

## SOLAR 101 Institute - Part II

Solar PV Implementation Case Studies and Financing Forum

California Housing Partnership | <a href="mailto:chpc.net">chpc.net</a>

#### Presenters and Panelists



Rachael Diaz (she/her), Sustainable Housing Program Manager California Housing Partnership



Michael Rangel (he/him), Asset Management Assistant Clifford Beers Housing



Mauricio Torre (he/him), Vice President of Program Operations South Bay Community Services

### Presenters and Panelists



Samantha Meyer (she/her), Project Developer Eden Housing



Kathlyn Mead (she/her), Philanthropic Advisor BQuest Foundation

## Agenda

- 1. Housekeeping
- 2. Non-Profit Housing Case Studies
- 3. Breakout Activity
- 4. Solar Financing Opportunities
- 5. Q&A



#### Zoom Functions

#### **Zoom Meeting**

- •Please rename yourself with the following
  - Name
  - Pronouns
  - Organization
- •Use the "Raise Hand" feature to ask a question, or type in the chat
- •Please keep your sound on mute, and unmute only when speaking
- •Keep your camera on, if possible

### Goals

- Foundational understanding of solar photovoltaics (PV)
- Solar benefits for housing providers and the residents they serve
- Support the affordable housing community's sustainability and resiliency goals.
- Available solar funding resources



## The Partnership's Mission

The California Housing Partnership creates and preserves affordable and sustainable homes for Californians with low incomes by providing expert financial and policy solutions to nonprofit and public partners.

- → chpc.net
- → @CHPCnews



## Sustainable Housing Team

Affordable Energy and Water Programs



California Climate Investment Programs



Sustainable Housing Technical Assistance

**GREEN Network** 



Trainings

## Thank You to Our Sponsor



SOMAH helps deliver financial and environmental benefits to your tenants.

Learn more at <u>CalSOMAH.org</u>

## Introductory Poll Questions

Poll #1

## Introductory Poll Questions

Poll #2

## Introductory Poll Questions

Poll #3



#### **SOLAR 101 INSTITUTE**

# Making the Case for Solar PV - Non-Profit Case Studies



# **Clifford Beers Housing**

May 17, 2022

## Why did CBH look at solar panels and backup batteries?

- Hurricane Maria in Puerto Rico showed how vulnerable electricity systems are
- The historic fires that SoCal has gone through and its effects on the current grid
- Climate change has shifted how we think of resiliency

## What was CBH's is goal?

To create a safe-haven concept in order to provide backup power to residents in case of a black out do to failure of systems or natural disasters

• The safe haven would assist our tenants, whom are already a part of the most vulnerable populations in Los Angeles.

# What did CBH first do?(1<sup>st</sup> phase of safe haven)

- We teamed up with CHP and other energy consultants to look at grants for solar pv and batteries
- We received SOMAH funding for the Holt Family Apartments
  - its in pomona
  - The funding not only gets us closer to achieving a safe haven but allows for utility savings to our tenants and the properties electric utility
- Some of our properties did not meet requirements for certain funding

## Lessons learned after phase one

- Some projects have to many limitations when it comes to qualifying for certain projects
- Certain funding pots were not enough to financially support the solar PV/batteries
- Some of our properties didn't have the space for the PV system and/or the battery system
- Limited funding and inability to tap into reserves

#### CBH Safe Haven Phase 2

- We are starting to research and develop other systems to be able to provide power to the building's community room in case of an emergency
- We scaled back on the size of the back up equipment and are looking at energy saving appliances
- We will testing out equipment at our office and will note any findings

## What about new developments?

- Due to the new electrification state measures our CBH's development team is emphasizing the use of solar pv and other systems such as heat pumps and graywater systems
- It is much easier to install these systems in the beginning or at least build for future installation





SBCS

Since 1971, South Bay
Community Services has been
providing programs and
services to help children,
youth and families when they
need it the most.



1971 - OUR HOUSE

## mla Vizta Star-Nemz

More News of Chula Vista than Any Newspaper in the World

Chula Vista, Calif., Thursday, Dec. 16, 1971

427-3000 | 10c Par Copy

#### Just needs use permit

## New 3rd Ave. home okayed for teen center Our House

Our House may have found a new home.

The Chula Vista City Council this week approved in principle the relocation of the controversial teenage drop-in center to a two-story building on an acre of land at 666 3rd Ave;

BUT THE approval is subject to the granting of a conditional use permit by the Planning Commission, which will consider that matter Jan,

Under the plan submitted to the council by City Manager John Thomson this week, the city will have to advance Our House \$1,300 to move into the 4,000 square foot facility.

