



# **Clean Energy for Low Income Communities Accelerator (CELICA) Online Toolkit**

*Virginia's Clean Energy Advisory Board*

*December 3, 2019*

# Agenda

- Background on CELICA
- CELICA Toolkit: Solar Overview
  - CELICA Case Study: State of Connecticut
  - CELICA Case Study: State of Colorado
  - CELICA Promising Practice: State of Michigan
  - CELICA Issue Brief: Denver Housing Authority and California's Multifamily Solar Program
  - Preliminary Guide for Integrating Renewable Energy into Weatherization
- Low-income Energy Affordability Data (LEAD) Tool Demonstration
- Q&A

# CELICA Background Information

# Weatherization & Intergovernmental Programs (WIP) Office

WIP's mission is to enable strategic investments in energy efficiency and renewable energy technologies through the use of innovative practices across the United States by a wide range of stakeholders, in partnership with state and local organizations and community-based nonprofits.

## State Energy Program



## Partnerships and Technical Assistance



## Weatherization Assistance Program



## Strategic & Interagency Initiatives



# Clean Energy for Low Income Communities Accelerator (CELICA)

37 partners (13 states + DC, 12 local, 11 community action agencies/non-profits/utilities)



May 2016 – Aug 2018

# Clean Energy for Low Income Communities (CELICA): Outcomes

Partners successfully leveraged resources to commit **up to \$335 million to help 155,000 low income households** access energy efficiency and renewable energy benefits, and demonstrated promising program models for:



## Single Family

Example: **State of Connecticut** and CT Green Bank's bundled energy efficiency and solar program has been so successful that *solar PV systems are owned by households in low income communities as much as those in non-low-income areas.*



## Multifamily Affordable

Example: **District of Columbia** is incentivizing building owners to *serve 100,000 low income households with 240-300MW solar PV.*



## Low Income Community Solar

Example: **State of Michigan** Energy Office's low income community solar program partnered with Cherryland Coop and NMCCA to deliver *\$350/yr in additional savings for participating, previously weatherized, low income households.*

# Clean Energy for Low Income Communities (CELICA): Online Toolkit

<https://betterbuildingsinitiative.energy.gov/CELICA-Toolkit>

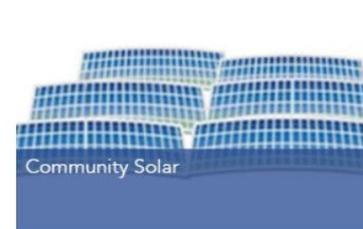
## CELICA PROGRAM DEVELOPMENT ACTIVITIES

Program development refers to the planning and implementation actions program administrators take to create and manage a program.



## CELICA PROGRAM MODELS

Program model refers to the defining features of a program, such as target market, key product and service attributes, terms and conditions, resource flows and benefits.



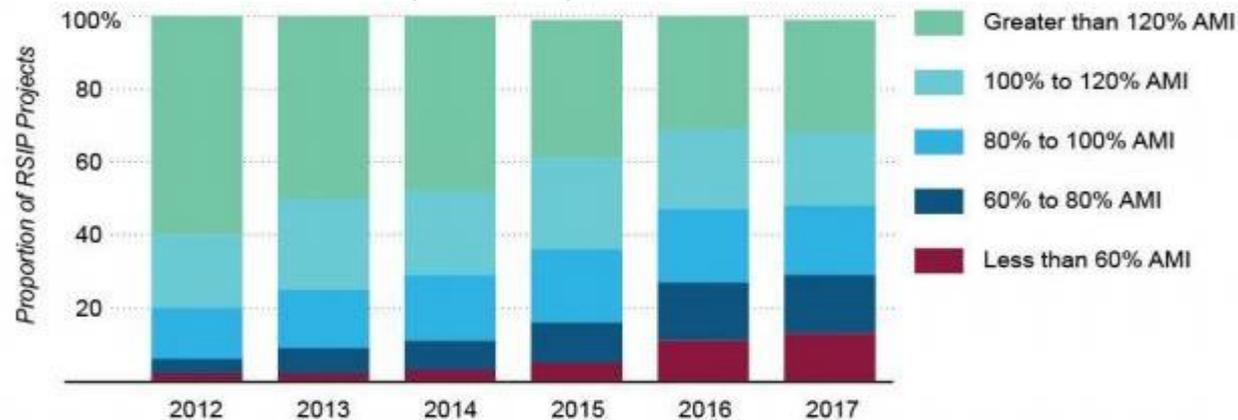
### Types of Resources in the CELICA Toolkit:

