



**LA100 Equity Strategies
Steering Committee Meeting #16
March 15, 2023**



Los Angeles Department of Water & Power (LADWP)

Project Leads



Simon Zewdu
Director

Transmission Planning,
Regulatory, and Innovation Division



Pjoy T. Chua, P.E.

Assistant Director
Transmission Planning, Regulatory,
and Innovation Division



Steve Baule

Utility Administrator
LA100 Equity Strategies Oversight
& UCLA Contract Administrator



Stephanie Spicer

Community Affairs Manager



Agenda

Start Time	Item
10:00 a.m.	Welcome, Meeting Purpose and Agenda Overview
10:05 a.m.	Community Listening Sessions (Part 2)
10:30 a.m.	Housing Weatherization & Resiliency - Preliminary Results and Strategies
10:50 a.m.	Community Solar Access & Benefits - Preliminary Results and Strategies
11:15 a.m.	Affordability - Preliminary Results (UCLA)
12:00 p.m.	Wrap up & Next Steps



Our Guide for Productive Meetings



Raise your hand
to join the
conversation
(less chat
entries, more
talking)



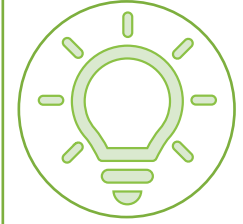
Help to make
sure that
everyone has
equal time to
contribute



Keep input
concise and
focused so that
others have
time to
participate



Actively listen to
others to
understand their
perspectives



Offer ideas to
address others'
questions and
concerns



Steering Committee Roster

Organization	Representative
Alliance of River Communities (ARC)	Vincent Montalvo
City of LA Climate Emergency Mobilization Office (CEMO)	Marta Segura, Rebecca Guerra
Climate Resolve	Jonathan Parfrey, Bryn Lindblad
Community Build, Inc.	Robert Sausedo
DWP-NC MOU Oversight Committee	Tony Wilkinson, Jack Humphreville
Enterprise Community Partners	Jimar Wilson, Michael Claproth
Esperanza Community Housing Corporation	Nancy Halpern Ibrahim
Los Angeles Alliance for a New Economy (LAANE)	Kameron Hurt, Estuardo Mazariegos
Move LA	Denny Zane, Eli Lipmen
Pacific Asian Consortium in Employment (PACE)	Celia Andrade, Susan Apeles
Pacoima Beautiful	Veronica Padilla Campos, Melisa Walk
RePower LA	Michele Hasson, Roselyn Tovar
The South Los Angeles Transit Empowerment Zone (SLATE-Z)	Zahirah Mann, April Sandifer
South LA Alliance of Neighborhood Councils	Thryeris Mason
Strategic Concepts in Organizing and Policy Education (SCOPE)	Agustín Cabrera, Tiffany Wong



Steering Committee Agendas

Tentative Schedule



3/15/23 #16	<ul style="list-style-type: none">• Community Listening Sessions (Part 2)• Preliminary results and strategies discussion:<ul style="list-style-type: none">• Housing—Weatherization and Resilience• Community Solar Access & Benefits• Affordability (UCLA)
3/29/23 #17	<ul style="list-style-type: none">• Preliminary results and strategies discussion:<ul style="list-style-type: none">• Air Quality and Health (NREL)• Air Quality and Health (UCLA)• Local Solar and Storage• Energy Atlas (UCLA)
4/19/23 #18	<ul style="list-style-type: none">• Preliminary results and strategies discussion:<ul style="list-style-type: none">• Rates & Affordability (NREL)• Universal access to safe and comfortable homes• Grid Reliability and Resilience• Jobs (UCLA)
5/17/23	<ul style="list-style-type: none">• Equity Strategies Summary (NREL & UCLA)• Next Steps Discussion (for LADWP & Steering Committee)

Part 2:

Community Listening Sessions

Paty Romero-Lankao, Nicole Rosner, Lis Blanco
and Daniel Zimny-Schmitt



Listening Sessions

- 1 Review Goals and Analytical Approach
- 2 Key Preliminary Findings
- 3 Q&A



1

Review Goals, Analytic Approach, & Steering Committee Feedback



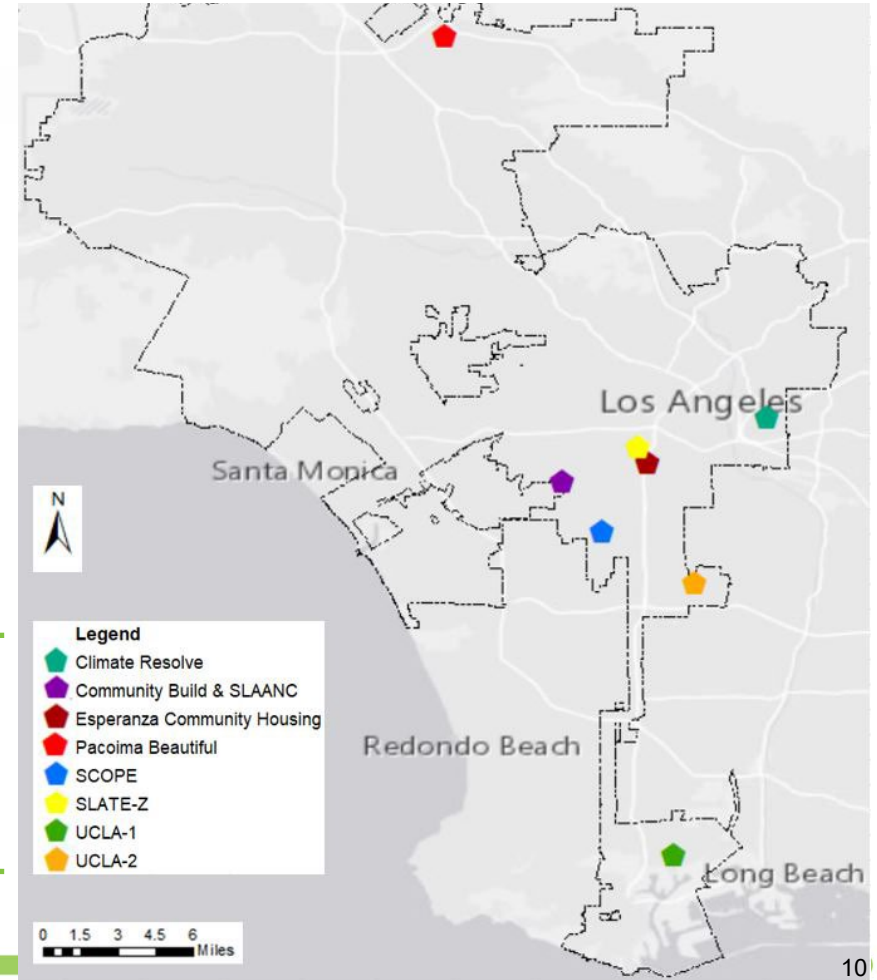
Goals

Examine Community-Identified:

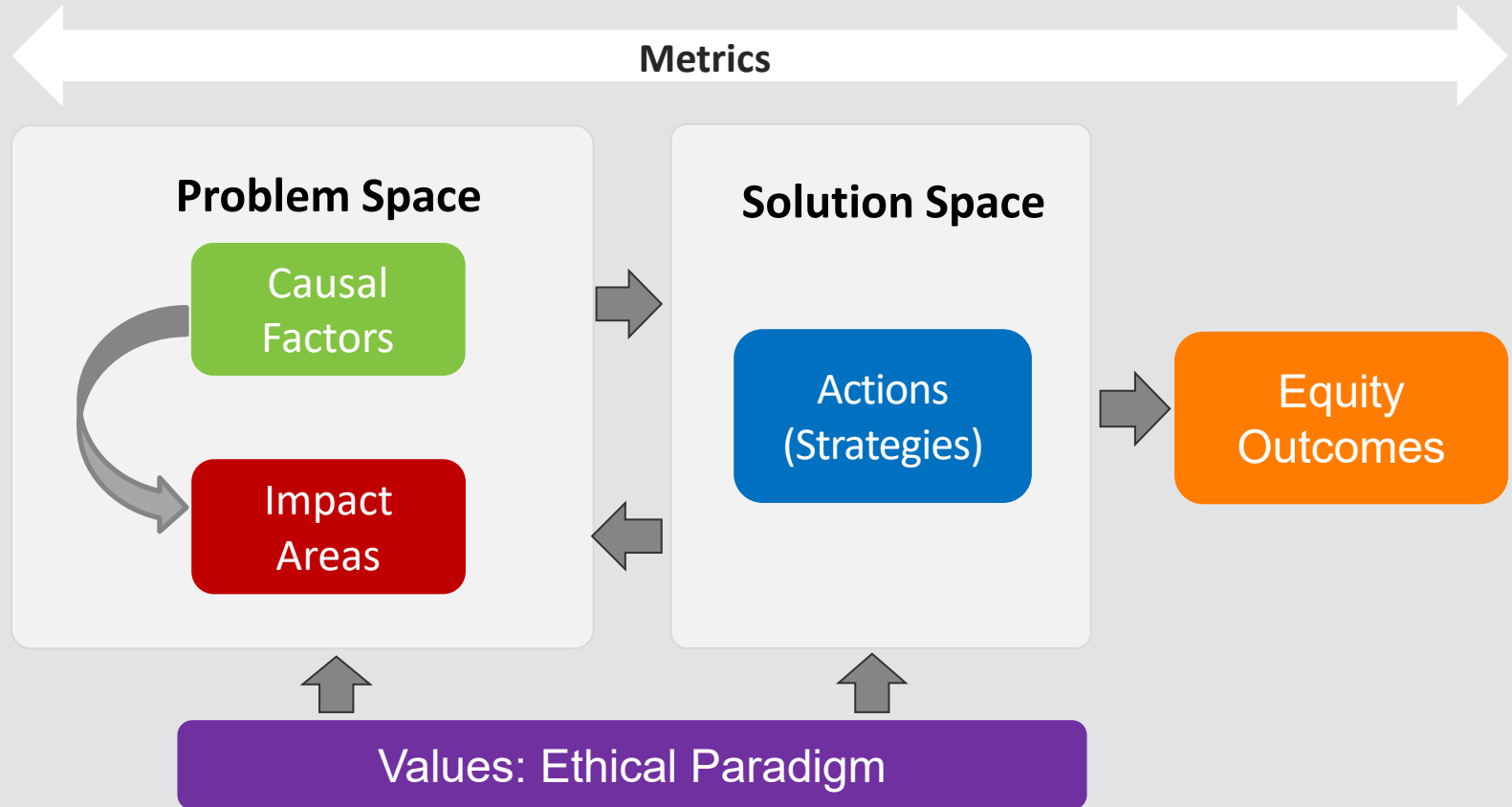
- Priorities and Needs of Disadvantaged Angelinos
- Causal Factors of Energy Inequities
- Actions (Strategies)
- Associated Equity Outcomes

Partners

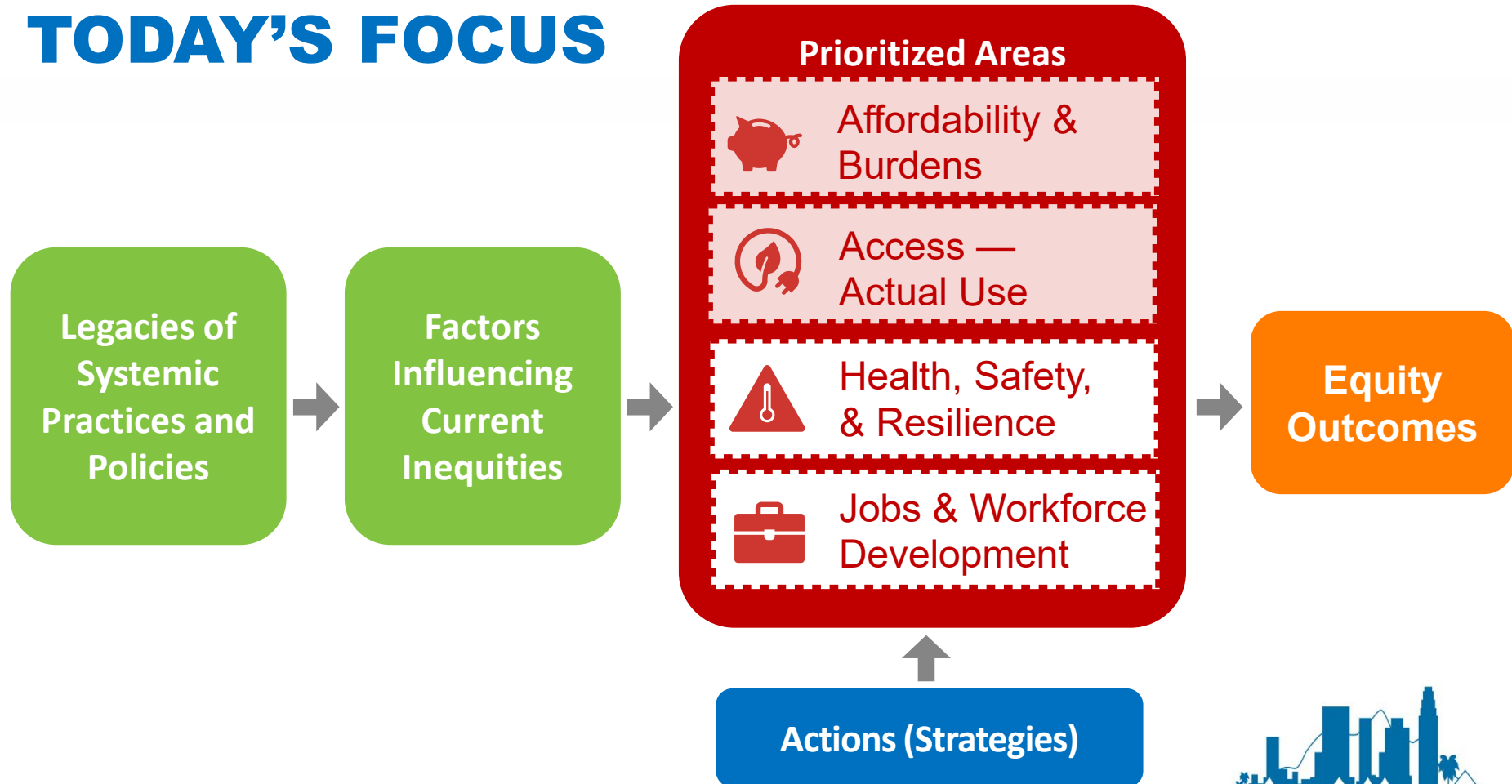
Map of In-Person Listening Sessions



Analytic Approach



TODAY'S FOCUS



Steering Committee Feedback

1

Process Question:

How can we operationalize the justice and equity principles laid out by Angelinos in this process?