The supplemental apprepriation represents an increase of \$175 per month in the rent that Our House now pays for its 392 3rd Ave. location for six months plus \$250 for remodeling.

Thomson will bring a resolution back to the council next week which will, subject to the issuance of a permit by the commission, authorize the ex-

HE TOLD the council Tuesday night that Our House Director Gary Wappes had inspected and approved the proposed site.

The city manager also listed a number of advantages which the site has over other locations which have previously been considered.

Some of those, he suggested, are inherent in the large size of the lot.

For example, he said, there is a front setback of 75 feet from the street, and there is ample space for off-street parking and outdoor activities.

Another advantage cited by Thomson was the nearby location of a bus stop, increasing the convenience of access from other parts of the city.

No deposit will be required by the owner and immediate occupancy isavailable, Thomson indicated. The offered minimum lease is for 12 months, with a potential for further extension, he added,

PRESUMABLY this means that if the council votes to put up the \$1,300, which will provide increased city support of the project through the remainder of this fiscal year, it also commits liself by implication to provide more,

Thomson says that city crews could he used to trim the trees on the property, and that Our House staff and perhaps other volunteers could perform other cleanup and repairs which will

"Perhaps the Downtown Assn. could provide paint and tools for this cleanup effort," he suggested.

Thomson's proposal marked the latest of several efforts to relocate Our hostility by businessmen neighborn.

Among other things, businessmen have claimed that young people congregating at and near the drop-in center, concerned mainly with drug abuse preventon, have been driving away epstomera.

LAST WEEK Thomson reported negatively to the council on a proposal to inove Our House into the Civic Center annex, now used by the building and housing department.

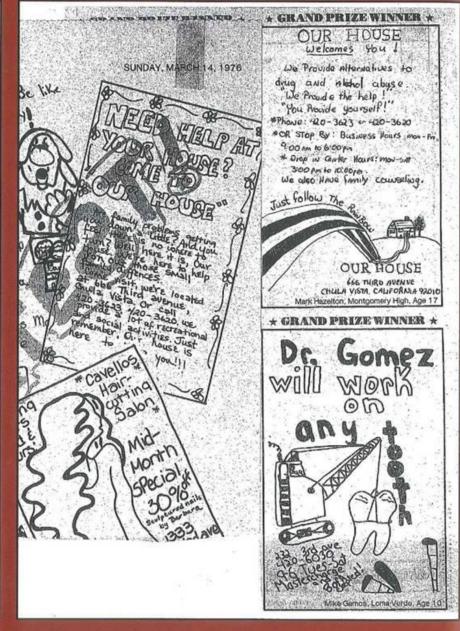
Under that proposal, the department would have either been moved into the police station basement or into a rented facility.

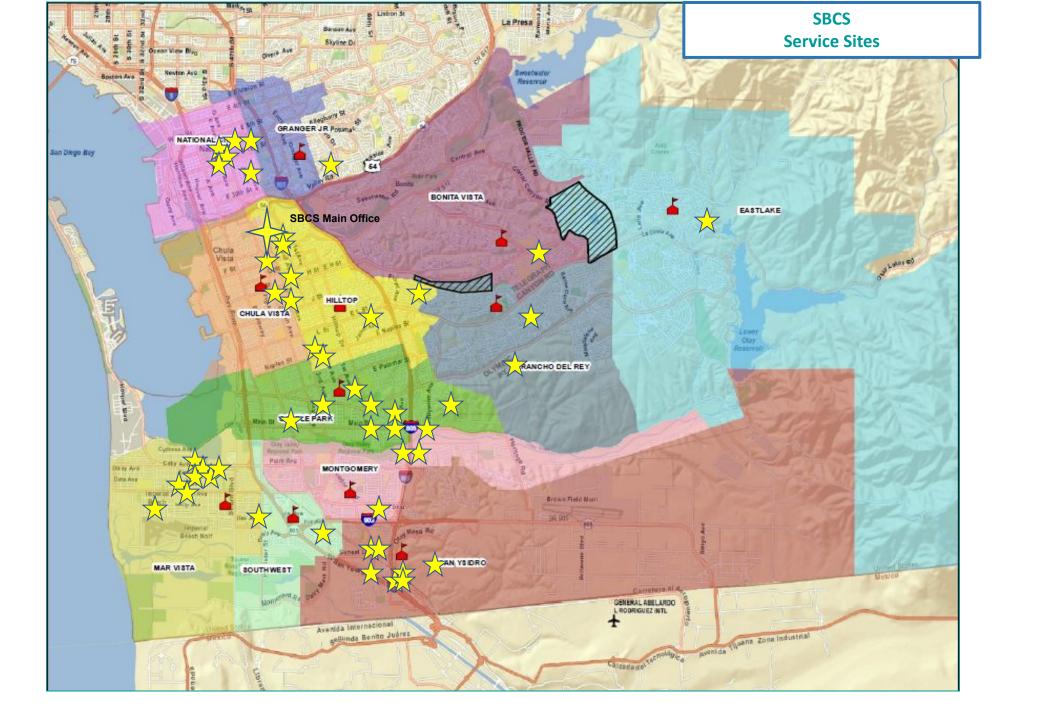
Thomson cited prohibitive costs and possible disruption of department functions as the reasons for his negative recommendation.

