

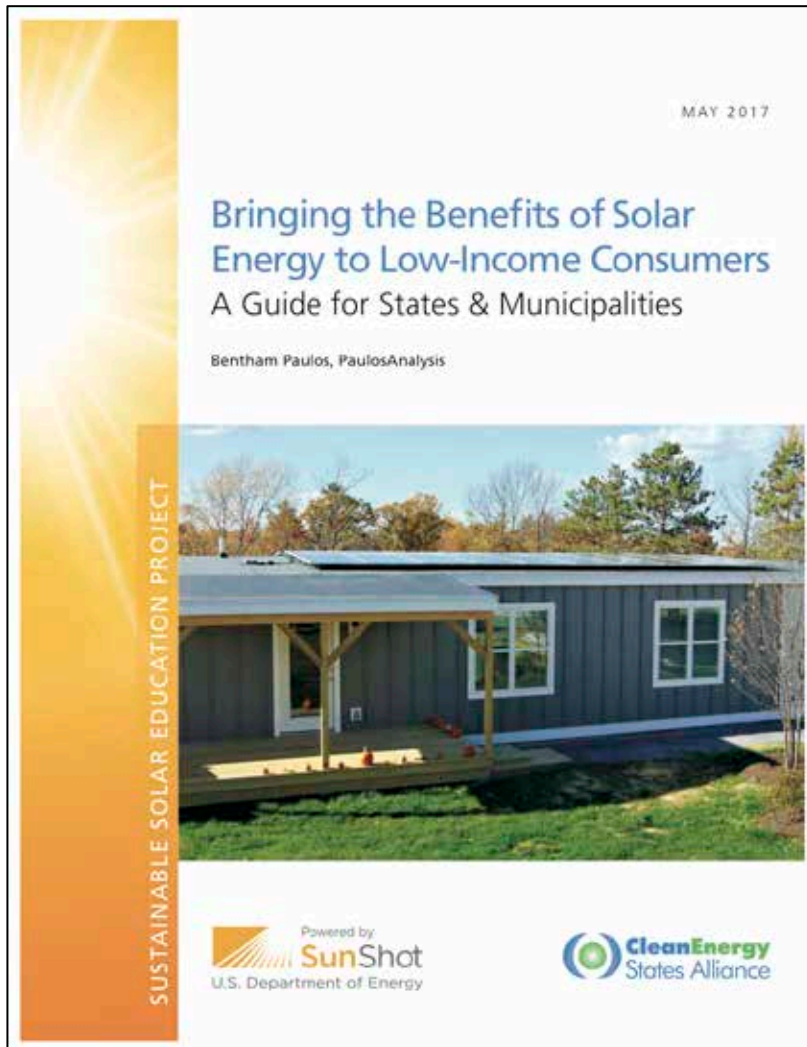
Bringing Solar's Benefits to Low-Income Consumers

A presentation for the NEUAC Annual Conference

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CESA & Low-Income Solar



- Clean Energy States Alliance
 - State agencies and other public organizations in 17 states plus DC
- Sustainable Solar Education Project
 - A DOE-funded outreach and training effort on low-income solar and solar consumer protection
 - Sign up for newsletter and more at www.cesa.org

What Will I Discuss?

- Low-income solar in context
 - Big picture approaches
 - Understanding the market(s)
 - The opportunity
 - Challenges
- General recommendations
- Policy and program options



Four General Approaches

- Goal: ensure that the development of solar benefits low-income households and communities

Four approaches

1. On homes and apartment buildings of low-income residents
2. Community solar that delivers benefits to low-income people
3. On institutions that benefit low-income people
4. Job training and placement programs

Understanding the Market(s)

- Start by analyzing the low and moderate-income (LMI) population in your state or community
- Different market segments need different strategies
- Homeowners vs renters
- Renters who pay for utilities vs renters who don't
- Multi-family housing vs single-family housing
- Mobile homes
- Senior citizens vs young families vs singles, etc.

The opportunity to benefit low-income residents

- The cost of solar has fallen dramatically, making it cost-effective in many locations
- Solar can now save consumers money, and no one needs to save money more than low-income consumers
- Solar can be integrated into housing and poverty programs, reducing expenditures
- Organizations that serve low-income populations can reduce their operating costs
- Existing solar policies can be adapted to better serve low-income consumers



Challenges

- Many barriers:
 - Renters
 - Problematic roofs
 - Lack of familiarity
 - Other priorities
 - Low or no credit scores
 - May not pay enough taxes to take tax credits
 - Housing assistance is capped at 30% of income for rent + utilities
- What this means:
 - Low income people need help tapping the benefits of solar
 - Low leverage means limited public budgets don't go far
 - Special marketing efforts are required