Case Studies, Promising Practices, Issue Briefs, Data Tools, and Templates

# CELICA Toolkit: Solar Overview

# CELICA Case Study: Connecticut's Efforts to Scale Up Integrated Energy Efficiency and Renewable Energy for Low Income Homes

## Connecticut's Residential Solar Investment Program Approved PV Projects by Income



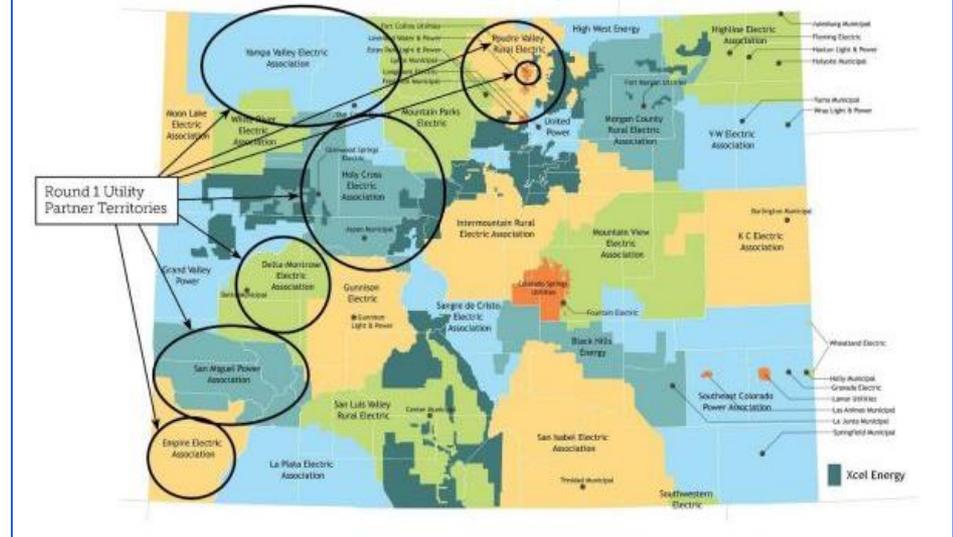
SOURCE: Connecticut Green Bank

- Connecticut's Solar for All program integrates utility-administered services and promotes an additional energy efficiency and solar lease "bundle" offered by the Connecticut Green Bank and PosiGen, a private company that leverages private financing.
- The Program deployed energy efficiency in over 2,300 homes served with solar PV installations for a total of 15 Megawatts (MW) of rooftop solar since 2015.

# CELICA Case Study: Colorado's Approach to Low Income Community Solar Programs that Leverage Weatherization Networks

- Colorado's Low-Income Community Solar Demonstration Project, launched in 2015 in collaboration with several rural electric cooperatives, has provided 1.4 Megawatts (MW) of community solar generation to 380 households.
- Families subscribed to community solar programs were drawn from those that participated in energy efficiency and energy assistance programs to further reduce household energy burden.
- Xcel Energy utility in Colorado was mandated to implement a low-income carve out which included a requirement of 5% low-income subscribers for Xcel community solar gardens.
  - A nonprofit called Energy Outreach Colorado recruited customers who already qualified for and received energy efficiency upgrades.