2

Recognition Question:

Are we forgetting any “causal factors” of current energy inequities?

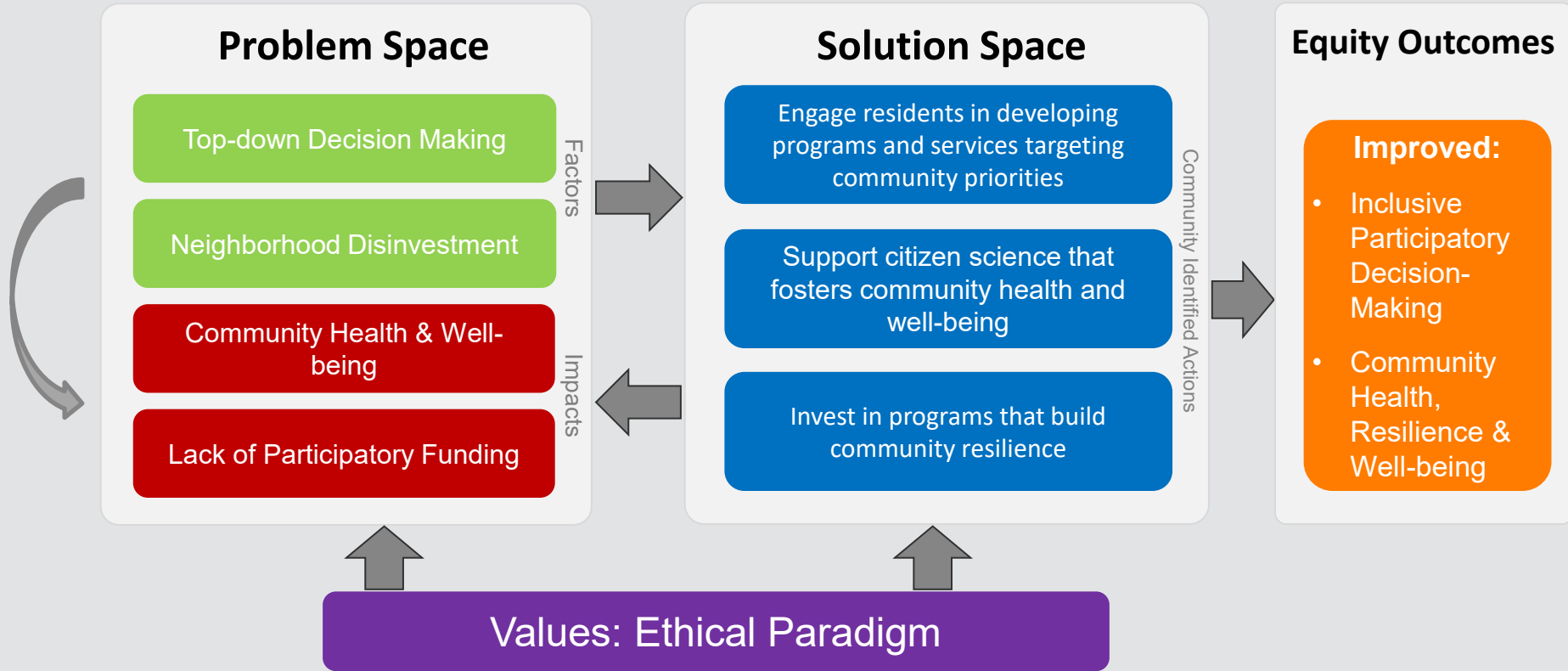


2

Key Preliminary Findings



Key Preliminary Findings: Health, Safety & Resilience



Action 1:

Engage Residents in Developing Programs & Services Targeting Community Priorities

“Our community has a lot of pollution and a lot of problems, and I know that DWP is making plans to change the energy we receive. Not just solar, not just wind, not just oil, but they're also considering things like green hydrogen and all that.

And I just hope that they are listening very well to what people are telling them: that they are tired of the pollution, they deserve more and want better services [from] DWP.”

Action 2:

Support Citizen Science that Fosters Community Health and Well-being

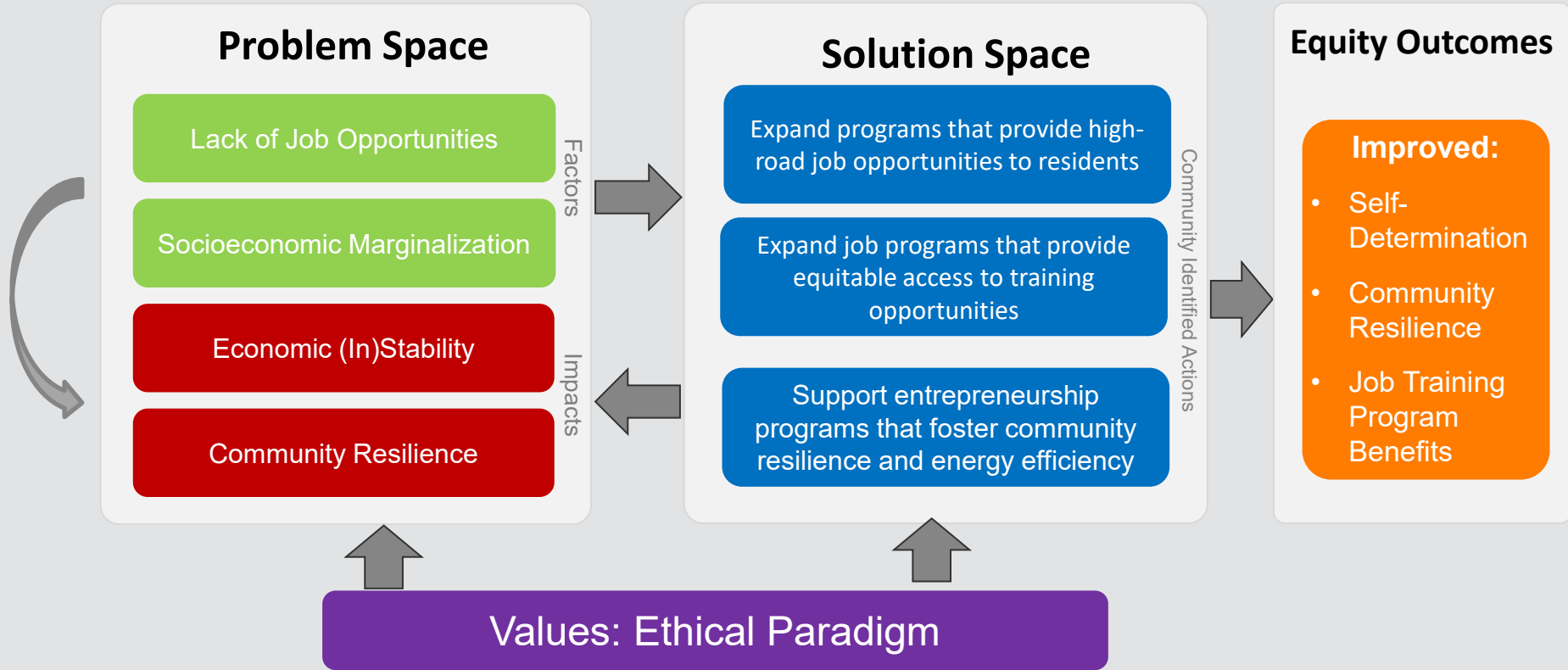
*“I run a non-profit in the community and we have a STEM program. We have shared [...] a device that we could teach the kids, called **the Air Pie**. And it [...] gives us data of what the air quality is. So, we [can have] the kids build it. **Get the data to understand what's in the air.** Benzine, carbon monoxide, whatever. And we are looking at a pilot program for three years, about maybe 2 million dollars. And [...] put these devices in various locations [...] collect the data. Because of the situation of **Wilmington. Since I have been here three generations, half of my family has died from cancer.** As young as thirty-four years old. From breast cancer, lung cancer, liver cancer, kidney cancer. With people that don't even drink or smoke. So, I know that the **refineries** have an issue. The contaminants from the **trucks** and the **containers**, from the breaks. They have a black soot in our community. ...I would like **[to put the device] in the house with a signal [...] saying mild, bad. Where it sets off an alarm** and goes into the central air-cooling system that has filters that go into effect. And those filters will automatically tell you to shut your windows and your doors [...it's] something to help the community members in their homes to at least have some kind of fresh air system.”*

Action 3:

Invest in Programs that Build Community Resilience

*“This is one way that DWP can help [...] before [...] there were programs. I was looking at the **fire [programs], what to do [in case of a fire]**. Before, I remember that they came to high school programs and they would take us to clean the freeways, the streets and things like that. And they gave us an incentive, maybe not a big one. **But they would educate us, they gave us an incentive. And we made community.** Well, I didn’t think it was bad. And I say...one day in the afternoon, a weekend when I’m not doing anything: ‘Let me sign up!’ In other words, to do something for my community. There are no more of those programs that used to exist.”*

Key Preliminary Findings: Jobs & Workforce Development



Action 1:

Expand Programs that Provide High-Road Job Opportunities to Residents

“In my humble opinion, we should be considered. I don't ask for free giveaways, I ask for a good job with a good salary for [the people of] the city of Watts. Because companies come and bring workers. And they don't benefit the residents [living] there. They should give jobs to every community where they work. They should give jobs to the people of the community there with good pay. And that, in my opinion, would be help [the help I need].”

Action 2: Expand Job Programs that Provide Equitable Access to Training Opportunities

“We human beings have many abilities. And sometimes [...] it [happens] that what perhaps she can do, I cannot do. So, sometimes there are barriers for some people, let's say in technology and all that. And sometimes it is very difficult for them to get a job here in Los Angeles. So, it would be good if there were some [mechanism], I don't know, some organization. That when these people need help, perhaps for their rent, they can be provided [with support to] find a job. And say, what skills, what can you do. So that [these people] can have a monthly livelihood, to be able to support themselves and their family. And I believe that this way we will be able to get out of the level of poverty in which we find ourselves.”

Action 3:

Support Entrepreneurship Programs that Foster Community Resilience & Energy Efficiency

*“I know what I'm doing. I've already started it. Here through this space, because of the actual development with the Resiliency Hub and Climate Resolve and the work I do with... schools, we started the Mural Workforce Academy. **So, we are starting small and building a workforce of young artists, to teach them how to use this [mineral] paint [that keeps building façades cooler].** So, we can ...build it out, get funding maybe [from] LADWP [...] It's to pay artists, ..young folks to learn this technology. Because the technology [has] been there...for a long time in other countries. Just LA has been behind [...] The idea here is to ditch acrylic paint, ditch this paint that isn't actually addressing the health needs. Because if it **decreases ten percent of buildings heat index**, from like a hundred to ninety, that means your air conditioning is going to work a lot less. It just means that is going to be **saving on energy**. We want to be able to do that with the **mural workforce**, so that's our plan.”*

Access and Affordability are Paramount

Actions and strategies enhancing access are not constrained by regulations such as Proposition 26



Action:

To Enhance Access, Create Mechanisms for Community-Guided Investments & Program

*“The issue around charging stations was already put on the table. They are supposed to be put in neighborhoods that needed them the most. The **state** went ahead of everyone and **offered cars to people without charging stations**. So, it's almost as if we are being asked to participate in a circular communication.”*

*“But recognizing we have some real issues around **what we say we want to do**. Electrification, with the governor saying that all vehicles will be electrical, by what, 2030? **Can't do that if you don't have the infrastructure. And you can't do that if you don't fix the homes to have the infrastructure.**”*

Steering Committee Feedback

1

Process Question:

How can we operationalize the justice and equity principles laid out by Angelinos in this process?

