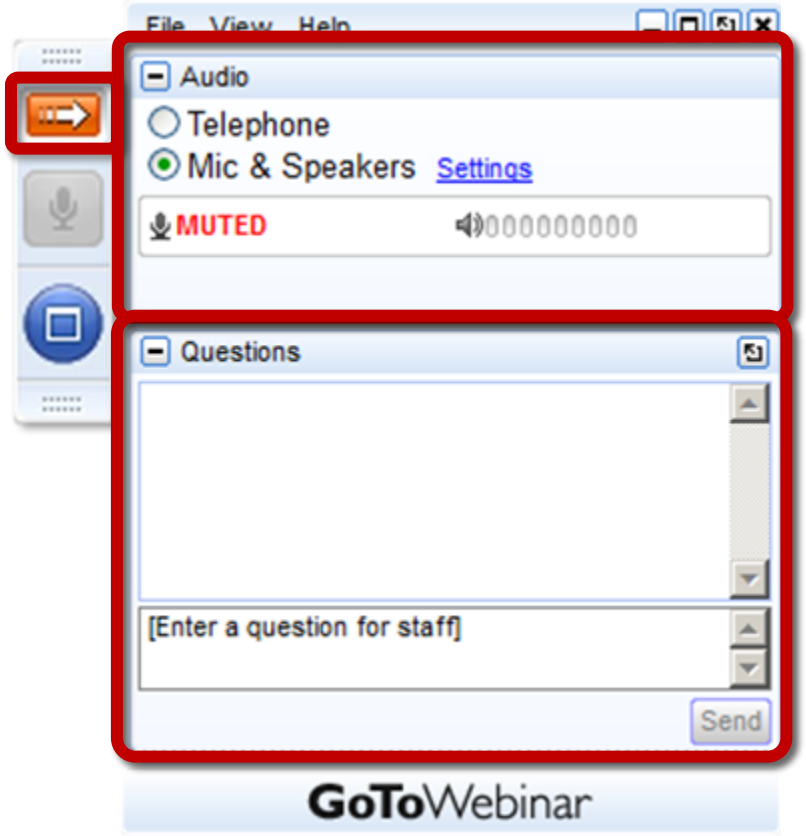
State Leadership in Clean Energy AWARDS

State Leadership in Solar+Storage, featuring Maryland and Oregon

December 9, 2022

CleanEnergy States Alliance

Webinar Logistics



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CleanEnergy States Alliance


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The 2022 State Leadership in Clean Energy Award Winners

