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Equity & Environmental Justice in Residential Renewable Energy Programs

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REM 2022

September 16, 2022

IMAGE: WERNER SLOCUM / NRELMULLER

WWW.WRI.ORG/ENERGY

HOW RESIDENTIAL RENEWABLE ENERGY PROGRAMS CAN ADVANCE EQUITY

1. Relieving Energy Burdens
2. Reducing Electricity Shutoffs and Account Arrearages
3. Providing Employment Opportunities
4. Reducing Pollution Exposure
5. Safer Home Heating through Electrification
6. Increasing Energy Resilience
7. Expanding the Market Reach
8. Energy Democracy



BARRIERS

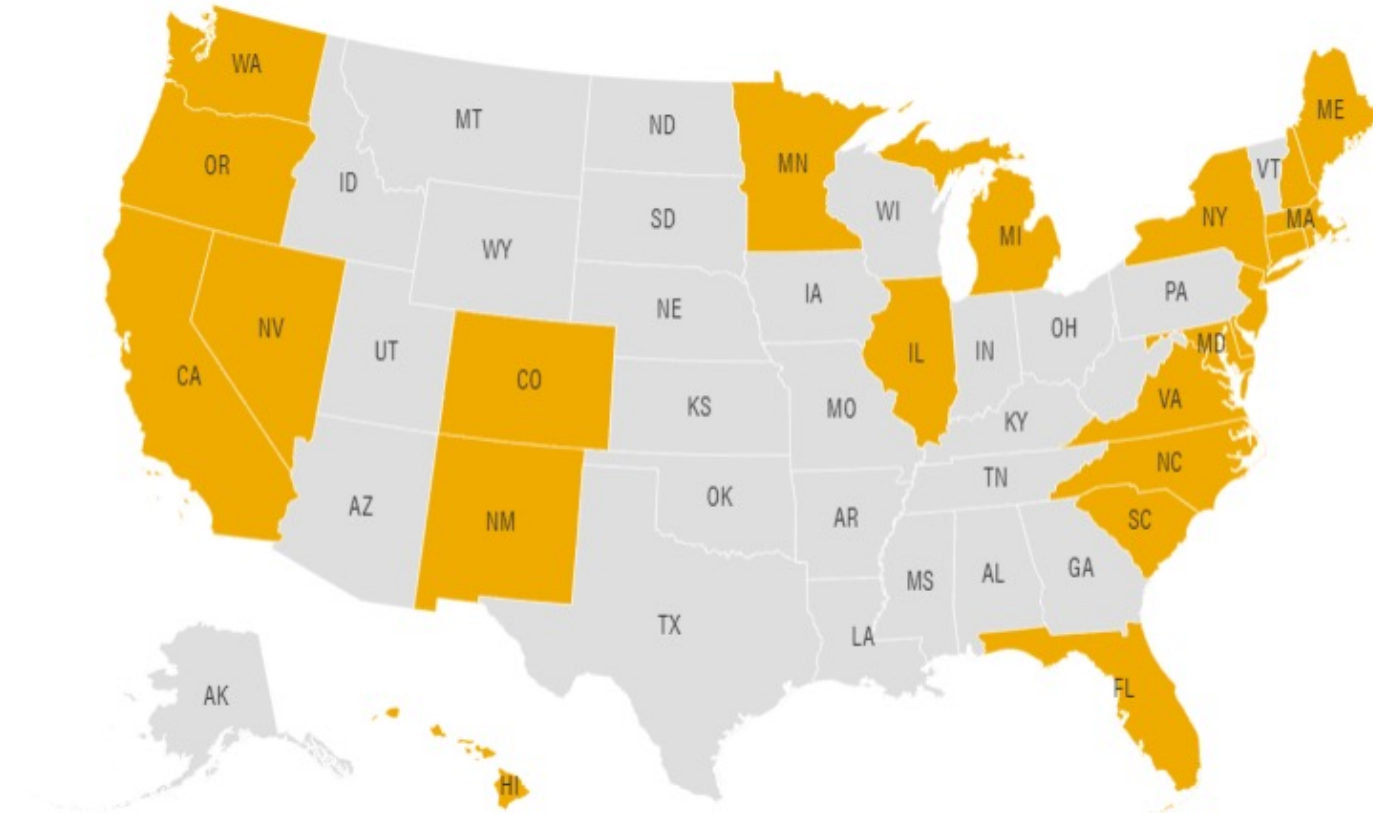
1. Policy Barriers
2. Housing
3. Finance Policies
4. Lack of Industry Interest and Customer Awareness in Under-Resourced Communities
5. Competition between Renewable Energy and Existing LMI Energy Programs
6. Capacity Limitations and Competing Priorities
7. Discriminatory Practices



