

A Proverb



“The sun shines on everyone for free.”

-Yiddish Saying

A Refinement



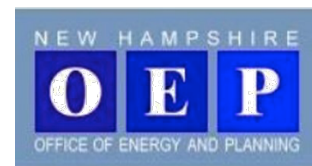
"The sun shines on the rich and the poor alike. But when it comes to rain, the rich have better umbrellas."

-Dushan Wegner
German Writer

* PaulosAnalysis.com

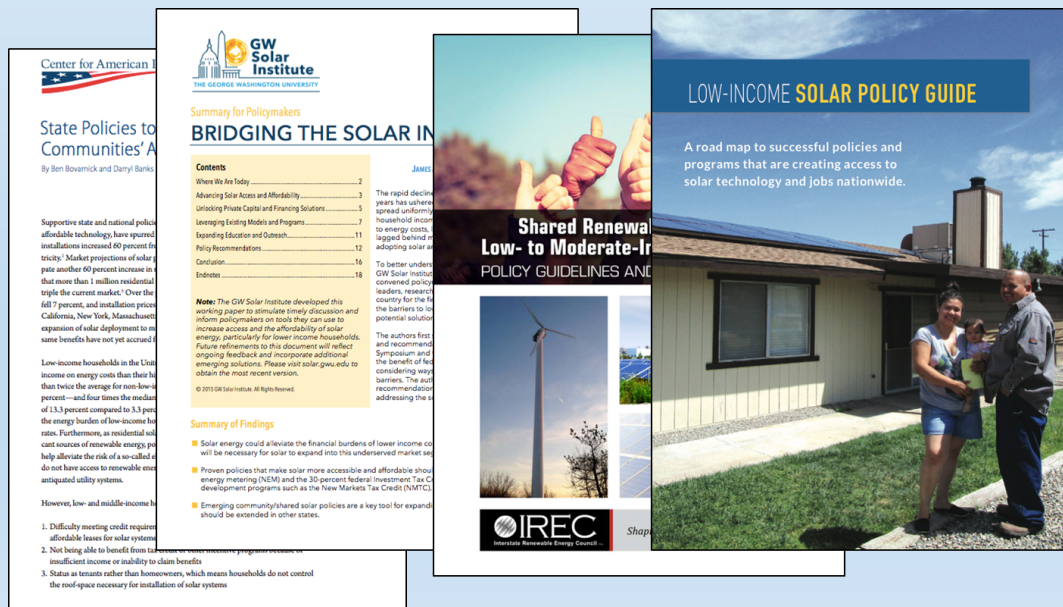
Clean Energy States Alliance (CESA)

www.cesa.org



The Clean Energy Income Divide

Households that earn less than \$40,000 of income per year account for less than 5% of residential solar installations in the U.S., but make up about 40% of American households.



* "Rooftop Solar Adoption in Emerging Residential Markets," Center for American Progress, May 2014; "Solar Power to the People," Center for American Progress, October 2013.

Why It Matters

- Everyone should benefit from the solar economy.
- Low-income people need savings more than anyone
- Energy inequity costs society a lot
- When low-income people don't have access to solar power, it limits the market's potential reach
- Solar energy is more likely to retain public support if it is perceived as benefitting all segments of society

Market Barriers

- Lack of upfront capital
- Inability to access capital
- Renting
- Risk and maintenance
- Inability to take advantage of incentives
- Unsuitable roofs and structural issues
- Perception that solar is for the rich
- Low priority and capacity limitations



Solar Can Help

	Fuel Assistance	Solar
Year 1	\$	\$\$\$
Year 2	\$	—
Year 3	\$	—
Year 4	\$	—
Year 5	\$	—
Total	\$\$\$\$\$	\$\$\$

Successful Strategies

- Benefits and protects low-income participants
- High levels of solar deployment
- Sustainable



Promising Strategies

- Community Solar and Virtual Net Metering (Vermont low-income adder policy proposal and MySunBuddy)
- Financing—Third-Party Ownership Models and Loan Programs (Vermont Community Solar Loan program)
- Group Purchase Programs (Solarize Upper Valley)
- Focus on low-income support network—public housing, shelters, health care, food kitchens, municipal services, etc. (Soulardarity)
- Crowd-financing (Collective Sun)
- Harness federal economic development programs—HUD, LIHTC, USDA (Colorado has launched a Low-Income Rooftop Solar Program within its Weatherization Assistance
- Workforce Development Opportunities (GRID Alternatives and Solar Ready Vets)
- Explore alternative revenue streams (solar+storage)