STATE OF CALIFORNIA ENERGY COMMISSION

CONNECTICUT GREEN BANK SM

Maryland Energy Administration

NYSERDA

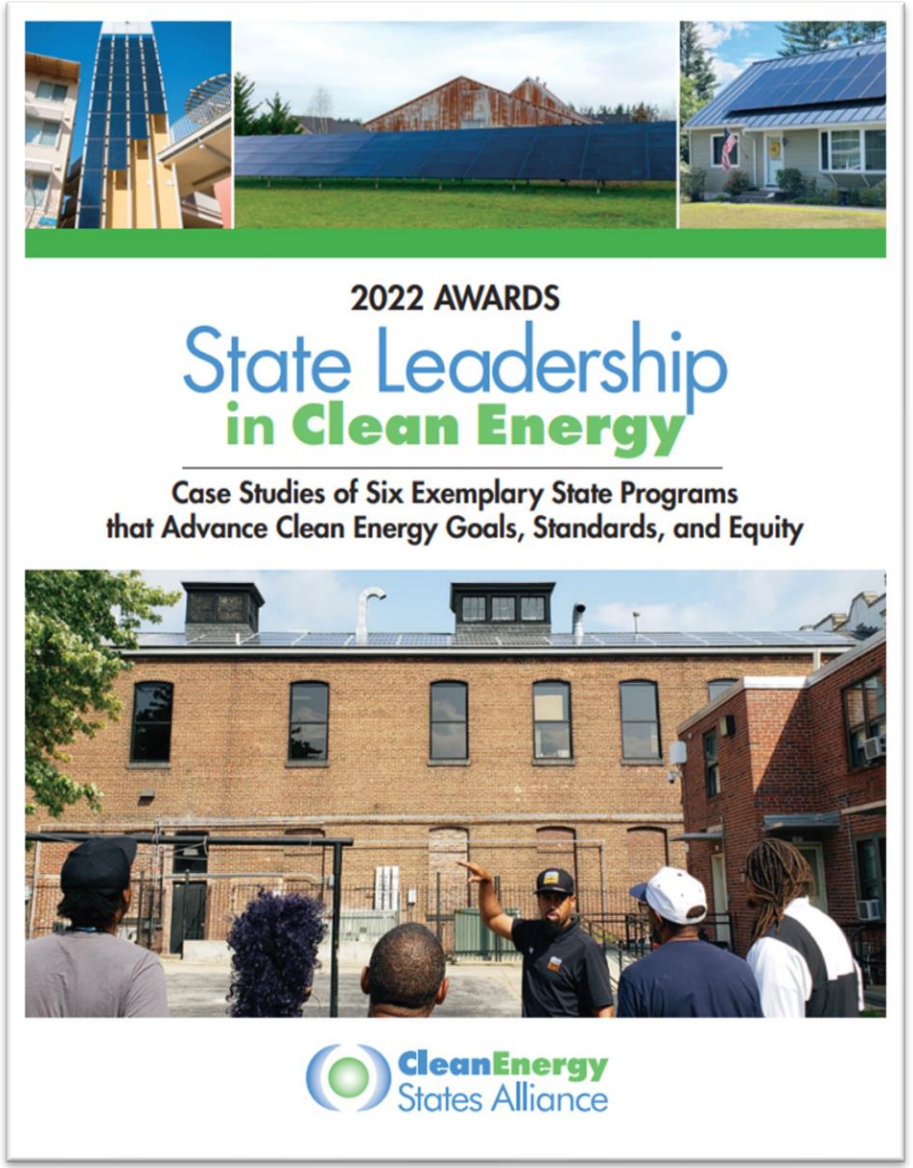
OREGON DEPARTMENT OF ENERGY

Washington State Department of Commerce

2022 State Leadership in Clean Energy Awards

- California Energy Commission's **2022 Building Energy Efficiency Standards**
- Connecticut Green Bank's **Green Liberty Bonds**
- Maryland Energy Administration's **Resilient Maryland / Resiliency Hubs Grant Program**
- New York State Energy Research and Development Authority (NYSERDA) and New York State Homes and Community Renewal's **Clean Energy Initiative**
- Oregon Department of Energy's **Oregon Solar+Storage Rebate Program**
- Washington Department of Commerce – Energy Office's **2021 State Energy Strategy**

Read case studies on the 2022 award winners at www.cesa.org/resource-library/resource/2022-slice-awards-report



Webinar Panelists

Brandon Bowser
Energy Resilience Program Manager, Maryland Energy Administration

David Comis
Senior Energy Program Manager, Maryland Energy Administration

James Cogle
Operations / Policy Analyst: Incentive Programs, Oregon Department of Energy

Pandian Krishnaswamy
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Maryland Energy Administration

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Maryland Energy Administration

Making a Resilient Maryland

MEA's Resilient Maryland & Resiliency Hubs Programs

09 December 2022

Maryland Energy Administration

The Maryland Energy Administration ("MEA") is the State Energy Office ("SEO") for the State of Maryland. Our mission is to promote affordable, reliable, and clean energy for Maryland. MEA achieves this through two (2) main functions: (1) providing incentives and resources to Maryland residential, commercial, industrial, and public organizations to develop and install clean energy, energy efficiency, and energy resilience projects; and (2) advising the Governor and Maryland General Assembly on energy matters.

