

Using LIHEAP and WAP to Expand Low-Income Solar Access

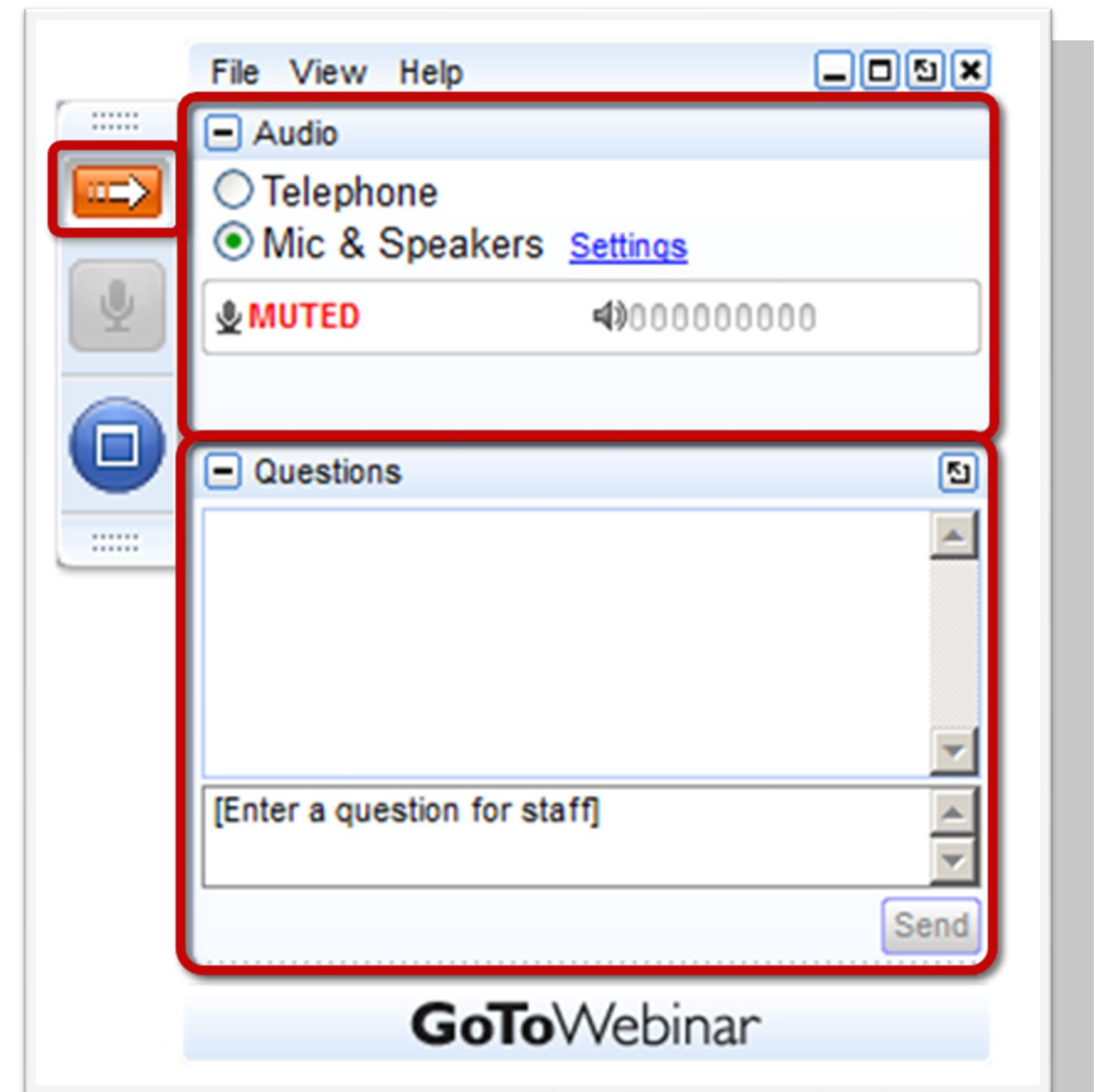
May 9, 2024

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Solar Pathways in Federal Energy Assistance Programs:

Expanding the Low-Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program (WAP)

March 2024

Jeff Cook, Juliana Williams, Jenna Harmon, Kaifeng Xu, Katie Nissen / NREL



Solar Pathways in Federal Energy Assistance Programs: Expanding the Low-Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program (WAP)

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National Renewable Energy Laboratory

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Technical Report
NREL/TP-6A20-88519
March 2024