## Colorado's Electric Utility Service Territory



Source: Colorado Energy Office. Map of CEO's Low-Income Community Solar Demonstration Project Utility Partners and Colorado Utility Service Territory Map

[https://betterbuildingsolutioncenter.energy.gov/sites/default/files/CS\\_CO%20Approach%20to%20L-1%20Community%20Solar%20FINAL\\_0.pdf](https://betterbuildingsolutioncenter.energy.gov/sites/default/files/CS_CO%20Approach%20to%20L-1%20Community%20Solar%20FINAL_0.pdf)

# CELICA Promising Practice: State Partnerships with Electric Cooperatives for Low Income Community Solar and Weatherization

- The State of Michigan's energy office partnered with Cherryland Electric Cooperative utility on a low income community solar pilot project launched in 2018.
- Participants were identified by Northwest Michigan Community Action Agency, a WAP Subgrantee, and homes received weatherization prior to the community solar subscription.
- Participants receive a monthly bill credit of 10 cents per kilowatt hour for the output of their PV share, or about \$350 in solar bill credits each year they are subscribed.



**CHERRYLAND ELECTRIC**  
• COOPERATIVE •



[https://betterbuildingsolutioncenter.energy.gov/sites/default/files/PP\\_State%20Partnerships%20w%20Electric%20Coops%20for%20L-1%20Final%20v%202.pdf](https://betterbuildingsolutioncenter.energy.gov/sites/default/files/PP_State%20Partnerships%20w%20Electric%20Coops%20for%20L-1%20Final%20v%202.pdf)

# CELICA Issue Brief: Reducing Energy Burden for Low Income Residents in Multifamily Housing with Solar Energy



## Denver Housing Authority (DHA) Community Solar

- Deployed 2 MW community solar installation focused on low-income properties and tenants.
- DHA signed power purchase agreements with savings of ~15%-20%, reinvested back into properties to provide about 700 homes with enhanced services, improved facilities, and sustainable operations.
- DHA acts as the subscriber manager, providing a backstop to the power purchase agreements.

## California's Multifamily Solar Programs

	MASH	SOMAH
<b>Availability</b>	2008 – 2021	2019 – 2029
<b>Locations</b>	Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) territories.	All investor owned utility territories (e.g., PG&E, SCE, SDG&E, Liberty Utilities Company, and PacifiCorp).
<b>Funding</b>	\$162.5 million from ratepayer funds.	\$100 million annually for 10 years with funding from utility greenhouse gas allowance auction proceeds.
<b>Eligible Properties</b>	Deed-restricted.	Deed-restricted (Properties located outside of designated disadvantaged community must also meet a requirement that ≥ 80% units have incomes ≤ 60% of area median income).
<b>Solar Incentives</b>	Fixed incentive: \$1.10/W owner offset, \$1.80/W tenant offset if 50% or more of the bill credits are allocated to tenant accounts.	Maximum incentive level for the portion of the PV system serving tenant units set at \$3.20/watt; \$1.10/Watt for the portion of the system serving common areas. Incentives are adjusted down if project leverages ITC or LIHTC.
<b>Tenant Benefits</b>	No minimum tenant allocation for lower incentive rate (Systems are eligible if they only offset common area load).	At least 51% of the total solar production from the PV system must be allocated to tenant units.
<b>Metering Restrictions</b>	No restriction on building meter type (i.e. individual or master metered).	All PV systems must be interconnected through virtual net metering. Residential units must be individually metered.
<b>Deployment</b>	33.75 MW of interconnected capacity with 28 MW of additional planned capacity.	Program will begin in 2019.

[https://betterbuildingsolutioncenter.energy.gov/sites/default/files/IB\\_Reducing%20Energy%20Burden%20in%20MF%20Housing%20with%20Solar%20Energy\\_FINAL\\_0.pdf](https://betterbuildingsolutioncenter.energy.gov/sites/default/files/IB_Reducing%20Energy%20Burden%20in%20MF%20Housing%20with%20Solar%20Energy_FINAL_0.pdf)

# Preliminary Guide for Integrating Renewable Energy into DOE's Weatherization Assistance Program



- Helps [Weatherization Assistance Program \(WAP\)](#) Grantees assess whether renewable energy is a fit for their WAP program before embarking on the process outlined in [WAP Memorandum 24](#) and prior to the use of the [Weatherization Grantee Renewable Energy Technology Application Template](#).
- Help Grantees with organizational, financial, and technical assessments needed to integrate renewable energy technologies into their program.
- Help determine Grantee compatibility prior to submitting an application to DOE and reduce unnecessary delays.