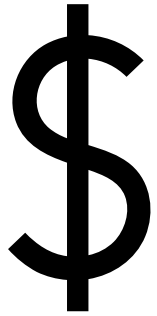
Maryland Energy Administration

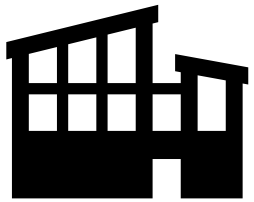
Mary Beth Tung, Ph.D., Esq.
Director, MEA

MEA Incentives

- MEA offers a suite of incentive programs available to Maryland businesses, nonprofits, local governments, other state agencies, residents, critical infrastructure, and other organizations for clean energy, energy efficiency, transportation, and energy resilience projects.

- More information can be found in the following links:
  - Business Incentives
  - State and Local Incentives
  - Transportation Incentives
  - Residential Incentives





MEA Resiliency Incentives Breakdown

Resilient Maryland Planning Program

Provides feasibility analysis and preconstruction planning grants to Maryland organizations to develop microgrid and other DER projects to enhance resiliency

Resilient Maryland Capital Development Pilot

Provides funds for the installation of microgrids that enhance resilience for essential organizations, vulnerable communities, and create clean energy economic development opportunities.

Resiliency Hub Grant Program

Provides Maryland organizations with grants to develop and install solar plus battery storage systems so that they can become “resiliency hubs” for their surrounding communities

Combined Heat and Power Grant Program

Provides Maryland organizations with funds to install qualified CHP systems that enhance operational resiliency and sustainability.

2022 CESA SLICE Award Winner

Resiliency Hubs Codified

S.B. 0256 passed by the Maryland General Assembly in 2022, signed into law by Governor

Establishes a Resiliency Hub Grant Program and related fund in Maryland Code

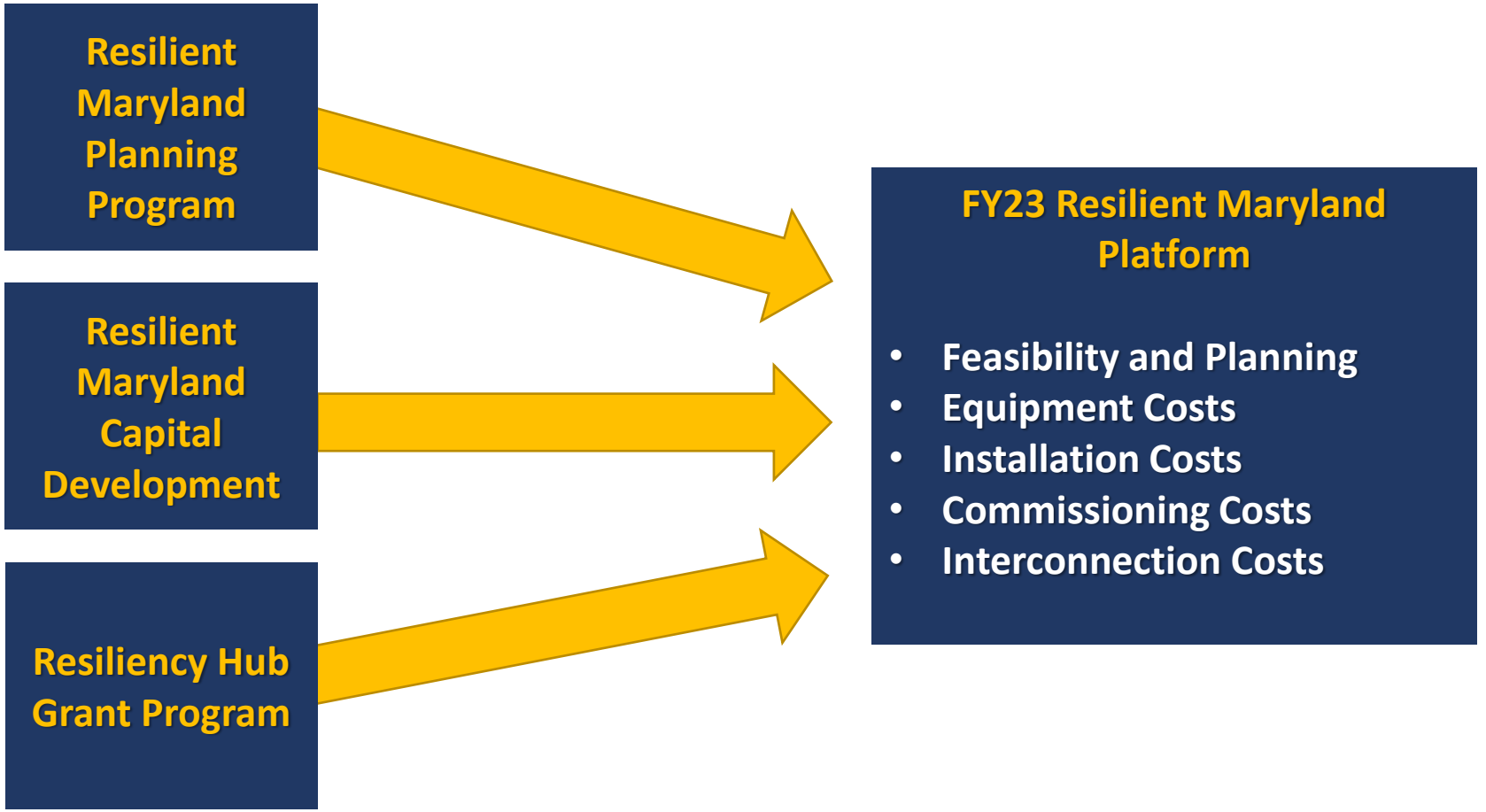
Makes program a permanent annual offering by MEA with a minimum guaranteed annual funding of $500,000

