

Leveraging Community Solar and Battery Storage Systems to Strengthen Energy Justice

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What Is Energy Justice?



Access



Affordability



Participation

Rooftop Solar Income Trends

Adoption of rooftop solar is gradually becoming more common for people with low and moderate incomes, according to Lawrence Berkeley National Laboratory.

MEDIAN INCOME OF ROOFTOP SOLAR ADOPTERS

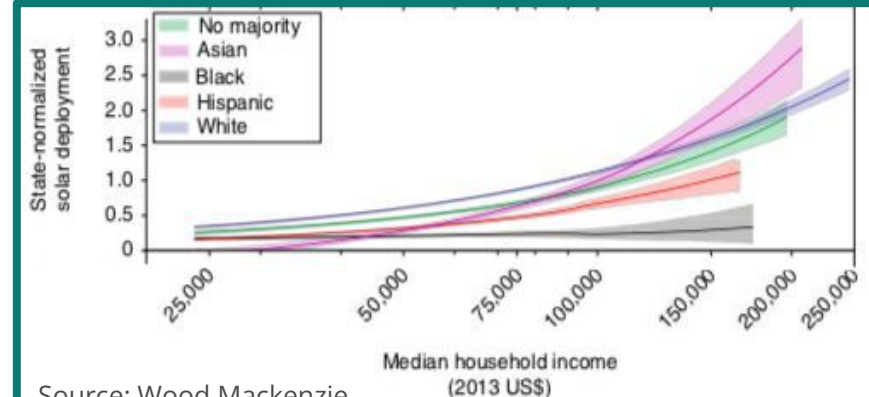
United States, 2010-2019



NOTE: The flat line for "All households" reflects incomes in Q1 2020 and serves as a reference level for the solar-adopter incomes, which are based on the same timeframe.

SOURCE: Lawrence Berkeley National Laboratory

Inside Climate News



Source: Wood Mackenzie

Why Community Solar?



Source: Greenskies

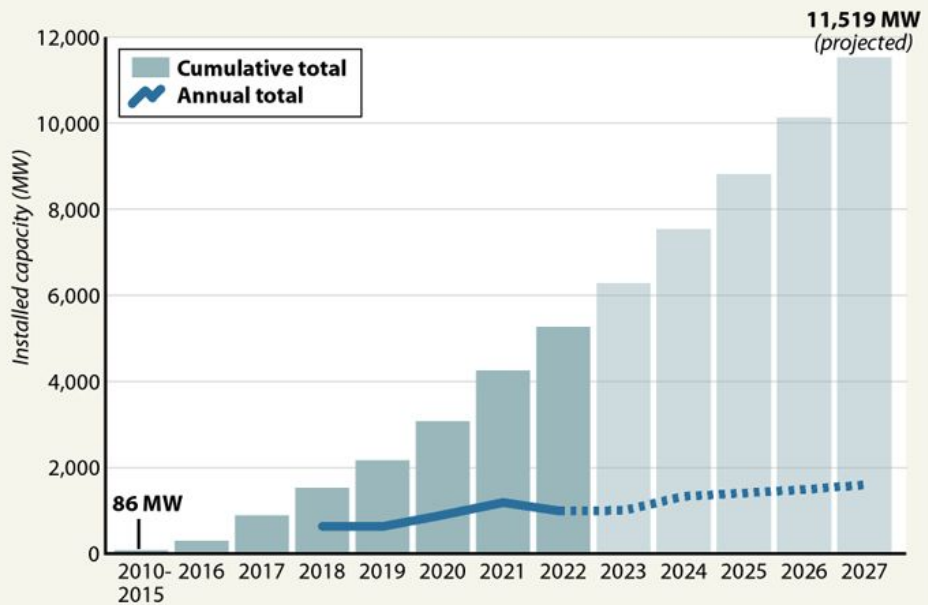
Why Community Solar?

Community Solar Growth

Wood Mackenzie, the energy research firm, projects a doubling of the country's community solar capacity by 2027. Community solar, also called "shared solar" or "solar gardens," are projects that sell subscriptions to customers.