Last month the council abundoned a proposal to temporarily relocate the center to the corner of F St. and Garrett Ave., where a new city library will eventually be built if bonds are approved by the voters.

But the council was deluged from protests against the relocation, mostly from businessmen and others living near the proposed new site.

The facility is financed jointly by city and the county, which pays the larger share.





## Youth and Community Wellness Department Core Services



- Wrap-Around Philosophy
- Trauma Informed Approach
- Strength Based Family Assessment
- Case Management
- Support Groups
- Referrals and Linkages

### Wrap Around Support Services

- Family Conflict Mediation
- Crisis Intervention
- Individual & Family Counseling / Therapy
- Advocacy
- Social Skill Building
- Drug & Alcohol Prevention
- Community Service

- Academic
   Enhancement
- Self Esteem
- Personal Growth
- Stabilization
   Assistance
- Employment Assistance
- Financial Literacy
- Special Outings



#### **SOLAR 101 INSTITUTE**

## Project Case Study



## Thank you! Questions?

Mauricio Torre, mtorre@csbcs.org



## ASPEN GROVE, MAPLE GARDENS, AND THE TREES APARTMENTS

Solar 101 Institute Samantha Meyer (she/her) May 17, 2022





#### **OUR MISSION**

Eden Housing creates and sustains high-quality affordable housing communities that advance equity and opportunity for all.

165+ properties | 11,000+ homes | 25,000+ residents











### **SOLAR AT EDEN**









#### **Aspen Grove, Maple Gardens, and The Trees**

- Three sites in Gilroy, CA
- 56 units of affordable farmworker housing
- Mix of 2, 3, and 4 bedrooms
- Built in the 1980s
- Rehabs will be funded with USDA RD loans and HCD Serna (no tax credits)









#### **Planned Rehab Scope**



- Exterior replacements of repair of siding, weather barriers, windows and trim
- Community spaces repaired and upgraded
- In-unit improvements include upgraded floors, bathrooms, and kitchens
- Energy and water efficiency improvements

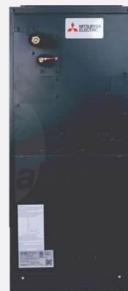


#### **Electrification**

- Going all electric!
- Conversion of heating systems, boilers, gas stoves, and clothes dryers to high-efficiency electric appliances
- Adding air conditioning as part of heat pump HVAC
- Piloting induction stoves
- Electric service upgrades



























#### **SOLAR**

- Partnered with SunRun
- Solar Services Agreement (SSA)
- SOMAH incentive
- 95% site electricity generated on-site
- Tenants receive ~\$45 credit per month on their PG&E bill
- SunRun owns, operates and maintains system







#### **FINANCING**

- SunRun leveraged SOMAH and other financing
- No cost to developer, owner or tenants ever

 SunRun provides Eden a developer fee





#### **AMT Lessons Learned**

- 1. You don't need to be an expert (or know much at all)!
- 2. There are lots of incentives, so you don't need a solar budget
- 3. Programs can benefit both owners/operators and tenants
- 4. Size the PV system correctly, especially if you are electrifying
- 5. Use technical assistance!

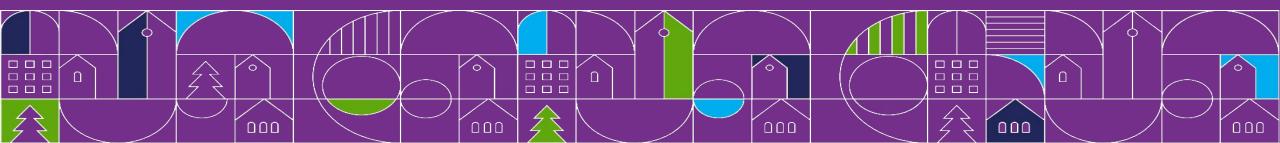




#### **Eden Lessons Learned**

- 1. Each site is unique
- 2. Check system operation and expected output
- 3. Don't set it and forget it!