<https://www.nrel.gov/docs/fy24osti/88519.pdf>

Webinar Speakers



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Thank You

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Solar Pathways in LIHEAP and WAP

Juliana Williams, NREL
Jenna Harmon, NREL
May 9, 2024

Speakers

- Juliana Williams
- Weatherization Lead



- Jenna Harmon
- Researcher II – Decision Support Analysis



Agenda

Today, we will discuss insights from NREL's research into the implementation of solar photovoltaics (PV), solar water heating, and community solar through the Weatherization Assistance Program (WAP) and the Low Income Home Energy Assistance Program (LIHEAP), including:

- Policy framework for solar in WAP and LIHEAP
- Pathways for solar implementation in WAP and LIHEAP
- Resources to assist with solar implementation.

Project Roadmap



Literature Review



Data Collection



Stakeholder
Interviews



Stakeholder
Workshop



Publication of
Results

Policy Frameworks for Solar in WAP and LIHEAP

WAP and LIHEAP Program Summaries

Characteristic	Weatherization Assistance Program (WAP)	Low Income Home Energy Assistance Program (LIHEAP)
Program Structure	Formula Grant	Block Grant
Typical Annual Funding	~\$300-350 million	~\$2.5-4.5 billion
Typical Annual Households Served	~35,000	~5-6 million
Infrastructure Investment and Jobs Act (IIJA)/Bipartisan Infrastructure Law (BIL)	\$3.5 billion until spent (initial 5-year period of performance)	\$500 million over 5 years
Income Eligibility	<200% of Federal Poverty Guidelines or categorical eligibility for recipients of SSI, LIHEAP, or certain Department of Housing and Urban Development (HUD) means-tested programs.	<150% of federal poverty level or <60% of State Median Income, whichever is greater. Recipients of certain means tested programs can be categorically income eligible.
Program Goal	Reduce energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring health and safety.	Keep families safe and healthy through initiatives that assist families with energy costs, associated with home energy bills, energy crises, and weatherization and energy-related minor home repairs.

WAP Solar Policy Framework

- [Energy Policy Act of 2005](#) authorized renewable energy systems (including solar) to be added as WAP measures, upon DOE approval.
- [WPN 23-06](#), issued March 3, 2023, outlines the process Grantees must follow to gain approval for solar photovoltaics (PV) to be a non-standard eligible measure.
 - Solar must have a Savings to Investment Ratio greater than 1.0.
 - Renewable energy expenditures are limited to \$4,169 per unit for Program Year 2024.
 - Solar PV systems installed through WAP may be eligible for a NEPA Categorical Exclusion.