Case Study: McKnight Lane Affordable Housing Development



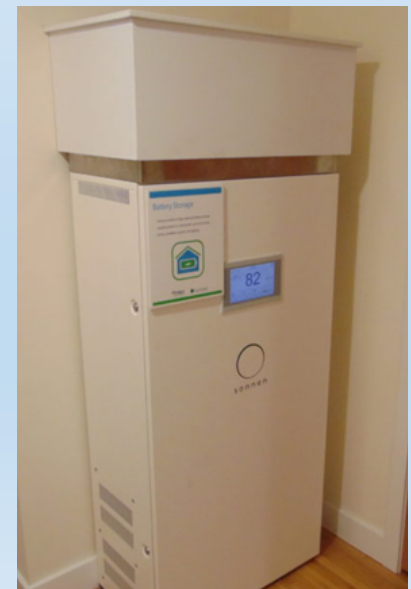
- Provides net-zero affordable rental housing complete with resilient solar+storage to low-income tenants in Waltham, Vermont
- 14 high-efficiency modular homes constructed by VERMOD equipped with 6kWh/4kW Sonnen energy storage systems.
- Energy storage systems automatically disconnect from the grid and provide resilient power to tenants during an outage.
- The project is a collaboration between community development agencies, industry, philanthropy, government agencies, and clean energy nonprofits. The housing developers are the Addison County Community Trust and Cathedral Square



Opportunity: Solar+Storage Follow-On Projects

Cost basis over 10 years for battery storage and resiliency at 11 units, using energy storage systems which will provide at least 6 hours of backup power for high-efficiency modular homes

Product	List Price	Quantity	Total Price
Sonnen ECO 6	\$ 11,950.00	11	\$131,450.00
Installation	\$ 1,600.00	11	\$ 17,600.00
	Sonnen Discount	20%	\$ (26,290.00)
	Solar Investment Tax Credit (ITC)	30%	\$ (52,602.00)
	Accelerated Depreciation over 5yrs	25%	\$ (39,435.00)
	Peak Savings over 10yrs		\$35,354
	Total Cost Over 10yrs		\$ (4,631.00)



Opportunity: The Solar in Your Community Challenge



- A prize competition to expand solar electricity access.
- The U.S. Department of Energy is offering \$5 million in cash prizes and technical assistance over 18 months.
- Supports teams across the country in developing projects or programs that expand solar access to underserved groups, while proving that these business models can be widely replicated and adopted by similar groups.
- Teams selected to participate in the challenge may receive three distinct types of awards: seed awards, technical assistance vouchers, and final prizes.
- Go to www.solarinyourcommunity.org to find out more.



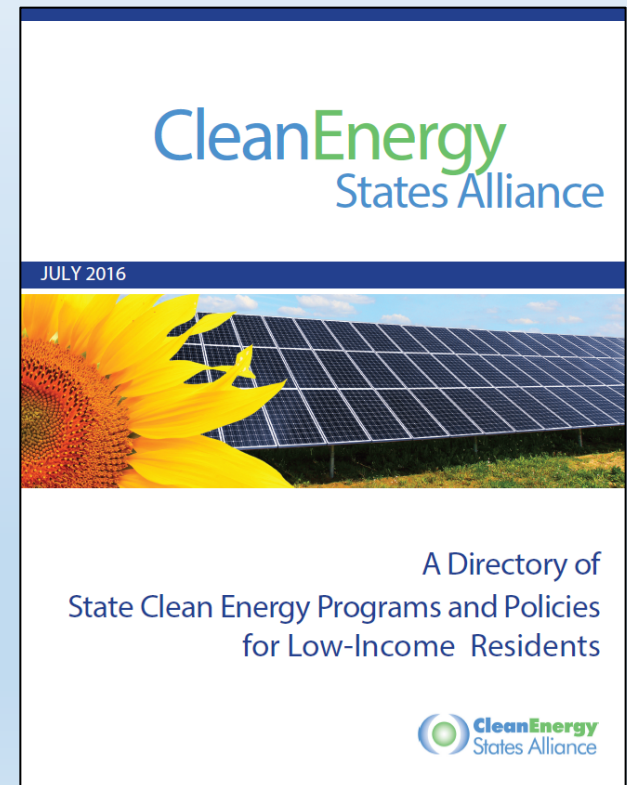
TIMELINE

Release of Official Rules: November 18, 2016
Early Application Deadline: January 6, 2017
Application Deadline: March 17, 2017
Late-Start Application Deadline: August 1, 2017
Seed Funding and Vouchers Awarded: April 2017
18-month Performance Period Begins: May 1, 2017
18-month Performance Period Ends: October 31, 2018

What CESA Is Doing



- **Sustainable Solar Education Project:** Providing information and resources to help states and municipalities ensure distributed solar remains consumer friendly and benefits low- and moderate-income households. Monthly e-newsletter and guides. Learn more at www.cesa.org/projects/sustainable-solar
- A directory of state activities that seek to bring the benefits of clean energy to low-income residents.



Thank You

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