But the picture is not as bleak as at first glance

- The LMI market is being reached
 - California: in 2015, 28% of homeowners installing solar had incomes from \$40-55,000 and 6% had incomes under \$40,000 (median household income = \$65,000).
 - Four state study: correlation with income, but still LMI participation*
 - Doing better with moderate income than low income
- Low-income does not necessarily mean bad credit**
 - Homeowners tend to have OK credit regardless of income
 - Owning a home is good for credit score
 - Highest credit bracket (over 750) is correlated with income, but other brackets are not



*Study by GTM Research and Power Scout

**According to research for the Connecticut Green Bank

Recommendations for How to Proceed

1. Leverage state energy policies
2. Adapt housing and anti-poverty programs
3. Implement solar for the institutional support network
4. Increase the value, lower the cost
5. Promote volunteerism
6. Set up a financial vehicle
7. Partner with trusted low-income allies
8. Provide tangible benefits to low-income consumers

1. Leverage state energy policy

- State RPS, financial incentives, community solar, and net metering policies can all be adapted to support low-income solar.
- Maryland and Colorado have included low-income in community solar programs
- DC and Massachusetts use their RPS programs to provide financial incentives for low-income solar.



2. Adapt housing and anti-poverty policies & programs for solar

- Solar can be cost-effective for energy assistance programs, like LIHEAP and Weatherization Assistance Program (WAP).
- Many other public housing programs, economic development incentives, and job training and placement initiatives.
- HUD has been turning to solar to reduce the \$5 billion a year it spends on utility bills in public housing.



3. Implement solar for the institutional support network

- Institutions that support low-income populations can be easier to reach than individuals
- Public housing, shelters, clinics, etc.
- Main issue: make it easy for institutions to participate, enable finance that doesn't interfere with main mission



4. Increase value, reduce cost



- Increase the value of solar, and lower the cost of installations
 - Net metering, virtual NEM, extra RECs
 - Volunteer labor, bulk procurement, soft costs
 - Solar+storage
- Regulatory changes needed in some places
- Solarize campaigns (group purchasing)

5. Promote volunteerism

- Volunteer labor can drive down the cost of installations while providing job training and community service opportunities.
- It is attractive to the public, because it simultaneously helps solve social and environmental problems.
- Habitat for Humanity and Grid Alternatives
- Supportive policies can help, including financial and promotional support, preferential permitting, and public recognition.



6. Set up a financial vehicle

- Finance can be complicated. Establish a lead agency with specialized skills in finance.
- The Connecticut Green Bank is not a single “policy,” but a multifaceted vehicle that develops, tests, and deploys innovative financial strategies, and provides leadership to other stakeholders and agencies.
- Requires enabling legislation, transparency, and strict oversight



7. Partner with trusted allies

- Government officials and program managers may not be best situated to promote programs in low-income communities.
- Trusted allies, such as low-income outreach and advocacy groups, community action agencies, community groups, religious institutions, and other service institutions, can reinforce mutual trust and improve outreach and marketing.



8. Make sure low-income consumers benefit

- Bottom line: Are you delivering benefits to low-income people?
- Solar on a low-income, multifamily apartment building needs to deliver benefits to the tenants.
- Example: Housing assistance is capped at 30% of income for rent + utilities



Policy and Program Options (discussed in CESA guide)

Compensation Mechanisms

- Net metering
- Community solar
- Hosting solar

Direct Incentives

- Tax credits and rebates
- Renewable energy certificates
- Prizes

Adapting Existing Low-Income Policies to Solar

Using Solar for Low-Income Support Services

- Public housing
- Section 8 (housing choice vouchers)
- Solar infrastructure in low-income communities

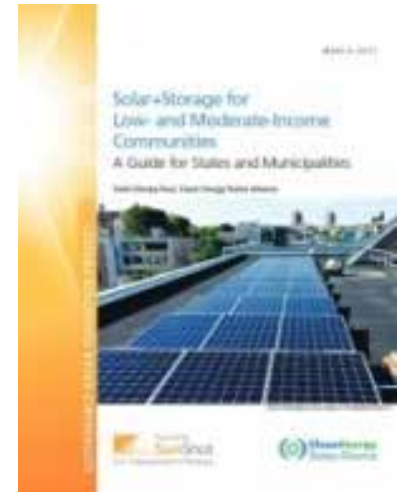
Solar Workforce Development Programs

Financing Policies

- On-bill repayment
- Property-assessed clean energy
- Pay as you save
- Compensating for low credit scores
- Third-party ownership
- Solarize
- Crowd funding
- Federal economic development programs
- Green banks
- Place-based investments
- Reduced-cost solar development

Sustainable Solar Education Project Resources

- Monthly newsletter
- Guides for states and municipalities
 - Solar+storage for LMI Communities
 - Publicly supported solar loan programs
 - Solar information for consumers
- Webinar recordings
 - Utility-driven solar projects for low-income customers
 - Community solar for LMI consumers
 - Crowd financing solar for institutions that serve LMI communities
 - Using the tools of low-income energy efficiency financing for solar
- And much more



www.cesa.org