Was an MEA-developed program that became codified, vs. the norm of programs being created by statute, and relevant agency directed by legislature to administer

MEA Resiliency Hub Requirements

- Must include solar + energy storage
- Must be able to island from grid
- Must have a 50% probability of lasting 3 continuous days at required loading
- May have backup generation (e.g. emergency diesel), if needed
- Must guarantee participation of site as a resiliency hub for at least 5 years
- Must be within walking distance for neighborhood served
- Must power lighting for safety and security
- Must have plug load capacity for cell phones, laptops, and durable medical equipment
- Must have refrigeration for temperature sensitive items like medications
- Must have enough power for heating / cooling to keep people in safe and healthy conditioned space

FY23 Resilient Maryland Platform



Maryland Energy Administration

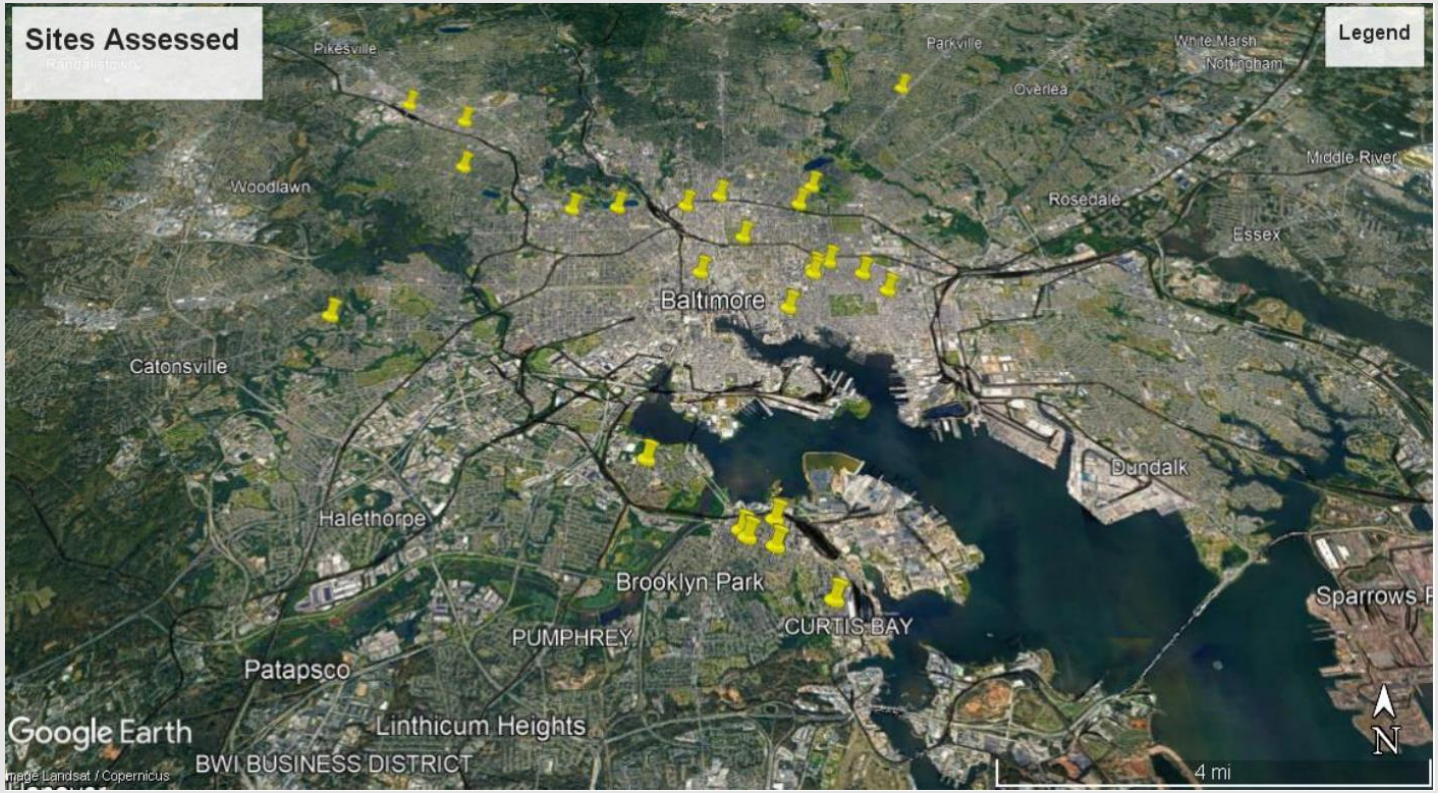
Spotlight Projects

Microgrid and Other DER System Projects Funded by MEA

Frostburg State University Campus Microgrid

- Frostburg State University (FSU) received a **$100,000 FY20 Resilient Maryland Grant** to help develop a viable microgrid design to serve the campus in both normal (“blue sky”) and power outage (“dark sky”) situations
- Student interns were actively involved in the analysis, which led to **FSU developing clean energy degree and certification programs,** adopted by other Maryland colleges and universities