2

Recognition Question:

Are we forgetting any “causal factors” of current energy inequities?



Thank
you!



Thank
you!



Housing Weatherization & Resilience

Preliminary Results and Discussion







Katelyn Stenger, NREL

Megan Day, NREL



Equity Strategy Modeling & Analysis

NREL is conducting modeling, analysis, and strategy development along prioritized pathways:

Affordability		Low-income energy bill affordability
Housing		Universal access to safe and comfortable home temperatures
		Housing weatherization and resilience to extreme events
Solar & Storage		Improved access to solar and storage for multifamily residents and renters
		Equitable community solar access and benefits
Transportation Electrification		Equitable transportation electrification – EVs, charging, and multimodal
Grid Reliability & Resilience		Distribution grid upgrades to enable equitable solar, storage, and EV adoption and resilience
Air Quality & Health		Truck electrification for improved air quality and health outcomes

This presentation covers the highlighted pathway.


















Baseline Equity Analysis

Jane Lockshin, NREL



LADWP Residential Efficiency Investment Baseline

LADWP INVESTMENTS		NUMBER OF YEARS	TOTAL AMOUNT SPENT	AVG. AMOUNT PER CUSTOMER DAC/Non-DAC	% OF INCENTIVES Normalized by # of Customers DAC/Non-DAC	WHICH COMMUNITIES DISPROPORTIONATELY BENEFITED FROM PROGRAMS?				
						DAC/ Non-DAC	Mostly Non- White/White	Mostly Hispanic /Non-Hispanic	Mostly Renters/ Owners	Below/Above Median Income
ENERGY EFFICIENCY	 Home Energy Improvement Program	 3	\$3,378,869	\$3 \$2	61% 	DAC		Hispanic	Owners	
	 Refrigerator Turn-In and Recycle Program	 5	\$2,667,307	0.01 refrigerators 0.014 refrigerators	42% 	Non-DAC	White	Non-Hispanic	Owners	Above
	 Consumer Rebate Program	 6	\$93,248,144	\$64 \$74	46% 	Non-DAC	White	Non-Hispanic	Owners	Above
	 Other Non-Low-Income-Targeted Programs	 15	\$252,513,659	\$178 \$196	39% 	Non-DAC	White	Non-Hispanic	Owners	Above
	 Low-Income-Targeted Program*	 5	\$7,897,260	\$11 \$1	92% 	DAC	Non-White	Hispanic	Renters	Below

* Low-Income Targeted

Programs representing 97% of the \$360 million in LADWP residential energy efficiency investments analyzed disproportionately benefited non-disadvantaged, mostly White, mostly non-Hispanic, mostly home-owning, and mostly above-median-income communities.



LADWP \$ Spent on Efficiency Incentives



Program	Which communities disproportionately benefited from incentives?				
	Non-DAC/DAC	Mostly White/ Mostly Non-White	Mostly Non-Hispanic/ Mostly Hispanic	Mostly Owners/ Renters	Above/Below Median Income*
Commercial Direct Install	DAC	No statistically significant difference			
Home Energy Improvement	DAC			Owners	
Consumer Rebate	Non-DAC	Mostly White	Mostly Non-Hispanic	Owners	Above
HVAC Optimization Program	Non-DAC	Mostly White	Mostly Non-Hispanic	Owners	Above
California Advanced Home Program			Mostly Non-Hispanic		
Chiller Efficiency Program	No statistically significant difference				
Commercial Lighting Incentive Program			Mostly Non-Hispanic		
Custom Performance-Based Efficiency Program	No statistically significant difference				
Efficient Product Marketplace	Non-DAC	Mostly White	Mostly Non-Hispanic	Owners	Above
Energy Savings Assistance Program**	DAC		Mostly Hispanic	Renters	Below
Energy Upgrade California	Non-DAC				
Food Service Program	No statistically significant difference				
New Construction					
Non-Profit Program					
Refrigeration	Non-DAC		Mostly Non-Hispanic	Owners	Above
Upstream Heating Ventilation AC (UHVAC)			Mostly Non-Hispanic		

NOTE: The Multifamily Whole Building Program could not be analyzed due to an insufficient population size of 6 data points.

*Median income: \$73,100 annual salary (2019)

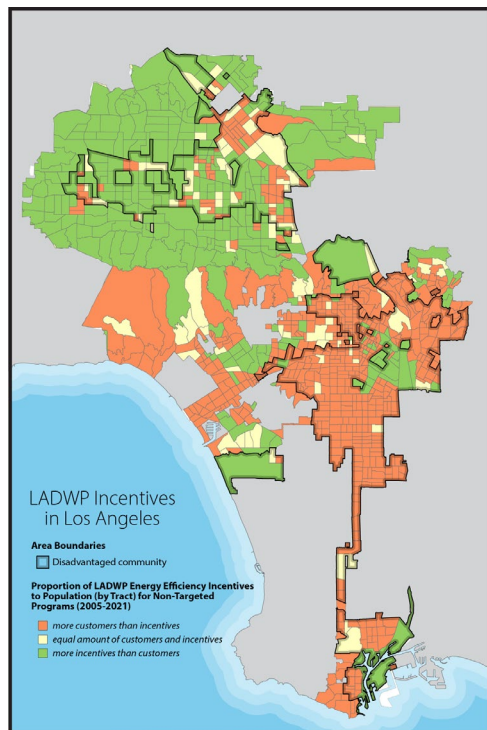
**Low-Income Targeted

Programs with a **statistically significant difference** in the **incentive dollars received** between the socio-demographic metrics are marked in **blue** or **gold**. Unmarked boxes indicate no statistically significant difference.



Did census tracts receive incentives proportional to their population*?

Programs Not Targeting Low-Income Households



Energy Efficiency Incentive Programs

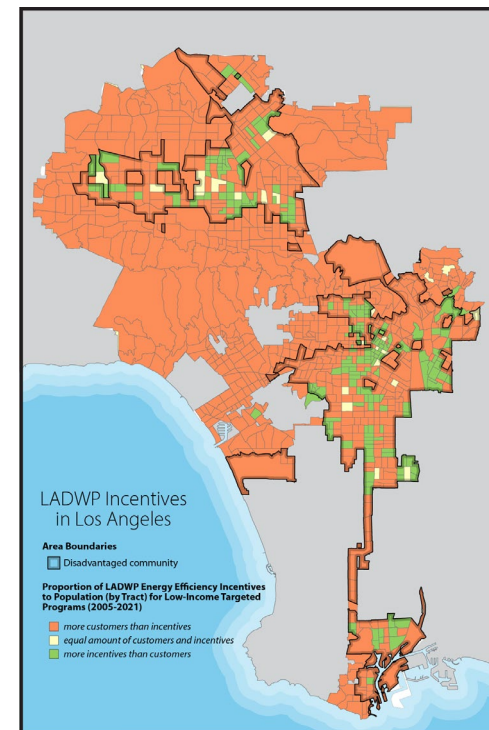
Tracts where:

- % of households* > % of incentives received**:
"more customers than incentives"
- % of incentives received** > % of households*:
"more incentives than customers"
- % of incentives received** = % of households*:
"equal number of customers and incentives"

*% of households = number of households in a census tract divided by the total number of households

**% of incentives received = number of incentives granted to tract divided by the total number of incentives

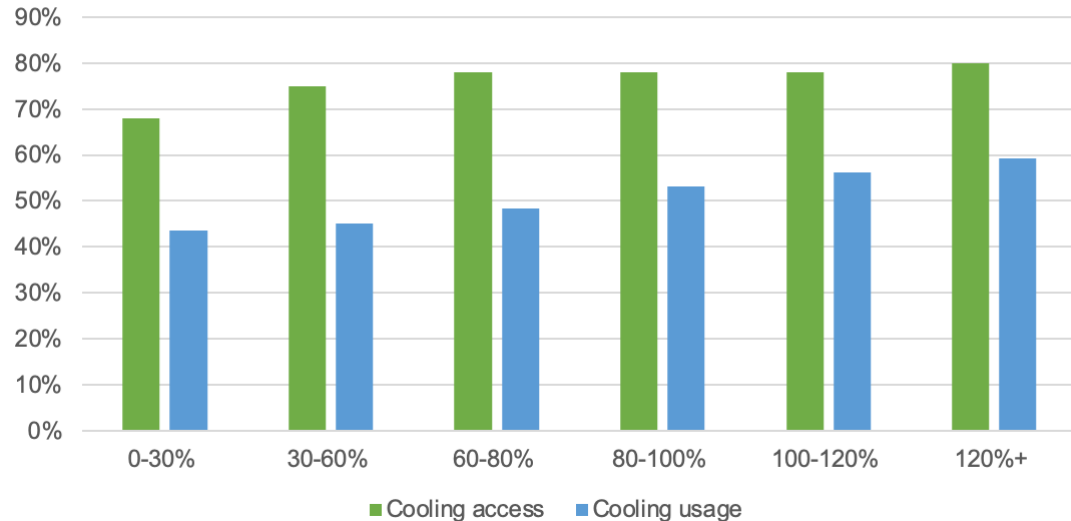
Programs Targeting Low-Income Households



Less than 50% of low-income households (0-80% AMI) use cooling. More than 30% of extremely low-income (0-30%) households lack access to cooling.

Residential Building Cooling Access and Use by Income

Cooling access and usage by % Area Median Income for the City of Los Angeles



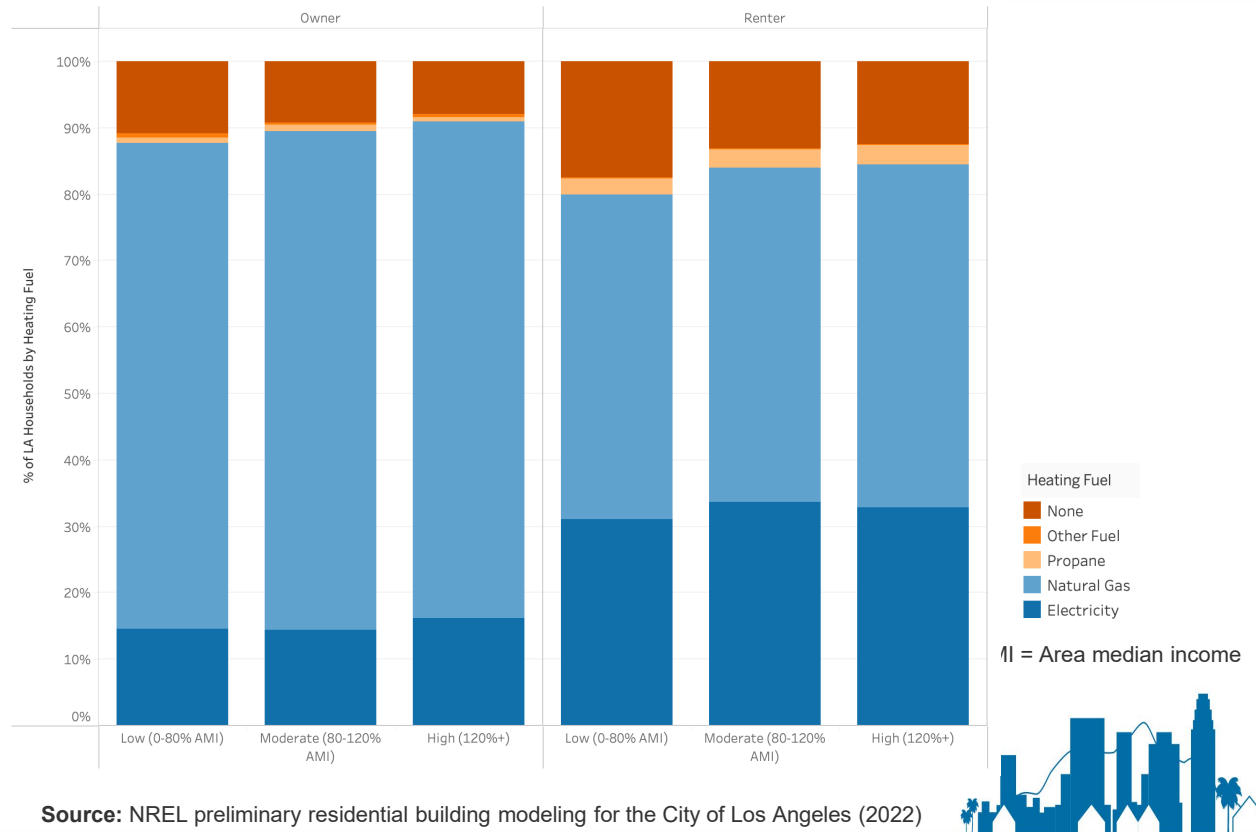
Source: NREL preliminary residential building modeling for the City of Los Angeles (2022)



Nearly 20% of low- and moderate-income renters lack access to heating or use propane, the highest-cost fuel, for heating.

