

OREGON SOLAR + STORAGE REBATE PROGRAM

2022 Program Report

Submitted to the
OREGON LEGISLATURE

by the
**OREGON
DEPARTMENT OF
ENERGY**

September 15, 2022



OREGON
DEPARTMENT OF
ENERGY



Oregon Solar + Storage Rebate Program 2022

Executive Summary

The Oregon Solar + Storage Rebate Program was established by the Oregon Department of Energy at the direction of HB 2618, passed by the Oregon State Legislature in 2019. The legislation directed the department to develop a program to provide rebates for the purchase, construction, or installation of solar electric systems and paired solar and storage systems. Initially, the legislature provided \$2 million for rebates and program administration, and the Department began accepting rebate reservations in January 2020. By the end of September 2020, all available funding had been allocated to project reservations and the department stopped accepting new reservation requests. HB 5606 (2021) provided an additional \$10 million and extended the program sunset to January 2024. ODOE began accepting new reservation request in September 2021. SB 5202 (2022) provided the program with an additional \$5 million.

Program rebates are issued to participating contractors, who pass the savings on to eligible customers as a reduction in the price of the installed system (ODOE's program staff do not work directly with the customers). To claim a rebate, a contractor must first apply for a reservation of rebate funds prior to the start of project installation. Reservations are converted into cash rebates once a contractor certifies a project complete. The legislature directed the department to make at least 25 percent of the rebate budget available for projects installed for residential customers with low or moderate incomes and for organizations that provide services to Oregonians with lower incomes (called low-income service providers in the program). Low-income service providers are a specific group of non-residential customers that provide assistive services to lower-income individuals and households.

The Oregon Solar + Storage Rebate Program advances Oregon energy policy by helping reduce the upfront costs associated with the purchase and installation of renewable energy production and energy storage systems, as well as supporting the Oregon solar installer industry.

AT LEAST 25 PERCENT OF THE REBATE BUDGET SUPPORTS LOW- OR MODERATE-INCOME RESIDENTIAL CUSTOMERS.

Informed by a public input process, the rebate program features tiered incentive rates for rebates based on the income level of the project owner, the availability of other rebates to the project owner, and whether it is a residential project or a project for a low-income service provider. The largest rebate amounts are reserved for low- and moderate-income residential customers and low-income service providers to expand access to those populations that may not otherwise have the financial resources to invest in solar. Eligibility for income-restricted rebates can be demonstrated by providing proof of eligibility for several low-income programs operated by the State of Oregon or by providing an Oregon Department of Revenue tax transcript. The department implemented an expanded list of eligibility options after the start of the program in response to program stakeholder feedback.

There are currently 67 contractors participating in the program. To be eligible to participate in the program, a contractor must meet eligibility requirements established under rule.

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The program continues to successfully meet the legislative mandate that 25 percent of funds be reserved for low- and moderate-income projects. In 2021, the program reserved or rebated 684 projects, representing over \$2.52 million in funds. \$940,333 or 37 percent of the committed funding was for projects owned by LMI residential owners or low-income service providers.

THE REBATE PROGRAM HAS RESERVED OR ISSUED REBATES FOR PROJECTS IN **29 OF OREGON'S 36 COUNTIES.**

Of the 684 projects that ODOE supported in 2021, 34 projects were for low-income service providers. Of projects that received a rebate or reserved 127 were paired solar and storage projects.

The projects that received a rebate in 2021 represent solar electric generation that is estimated to displace 4,621 metric tons of CO₂e (carbon dioxide equivalent) per year based on the carbon intensity of the electric utility serving the project.

This report is available electronically on the Oregon Department of Energy's website:
<https://www.oregon.gov/energy/Data-and-Reports/Pages/Reports-to-the-Legislature.aspx>.

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Oregon Solar + Storage Rebate Program 2022

Introduction

Program Background

The Oregon Solar + Storage Rebate Program was established by the Oregon Department of Energy at the direction of HB 2618, which was passed by the Oregon State Legislature in 2019. The legislation directed the department to develop a program to provide rebates for the purchase, construction, or installation of solar electric systems and paired solar and storage systems.