# Thank you!

Samantha Meyer (she/her) | Project Developer | Eden Housing samantha.meyer@edenhousing.org





#### **SOLAR 101 INSTITUTE**

# Breakout Activity



#### **SOLAR 101 INSTITUTE**

# Solar PV Financing Opportunities

## Experience with Solar Programs

Poll #4



### Leveraging SOMAH Rebates for Multifamily Solar PV

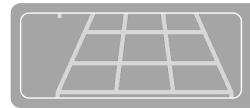


## SOMAH is Designed To...





Incentivize solar adoption on multifamily affordable housing



Install **300 megawatts** of generating capacity **by 2030** 



Benefit owners and tenants



Increase energy efficiency + offset emissions

## On Properties With...



- At least five units
- Deed-restricted low-income residential housing
- Existing building or retrofit
- Virtual net metering with separately metered units
- Located in a disadvantaged community according to CalEnviroScreen (3.0 + 4.0)
- Or
- 80% of property residents have incomes at or below 60% of the area median income



## 2021-2022 Incentive Rates

The SOMAH incentive rates for the October 30, 2021 to June 30, 2022 program years are as follows:

Tax Credits		\$ per AC Watt Incentive			
ITC	LIHTC	Tenant		Com	mon
		2020-2021	2021-2022	2020-2021	2021-2022
No	No	\$3.04	\$2.97	\$1.04	\$1.02
Yes	No	\$2.14	\$2.09	\$0.76	\$0.74
No	Yes	\$2.14	\$2.09	\$0.76	\$0.74
Yes	Yes	\$1.52	\$1.49	\$0.57	\$0.56

Free Technical & Support Services every step of the way



# Technical assistance (TA) is a free service offered to all SOMAH participants

 Available to enrolled property owners and contractors at any time of the project process

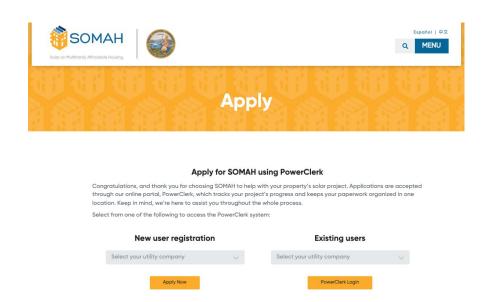


### Owners: How to Get Started





#### Visit <u>CalSOMAH.org</u> to apply





Non-Profit Housing Providers
 Rachael Diaz, rdiaz@chpc.net

For-Profit Housing Providers
 Margee McDonnell,
 margee.mcdonnell@calsomah.org



#### Philanthropic Investing for Impact

California Housing Partnership – Solar 101 Institute



We're fighting the climate crisis by funding projects and partnering with organizations that reduce carbon emissions, expand the use of renewable energy, and advocate for the policy changes we need to transition to a carbon neutral future.

#### **Areas of Interest:**

- Affordable Housing / Homelessness
- 2. Youth Development
  - a. Career and Job Training
  - b. Juvenile Justice



- Place-based investments in San Diego, Imperial County, and California for three reasons: Collaboration, Community, and Leadership
- Primary Vehicle: Impact Investing
  - ✓ Low and No interest loans
  - ✓ Amount and Time Dependent
- Multiple Layers of Impact

#### **SOMAH**

- No interest bridge loans for the installation period until permission to operate (PTO)
- Low interest loans gap loans available
  - Amount and Time dependent: no greater than 3.5%



#### **Collaboration GOALS**

- 1 Assist the SOMAH program, landlords/owners, and installers to increase the number and pace of solar installation projects on multi-family dwellings in CA
- 2 Reduce the cost of electricity to tenants thereby reducing their cost-of-living burden
- 3 Reduce the cost of common area electricity to landlords/owners to help control rent increases

#### **Community GOALS**

- Demonstrate value of going solar to the local community
- Use solar as a starting point for other clean energy education/commitments, e.g., EV
- Hope is that common area savings returns to improvements, programs, and services for tenants



#### **NO** COLLATERAL REQUIREMENTS

#### **NO** ORIGINATION FEES

Unlike other loans, BQuest does not charge origination fees such as underwriting, processing, or application fees.