<https://www.energy.gov/sites/prod/files/2019/05/f63/CELICA-Brief-WAP-Renewables.pdf>

# CELICA: Low-income Energy Affordability Data (LEAD) Tool

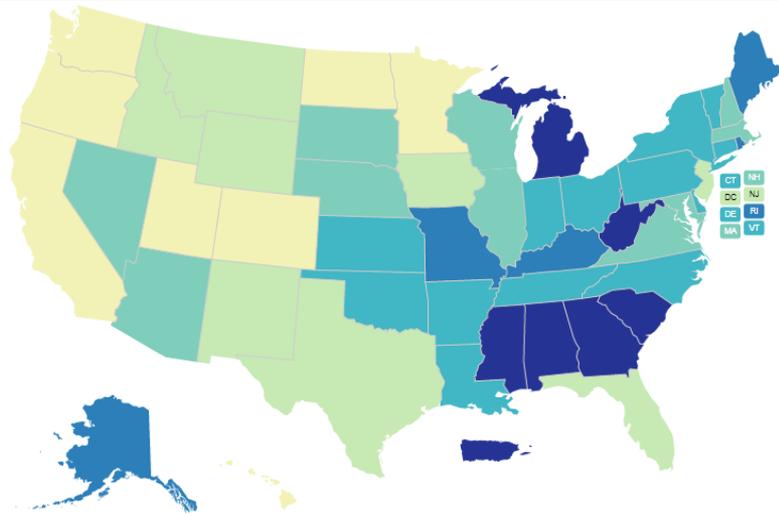
Energy Burden (% income) for the United States ⓘ

Percent Income (%) Annual Energy Cost (\$) Housing Counts



United States 📍

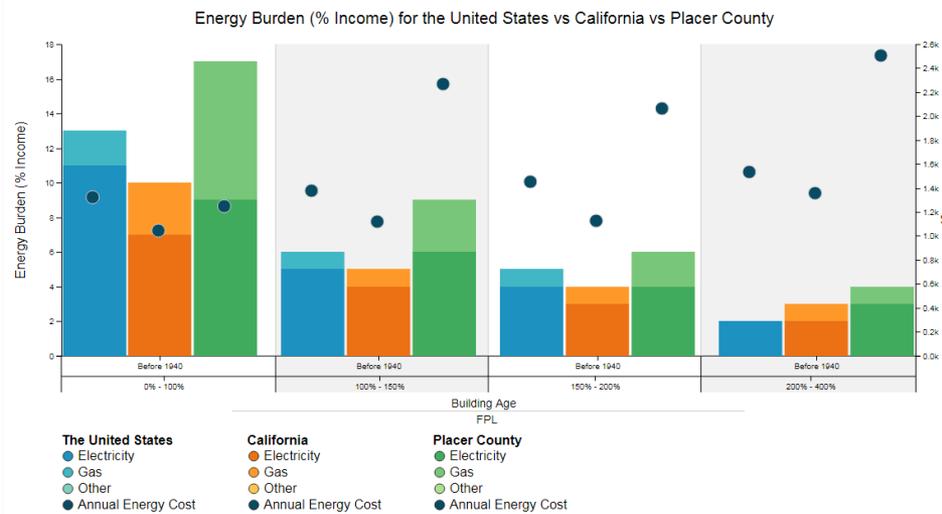
Click any state to view counties, census tracts, and cities.



Goal: Help stakeholders make data-driven decisions on energy goals and program planning by improving their understanding of low income and moderate income household energy characteristics.

## Charts

Primary Dimension Federal Poverty Level	Secondary Dimension Building Age	Left Axis Energy Burden (% Income)	Right Axis Annual Energy Cost
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LEAD Tool: <https://www.energy.gov/eere/slsc/maps/lead-tool>

LEAD Tool Tutorial:  
<https://www.youtube.com/watch?v=i9D5XBK6aKE>

**Questions?**

**Krystal Laymon**

**U.S. Department of Energy**

**Krystal.Laymon@ee.doe.gov**