Program rebates are issued to participating contractors and are passed on to customers as a reduction in the price of the installed system. To claim a rebate, a contractor must first request a reservation of funds prior to the start of project installation. Once a project has been completed, a contractor then applies to have the project's reservation converted into a cash rebate, which is issued as a check to the contractor. The legislature directed the department to make at least 25 percent of the rebate budget available for projects installed for residential customers with low or moderate incomes and for organizations that provide services to Oregonians with lower incomes (called low-income service providers in the program). Low-income service providers are a specific group of non-residential customers that provide assistive services to low- or moderate-income individuals and households.

The Oregon Solar + Storage Rebate Program advances Oregon energy policy by helping reduce the upfront costs associated with the purchase and installation of renewable solar energy production and solar energy storage systems, as well as supporting the Oregon solar installer industry.

HB 2618 directed the department to provide a report to the legislature by September 15 of each year the program is in effect that includes the number, size, and location of solar electric systems installed for residential customers and low-income service providers, as well as the number and storage capacity of paired solar and storage systems installed, for which a rebate was claimed. The report is to include the estimated amount of greenhouse gas emissions reduced or avoided due to the installation of the completed systems. The bill also directed that the report should address whether the goals of the rebate program are being met and include recommendations on whether the rebate amount limits, or the funding levels reserved for LMI and low-income service provider projects, should be modified. While not required, this report also includes legislative recommendations.

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Program Operations

The Oregon Department of Energy developed program rules informed by targeted outreach with 26 different stakeholder groups, held three public meetings in Salem and Portland, and wrote letters to Chairs of Oregon Tribes. The department filed final program rules on December 19, 2019. ODOE filed updated administrative rules on May 28, 2020 that made it easier to demonstrate qualification for a low- and moderate-income rebate by adding the Supplemental Nutrition Assistance Program, the Oregon Health Plan, and the Children’s Health Insurance Program to the list of programs under which a project owner would be eligible. In addition, ODOE added the ability of a residential project owner to prove eligibility by providing a current tax transcript from the Oregon Department of Revenue. The department further amended program rules on April 15, 2022, with changes designed to encourage more participation from low-income service providers, such as affordable housing organizations. The feedback and suggestions provided through ODOE’s outreach and engagement were very valuable in the development of the program’s rules.

The Oregon Solar + Storage Rebate program features a tiered incentive rate for rebates based on the location and financial capacity of the project owner. The largest rebate amounts are reserved for residential customers with low and moderate incomes and low-income service providers to expand access to those populations that may not otherwise have the financial resources to invest in solar. The smallest rebate amounts are available for non-LMI residential customers that have access to existing financial incentives through their electric utility:

- Projects for low- and moderate-income households can receive a rebate of \$1.80 per watt (DC) of installed capacity, up to 60 percent of the project net cost or \$5,000, whichever is less.
- Low-income service provider projects can receive a rebate of \$0.75 per watt of installed capacity, up to 50 percent of project net cost or \$30,000, whichever is less.
- Projects for non-LMI residential customers who are not eligible for a utility incentive can receive a rebate of \$0.50 per watt of installed capacity, up to 40 percent of net project cost or \$5,000, whichever is less.
- Projects for non-LMI residential customers who are eligible for a utility incentive can receive a rebate of \$0.20 per watt of installed capacity up to 40 percent of net project cost or \$5,000, whichever is less.

For solar electric projects with paired energy storage, the program offers an additional rebate for the storage component, which is also tiered based on the type of project owner:


“Love the program and we’re very excited about our solar.”

Program Participant

Oregon Solar + Storage Rebate Program 2022

- Low-income service provider projects are eligible for a rebate of \$300 per kilowatt hour of installed storage capacity, up to 60 percent of net project cost or \$15,000, whichever is less.
- Projects for LMI customers are eligible for a rebate of \$300 per kilowatt hour of installed storage capacity, up to 60 percent of project cost or \$2,500, whichever is less.
- Projects for non-LMI residential customers are eligible for a rebate of \$300 per kilowatt hour of installed storage capacity, up to 40 percent of net project cost or \$2,500, whichever is less.