Residential Building Heating Fuel by Income and Renter/Owner Status

Heating Fuel



Source: NREL preliminary residential building modeling for the City of Los Angeles (2022)

Housing Weatherization and Resilience to Extreme Events

Katelyn Stenger, NREL

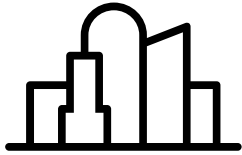
Janet Reyna, NREL

Philip White, NREL

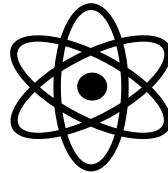
Ry Horsey, NREL



Modeling Los Angeles Homes



Building stock
characteristics
database



Physics-based
computer
modeling



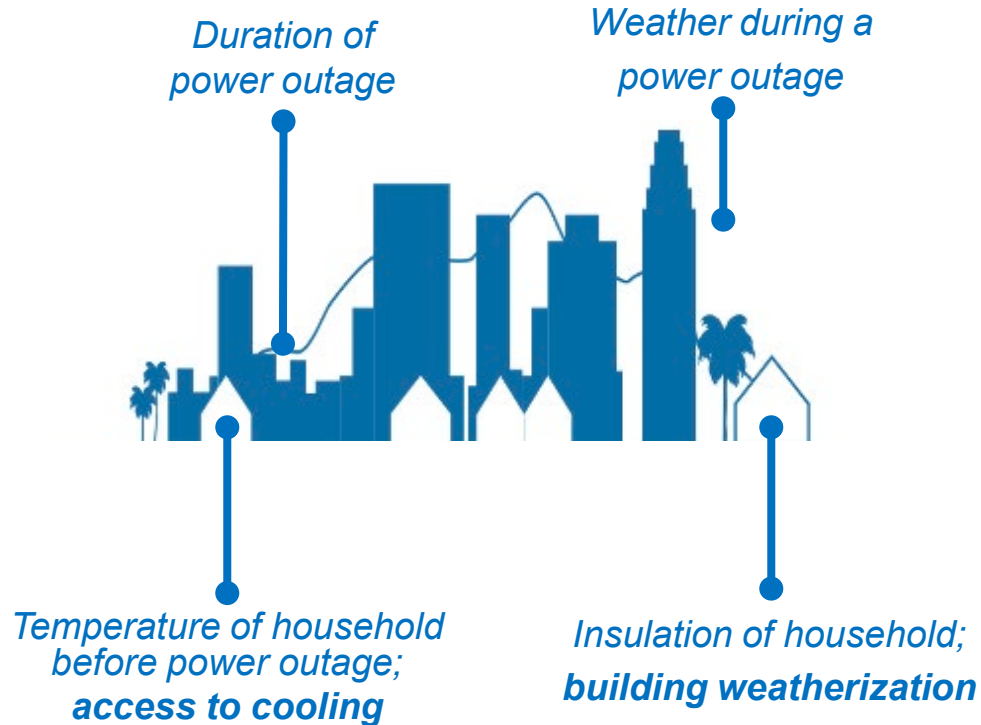
High-
performance
computing

NREL modeled 50,000 dwellings representing the diversity of building types (like single family, multifamily), building technologies, climate zones, incomes, and renter/owner status in LA.

1. Describe the Los Angeles home characteristics probabilistically.
2. Sample the stock characteristics.
3. Make a physics-based model for each sample.
4. Model changes to the homes: efficient appliances, insulation, and cooling.
5. Assess impact on energy use and bills.



Simulating a Power Outage



Key modeling assumptions:

- 1) Greatest risk of unsafe indoor temperatures occur during the summer months due to heat
- 2) Simulated power outage is during a heat wave for 4 days, from 00:00 July 20 to 00:00 July 24, 2035
- 3) No backup power is available to households during a power outage



7 Distinct Building Weatherization and Cooling Upgrades Simulated

Building Weatherization Upgrade?	yes	<ul style="list-style-type: none">• Cool roofs and shading	<ul style="list-style-type: none">• Heat pump, cool roofs, and shading• Heat pump, low-cost envelope improvements• Heat pump, Title 24 envelope improvements• Heat pump passive home envelope improvements
	no	<ul style="list-style-type: none">• Baseline LA housing stock• Baseline LA housing stock during a power outage	<ul style="list-style-type: none">• Cooling upgrade through a heat pump
		no	yes

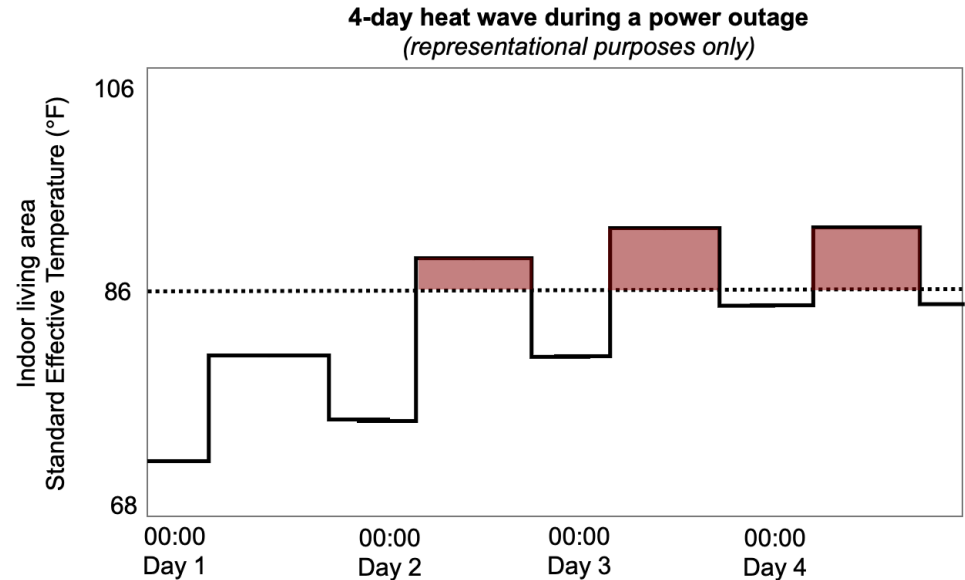
Cooling Upgrade?



Measuring Heat Exposure

NREL measured heat exposure and household safety during a heat wave in a power outage using standard effective temperature (SET), which incorporates both temperature and duration of exposure as SET(°F)-Hours.

- The Leadership in Energy and Environmental Design (LEED) **Passive Survivability and Functionality During Emergency** standard requires a residential building to not exceed 86°F SET for more than 216 SET°F-hours in summertime.
- Livable conditions are defined by SET as part of the ASHRAE 55 thermal comfort standard.



Source: The LEED Pilot Credit IPpc100 (USGBC LEED 2022)

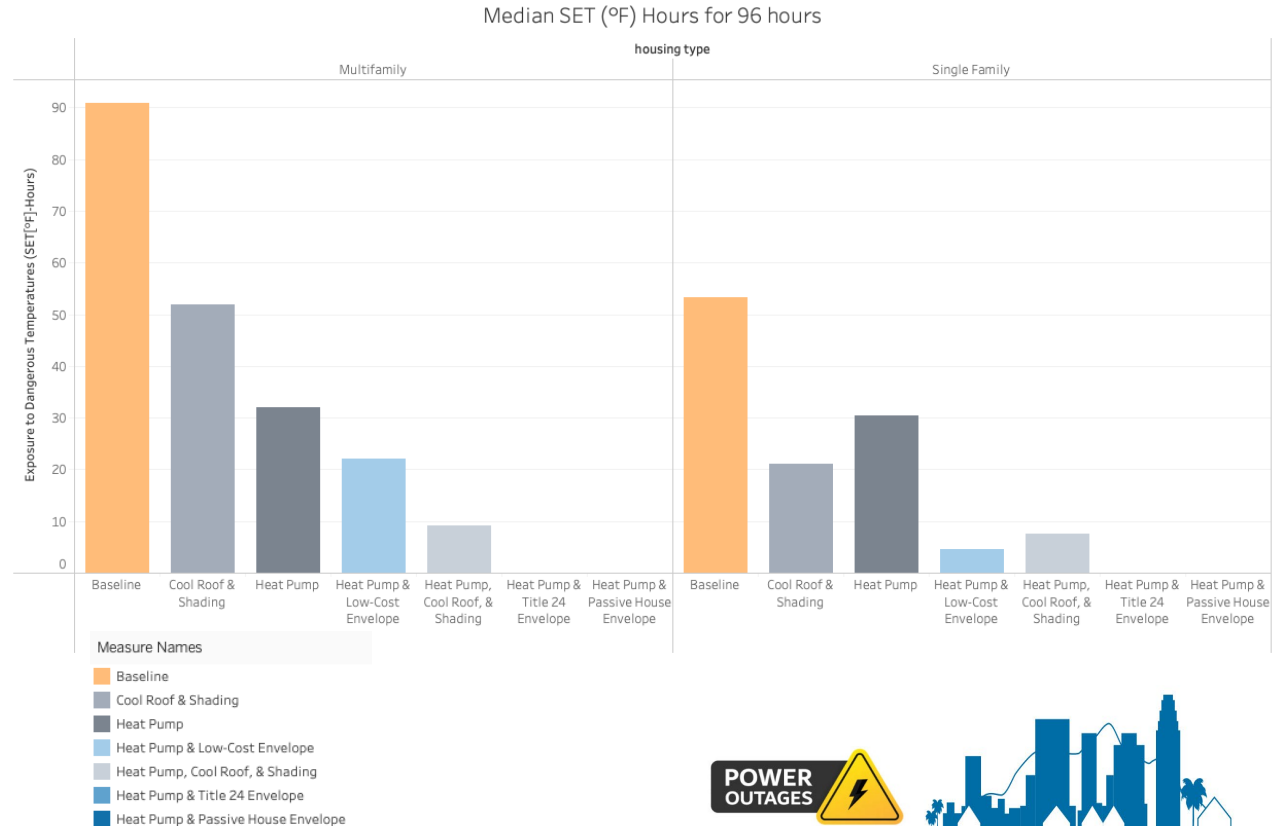


Housing Type and Building Weatherization

Key Finding: Multifamily households are exposed to more dangerous temperatures on average than single-family households in baseline conditions during an outage.

Pre-cooling before an outage through a heat pump decreased exposure to similar levels in single-family and multifamily homes.

Cooling access through a heat pump decreased exposure to dangerous heat temperatures by 35%, from 90.9 to 31.9 SET (°F)-hours for multifamily buildings, and from 53.2 to 30.4 SET (°F)-hours for single-family buildings.

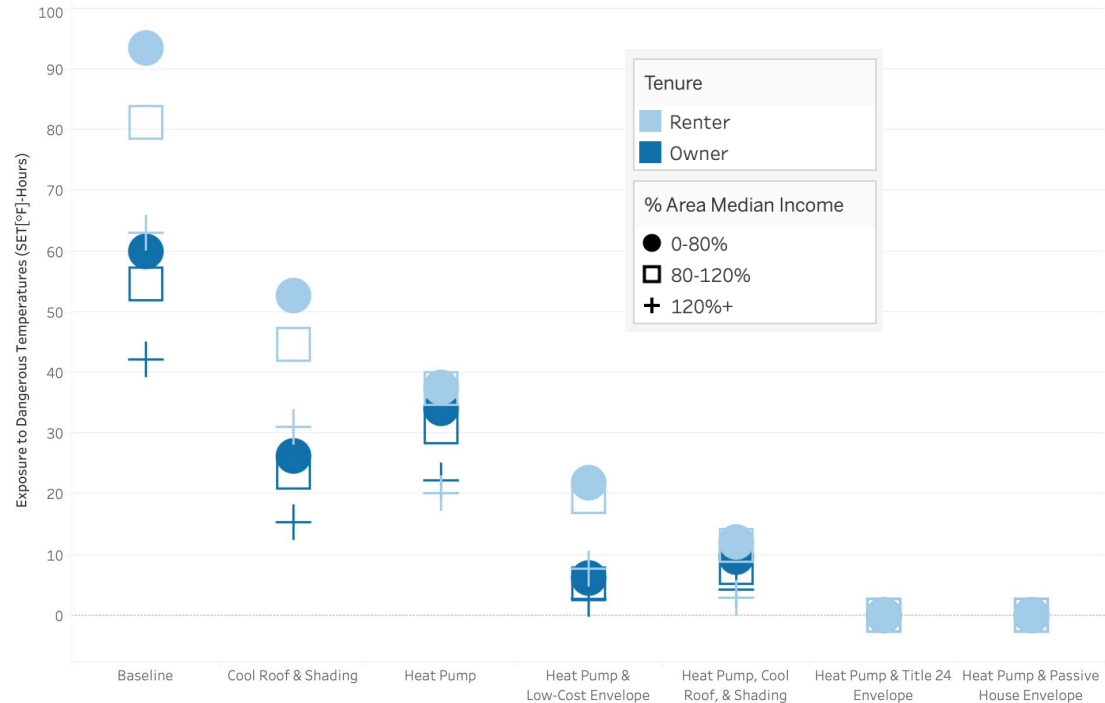


Income, Tenure, and Building Weatherization

Key Finding: Low- and moderate-income renters have the highest exposure to dangerous temperatures in an outage.

Combining cooling access through a heat pump and robust envelope improvements decreased exposure to dangerous temperatures to a median of 0 across tenure and income levels.

