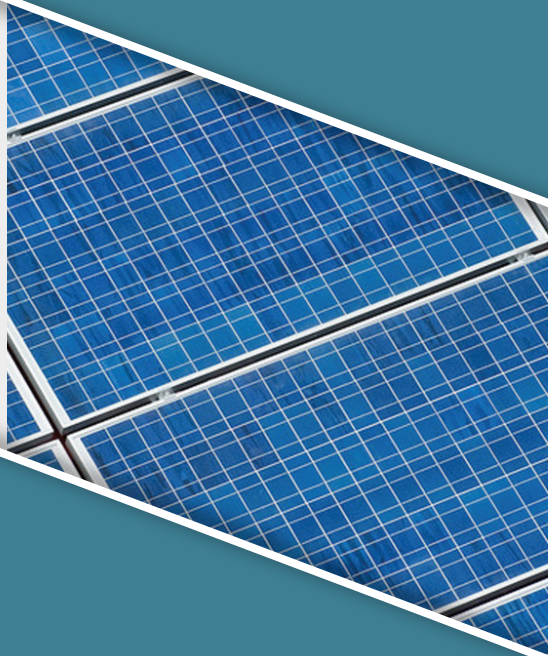


50 States of SOLAR

Q2 2022 Quarterly Report
Executive Summary



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The NC Clean Energy Technology Center is a UNC System-chartered Public Service Center administered by the College of Engineering at North Carolina State University. Its mission is to advance a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies. The Center provides service to the businesses and citizens of North Carolina and beyond relating to the development and adoption of clean energy technologies. Through its programs and activities, the Center envisions and seeks to promote the development and use of clean energy in ways that stimulate a sustainable economy while reducing dependence on foreign sources of energy and mitigating the environmental impacts of fossil fuel use.

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Full editions of and annual subscriptions to the 50 States of Solar may be purchased [here](#).

The 50 States of Solar is a quarterly publication. Previous executive summaries and older full editions of *The 50 States of Solar* are available [here](#).

The NC Clean Energy Technology Center also publishes the *50 States of Grid Modernization* and the *50 States of Electric Vehicles* on a quarterly basis. Executive summaries of these reports may be found [here](#). Please contact us for older issues of the 50 States of Solar.

ABOUT THE REPORT

PURPOSE

The purpose of this report is to provide state lawmakers and regulators, electric utilities, the solar industry, and other stakeholders with timely, accurate, and unbiased updates on state actions to study, adopt, implement, amend, or discontinue policies associated with distributed solar photovoltaics (PV). This report catalogues proposed and enacted legislative, regulatory policy, and rate design changes affecting the value proposition of distributed solar PV during the most recent quarter, with an emphasis on the residential sector.

The 50 States of Solar series provides regular quarterly updates of solar policy developments, keeping stakeholders informed and up to date.

APPROACH

The authors identified relevant policy changes through state utility commission docket searches, legislative bill searches, popular press, and direct communication with stakeholders and regulators in the industry.

Questions Addressed

This report addresses several questions about the changing U.S. solar policy landscape:

- How are state legislatures, regulatory authorities, and electric utilities addressing fast-growing markets for distributed solar PV?
- What changes to traditional rate design features and net metering policies are being proposed, approved, and implemented?
- Where are distributed solar markets potentially affected by policy or regulatory decisions on community solar, third-party solar ownership, and utility-led residential rooftop solar programs?

Actions Included

This report series focuses on cataloging and describing important proposed and adopted policy changes affecting solar customer-generators of investor-owned utilities (IOUs) and large publicly-owned or nonprofit utilities (i.e., those serving at least 100,000 customers). Specifically, actions tracked in these reports include:

- Significant changes to state or utility **net metering** laws and rules, including program caps, system size limits, meter aggregation rules, and compensation rates for net excess generation
- Changes to statewide **community solar** or **virtual net metering** laws and rules, and individual utility-sponsored community solar programs arising from statewide legislation
- Legislative or regulatory-led efforts to study the **value of solar, net metering**, or **distributed solar generation policy**, e.g., through a regulatory docket or a cost-benefit analysis
- Utility-initiated rate requests for **charges applicable only to customers with solar PV** or other types of distributed generation, such as added monthly fixed charges, demand charges, stand-by charges, or interconnection fees
- Utility-initiated rate requests that propose a 10% or larger increase in either **fixed charges** or **minimum bills** for all residential customers
- Changes to the legality of **third-party solar ownership**, including solar leasing and solar third-party solar power purchase agreements (PPAs), and proposed **utility-led rooftop solar** programs

In general, this report considers an “action” to be a relevant (1) legislative bill that has been passed by at least one chamber or (2) a regulatory docket, utility rate case, or rulemaking proceeding. Introduced legislation related to third-party sales is included irrespective of whether it has passed at least one chamber, as only a small number of bills related to this policy have been introduced. Introduced legislation pertaining to a regulatory proceeding covered in this report is also included irrespective of whether it has passed at least one chamber.

Actions Excluded

In addition to excluding most legislation that has been introduced but not advanced, this report excludes a review of state actions pertaining to solar incentives, as well as more general utility cost recovery and rate design changes, such as decoupling or time-of-use tariffs. General changes in state implementation of the Public Utility Regulatory Policies Act of 1978 and subsequent amendments, including changes to the terms of standard contracts for Qualifying Facilities or avoided cost rate calculations, are also excluded unless they are related specifically to the policies described above. The report also does not cover changes to a number of other policies that affect distributed solar, including solar access laws, interconnection rules, and renewable portfolio standards. Details and updates on these and other federal, state, and local government policies and incentives are available in the NC Clean Energy Technology Center’s Database of State Incentives for Renewables and Efficiency, at www.dsireusa.org.