Consistent with the direction provided in HB 2618, the department worked closely with Oregon Housing and Community Services to develop program rules regarding eligibility for LMI households. Informed by OHCS's experience in providing benefits to low-income individuals, ODOE determined that individuals and households could have their projects qualify for low- and moderate-income restricted rebates if the individual or household was eligible for services offered by OHCS through the Low-Income Home Energy Assistance Program, the Oregon Energy Assistance Program, or the Low-Income Weatherization Assistance Program. Rebate program participants are also eligible for the LMI rebate if they are eligible for the Supplemental Nutrition Assistance Program, Oregon Health Plan, or the Children's Health Insurance Program. Participants can also prove eligibility through an Oregon Department of Revenue tax transcript demonstrating that they earn less than or equal to 100 percent of state median income adjusted for household size. This type of eligibility system allows ODOE to reduce the number of primary income verification steps, which is both resource intensive and outside the scope of the department's program experience.



The Oregon Solar + Storage Rebate Program issues rebates directly to solar contractors as reimbursement for cost savings, which must be passed on to the project owner at the time of project installation. The program does not often work directly with project owners, other than occasionally providing information via phone or email, or during compliance inspections. For a solar contractor to receive a rebate through the program, the contractor must meet the program's contractor eligibility requirements

and must have applied for a reservation of rebate funds prior to commencing installation of a project. There are currently 67 eligible contractors participating in the program.

In 2021, the program reserved or rebated 684 projects, representing over \$2.52 million in funds. \$940,330 or 37 percent of the committed funding was for projects owned by LMI residential owners or low-income service providers.

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The department is proud to be in a position to continue to administer the Oregon Solar + Storage Rebate program, which was awarded a national State Leadership in Clean Energy (SLICE) award by the Clean Energy States Alliance in 2022.

Program Challenges

The most immediate challenge facing the Oregon Solar + Storage Rebate program is that it is legislatively scheduled to sunset on January 2, 2024 and is only staffed until June 30, 2023. The ODOE team members working on OSSRP are limited duration positions that are only authorized through the end of the current biennium. This will leave the program unstaffed for the last six months of its currently-authorized time period, which means the agency would not have dedicated staff to continue processing rebate reservations and approvals, respond to public and contractor inquiries, or conduct site inspections to ensure program compliance. The program's sunset would reduce much-needed support for the solar industry and would increase costs for Oregonians installing solar systems — this could lead to lower demand and slower adoption of renewable energy. ODOE will be proposing a legislative concept to extend the program during the 2023 legislative session.

While the program has been successful, supply chain issues have led to a long wait time for battery storage. The current statute requires that both the PV system and battery storage must be in place for a rebate to be processed for a solar + storage project. This has left contractors and homeowners waiting for the rebate, sometimes for months, after already installing the PV system. The draft legislative concept also includes a technical fix related to supply chain issues that will allow the agency to process rebates for solar PV first and then for storage later when those systems are purchased together.

If the program were to continue, ODOE would like to see program benefits extended to low- and moderate-income individuals and families that live in rental housing; under program rules, the definition of Low-Income Service Provider theoretically provides a pathway for that to happen. Under current program rules, a low-income service provider can be a developer or owner of affordable multifamily housing buildings that are eligible to receive public assistance under one or more housing development or rental assistance programs administered by Oregon Housing and Community Services. In practice, however, multifamily housing developers install photovoltaic (PV) systems under the ownership of a for-profit LLC in order to capture federal tax benefits. These for-profit entities are not eligible under current program administrative rules and no multifamily housing developers have elected to directly own PV installations to make their systems eligible for the rebate program. In addition, no tribal governments have participated in the program to date. It is unclear what factors are behind this lack of project participation, but the department believes opportunities for PV and energy storage projects exist in tribal communities.