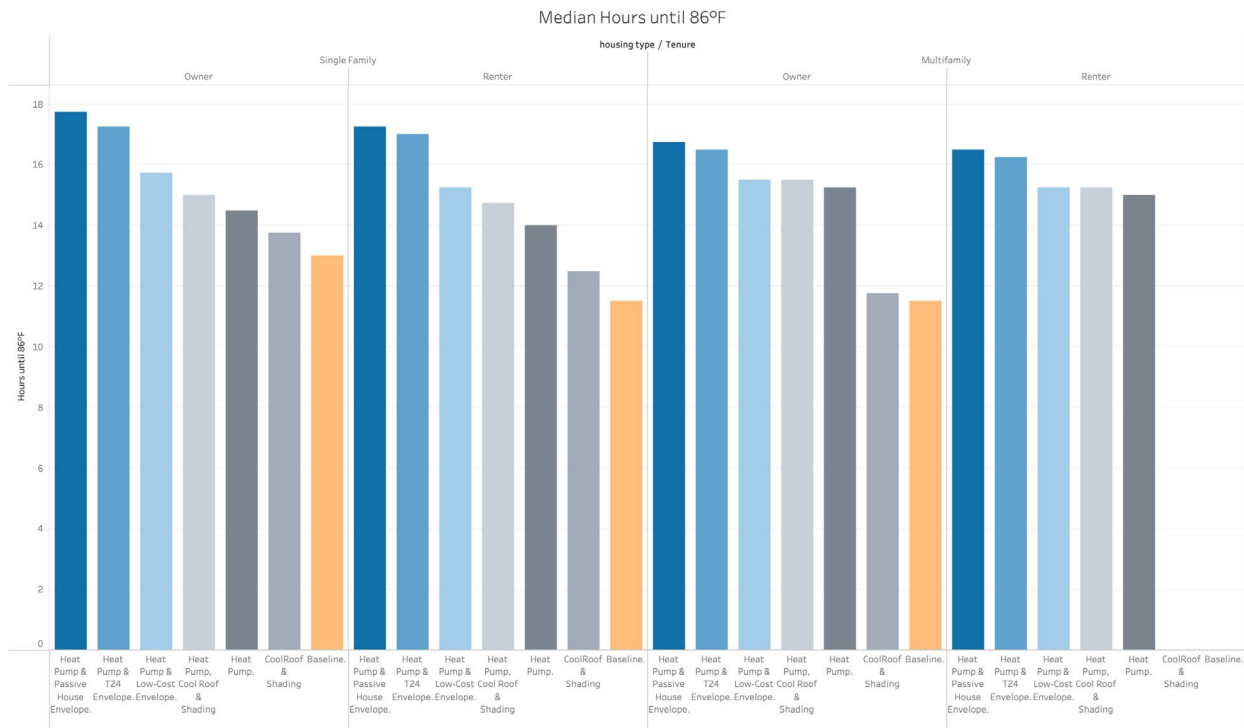
Median SET (°F) Hours for 96 hours of Power Outage



Median Hours Until 86°F by Tenure and Housing Type

Key Finding: Multifamily renters started the simulated outage at unsafe temperatures. Pre-cooling through a heat pump increased the hours until unsafe temperatures to 15.

Cooling access increased the number of hours until 86°F during a power outage from a median of 0 hours in baseline conditions to 15 hours for renters in multifamily buildings and from 11.50 to 14 hours in single-family buildings.



Measure Names

- Heat Pump & Passive House Envelope.
- Heat Pump & T24 Envelope.
- Heat Pump & Low-Cost Envelope.
- Heat Pump, Cool Roof & Shading
- Heat Pump.
- CoolRoof & Shading
- Baseline.



Equity Strategies



Housing Weatherization and Resilience – Cooling Access

DRAFT for Discussion

Baseline Equity

- Less than 50% of low and moderate-income households use cooling. More than 30% of extremely low-income households lack access to cooling.

Community Solutions Guidance

- Transparent explanation of benefits and costs of weatherization measures
- Funded, staffed, culturally informed, transparent, tailored, and consistent outreach and communication (promotor-type approach)
- Simplified application materials and methods.

Modeling & Analysis Key Findings

- Low- and moderate-income renters have the highest exposure to dangerous temperatures in an outage.
- Multifamily households are exposed to more dangerous temperatures on average than single-family households during an outage.
- Multifamily renters started the simulated outage at unsafe temperatures.
- Pre-cooling before an outage through a heat pump increases the average hours until unsafe temperatures to 15 and decreases exposure to similar levels in single-family and multifamily homes.

Equity Strategies

- Prioritize low- and moderate-income multifamily renters without cooling access for heat pump cooling.
- Deploy cooling access and building envelope improvements in coordination for single-family homes without cooling.
- Modify LADWP's AC Optimization Program to include heat pumps.
- Fund and staff program outreach and technical assistance in partnership with community organizations targeting areas that received disproportionately fewer efficiency incentives like South LA.

Housing Weatherization and Resilience – Envelope Upgrades

DRAFT for Discussion

Baseline Equity

- Programs representing 97% of the \$360 million in LADWP residential energy efficiency investments analyzed disproportionately benefited non-disadvantaged, mostly White, mostly non-Hispanic, mostly home-owning, and mostly above-median-income communities.

Community Solutions Guidance

- Deliver benefits to moderate-income, renter, and energy-burdened households and households in multifamily housing.
- Consistent disadvantaged customer support system for safety and comfort, maintenance, and efficiency upgrades.
- Concerns about increased rent as a result of LADWP-supported improvements.

Modeling & Analysis Key Findings

- Combining cooling access through a heat pump and robust envelope improvements decreased exposure to dangerous temperatures to a median of 0 across tenure and income levels.
- Multifamily renters experience more consecutive hours at dangerous temperatures in an outage than multifamily homeowners, except when heat pump cooling and passive house envelope improvements are applied and exposure decreases to 0.

Equity Strategies

- Prioritize coordinated deployment of cooling access and envelope upgrades in multifamily, renter-occupied buildings to address those at greatest risk of dangerous heat exposure.
- Include funding for renovations and electrical upgrades needed to add cooling.
- Prioritize rent-controlled and affordable housing buildings/units where upgrades will not increase rents.

Housing Weatherization and Resilience – Additional Strategies **DRAFT for Discussion**

Baseline Equity

- Many disadvantaged communities, including much of South LA, did not receive LADWP energy efficiency incentives proportional to their population.

Community Solutions Guidance

- Home visits to assess building conditions, safety.
- Apprenticeship, internship, entrepreneurship, and educational opportunities in weatherization.
- Consistent disadvantaged customer support system for safety and comfort maintenance and efficiency upgrades.

Modeling & Analysis Key Findings

- Nearly 20% of low- and moderate-income renters lack access to heating or use propane for heating, the highest-cost fuel.
- Access to cooling through a heat pump decreases extreme heat exposure by 34%.

Equity Strategies

- Prioritize heat pump installation in low- and moderate-income households with no cooling or heating to provide safe and comfortable temperatures and increase resiliency year-round.
- Support apprenticeship programs in disadvantaged communities for HVAC entrepreneurship and educational opportunities.

Discussion

Please share ideas and suggestions about the draft equity strategies

(A continued response opportunity will be available after the meeting.)

DRAFT Housing Weatherization and Resilience Equity Strategies Discussion

Cooling Access

- Prioritize low- and moderate-income multifamily renters without cooling access for heat pump cooling.
- Deploy cooling access and building envelope improvements in coordination for single-family homes without cooling.
- Modify LADWP's AC Optimization Program to include heat pumps.
- Fund and staff program outreach and technical assistance in partnership with community organizations targeting areas that received disproportionately fewer efficiency incentives like South LA.

Envelope Upgrades

- Prioritize coordinated deployment of cooling access and envelope upgrades in multifamily, renter-occupied buildings to address those at greatest risk of dangerous heat exposure.
- Include funding for renovations and electrical upgrades needed to add cooling.
- Prioritize rent-controlled and affordable housing buildings/units where upgrades will not increase rents.

Additional Strategies

- Prioritize heat pump installation in low- and moderate-income households with no cooling or heating to provide safe and comfortable temperatures and increase resiliency year-round.
- Support apprenticeship programs in disadvantaged communities for HVAC entrepreneurship and educational opportunities.









Equitable Community Solar Access & Benefits

Preliminary Results & Discussion



Equity Strategy Modeling & Analysis

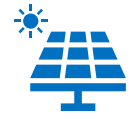
NREL is conducting modeling, analysis, and strategy development along prioritized pathways:

Affordability		Low-income energy bill affordability
Housing		Universal access to safe and comfortable home temperatures
		Housing weatherization and resilience to extreme events
Solar & Storage		Improved access to solar and storage for multifamily residents and renters
		Equitable community solar access and benefits
Transportation Electrification		Equitable transportation electrification – EVs, charging, and multimodal
Grid Reliability & Resilience		Distribution grid upgrades to enable equitable solar, storage, and EV adoption and resilience
Air Quality & Health		Truck electrification for improved air quality and health outcomes

This presentation covers the highlighted pathway.



Shared Solar Program (SSP)



	Which communities disproportionately participated in the Shared Solar program?				
(2,116 participants as of 12/31/21)	Non-DAC/DAC	Mostly White/ Mostly Non-White	Mostly Non-Hispanic/ Mostly Hispanic	Mostly Owners/ Renters	Above/Below Median Income*
Number of Shared Solar Program subscribers	Non-DAC		Mostly Non-Hispanic		Above
Subscribed Shared Solar Program capacity	Non-DAC		Mostly Non-Hispanic		Above

*Median income: \$73,100 annual salary (2019)

Analysis of the LADWP Shared Solar Program indicates higher participation and subscribed capacity among non-disadvantaged, non-Hispanic, and above-median-income communities.

Where a **statistically significant difference** is identified between the sociodemographic metrics in the **amount of subscribed shared solar capacity** or the **number of subscribers**, they are marked in **blue** or **gold**. Unmarked boxes indicate no statistically significant difference.



Equitable Community Solar Access and Benefits

Ashreeta Prasanna, NREL
Jane Lockshin, NREL



Community Solar Modeling Scenarios

Potential community solar sites are evaluated under a community solar financial model and a power purchase agreement (PPA) financial model to determine economic viability (net present value of the project) under two scenarios:

Baseline Scenario

The current LADWP [Shared Solar Program](#) and [Feed-in-Tariff \(FiT\) Program](#) define model input parameters.

Equity Scenario

Shared Solar Program:

- Increases the current maximum community solar subscription of 100 kWh/month per customer to 500 kWh/month per customer for low-income customers
- Reduces the current subscription rate of \$0.21665 per kWh 20% to \$0.18 per kWh for low-income customers.

PPA financial model:

- Increases the LADWP PPA payments for parking canopy sites in DAC tracts from \$0.14 per kWh to \$0.16 per kWh.



IRA Solar Investment Tax Credits

The following incentives are available as part of the Inflation Reduction Act (IRA) (U.S Department of the Treasury and Internal Revenue Service 2023)* and are applied to both scenarios:

- A **20% Investment Tax Credit bonus** for projects installed on qualifying residential rental buildings or that provide **at least 50% of the financial benefits of the electricity produced to households with income of less than 200% of the poverty line or less than 80% of area median gross income**. The model assumption to allocate at least 50% of the financial benefits to low-income households is to apply the bonus 20% Investment Tax Credit for sites located in tracts having a low median income.
- An additional **10% bonus credit** for any facility placed in service in an energy community, defined as a **brownfield site**, an area with significant fossil fuel employment, or a census tract or any immediately adjacent census tract in which, after December 31, 1999, a coal mine has closed, or, after December 31, 2009, a coalfired electric generating unit has been retired. The model applies this bonus credit to all sites on parcels classified as brownfield.

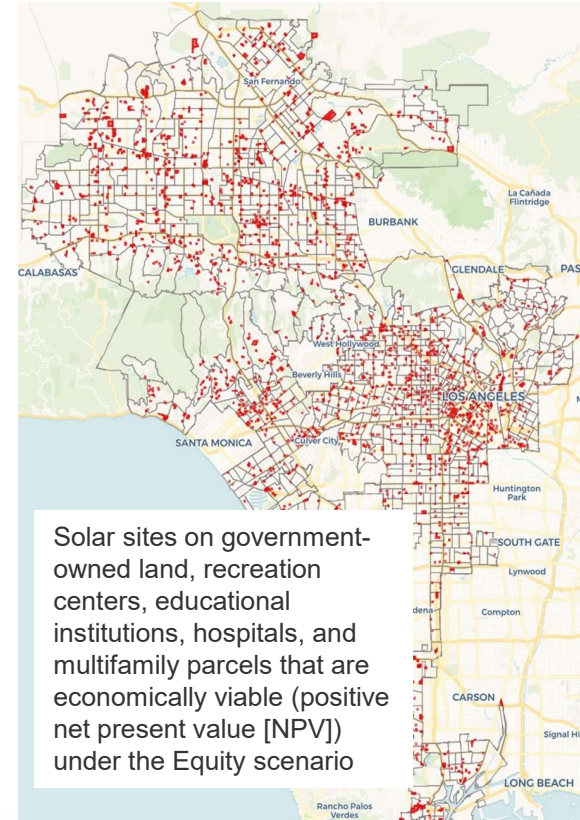
[*Treasury Initial Guidance Establishing Program to allocate Environmental Justice Solar and Wind Capacity Limitation Under Section 48\(e\)](#)



Community Solar Modeling Results

NREL identified 1,031 MW of economically viable (positive NPV) community solar (30 kW or more) potential on 2,369 government-owned parcels, recreation centers, educational institutions, hospitals, and multifamily parcels.