COMMUNITY SOLAR CAPACITY AND FORECAST

Cumulative installed capacity and annual total, in megawatts DC, 2010-2027 (projected)

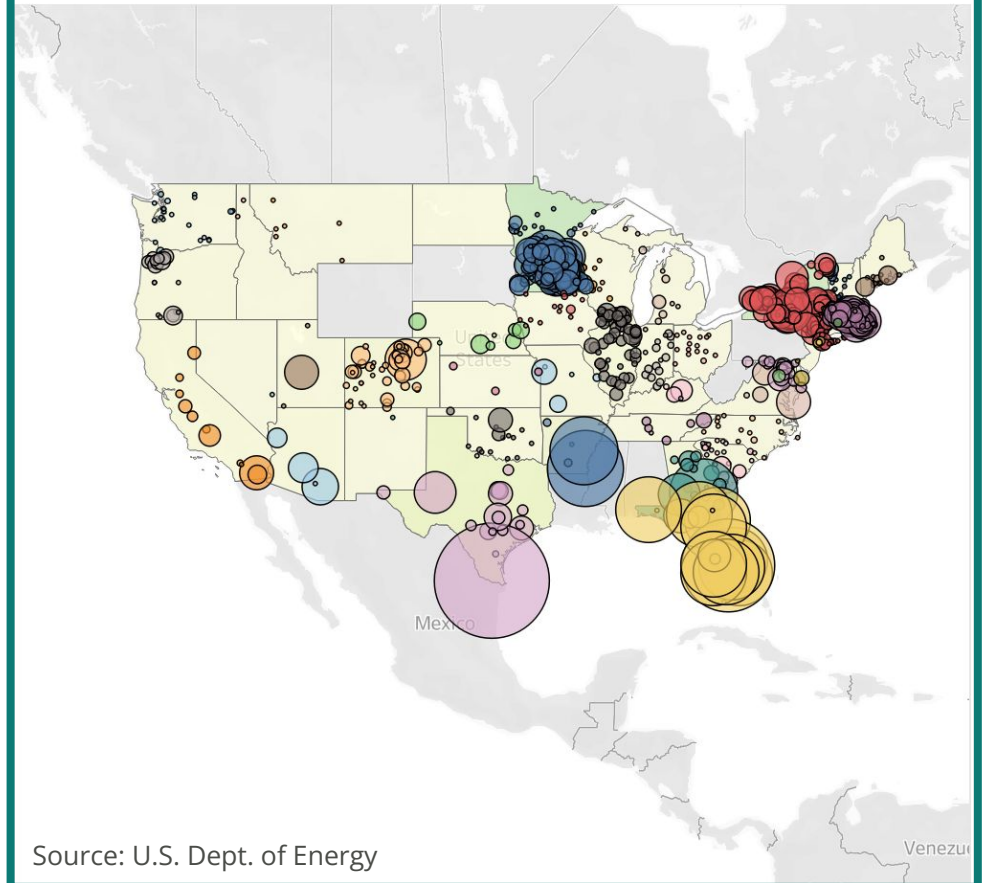


NOTE: Capacity values are for direct current (DC), which is slightly higher than they would be after the electricity is converted to alternating current (AC) for use by the grid.

SOURCE: Wood Mackenzie

PAUL HORN / Inside Climate News

The U.S. Community Solar Market (2022 January Update)