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Program Goals and Recommendations

The department has been asked to report on whether the goals of the program are being met and to make recommendations on some of its parameters. The goals identified by legislative supporters were to support the solar industry and its workers and to increase the use of renewable energy sources, including among low- and moderate-income households and the non-profit organizations that serve them.

“We were only the second solar project in our town in a decade, I think!”



Program Participant

First, ODOE continues to find that there is significant demand for residential solar rebates. Sixty-seven solar installation businesses have participated in the program to date. Based on continued demand for the incentive, ODOE believes the program has created economic opportunities for the solar installation industry. The additional funding provided by the 2021 and 2022 legislative sessions is currently projected to be fully reserved by the summer of 2023, with a need for program staff to process rebate approvals, provide contractor support, and complete compliance audits through the sunset of the program in January 2024. However, as noted above, limited duration staff have only been authorized until June 30, 2023.

Second, by helping reduce the upfront costs associated with the purchase and installation of renewable energy production and energy storage systems, the program has increased the use of renewable energy throughout Oregon. In 2021, 684 projects were completed in 29 counties across the state. These projects are expected to reduce greenhouse gas emissions by 4,621 metric tons of CO₂ equivalent per year. The Oregon Department of Environmental Quality estimates Oregon’s economy wide sector-based greenhouse gas emissions were 65 million metric tons of CO₂ equivalent in 2019.¹

Low-income service providers represent just over half of the funding dollars for low- and moderate-income projects, with \$479,670 in allocated funding out of \$940,333 in total funding allocated to all low- and moderate-income projects. As noted previously, the department believes there are opportunities for even more low-income services provider projects in the coming biennium.

HB 2618 directed the agency to make recommendations on the level of rebates provided to project owners or on the maximum and minimum levels of funding provided to certain project owners. As discussed above, we will work with stakeholders through the legislative and rulemaking processes to ensure the program is accessible to our tribal partners and people living in rental housing.

¹ [Department of Environmental Quality : Oregon Greenhouse Gas Sector-Based Inventory Data : Action on Climate Change : State of Oregon](#)

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Demand for solar rebates, by number of reservations and rebates, is higher in the non-LMI category, but the program has been successful at driving program funding (37 percent) to low- and moderate-income homeowners and low-income service providers.



In early 2021, ODOE published its [strategic plan](#) and updated [mission](#), which places a greater emphasis on equity in our programs and services; a strategic objective that is increasingly shared across state government.

The Oregon Department of Energy also submitted a Racial Equity Impact Statement associated with the rebate program as part of its 2023-2025 Agency Request Budget, in which ODOE is requesting additional funds to continue this valuable program. Through the REIS process, ODOE strengthened its engagement activities with environmental justice organizations to better understand the diverse needs of communities for a program like this, enhanced the program's website to better serve potential participants, developed a flyer in Spanish, and completed a

rulemaking effort that adjusted the definition of *low-income service provider* to further expand eligibility to affordable housing organizations.

To identify potential gaps in program participation among diverse communities, ODOE has been sending an optional, anonymous survey to participants, asking about demographic data, including race or ethnicity and if someone in the household has a disability. To date, the department has received a total of 233 survey responses. Of those who responded, participants in the program overwhelmingly identify as white. Eleven participants identified as Hispanic or Latino, eight identified as Native American or Alaska Native, sixteen identified as Asian, three as Native Hawaiian or Pacific Islander, and eight as Black or African American. Six participants marked that they identify as two or more races. Thirty-eight participants reported that someone in their household has a disability.

While not necessarily scientifically valid, the survey results show that Black, Indigenous, and People of Color, and people with disabilities are likely under-represented in the program. Similarly, there are also some parts of the state that are under-represented in the program.

ODOE has adapted its approach for sending the surveys in an effort to improve survey participation and the resulting data. For much of 2022, contractors would provide homeowners with the anonymous demographics survey, which homeowners could complete and mail to ODOE or submit online via SurveyMonkey. While the approach showed some improvement in survey participation, ODOE determined it may have more success if the agency directly emails a link to the survey to participants. ODOE implemented the change in August 2022 and will report on results in the 2023 report to the Legislature.