	Technical Potential	Equity Scenario
Land Use	Total Capacity and Number of Sites	Community Solar Economic Capacity and Number of Sites
Residential (Multifamily)	2,201 MW, 22,577 sites	237 MW, 387 sites
Educational Institutions	1,209 MW, 2,538 sites	532 MW, 1,154 sites
Hospitals	218 MW, 750 sites	105 MW, 448 sites
Government-Owned	140 MW, 478 sites	22 MW, 3 sites
Recreation Centers	57 MW, 265 sites	15 MW, 107 sites



Community Solar Benefits for Low-Income Customers

Key Finding: Enhancing the LADWP Shared Solar Program by establishing a lower subscription rate for low-income customers (\$0.18/kWh) and increasing the maximum subscription allowed from 100 kWh per month to 500 kWh per month can increase average savings to approximately \$440 per year for low-income customers while maintaining average savings of \$60 per year for all other customers.

The above modifications to the current Shared Solar Program would have a relatively moderate impact on project profitability. Based on model assumptions, the average NPV of projects decreases by 9%, and 277 fewer sites (decrease of 1% from a total of 28,277 sites) have a positive NPV when compared to NPV under the current program structure.

Impact on benefits to community solar subscribers and project developer (LADWP) in the Equity scenario

Benefit Recipient	Change Compared to Baseline Scenario
Community solar developer (LADWP)	Average NPV decreases by 9% and number of potential profitable project sites decreases by 1%
Low-income community solar subscriber	Savings of \$440 per year
Community solar subscriber	Savings remain the same as current (\$60 per year)



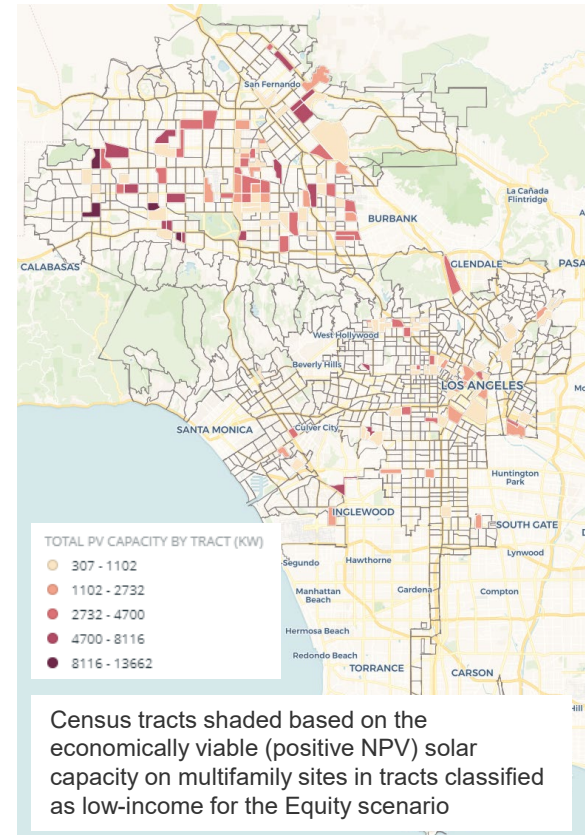
Potential Multifamily Community Solar Sites

Key Finding: NREL identified 364 economically viable community solar sites with 30 kW or greater capacity on multifamily sites in low-income census tracts.

These sites are modeled as qualifying for the Inflation Reduction Act (IRA) 20% bonus Investment Tax Credit (ITC) (for a total of 50% ITC) when at least 50% of the project's financial benefits of the electricity produced are provided to low-income households (U.S Department of the Treasury and Internal Revenue Service 2023).*

Site Classification	Technical Potential		Equity Scenario	
	Capacity	Number of Sites	Community Solar Economic Capacity	Number of Sites
Multifamily	2,201 MW	22,577	237 MW	387
Multifamily in low-income tract	1,192 MW	13,429	192 MW	364

*[Treasury Initial Guidance Establishing Program to allocate Environmental Justice Solar and Wind Capacity Limitation Under Section 48\(e\)](#)

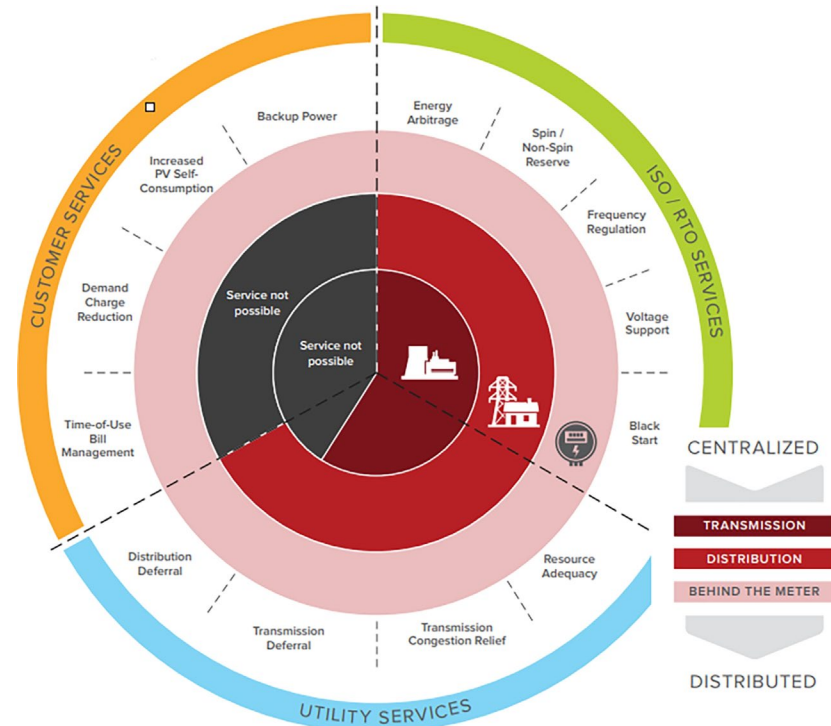


Community Solar and Battery Storage

Key Finding: Community solar-plus-storage projects are not economically attractive (have a lower NPV) compared to standalone solar projects due to the lack of time-varying compensation value for electricity under the FiT Program and no additional value streams for resiliency under the Shared Solar Program.

Approximately 300 MW of storage (4-hour duration) could be co-located with NPV-positive PV on 645 sites in LA.

During standard operation (no outage events), energy storage would derive value by storing and shifting energy production in response to time-varying energy prices. Energy storage could also derive value from other services, such as frequency regulation, deferral of distribution grid upgrades, or providing backup power during an outage, but none of these value streams are compensated explicitly under current LADWP program offerings.



Services offered by energy storage. Source: Arfeen, ZA, Abdullah, MP, Hassan, R, et al. Energy storage usages: Engineering reactions, economic-technological values for electric vehicles—A technological outlook. *Int Trans Electr Energy Syst.* 2020; 30:e12422. <https://doi.org/10.1002/2050-7038.12422>

Equity Strategies



Equitable Community Solar Access and Benefits

Baseline Equity

- The LADWP Shared Solar Program enrollment rate is higher than the Tier 1 rate for the first block of electricity consumed, but lower than the Tier 2 rate for additional electricity consumed.
- \$341 million in LADWP solar incentives disproportionately benefited predominantly White, non-Hispanic, home-owning, and wealthier neighborhoods.

Community Solutions Guidance

- Current community solar programs have insufficient incentives for low- and moderate-income customers to participate.
- Conduct more outreach in low- and moderate-income communities and communities of color on solar and storage options.

Modeling & Analysis Key Findings

- NREL modeled the impact of increasing the maximum subscription amount to 500 kW/month and lowering the subscription rate to \$0.18/kWh for low-income customers; this results in average savings of \$440 per year for low-income subscribers and \$60 per year for all other subscribers.
- Economically viable potential community solar sites (positive NPV and 30 kW or more) could serve all LADWP customers.

Equity Strategy

- Modify Shared Solar Program to increase access and bill savings for low-income subscribers.

Equitable Community Solar Access and Benefits

Baseline Equity

- The LADWP Shared Solar Program has higher participation and subscribed capacity among non-disadvantaged, non-Hispanic, and above-median-income communities.

Community Solutions Guidance

- Technical assistance on solar and storage is needed (for affordable housing organizations and others).
- Ensure ground-mounted solar development does not prevent affordable housing development.

Modeling & Analysis Key Findings

- Commercial and industrial land parcels have the highest economic capacity under both financial models.
- IRA Investment Tax Credit bonuses make 364 potential multifamily community solar sites (30 kW or more) in low-income census tracts economically viable.

Equity Strategy

- Provide customers in multifamily buildings the opportunity to have virtual-net-energy metering (VNEM) from nearby commercial or other privately owned sites through an anchor tenant model.
- Seek technical assistance as well as legal assistance to ensure developed community solar projects receive incentives available under the IRA.
- Subcontract project development and construction and work with other city organizations to jointly develop community solar with LADWP ownership.

Community Solar with Storage

Baseline Equity

- The LADWP Shared Solar Program has higher participation and subscribed capacity among non-disadvantaged, non-Hispanic, and above-median-income communities.

Community Solutions Guidance

- Consider schools and LADWP land for battery storage, microgrids, and cooling centers accessible 24/7.
- Community solar with storage should support resilience hubs in environmental justice communities.

Modeling & Analysis Key Findings

- 300 MW of storage (4-hour duration) could be co-located with positive-NPV solar at 645 sites in LADWP service territory.
- Solar-plus-storage projects are not economically attractive (have a lower NPV) compared to standalone solar projects due to the lack of time-varying compensation value for electricity under the FiT Program and no additional value streams for resiliency under the Shared Solar Program.

Equity Strategy

- Provide compensation for community solar with storage that sets credits at the actual value of electricity at the time it is delivered to the grid: Midday electricity has lower value than peak demand hours in the late afternoon and evening, making battery storage paired with community solar more valuable.

Discussion

Please share ideas and suggestions about the draft equity strategies

(A continued response opportunity will be available after the meeting.)

DRAFT Community Solar Equity Strategies Discussion

Community Solar Access

- Modify Shared Solar Program to increase access and bill savings for low-income subscribers.

Community Solar Benefits

- Provide customers in multifamily buildings the opportunity to have virtual-net-energy metering (VNEM) from nearby commercial or other privately owned sites.
- Seek technical assistance as well as legal assistance to ensure developed community solar projects receive incentives available under the IRA.
- Subcontract project development and construction and work with other city organizations to jointly develop community solar with LADWP ownership.

Community Solar & Storage

- Provide compensation for community solar with storage that sets credits at the actual value of electricity at the time it is delivered to the grid: Midday electricity has lower value than peak demand hours in the late afternoon and evening, making battery storage paired with community solar more valuable.