Source: U.S. Dept. of Energy

Community Solar Supports Energy Justice

Offtake

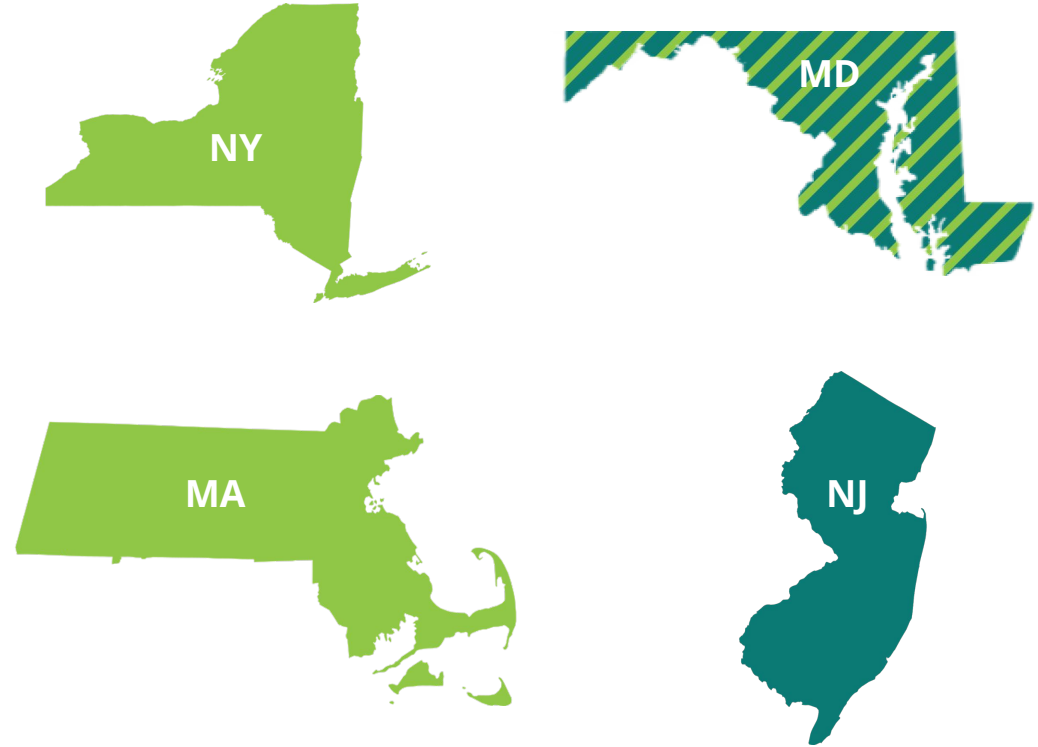


Sites



Program Design

Incentives vs. requirements

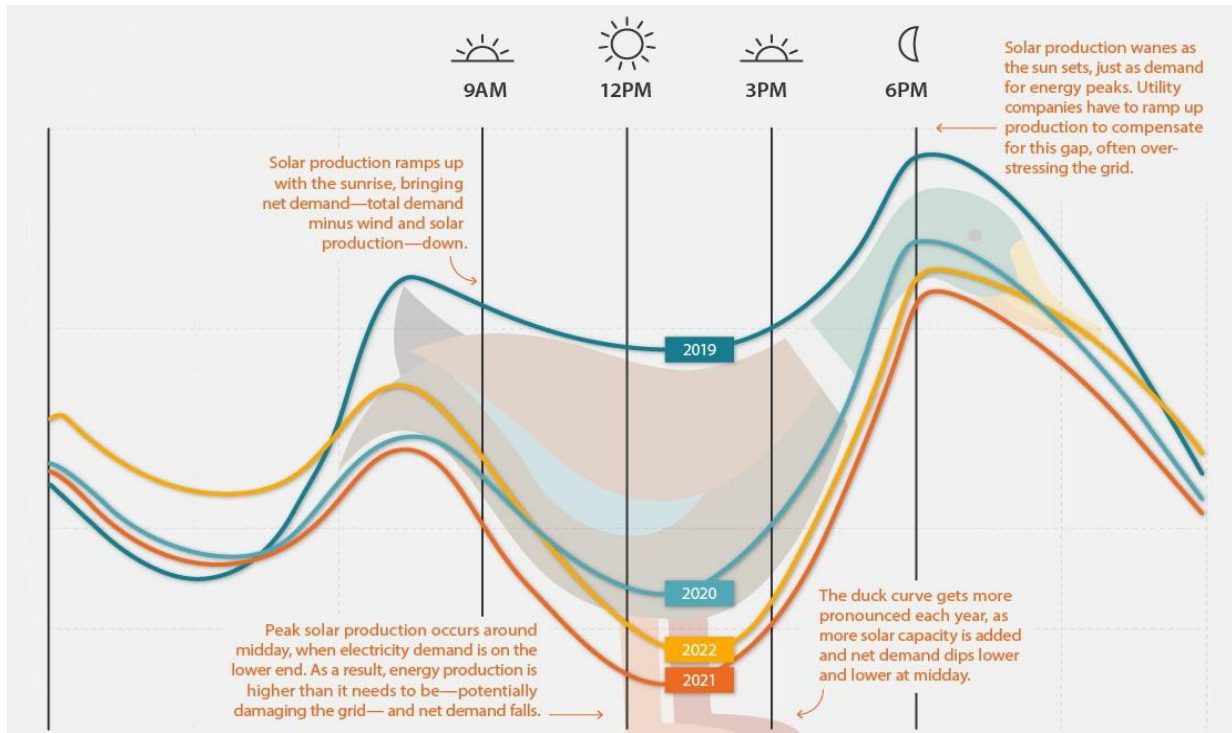


Incentivizes LMI

Requires LMI

Why Energy Storage?