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The department believes there could be value in collaborating with other state agencies, state leadership, and the public to determine agency best practices when it comes to the collection, storage, and use of individual demographic information to ensure equity practices are consistent across state government and sensitive to historically and currently under-served communities.

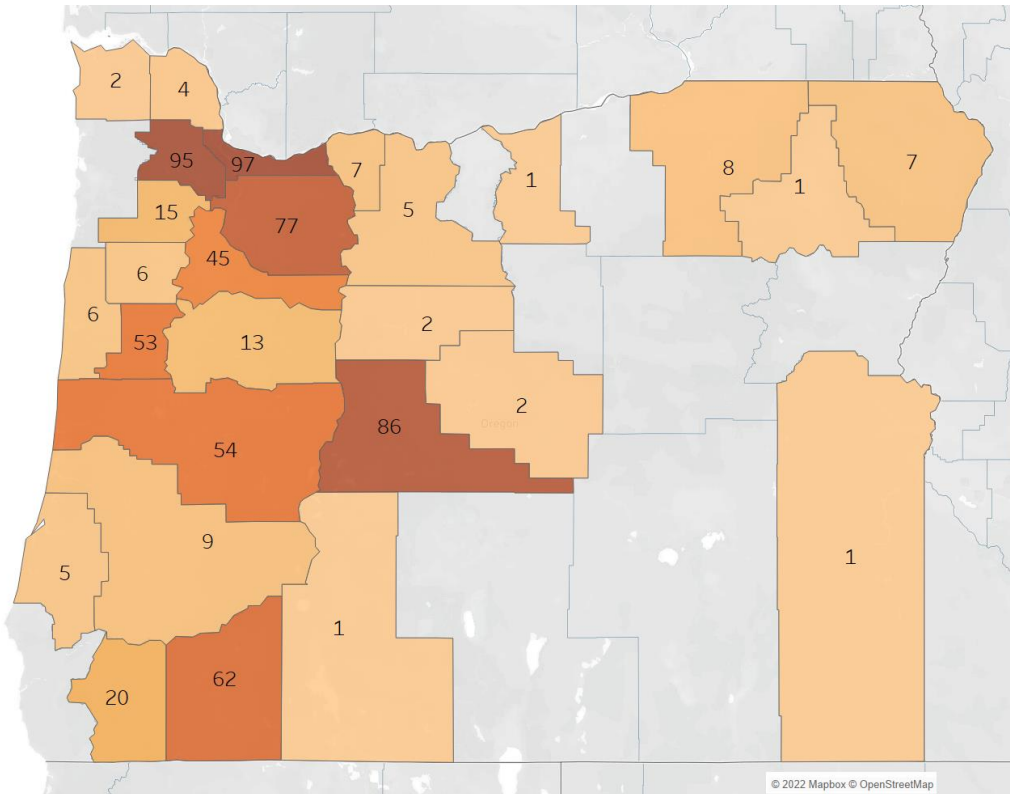
“Thank you! We appreciate DOE’s help trying to live out our values.”



Program Participant

Program Metrics

Figure 1: Number of All Projects Reserved and Rebated by County in 2021



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Figure 2: Number of Low- and Moderate-Income and Low-Income Service Provider Projects Reserved and Rebated by County in 2021