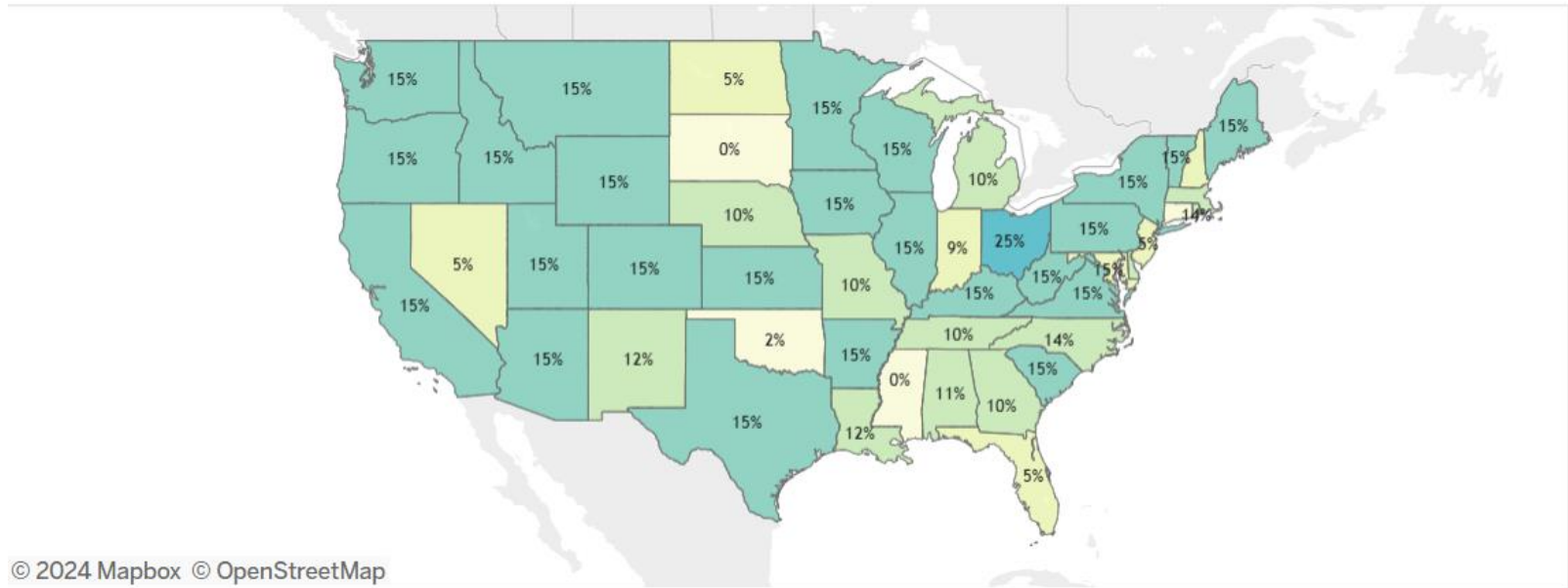
LIHEAP Solar Policy Framework

- [Low Income Home Energy Assistance Program \(LIHEAP\) Act of 1981 \(amended\)](#) prohibits use of funds for improvement of land, or the purchase, construction, or permanent improvement of any building or other facility except for low-cost residential weatherization and energy-related home repairs.
- [Energy Policy Act of 2005](#) authorized LIHEAP funds to be used to “purchase renewable fuels.”
- [LIHEAP Information Memorandum \(IM\) 2023-04](#) identifies that LIHEAP funds may be used for community solar subscription fees, if allowed by the grant recipient’s rules and policies.

LIHEAP and WAP Interface

- LIHEAP weatherization funds:
 - Grant recipients may allocate up to 15% of funds to weatherization, or 25% if approved by Department of Health and Human Services (HHS) waiver
 - Funds may be used for rooftop solar if approved in the grant recipient plan
 - LIHEAP funds may be used for community solar subscriptions if approved in the grant recipient plan.
- LIHEAP grant recipient plan must identify:
 - The agency/office that will oversee LIHEAP-funded weatherization activities
 - The rules that will apply to those funds: HHS LIHEAP, DOE WAP, or a hybrid of both regulations
 - The specific weatherization measures, which may include solar.