- Produced a design to include 3 MW solar PV, 1 MW fuel cell CHP, and advanced thermal management system including absorption chilling and hot/chilled water storage and dispatch
- Went on to receive a **$750,000 FY22 Resilient Maryland Capital Development Grant** to help install the microgrid, currently underway
- Microgrid will safeguard critical campus operations and power a building that will be officially designated an **emergency shelter for students and surrounding Frostburg community**

Groundswell, Inc. Baltimore Resiliency Hubs



- Groundswell, Inc. received a **$300,000 FY20 Resilient Maryland Grant** to help Baltimore City identify viable sites to serve as "resiliency hubs" across its many communities
- Groundswell ran an active and highly-successful outreach campaign to identify community sites with the necessary space and ease of access that also have critical community trust and support
- Identified **26 viable sites across Baltimore** for which it conducted feasibility analyses and produced preliminary solar PV and battery storage system designs
- Systems are designed to help ensure community members can easily access the location to power their essential electronic devices and portable medical equipment, stay in safe and healthy conditioned space, and refrigerate temperature-sensitive items
- Several hubs are now progressing to installation, a few have received **Resiliency Hub Grants from MEA**
- Groundswell selected by U.S. Department of Energy for a multi-year **Renewables Advancing Community Energy Resilience (RACER)** Grant to pursue area-wide resiliency hub concept