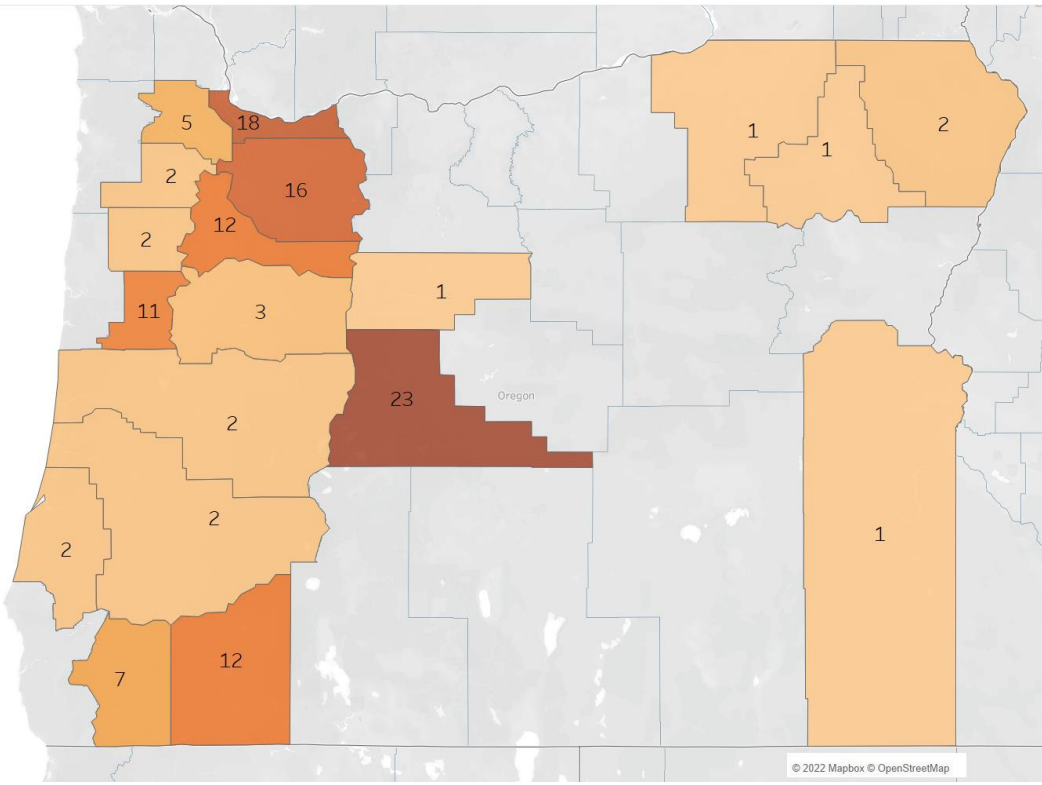


Table 1: Total Residential Reservations and Rebates Issued in Year 2021

Customer Type	PV			Storage (Paired with PV)			Total Committed Funds
	# of Projects	Funds Committed	Nameplate Capacity (kW)	# of Projects	Funds Committed	Storage Capacity (kWh)	
Non-LMI	561	\$1,285,897	5,504	116	\$289,320	1,356	\$1,575,217
LMI	89	\$433,163	685	11	\$27,500	123	\$460,663
Totals	650	\$1,719,060	6,189	127	\$316,820	1,479	\$2,035,880

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Table 2: Total Residential Reservations and Rebates Issued 2020 – 2021

Customer Type	PV			Storage (Paired with PV)			Total Committed Funds
	# of Projects	Funds Committed	Nameplate Capacity (kW)	# of Projects	Funds Committed	Storage Capacity (kWh)	
Non-LMI	840	\$1,852,057	7,891	146	\$364,320	1,732	\$2,216,377
LMI	142	\$693,269	1,061	13	\$32,500	147	\$725,769
Totals	982	\$2,545,326	8,952	159	\$396,820	1,879	\$2,942,146

Table 3: Estimated Greenhouse Gas Emissions Reductions* for Projects Completed in 2021

Installed Projects	Total kWh Production (Annual)	Metric Tons CO2e Reduced (Annual)
683**	10,637,590	4,621

*The greenhouse gas emissions reduction estimate is calculated by multiplying the estimated annual kWh electricity production of a completed project by the estimated carbon intensity multiplier (lbs CO2e per kWh) of the electric utility providing service to the project. Utility carbon intensity multipliers are maintained on ODOE's [Electricity Resource Mix dashboard](#).

** Number is off by one because one rebated project was completed off the grid, and therefore has no utility CO2 data.

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FOR MORE INFORMATION

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