PROGRAM DESIGN RECOMMENDATIONS

1. Understand the Market You Want to Reach
2. Design Programs for Specific Market Segments
3. Ensure Financial Benefits Reach LMI Households
4. Leverage Existing Energy Policies
5. Partnerships with Trusted Community Organizations Are Essential
6. Resilience Is Important
7. Financial Risk Needs to Be Minimized for LMI Households
8. Strong Consumer Protection Is Crucial
9. Training and Workforce Development Should Be a Priority
10. Education Is Key
11. Increasing the Availability of Financing Is Critical

STATES WITH LMI COMMUNITY SOLAR PROVISIONS



Source: [How Community Solar Can Benefit LMI Customers](#) | World Resources Institute

UTILITY-LED LMI COMMUNITY SOLAR

- Some utilities are launching community solar programs on their own
 - In FL, Duke Energy and Florida Power & Light have created utility-led community solar programs with provisions to ensure savings for participating LMI customers
- WRI is working to expand utility-led community solar programs in targeted geographies to ensure they benefit LMI customers
 - In KY and NE, WRI is advancing partnerships between utilities, local affordable housing nonprofits, and philanthropic organizations to pilot LMI community solar subscription gifting programs



CONNECTICUT'S SOLAR FOR ALL PROGRAM

- A partnership between the Connecticut Green Bank and PosiGen that resulted in more than 3,000 solar installations for LMI homeowners in CT between 2015-2021
- At its core, the program involved 1) an elevated LMI solar incentive, and 2) public support for solar providers to enter the LMI solar market in CT
- The model relied on 3rd-party ownership to monetize the federal tax credit, reduce customer capital investment burdens, and increase affordability
- The program allowed for alternative methods to credit scores for evaluating the LMI eligibility and combined solar with energy efficiency
- Program participants on average received a financial savings of \$700 in Year One with no upfront costs, escalators, or hidden fees

ILLINOIS' SOLAR FOR ALL PROGRAM

- Incentives are offered through approved vendors, who agree to all the consumer protection standards in the state's general Illinois Shines solar initiative, as well as special measures that guarantee benefits and reduce risks for participating LMI customers
- No upfront costs for participants and any ongoing costs or fees must not exceed more than half the value of the energy produced
- The program also offers solar job training and connects graduates of the training with approved vendors, who are required to use qualified trainees on a percentage of their projects

HAWAII'S GREEN ENERGY MONEY SAVER PROGRAM

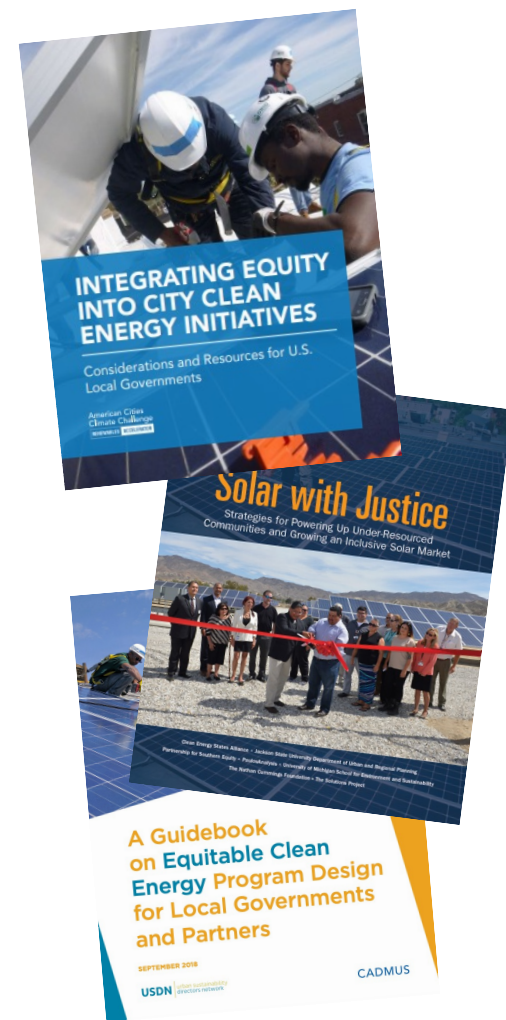
- A solar and energy efficiency on-bill financing program, enabling clean energy investments to be repaid over time through a line item on a customer's electric bill
- Does not require upfront participant costs
- Only finances investments where the average monthly savings exceed the cost of a participant's monthly bill repayment
- Program eligibility is conditioned upon a participant's history of bill repayment (rather than a traditional credit score)
- Repayment is tied to the electric meter so it can be transferred from one customer to another