Housing Initiative Partnership Fairmount Heights Microgrid

- The Housing Initiative Partnership (HIP), a Prince George's County-based nonprofit housing developer dedicated to revitalizing neighborhoods, received a **$78,680 FY20 Resilient Maryland Grant** to conduct feasibility analysis and preconstruction planning for a microgrid to serve a block of six new construction net zero energy homes in Fairmount Heights
- Once completed the homes will be powered by a solar and battery storage microgrid and **offered exclusively to Marylanders experiencing low-to-moderate income (LMI)**
- Microgrid will consist of solar PV arrays installed on each home's rooftop, individual front-of-the-meter combination energy storage and microgrid control modules, and a central battery bank; and **homes will be able to share energy produced**
- Residents will have the ability to opt into receiving notifications for scheduled and unscheduled grid outages from local electric utility PEPCO and view an energy dashboard, **which can help inform energy-related decisions**
- HIP received a **$200,000 Special Innovation Grant from MEA** to help pay for the equipment and installation costs for the microgrid, **and it's currently under construction**

Maryland Energy Administration

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To learn more, visit us at

Energy.Maryland.gov

And visit us on social media:

Facebook | Twitter | LinkedIn

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Oregon Solar + Storage
Rebate Program

OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

Our Mission

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

Oregon Solar + Storage Rebate Program Objectives

- Incentivize the purchase and installation of solar electric systems and paired solar and storage systems.
- Reduce upfront cost to the customer while supporting installer industry.
- Expand access to renewable energy for low-and moderate-income Oregonians.

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OREGON SOLAR + STORAGE REBATE PROGRAM

State Investments: 2019 - 2022

- HB 2618 (2019) - $2 million
- HB 5006 (2021) - $10 million
- SB 5202 (2022) - $5 million

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PROGRAM OUTLINE

- The program issues rebates for Oregonians installing **solar or solar and paired storage**.
- Contractors apply for the rebate on **behalf of their customer**.
- Rebates are **paid to the ODOE-approved contractor** who installs the system.
- The **rebate amount is passed on** to the residential customer or Low-Income Service provider as savings on the net cost of the system.
- Low-Income Service providers are Oregon-based organizations that **provide services to Oregonians with low- and moderate-incomes**.
- The solar and storage project must be installed on **real property in Oregon** to qualify.

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How It Works

1. Customers contact an approved contractor
2. Contractors submit their reservation request to the Oregon Department of Energy
3. The request is reviewed
4. Upon completion, contractors make a rebate request
5. Rebate request is reviewed, and eligibility is determined
6. A rebate is paid to the contractor if the rebate request is approved

INCENTIVES

Type	Rates For Solar	Rates For Storage	Max Amount For Solar	Max Amount For Storage
Non-Income Restricted	$0.20 Per Watt/ up to 40% net cost	$300 per kW hour/ up to 40% net cost	$5,000	$2,500
Non-Income Restricted w/o utility incentive	$0.50 Per Watt/ up to 40% net cost	$300 per kW hour/ up to 40% net cost	$5,000	$2,500
Income Restricted (low/mod income)	$1.80 Per Watt/ up to 60% net cost	$300 per kW hour/ up to 60% net cost	$5,000	$2,500
Low-Income Service Provider	$0.75 Per Watt/ up to 50% net cost	$300 per kW hour/ up to 60% net cost	$30,000	$15,000

Results

- 3670 projects in 32 counties
- Over $11.7 million in rebates completed or in process in 3 years
- Supporting over $138 million investment in clean energy
- 66 approved contractors

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Results

- In 2021, 37% of committed funding was for low- or moderate-income Oregonians or low-income service providers.
- Average nameplate capacity is 10 kWh.

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Learn More

https://tinyurl.com/SolarOR

odoe.solarrebates@energy.oregon.gov

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Thank you for attending our webinar

Todd Olinsky-Paul
Project Director
Clean Energy States Alliance

Learn more about the 2022 State Leadership in Clean Energy Awards and read case studies of the winning programs at
www.cesa.org/projects/state-leadership-in-clean-energy/2022-awards/

Upcoming Webinars

Environmental Justice Strategies for Hydrogen Opposition
Thursday, December 15, 1-2pm ET

New Federal Money for Energy Storage: The Inflation Reduction Act
Friday, December 16, 1-2:30pm ET

Read more and register at www.cesa.org/webinars