PY 2024 Percent of LIHEAP Transfer to Weatherization Assistance



Alaska



Northern Mariana Islands



Hawaii



Puerto Rico

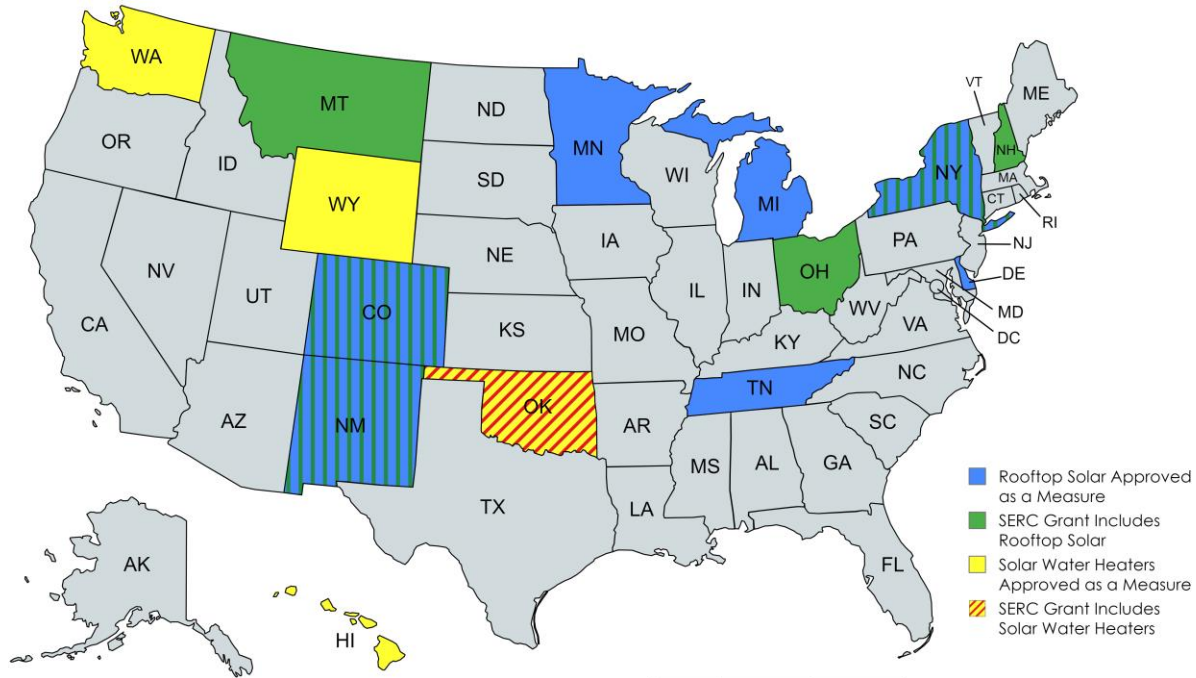


Solar Pathways and Activity

Solar Pathways in WAP and LIHEAP

1. Rooftop solar or solar water heaters as eligible weatherization measure in WAP.
2. Rooftop solar as eligible weatherization measures in LIHEAP.
3. LIHEAP Crisis Funds to repair or replace existing solar.
4. LIHEAP funds for community solar subscriptions.
5. LIHEAP funds for client solar bills.
6. Use of WAP or LIHEAP infrastructure for external solar programs (ex: verifying income eligibility or referrals).

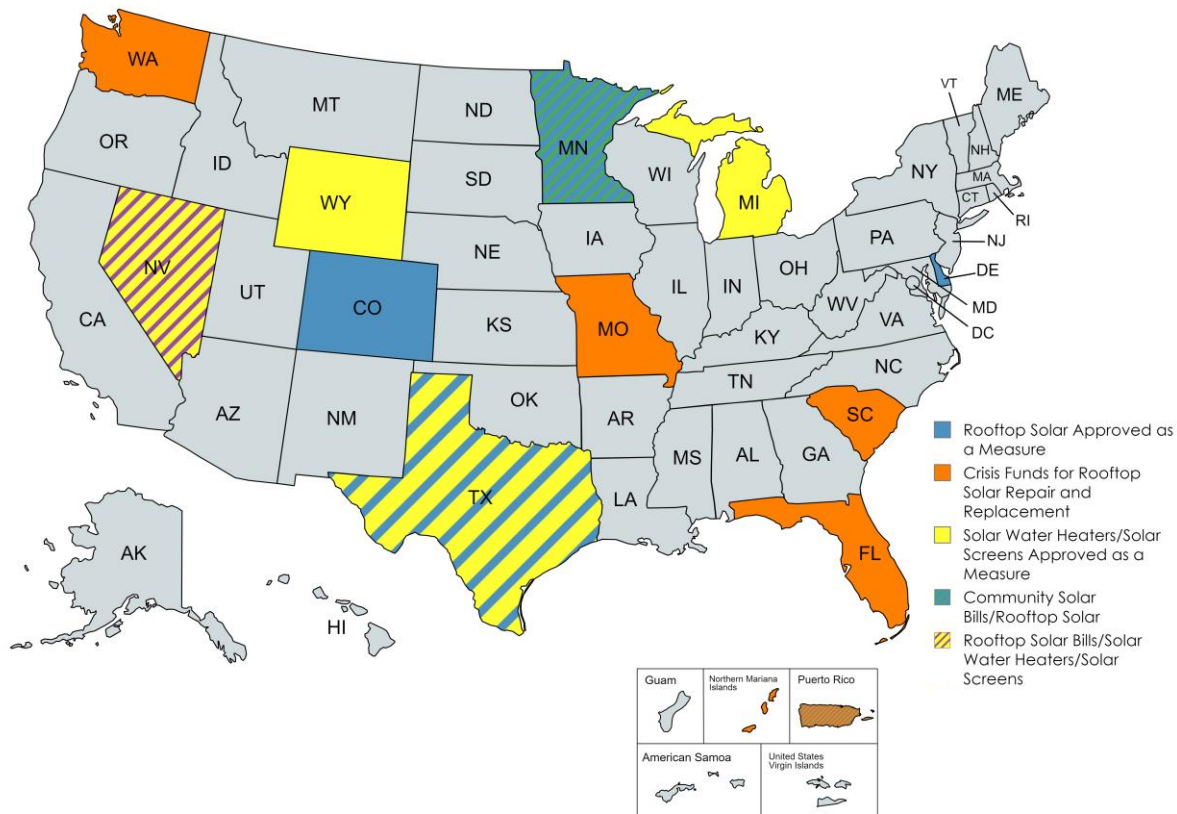
Solar Activity in WAP, Program Year 24 Plans



- Rooftop Solar Approved as a Measure
- SERC Grant Includes Rooftop Solar
- Solar Water Heaters Approved as a Measure
- SERC Grant Includes Solar Water Heaters



Solar Activity in LIHEAP, Program Year 24 Plans



Clean Energy Connector

- The Clean Energy Connector is a digital tool to help stakeholders securely connect LIHEAP recipients with community solar subscriptions that provide meaningful electric bill savings.
- The Connector is being soft launched in the District of Columbia (D.C.), Illinois, and New Mexico, and is available to pilot subscription managers and local LIHEAP administrators in these states.