FEDERAL SUPPORT FOR CLEAN ENERGY EQUITY

- **Justice40 Initiative** is the Administration's goal that 40 percent of the overall benefits of certain federal investments, including clean energy investments, flow to disadvantaged communities
- The **Inflation Reduction Act** includes tax incentives for a variety of solar projects, including projects connected to low-income communities and community solar projects that provide economic benefits to low-income residents
- US Department of Energy's **National Community Solar Partnership** includes:
 - A target of powering 5 million households with community solar by 2025
 - An online platform where partners can participate in a virtual community solar community of practice and share resources and events
 - A technical assistance program, offering on-demand and no-cost assistance to partners on community solar program and project development questions
 - Community solar market trends data tracking

REPORTS AND GUIDES

1. [Integrating Equity in City Clean Energy Initiatives: Considerations and Resources for US Local Governments](#) (WRI, 2022)
2. [Solar with Justice: Strategies for Powering Up Under-Resourced Communities and Growing an Inclusive Solar Market](#) (CESA & partners, 2019)
3. [A Guidebook on Equitable Clean Energy Program Design for Local Governments and Partners](#) (Cadmus Group & USDN, 2018)
4. [Low-Income Solar Policy Guide](#) (Vote Solar & GRID Alternatives, 2016 but subsequently updated online)



TOOLS

1. US Department of Energy's [Low-Income Energy Affordability Data \(LEAD\) tool](#): a tool that helps users understand housing and energy characteristics for LMI households across the US
2. The Council on Environmental Quality's [Climate and Economic Justice Screening Tool \(CEJST\)](#): a map that identifies disadvantaged communities, US census tracts that are marginalized, underserved, and overburdened by pollution
3. Lawrence Berkeley Lab's [Solar Demographics Tool](#): a tool that enables users to explore income, demographic, and other socio-economic data for U.S. residential rooftop solar adopters
4. CESA's [Directory of State Low- and Moderate-Income Clean Energy Programs](#): An interactive online directory that describes state clean energy programs for LMI residents and communities



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THANK YOU

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Income Eligible Community Solar

Leslie Myers, PSE Clean Energy Product Manager

September 2022



Inclusive program design

Inclusive Design Elements

General

Income Eligible

Inclusive Design Elements	General	Income Eligible
Choice of sites in various neighborhoods (as avail)	✗	✗
Choice of local sites or higher generating sites further away	✗	✗
Open to homeowners & renters	✗	✗
No installation or roof required	✗	✗
Subscription limits in place to ensure access to more customers	✗	✗
Sites prioritize residential customers (50% must be reserved)	✗	✗
First come, first served	✗	✗
\$20 fee/share to participate	✗	

Intentional details only for Income Eligible participants



- \$0 / per share cost
- Predictable monthly credit
- Annual true-up (always in customer favor)
- No contract
- No proof of income
- 20% of total program set aside
- Annual re-affirm for eligibility

Funding sources

- Flexible tariff language

Equity focused marketing

Target
market – at
or below
200% FPL
(net)



- Income verified customers
- High energy burden in known vulnerable communities
- Moderate to high renewables propensity

Identifying target customers – data sources



- PSE's low-income program participant list (already verified)
- PSE Customer Intelligence team
 - Propensity models
 - Includes Experian Income data