Solar has a duck problem (illustrated below)



Source: Elements by Visual Capitalist

Resilience



Long-term renewable path



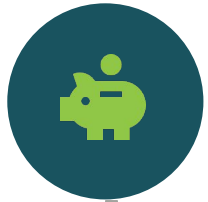
Challenging Economics

CA, MA, and NY leading the way



Energy Storage Supports Energy Justice

Energy Affordability



Host Compensation



Grid Resilience + Reliability



Financing Considerations



10-20% Bonus

Case Study: Tuckahoe Housing Authority (THA)

THA received:

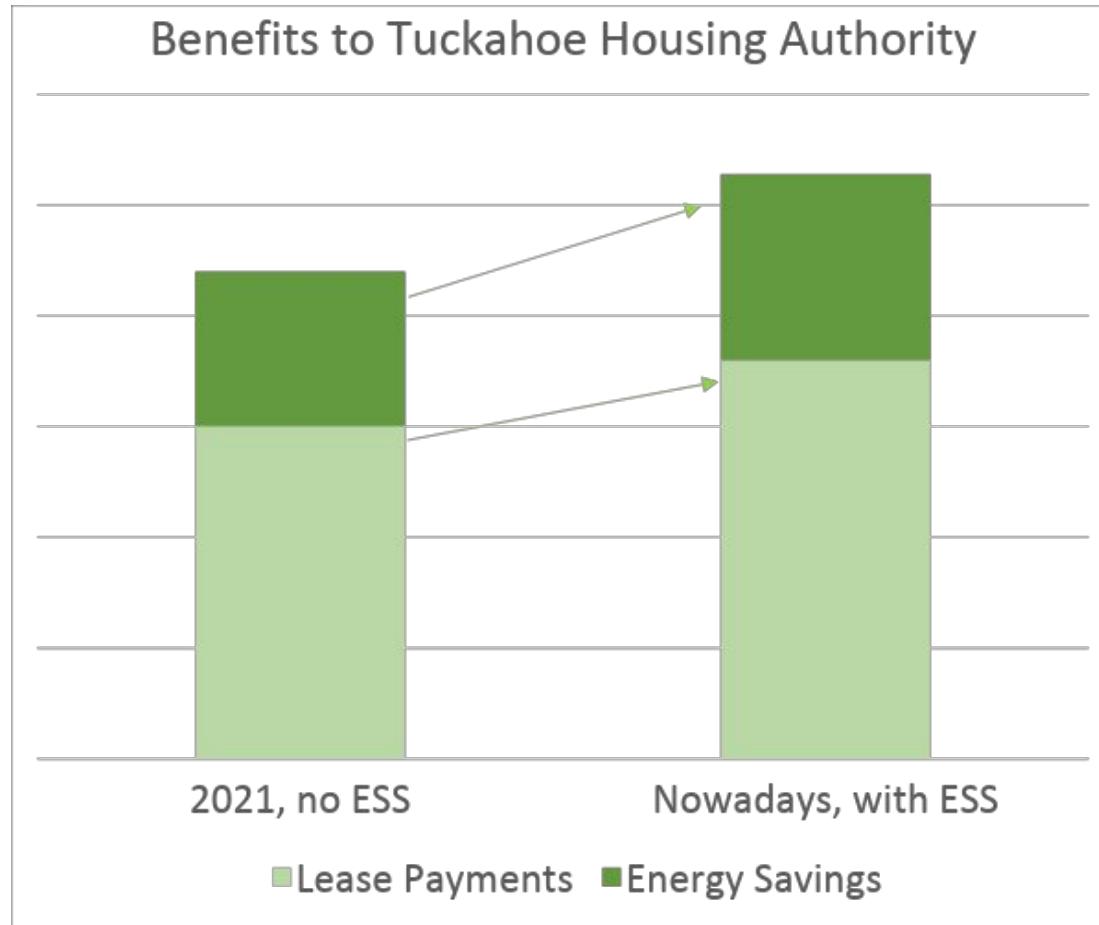
- Lease payments
- Energy savings
- Clean energy

The project received:

- High offtake rates
- NYSERDA incentives
- Bonus LMI incentives



Case Study: Tuckahoe Housing Authority (THA) Cont.



Energy Storage

- No state energy storage incentives available when built
- If designing today, energy storage would have allowed for 15%-20% better economics

What We Can Do Today

Commitment to LMI Offtake

Developers should commit to include LMI offtake in their community solar projects

Multi-Family Housing Siting Opportunities

Solar developers need clearer guidance on the ITC bonus availability for LMI-hosted projects

Integration of Energy Storage

State programs need to develop an added focus on incentivizing energy storage and addressing grid reliability

Thank you!

If you have any questions, please don't hesitate to ask. And feel free to reach out to me any time at my number or email listed here:

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