility can only be determined by assessing each home or structure (e.g. garage or carport or other out-building) and considering a number of factors, including climate, housing type, condition of existing systems, etc. The LIWP Provider

will assess each home or structure and make the final determination of eligibility, subject to any approvals required by CSD.

LIWP Providers regularly reach out to their local low-income communities via direct marketing, community events and through existing relationships with partner agencies who also serve the same customers. As Providers already serve the identified disadvantaged communities within their service territories, these organizations will continue to provide services through LIWP, and if necessary, expand their existing outreach programs.

X. Quality Assurance

CSD maintains strict weatherization installation guidelines, which are documented in its Weatherization Installation Standards (WIS) manual. In addition, as the administrator of DOE WAP and LIHEAP, CSD has a Quality Assurance (QA) Unit comprised of both in-house staff and a subcontracted inspection company. The job of the QA team is to inspect a percentage of completed projects to ensure all measures were installed according to the installation guidelines.

Under LIWP, the QA tasks will be slightly expanded, to include the following:

- *Work-In-Progress Inspections* – Work-In-Progress Inspections will identify Provider compliance and programmatic issues during the initial stages of production.
- *Post Installation Inspections* – Post Installation inspections will be performed on a percentage of completed units. Any units reported to be completed and billed must meet programmatic requirements. The purpose of the post installation inspection is to determine if GHG reduction and unit benchmarks have been met.

Based on program requirements and benchmarks, the QA team will inspect all project types: Single-Family and Small Multi-Family; and Solar PV (post inspection only).

XI. Monitoring

CSD has an in-house field monitoring unit primarily responsible for conducting on-site reviews of DOE WAP and LIHEAP weatherization installations. The field monitoring staff will perform on-site visits of all Providers that provide LIWP or solar services to single-family and small multi-family dwellings.

During monitoring visits, CSD field monitors verify the Provider's adherence to contractual obligations, including: methods of procurement, staff training, service territories, progress in completion of projects and production goals, project costs, review of client files, and more. Organizations who fail to adhere to contractual obligations may jeopardize the receipt of future funding or be required to return funding.

The same monitoring methods will be applied to all LIWP projects.

XII. Reporting and Auditing

Reporting and recordkeeping requirements will be the responsibility of both CSD and LIWP Providers. All reports must be consistent with the quantification methodologies and reporting guidance developed by CARB⁴ and the requirements established by CSD in these Guidelines. CARB's funding and reporting guidelines are available at:

⁴ CARB is the state agency responsible for collecting and reporting data from multiple agencies receiving GGRF. As a result, CSD is dependent upon CARB to provide specific reporting requirements.

www.arb.ca.gov/ccifundingguidelines

The level and duration of reporting and record retention will vary depending upon project type and will be specified in the LIWP Provider contract. At a minimum LIWP Providers will be required to report to CSD basic information for projects conducted during the funding or contract term and maintain records for three years after contract close.

LIWP Providers will be required to report to CSD basic project information that demonstrates the energy and GHG savings achieved (See Section VIII), disadvantaged community benefits (See Section V.b.), and other implementation metrics. Project level information includes, but is not limited to project location, project type, building characteristics, specific measures installed per project, diagnostics performed, historical building energy usage, estimated energy savings, estimated project savings calculation method, solar PV system design and specifications and solar water heater design and specifications.

To support the disadvantaged community goals of this program and the GGRF, LIWP Providers will need to track and report additional aggregate information, including but not limited to, dollars spent in a disadvantaged community census tract, whether employees are disadvantaged community residents, the number of hours worked / trained, and the amount of LIWP funding used for job training or employment.

CSD may also impose other reporting requirements that will allow CSD to track and manage progress towards goals, and to report, as necessary, to other agencies and organizations who seek updates on the progress of GGRF spending.

For project auditing, the State shall have the right to inspect the work and associated records at any and all reasonable times as part of LIWP oversight. This right shall extend to any subcontracts, and Providers shall include provisions ensuring such access in all its contracts or subcontracts. The State retains the right to audit the LIWP or any LIWP projects.

XIII. LIWP Future

Though CSD has an existing weatherization program and is, essentially, “shovel ready” to implement LIWP, a number of program modifications were made to CSD’s existing program design to integrate LIWP. These include such changes as working exclusively within disadvantaged communities, requiring that all projects reduce GHG emissions, effectively leveraging LIHEAP with LIWP, and placing increased focus on energy efficiency.

As LIWP is implemented, CSD may find cause to modify the program design to make program implementation more efficient. Such changes could include adjustments in monitoring, quality assurance inspections, measures to be installed, etc. If such changes are necessary, and CSD determines those changes to be substantive, CSD will modify these Program Guidelines.

Changes to these Program Guidelines will be posted on CSD’s website at www.csd.ca.gov. To receive notification of changes to LIWP, including changes to these Guidelines, sign up on the LIWP page to receive LIWP updates via email.

Chart of Eligible LIWP Energy Efficiency Measures

WATER FLOW RESTRICTOR, HAND-HELD LOW FLOW SHOWERHEAD
HOT WATER FLOW RESTRICTOR, LOW FLOW SHOWERHEAD
HOT WATER FLOW RESTRICTOR, FAUCET RESTRICTOR
THERMOSTATIC SHOWER VALVES
COMPACT FLUORESCENT LIGHTBULBS
LED LIGHTBULBS
LED NIGHT LIGHTS
OCCUPANCY SENSORS
FLUORESCENT TORCHIERE LAMP REPLACEMENT
"SMART" POWER STRIPS
WATER HEATER BLANKET
MICROWAVE OVEN
CEILING FANS
REFRIGERATOR REPLACEMENT
WATER HEATER REPAIR
WATER HEATER REPLACEMENT
DUCT REPAIR AND REPLACEMENT
WALL INSULATION
FLOOR INSULATION
CEILING INSULATION
WINDOW REPLACEMENT
COOLING REPLACEMENT, EVAPORATIVE COOLER - WINDOW/WALL
COOLING REPLACEMENT, AC WALL/WINDOW
COOLING REPLACEMENT, EVAPORATIVE COOLER - ROOF UNIT
COOLING REPLACEMENT, AC FORCED AIR UNIT (SPLIT SYSTEM)
HEATING SOURCE REPAIR, PACKAGE (DUAL PACK)
HEATING SOURCE REPLACEMENT, FORCED AIR UNIT, SPLIT SYSTEM
HEATING SOURCE REPLACEMENT, PACKAGE UNIT (DUAL PACK)
HEATING SOURCE REPAIR, FORCED AIR UNIT, SPLIT SYSTEM
HEATING SOURCE REPLACEMENT, EXT. WALL DIRECT VENT, INT. WALL AND FLOOR
FURNACE
HEATING SOURCE REPLACEMENT, FAU, SPLIT SYSTEM
SOLAR WATER HEATING