Equity focused marketing tactics

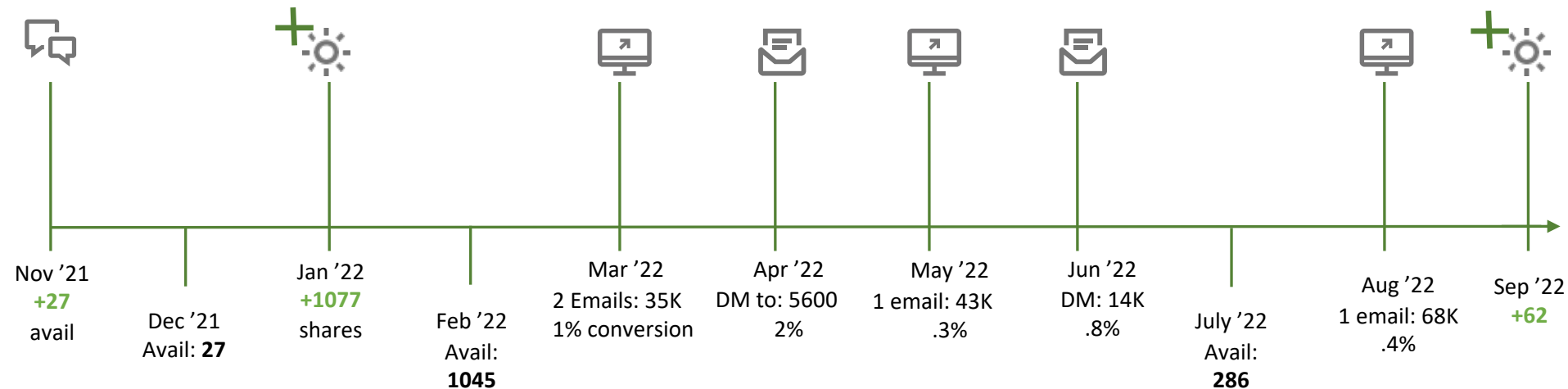


- Outreach 1st marketing
- Community events
- Targeted marketing
 - Email
 - Direct Mail
- Spanish materials
 - Print
 - Website
- Stakeholder presentations
 - Equity Advisory Group
 - LI Roundtable

Lessons learned and next up

Timeline to sell-out Nov '21 – Aug '22

Sold out!
(for today)



Lessons in reaching the customer

- Time requests and outreach with CBOs when not busy with own year-end activities
- Rely on CBOs for awareness and 3rd party validation vs acquisition
- Maximize outreach by starting email marketing mid-way
- Repeat messages work, improve frequency
- Lead with \$ savings over environmental or technology led messages
- Pace marketing to avoid sell-out disappointment
- Print costs but improves equity (general shares required no print to sell-out)

Expanding to focus on native Spanish speakers

Ahorre hasta \$132 en su factura de electricidad

Presentamos el programa de Energía Solar Comunitaria de PSE. Es una manera nueva en la que los clientes de electricidad residencial pueden reducir su factura de electricidad y su huella de carbono a través de energía solar 100% local sin costos adicionales.

1A 98009-9734



Energía solar **PARA TODOS** ▶▶

The screenshot shows the PSE website interface. At the top, there is a navigation bar with the PSE logo, 'RESIDENTIAL', 'BUSINESS', '\$ PAY BILL', 'SIGN IN', and 'OUTAGES'. Below this is a dark teal menu bar with 'Account & Billing', 'Safety & Outages', 'Customer Service', and 'Efficiency & Green Options'. The main content area features a large image of solar panels with the text 'Energía Solar Comunitaria' and 'Opción según sus ingresos'. Below the image, it states 'Ahorre hasta \$132 mientras reduce su huella de carbono' and provides details about the program's benefits. At the bottom, there is a call to action 'Inscríbese hoy al programa de Energía Solar Comunitaria' and a small image of a school building.

Ahorre hasta \$132 mientras reduce su huella de carbono

El programa de Energía Solar Comunitaria ofrece a los clientes de electricidad residencial de PSE que califiquen la oportunidad de ahorrar hasta \$11 al mes en su factura de electricidad mientras comparten los beneficios de la energía solar 100% local, todo sin costo adicional y sin tener que instalar o dar mantenimiento a nada.

Inscríbese hoy al programa de Energía Solar Comunitaria



Thank you!

Contact information

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