#### PAYMENT AND INTEREST HOLIDAY

There are no costs to the host while the system is under construction. BQuest will make all milestone payments.
\*Gap loan payments begin after PTO

- 1 Host enters into Agreement with BQuest
- 2 Host assigns rebate to BQuest Foundation
- 3 SOMAH milestone and final rebate is received by BQuest
- 4 Adjustments to anticipated SOMAH rebate result in contract adjustments
- 5 Low or No interest gap loan is available



Gap loan (amount between SOMAH rebate and total project cost) can be financed at Low or No interest

3.5% or less depending on amount and loan period

#### **EXAMPLES**

https://bquestfoundation.org

Info@bquestfoundation.org



#### Philanthropic Investing for Impact

California Housing Partnership – Solar 101 Institute



# LOW INCOME WEATHERIZATION PROGRAM for Multifamily (LIWP-MF)









#### **OVERVIEW**

 Whole building energy efficiency, solar thermal, and solar PV for multifamily properties under a single program







All measures that result in greenhouse gas (GHG) reductions are eligible







LOW INCOME WEATHERIZATION PROGRAM

#### PROPERTY ELIGIBILITY CRITERIA

- Located in a CalEPA Disadvantaged Community (DAC)
  - Limited funding for properties outside of DACs, program rules for this new funding still TBD
- Property must contain 5 units or more
- At least 66% of tenants with incomes < 80% AMI</li>
- Able to achieve modeled energy savings ≥ 15%
  - 25% minimum savings required for projects that leverage other major incentive sources (i.e. TCAC, EUC, etc.)
- Must sign Property Affordability Covenant agreeing to maintain LIWP affordability requirements for at least 10 years
- Incentives cannot exceed net project cost
- Maximum of 1500 units per ownership entity/subsidiaries of one entity







LOW INCOME WEATHERIZATION PROGRAM

#### LIST OF REQUIRED IN-UNIT ENERGY EFFICIENCY UPGRADES

Measure Category	Measure Type		
Water Heating	Low flow kitchen aerators Low flow bathroom aerators Low flow showerheads	<1.8pgm at 60psi <1.2gpm at 60 psi <1.8gpm at 80psi	
Heating and Cooling	Duct sealing	Where ducts or plenums are accessible, seal seams and connections with mastic Seal supply boots to drywall with caulk	
Lighting and Appliances	Replace all incandescent and halogen bulbs with LED equivalent  Replace any refrigerator manufactured before 1999 rated 750 kWh annual consumption or more	If applicable	









#### INCENTIVE LEVELS FOR SOLAR PV SYSTEMS

Solar PV Program Incentives	Tenant Meter PV Systems < 100 kW*	Owner Meter PV System <100 kW* (Common Area or Master Meter)
Future program rules still being developed, subject to change*	Up to 100%	Up to 50%

#### Solar PV Incentive is based on:

- Type of leveraged funds (LIHTC, ITC, MASH/LADWP) - the more leveraged funds, the less LIWP funding is needed. Projects are assumed to take ITC.
- If PV system is offsetting owner meter or tenant meter consumption
- Size of PV system







LOW INCOME WEATHERIZATION PROGRAM

#### **GET STARTED!**

#### CALIFORNIA LOW INCOME WEATHERIZATION PROGRAM

FOR LARGE MULTIFAMILY PROJECTS



#### FIND OUT IF YOUR PROPERTY OUALIFIES →



BECOME A PARTICIPATING CONTRACTOR →



GET STARTED: SUBMIT AN INTEREST FORM  $\rightarrow$ 



#### www.camultifamily energyefficiency.org

Fill out an interest form here (to be completed by building owner)









# BUILD Building Initiative for Low-Emissions Development Program

### Introducing: BUILD



#### Why Participate in BUILD?



**BUILD Program Fact Sheet** 

- Receive up to \$2,000,000 in incentives to reduce construction costs
- Reduce long-term utility costs for owners and residents
- Build in-house capacity for all-electric building
- Prepare for current and future state and local building electrification policies
- Layer funds with other programs and incentives
- Eliminate costs for gas infrastructure
- Receive up to 300 hours of no-cost technical assistance to overcome design or construction barriers, and to complete an incentive application

#### **New Adopter Design Award**

The BUILD program provides a design award up to \$100,000 to defray direct design costs to eligible applicants who are constructing their first:

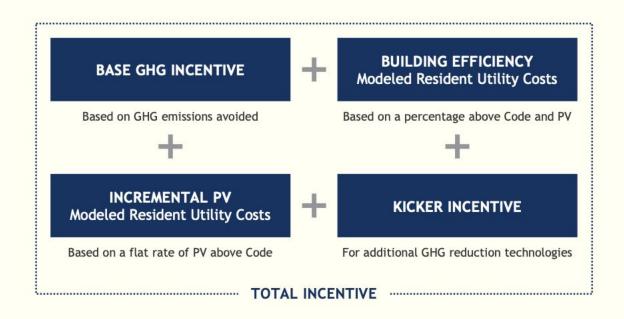
- all-electric,
- low-income, and
- multifamily building (10+ units)

\$100,000

Design Award
per applicant
to defray direct design costs

#### Incentives

BUILD provides robust incentives consisting of four components:



\$1,700

**Per Bedroom** average minimum greenhouse gas incentive

\$2,000,000

Program Cap per applicant

#### **Kicker Incentives**

The BUILD program provides kicker incentives for technologies that further reduce GHG emissions, the benefits of which are not included in the modeled GHG reductions in the base incentive.



GRID FLEXIBILITY

\$50/ smart thermostat and \$500/JA13-compliant HPWH



GWP REFRIGERANTS <750 \$500/lb of refrigerant

GWP REFRIGERANTS< than 150 \$1,500/lb of refrigerant



GWP REFRIGERANTS <150 \$1,500/lb of refrigerant



INDUCTION COOKTOP

\$300/ induction cooktop unit



HEAT PUMP CLOTHES DRYER

\$150/ heat pump clothes dryer



ON-SITE ENERGY STORAGE

\$250/kWh storage capacity



ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)

\$200/ EVSE (single family) and \$300/ EVSE (multifamily)



SMART ELECTRIC VEHICLE
SUPPLY EQUIPMENT

\$500/ EVSE (single family) and \$600/ EVSE (multifamily)

Source: California Energy Commission

#### Who Is Eligible?

Building owners or developers of low-income housing with:

YEARS + COMPLETED low-income experience project

#### What Projects Are Eligible

- Low-income residential housing (single-family and multifamily) with income restrictions varying depending on project location and type of housing
- All-electric and no hookups to the gas distribution grid
- Demonstrate modeled resident utility cost savings
- Project located in one of four gas service territories:
  - Southern California Gas
  - Pacific Gas & Electric
  - San Diego Gas & Electric
  - Southwest Gas Corporation

All energy models submitted for BUILD must be completed by a CEA

#### **ELIGIBLE RESIDENTIAL BUILDINGS**

- Newly Constructed buildings
- Existing buildings repurposed for housing
- Building additions or renovations where 50% or more of the exterior weight bearing walls are removed or demolished

#### **ELIGIBLE BUILDING TYPES**

- Single-family homes
- Duplexes/triplexes/quadplexes
- Multifamily apartments
- Condominiums
- Dormitories
- Residence hotels
- Assisted living facilities
- Homeless/transitional housing
- Farmworker housing
- Mixed-use buildings
   (incentive for residential portion)

#### Free Technical Assistance Services

- Educational resources on all-electric building design and technologies
- Support throughout all development phases
   (including building design, construction, installing near-zero emission technologies) and information on local building permits
- Assistance with submission of BUILD Incentive
   Application package and participation support



#### **Contact BUILD**

#### FOR QUESTIONS, EMAIL BUILD AT:

BUILD@energy.ca.gov or bmoncada@chpc.net

#### FOR MORE INFORMATION, VISIT:

http://www.energy.ca.gov/programs-and-topics/programs/

building-initiative-low-emissions-development-program

# Comprehensive Affordable Multifamily Retrofit (CAMR) Program

- New energy efficiency + solar PV program available now but official launch, July 1st, 2022
- Available for multifamily customers in the LADWP territory
- · CAMR is modeled after LIWP
- Interested? Contact <u>CAMRinfo@aea.us.orq</u>
- Visit <a href="http://www.ladwpcamr.com/">http://www.ladwpcamr.com/</a>



# QUESTIONS?

## Let's Keep in Touch!

- The Partnership's Sustainable Housing team is available to help providers identify clean energy programs for your portfolio
  - Reach out to <u>rdiaz@chpc.net</u> to get started

 Interested in learning more about building decarbonization? <u>Sign up to receive</u> <u>updates from the Partnership's Sustainable</u> <u>Housing team</u>





# THANK YOU!

Your feedback is valuable! Complete our survey