<https://connector.nrel.gov/>



Resources for Solar in WAP and LIHEAP

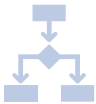
Solar in WAP and LIHEAP Resources



Technical Report



Solar Case Studies



Solar Pathway Decision Guide



Frequently Asked Questions



Implementation Toolkit



SIR Calculator & Solar Energy
Burden Calculator
(forthcoming)

Solar Resources in WAP and LIHEAP

Weatherization Assistance Program

Weatherization Assistance Program » Solar Resources in WAP and LIHEAP

Low-and moderate-income households **comprised only 15% of solar adopters**, despite representing 43% of all U.S. households, as of 2018. The U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) and the U.S. Department of Health and Human Services (HHS) Low Income Home Energy Assistance Program (LIHEAP) can help address this gap in solar adoption through a variety of pathways for low-income solar access.

Each program issued guidance in 2023 to support the inclusion of solar. The DOE **Weatherization Program Notice 23-06 (Section 3 and Attachment 4)** clarifies and simplifies the process for WAP Grantees to request approval of solar photovoltaic (PV) systems as eligible, cost-effective weatherization measures. Similarly, HHS issued the **LIHEAP**

JUMPTO:

- [Decision Guide](#)
- [FAQs](#)
- [Implementation Toolkit](#)
- [Case Studies / Technical Report](#)

Case Study: Colorado

Solar as an eligible measure in WAP

- From 2018-23, a total of 2,094 kW of rooftop solar was installed on 846 homes through WAP Subgrantees. In 2023, WAP Subgrantees planned for 160 homes to receive solar leveraging investor-owned utility benefit service charge funds and utility rebates.

Solar as an eligible measure in LIHEAP

- In 2017, Colorado received approval for rooftop solar as a LIHEAP weatherization measure. From 2017-23, a total of 176 homes have received rooftop solar either partially or entirely funded by LIHEAP.

Case Study: Minnesota

Solar as an eligible measure in WAP

- In 2017, Minnesota Department of Commerce launched a pilot to install rooftop solar and weatherization measures on 15 homes, with WAP funds covering about one-third of solar installation costs and utility funds covering the rest.
- As of February 2024, WAP Subgrantees had completed 29 solar projects in WAP with 22 more projects underway.

Solar as an eligible measure in LIHEAP

- As Commerce also administers LIHEAP in Minnesota, rooftop solar is listed as an eligible weatherization measure, granting the ability for LIHEAP funds allocated to weatherization to be used for rooftop solar installations.

Community Solar in LIHEAP

- Commerce allows for community solar vendors to be included as vendors eligible for LIHEAP payments, so clients with community solar subscriptions may have their subscription fees covered through LIHEAP.

Case Study: Puerto Rico

Solar (plus storage) as eligible measure in WAP

- In 2018, DOE worked with the Puerto Rico Department of Economic Development and Commerce (DEDIC) to design a pilot to install rooftop photovoltaic systems with battery storage using WAP funds.
- The pilot allocated \$40,000 of WAP funds, along with \$54,000 of DEDIC State Energy Program funds, for a total of \$94,000.
- Solar and battery storage systems were ultimately installed on a total of six units between May and June 2022. Each household received a 3-kW solar panel system, an inverter, and four 12-V lead carbon batteries. The pilot has not been continued.

Case Study: Washington, D.C.

Use of LIHEAP infrastructure for external solar programs

- The D.C. Department of Energy and Environment (DOEE) manages WAP, LIHEAP, and D.C. Solar for All, which engages partner organizations to install solar photovoltaics on single-family homes and develop community solar projects benefiting income eligible D.C. households.
- The program aims to reduce the electric bills of 100,000 low-income households by at least 50% by 2032. As of 2024, D.C. Solar for All has enrolled 10,000 participants, of which 70% came from a LIHEAP referral.

Questions?

All resources can be accessed on the Weatherization Assistance Program Resource Hub:

<https://energy.gov/scep/wap/solar-resources-wap-and-liheap>



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Thank you!

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