Affordability

UCLA



Energy Affordability and Policy Solutions Analysis

March 15, 2023

Greg Pierce, Rachel Sheinberg, et al.
UCLA Luskin Center for Innovation (LCI)
UCLA School of Law & Institute of the Environment and
Sustainability



LCI's Three Affordability Analyses

Task 1. Structural and Baseline Affordability Considerations

- Assembling existing data sources to assess structural energy affordability and considerations for households across LADWP territory and utility itself

Task 2. Energy Affordability Metrics

- Identifying and analyzing goals and metrics to inform actionable plans

Task 3. Energy Affordability Policy Options

- Identifying and analyzing priority policy options to inform actionable plans



Research Process and Products

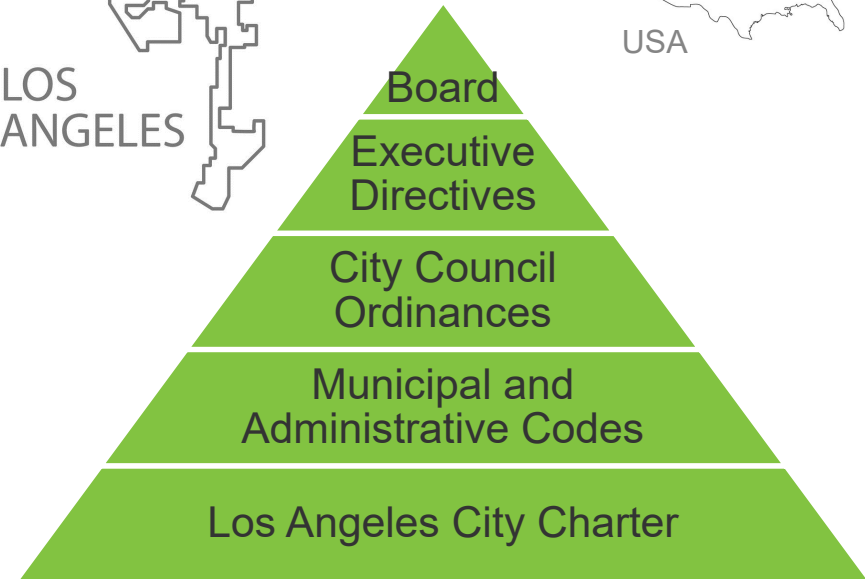
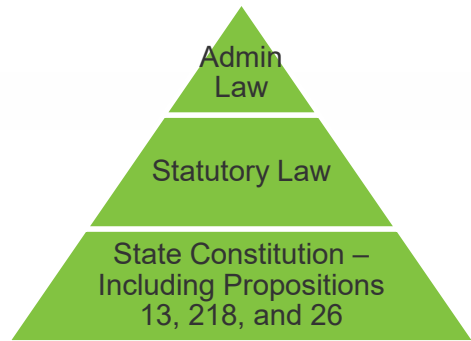
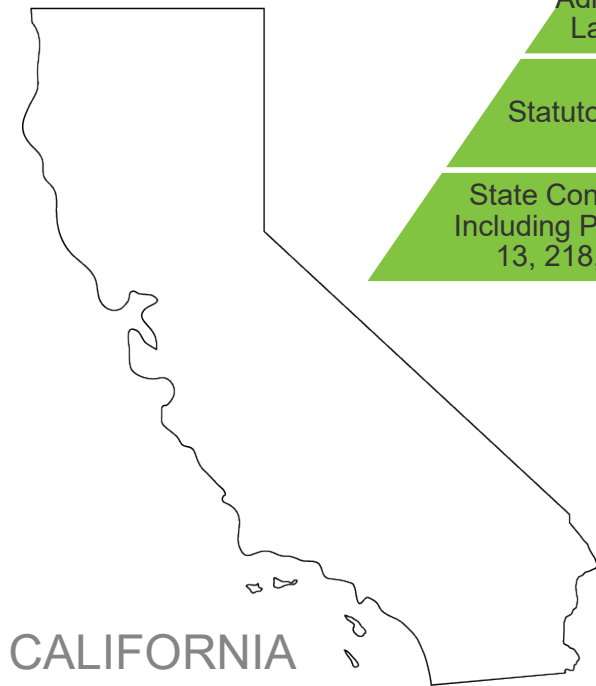
- Product: 10-15 page analysis each of 4 metrics and 4 policies including implementation options and recommendations
- Research Process relied on combination of:
 - DWP administrative staff interviews
 - LADWP data shared through the Energy Atlas
 - Publicly available information and secondary documents
 - Analysis of metric adoption & policy performance in other service areas



Regulatory Recap: What does DWP need to consider when setting rates?

- There are a **variety of laws and regulations** that LADWP must consider when setting electricity rates, all coming from different authorities.
- Arguably the most *visible* constraints on municipal utility ratemaking are **Propositions 218 and 26**.
 - With these propositions limiting ratemaking, many solutions we discuss would require policy changes to be implemented at the city or state level.
- But there are also other local and state regulations that impact affordability and rates, such as **California's Public Utilities Code** and the **LA City Charter**.
 - In some cases, these might even support the *need* for rate changes.





Federal Energy
Regulatory
Commission (FERC) -
Federal Power Act



Regulatory Levels



Regulatory Recap: Rate Changes Moving Forward

- The equity strategies work is being conducted **to support DWP and the community** in identifying the most impactful rate changes and affordability strategies for implementation
 - Most (if not all) of the studied strategies would require a successful city-wide ballot initiative in order to be implemented
 - A full rate case is likely to be conducted in the near future



Quantifying Discount Programs Today

Overarching Questions:

- **Revenue:** How much of DWP's power system revenue comes from customers on discounted electricity rates?
- **Discount Percentages:** How much of a discount do the Lifeline and EZ-Save programs offer customers?
 - How do these discounts compare to other utilities?
- **Alternatives:** What are other options for discount structures, and how much would it cost the department to implement them?



Quantifying Discount Programs Today

Data:

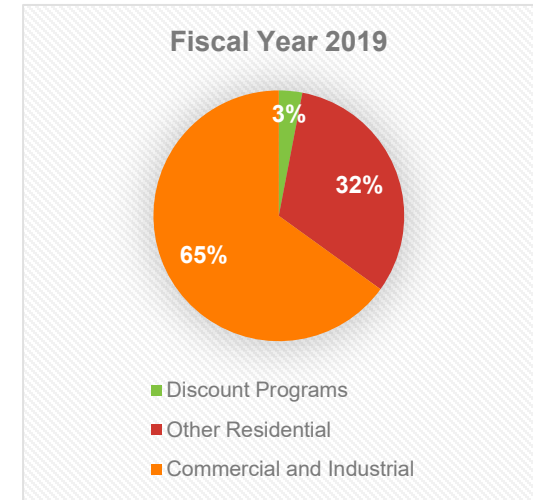
- LADWP customer energy use data from 2018-2021
 - Specifically, discount program energy usage
 - Prepared, geocoded, and queried by the CCSC
- LADWP energy rates from 2018-2021
- American Community Survey 5-Year housing and income data
- LADWP Power System Financial Statements



Discount Programs - Revenue

Bills from customers on discounted rates represent a **small portion** of residential and total power system revenue

	Revenue FY2019	Revenue FY2020	Revenue FY2021
Discount Programs Total	\$118 million	\$120 million	\$138 million
Other Residential	\$1.26 billion	\$1.24 billion	\$1.48 billion
Commercial	\$2.56 billion	\$2.37 billion	\$2.56 billion
Total Power System Revenue	\$4.07 billion	\$3.8 billion	\$4.27 billion



Sources: LADWP Power System Financial Statements [December 2022]; California Center for Sustainable Communities Energy Atlas [December 2022]



How are Programs Subsidized?

- Currently, both commercial and residential customers **finance the discount programs through a small adder**
 - Called the Electric Subsidy Adjustment (ESA), this is one of seven adjustment billing factors

Residential Adjustment Factors (All units in Dollars/kWh)							
2023							
Period Applicable	ECA	ESA	RCA	IRCA	VEA	CRPSEA	VRPSEA
Jan - Mar	0.05690	0.00147	0.00300	0.00999	0.00658	0.01035	0.02886

- Increasing or changing this adder is one of the changes that would likely require a **ballot initiative** based on Proposition 26

Calculation for Residential Adder

2. Residential ESAF: The Residential ESAF shall be determined by the following relationship and expressed to nearest \$0.00001 per kilowatt-hour.

$$\text{ESAF} = \frac{(a) + (b)}{(c)}$$

Where:

- (a) Variable a is the annual estimated cost of the Lifeline, Low-Income, Enterprise Zone, Disaster Recovery, Street Lighting and Traffic Control billing subsidies, including administrative costs allocated to the Residential class in proportion to its annual energy use.
- (b) Variable b is the Residential class allocation of the balance in the ESA account as described in 4 below.
- (c) Variable c is the estimated annual Residential retail energy sales, excluding Lifeline and Low-Income Residential sales.

Source: Los Angeles Electric Rates, Ordinance 180127 [July 2008]



Discount Programs' Aggregate Cost

	Subsidy FY2019	Customers FY2019	Subsidy FY2020	Customers FY2020	Subsidy FY2021	Customers FY2021
Lifeline	\$22.8 million	98,597	\$23.5 million	97,764	\$22.8 million	97,416
EZ-Save	\$10.4 million	126,801	\$9.17 million	113,615	\$10.2 million	131,526
Life Support	\$0.85 million	5,186	\$0.86 million	5,100	\$0.86 million	6,239
Physicians Certified Discount (PCAD)	\$1.36 million	6,545	\$1.59 million	7,390	\$1.79 million	8,756
Total Discount Program	\$35.5 million	237,129	\$35.1 million	222,869	\$35.6 million	243,937

*Not including historical water discount, Utility User Tax savings, or recipients of multiple discounts



Discount Programs – Customer Savings

Lifeline Discount:

- Income-qualified elderly (62+) and disabled residents
- \$17.71 per month; \$35.42 bimonthly
- Exemption from 10% Utility Users Tax (UUT)

EZ-Save/Low Income Discount:

- Income-qualified households
- \$8.17 per month; \$16.34 bi-monthly

Average *Percent* Discount on Electricity

	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Overall
Lifeline*	43.0%	43.1%	41.1%	42.4%
EZ-Save**	17.6%	17.0%	15.9%	16.9%

*Not including historical water discounts or UUT savings

**Not including historical water discounts



Comparing DWP's EZ-Save Program

Represented as a bill percentage, how does DWP's EZ-Save discount compare to other utilities' discounts?

	Burbank Water and Power	LADWP	Arizona Public Service	California IOUs	Massachusetts IOUs	New Hampshire IOUs	Seattle City Light
Monthly Bill Discount	12%	17-18%* (on average)	25%	30-35%	32-36%	8-76%	60%

*Not including historical water discounts



Baseline Revenue Impact Example: Percent Bill Discounts for EZ-Save

Based on historical usage, what would the **additional subsidy** be for providing the following discount *percentages*:

<u>Theoretical</u> EZ-Save Discount	FY2021 - Usage, Current Enrollment (29%)	Additional Non-LI Residential per kWh Adder*	Average Additional Non-LI Residential Monthly Cost**	FY2021 - Usage, 80% Enrollment	Additional Non-LI Residential per kWh Adder*	Average Additional Non-LI Residential Monthly Cost**
30% Discount	\$17.6 million	\$0.0009	\$0.30	\$48.9 million	\$0.0031	\$1.03
40% Discount	\$26.3 million	\$0.0014	\$0.46	\$73.1 million	\$0.0047	\$1.54
50% Discount	\$35.0 million	\$0.0018	\$0.61	\$97.3 million	\$0.0062	\$2.06

* Estimate, based on 20,936 GWh sold in FY2021, LADWP Briefing Book 2020-2021

** Estimate, based on median residential usage of 333kWh per month, LADWP Briefing Book 2020-2021



Discount Structure Alternative Example

Percentage of Income Payment Plans:

- Customers only pay up to a certain percentage of their income towards their electricity bill
- For most states that offer these programs, energy bills are capped at between 3% and 10% of income



KNOW THE FACTS:
PIPP Plus

PIPP

PERCENTAGE OF INCOME
PAYMENT PLAN AND
BUDGET BILLING



Illinois
Department of Commerce
& Economic Opportunity
OFFICE OF COMMUNITY ASSISTANCE
JB Pritzker, Governor

Next Steps – Discount Programs

- Summarize precedent from other state programs in final report (e.g., percentage discounts, Percentage of Income Payment Plans)
- Map average energy burden by census tract
- Post-June 2023: Identify specific pros and cons of program and rate structures for LADWP implementation context (regulatory hurdles, revenue and subsidy impacts)



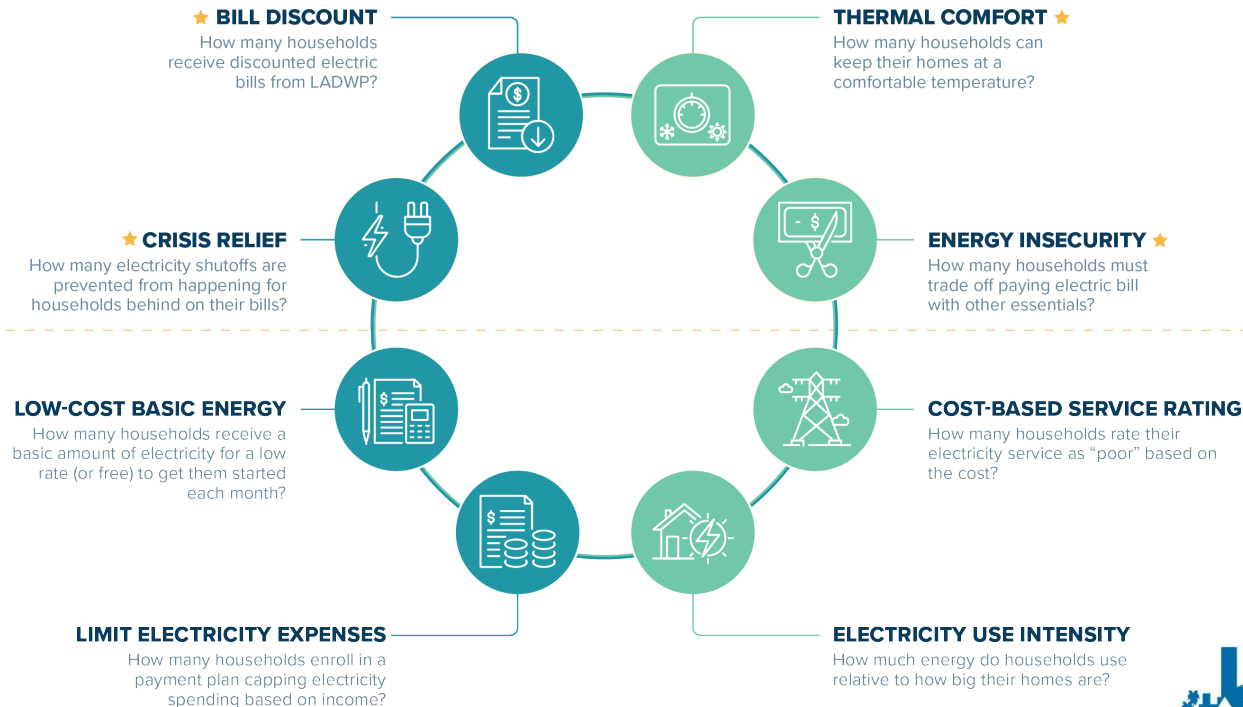
Metrics options analyzed

ENERGY AFFORDABILITY METRICS

POLICY-SPECIFIC METRIC TYPES

GENERAL METRIC TYPES

METRICS ANALYZED
★
IN THIS PROJECT
★



Bill Discount Metrics

Sub Metric	Measure	Target	Baseline	Data	Benefits
Enrollment	Percent of eligible households enrolled in EZ Save and Lifeline	80% of eligible customers enrolled in EZ Save and Lifeline	29% of eligible customers enrolled in EZ Save and 62% of eligible customers enrolled in Lifeline	ACS poverty and population data by tract	Easy to calculate. Measure of impact of program
<i>Eligibility</i>	<i>Percent of low-income household eligible for EZ Save or Lifeline discount programs</i>	<i>100% of low-income households in Los Angeles as defined by HCD qualify for discount program</i>	<i>65% of low-income customers (80% AMI) are eligible for EZ Save or Lifeline (200% FPL)</i>	<i>HUD Low and Income Summary Data</i>	<i>Addresses electricity affordability for customers who don't currently qualify for discount programs but are considered low-income</i>



Crisis relief: November 2022 motion

Los Angeles Times

CALIFORNIA

Los Angeles DWP to end water and power shutoffs for low-income customers who can't pay



LADWP will end water and power shutoffs for low-income customers who can't pay. (Ricardo DeAratanha / Los Angeles Times)

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Crisis relief Metrics

Sub Metric	Measure	Target	Drawbacks
Uncovered Residential Shutoffs	Proportion of uncovered residential customers receiving shutoffs	Annual disconnection rate of <1% uncovered residential customers	Difficult to differentiate between household that are eligible but not enrolled and not eligible for discount programs
Uncovered Small Business Shutoffs	Proportion of uncovered small business customers receiving shutoffs	Likely annual disconnection rate of between 1%-2% uncovered small business customers	No existing definition for small business account or historic data on small business accounts
Bill Debt	Median unpaid customer utility bill debt	Reduce median bill debt to below 2019 baseline	No customer precedent/target except zero



Thermal Comfort Metrics

Metric	Mechanism	Measure	Baseline	Target
Self-Reported Comfort	Survey	Proportion of households that report any frequency of thermal discomfort in the last year	20% of households nationwide reported some frequency of thermal discomfort in the last year	Less than 5% of in-need households reporting any frequency of thermal discomfort in the last year
Self-Reported Thermostat Temperature	Survey	Proportion of households that report thermostat temperatures >78 during the cooling season	Almost 40% of households in the lowest income groups have AC turned off during summer	Less than 5% of in-need households reporting thermostat settings >78 or off
Externally Measured Indoor Temperature	Smart Thermostat	Proportion of households where the thermostat is set > 78	N/A	Less than 5% of in-need households with Smart Thermostat settings >78 or off
Energy Equity Gap	Electricity consumption data and temperature	Inflection point in use of cooling systems by income bracket	N/A	Less than 1 degree difference between high-income customer AC use and in-need customer AC use



Electricity insecurity Metrics

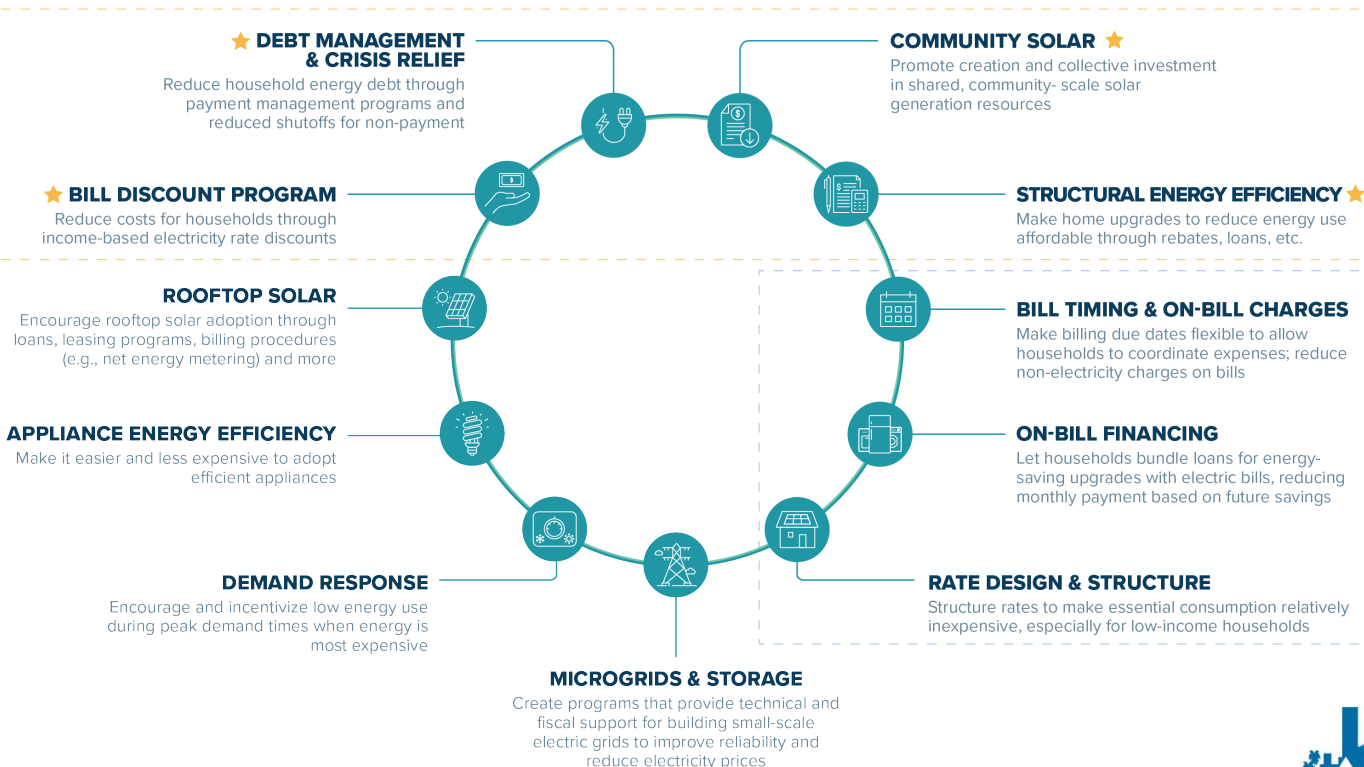
Sub-Metric	Existing Data Source or Precedent	Target	Drawback
Self-Reported Trade Offs	None	Less than 1% of households reporting forgoing basic household expenses to pay electricity bills.	Unclear which way trade-off is happening, whether utility bill or other essential services are forgone.
Forgoing or Reducing Other Essential Services	Residential Energy Consumption Survey	Less than 5% of households report forgoing household necessities to pay utility bills	Longer survey may elicit less responses.
Prioritization of Essential Bill Pay	Lewis Center for Regional Studies: Los Angeles County Quality of Life Index Survey	Average satisfaction of at least 8 for satisfaction of payment for utilities.	Satisfaction question very subjective. Hard for LADWP to influence Does not capture ability to pay for essential services.



Policy options analyzed

AFFORDABILITY POLICY OPTIONS

★ POLICIES ANALYZED IN THIS PROJECT ★



Challenges of Policy Dynamism

Recent policy change examples

Policy Focus	Recent Developments
Discount Programs (EZ-SAVE)	Streamlined enrollment process
Low-Income Multifamily Housing	New programs for efficiency, electrification, solar
Shutoff Protections	New, progressive moratorium

- Too early to measure impacts holistically
- Focus on data gathering, evaluation, and improvement.



Discount Programs: Findings

- Current discount program enrollment is too low... but improving!
- Benefits and eligibility are lower than neighboring IOUs
- Two big programs but our recommendations focus on EZ-SAVE for several reasons
- EZ-SAVE: Flat discount on monthly bills for low-income households



Discount Programs: Priorities

- **Immediate:** Maximizing enrollment and penetration (at least 80% target)
- **Near-term:**
 - Evaluate enrollment success or shortcomings
 - Adjusting benefit magnitude/model (e.g., flat amount vs rate-based)
 - Tailoring eligibility to local conditions
- **Longer-term:** Explore augmentations to EZ-SAVE (e.g., incorporating rate-based discounts) and potential streamlining with Lifeline



Crisis Relief: Findings

- The pre-covid shutoff and debt situation is instructive but not guiding
- Limitations on shutoff protections are not plausibly justified by revenue recovery for several reasons
- LADWP has recently instituted one of the more progressive permanent, but still partial shutoff moratoria in the country



Crisis Relief: Priorities

- **Immediate:**
 - Boost discount program enrollment
 - Evaluate the fiscal impact of the permanent moratoria &
 - Develop customer behavioral guardrails in light of the permanent moratoria
- **Near term:** Ensure protection via enrollment and set strict metrics for uncovered residential and small business customers (per Board motion)
- **Medium term:** Determine feasibility of dedicated debt relief program within legal parameters



Structural Efficiency: Findings

- Larger efforts through IRA and LIHEAP unlikely to be routed through LADWP's purview
- Comprehensive Affordable Multifamily Retrofits (CAMR) has a near universal approval rating and should be the focus
 - Provides fiscal incentives for energy efficiency and electrification retrofits of low-income multifamily residential properties
- Too early to evaluate CAMR, needs to be scaled
 - Very new, 3 projects in very early stage, 68 interest forms submitted
 - Goals are modest: 3,000 units in 5 years, vs ~400,000 eligible units in LA.



Structural efficiency: Priorities

- **Near-term:** Focus on monitoring and evaluation
 - Application and enrollment trends, ensure healthy project pipeline
 - Post-project data gathering
- **Longer-term:** Address performance gaps, explore scaling up
 - Measure success in real-world affordability terms
 - Administrative tweaks to boost program performance
 - Harness outside funds to support significant program expansion



Community Solar: Context

Solar Pathways & Benefits



Community Solar: Findings

- Future affordability focus and program design must flow from NREL modeling and CCSC work identifying and scoping physical multifamily residential community solar as area of greatest potential.
- Existing community solar offerings currently limited in broader impact on affordability due to scale or design, although NREL's modeling suggests enhancements
 - *Example:* Shared Solar (subscription model)



Community Solar: Priorities

- Scale up VNEM Pilot, which promotes solar capacity in multifamily residential, directly offsets tenant energy needs.
- Evaluation and iteration required to:
 - Gather data on uptake alongside CAMR, evaluate trends.
 - Implement administrative revisions to promote wider access.
 - Evaluate pre-post-project, in the field affordability benefits for low-income tenants.



Key (DRAFT) Recommendations

METRICS



DISCOUNT PROGRAMS

- 80% or higher enrollment



CRISIS RELIEF

- <1% uncovered residential shutoffs
- Aggressive numerical target for uncovered small business shutoffs



THERMAL COMFORT

- <5% self-reported discomfort
- <5% thermostat > 78 degrees)



ENERGY INSECURITY

- No current recommendation

POLICIES



DISCOUNT PROGRAMS

- Enhance enrollment in two major programs
- Next: expand benefit & eligibility pool closer to CARE/FERA



CRISIS RELIEF

- Boost discount enrollment and evaluate motion impact
- Next: protections for other residential & small biz customers



STRUCTURAL EFFICIENCY

- Support city-wide efforts to route IRA & LIHEAP+ funds
- Scale & adapt “in field” impacts of CAMR rapidly



COMMUNITY SOLAR

- Evaluate “in field” VNEM pilot for potential expansion



Next steps

- NREL presentation next month will provide evidence on longer-term rate & on-bill strategies
- Final draft report delivered to LADWP in early April
- Continuing to support strategy implementation and evaluation beyond May 2023



Discussion Questions (15 mins)

- Do you agree with the combination of metrics proposed?
- Do you agree with the specific policies emphasized for development & further enhancement?
- What commitments & accountability mechanisms do you want to see from LADWP to ensure implementation?



Thank you

Going Forward

Tentative

Steering Committee Meetings

March 29, 2023 (Virtual)

- Grid Reliability and Resiliency preliminary results & strategies
- Air Quality and Health preliminary results & strategies
- Energy Atlas

April 19, 2023 (Virtual)

- Rates and affordability
- Access to home cooling
- Jobs

Subsequent Meetings

- Third Wednesday of each month, 10:00 a.m. – 12:00 p.m. PT
- Virtual for near-term

For another opportunity to provide input on the transportation strategies, watch for an email with a link.



Thank you!