EXECUTIVE SUMMARY

OVERVIEW OF Q2 2022 POLICY ACTION

In the second quarter of 2022, 42 states plus DC took a total of 208 actions related to distributed solar policy and rate design (Figure 1). Table 1 provides a summary of state actions related to DG compensation, rate design, and solar ownership during Q2 2022. Of the 208 actions cataloged, the most common were related to DG compensation rules (68), followed by community solar (63), and residential fixed charge and minimum bill increases (29).

Table 1. Q2 2022 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
DG compensation rules	68	33%	29
Community solar	63	30%	23 + DC
Residential fixed charge or minimum bill increase	29	14%	18
Residential demand or solar charge	19	9%	10
DG valuation or net metering study	13	6%	10
Third-party ownership of solar	11	5%	7
Utility-led rooftop PV programs	5	2%	5
Total	208	100%	42 States + DC

Note: The "# of States/ Districts" total is not the sum of the rows, as some states have multiple actions. Percentages are rounded and may not add up to 100%.

TOP FIVE SOLAR POLICY DEVELOPMENTS OF Q2 2022

Five of the quarter's top policy developments are highlighted below.

Florida Governor DeSantis Vetoes Net Metering Reform Bill

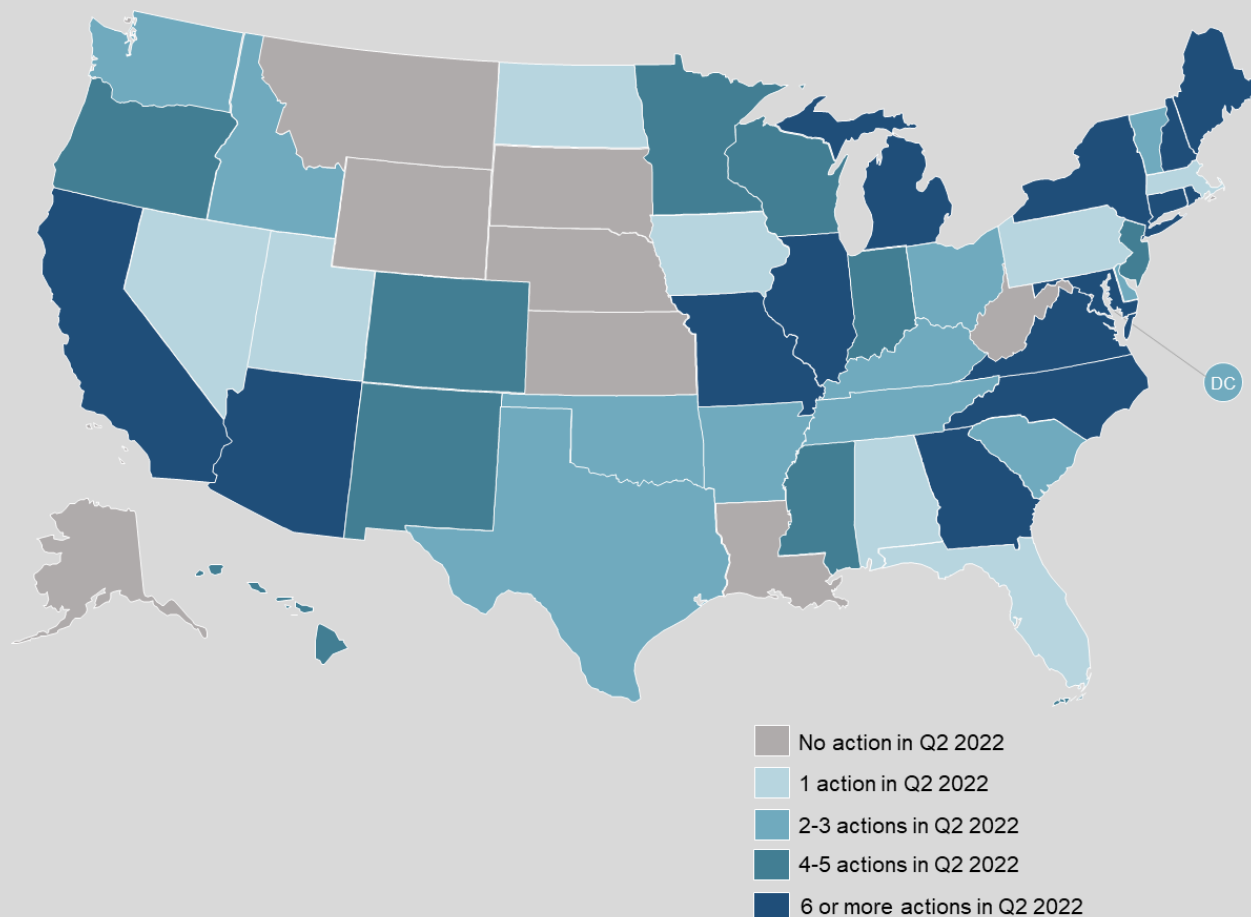
Florida Governor DeSantis vetoed a net metering reform bill in late April 2022, which would have gradually reduced the credit rate for excess generation and authorized additional fees for customer-generators. The Governor noted his objection to the ability of utilities to impose additional charges to recover lost revenues associated with residential solar, including how this amount would be determined and the impact on all ratepayers.

Arkansas Appeals Court Strikes Down Grid Charge

The Arkansas Court of Appeals issued a ruling in May 2022, upholding the retail rate net metering structure approved by the Public Service Commission, but striking down the grid

charge for larger customer-generators on rates with a demand component. The Court found that there was a lack of utility-specific data and evidence of cost shifting provided. The Commission filed a petition for rehearing on the issue of the grid charge, but the Court of Appeals denied the petition.

Figure 1. Q2 2022 Action on DG Compensation, Rate Design, & Solar Ownership Policies, by Number of Actions



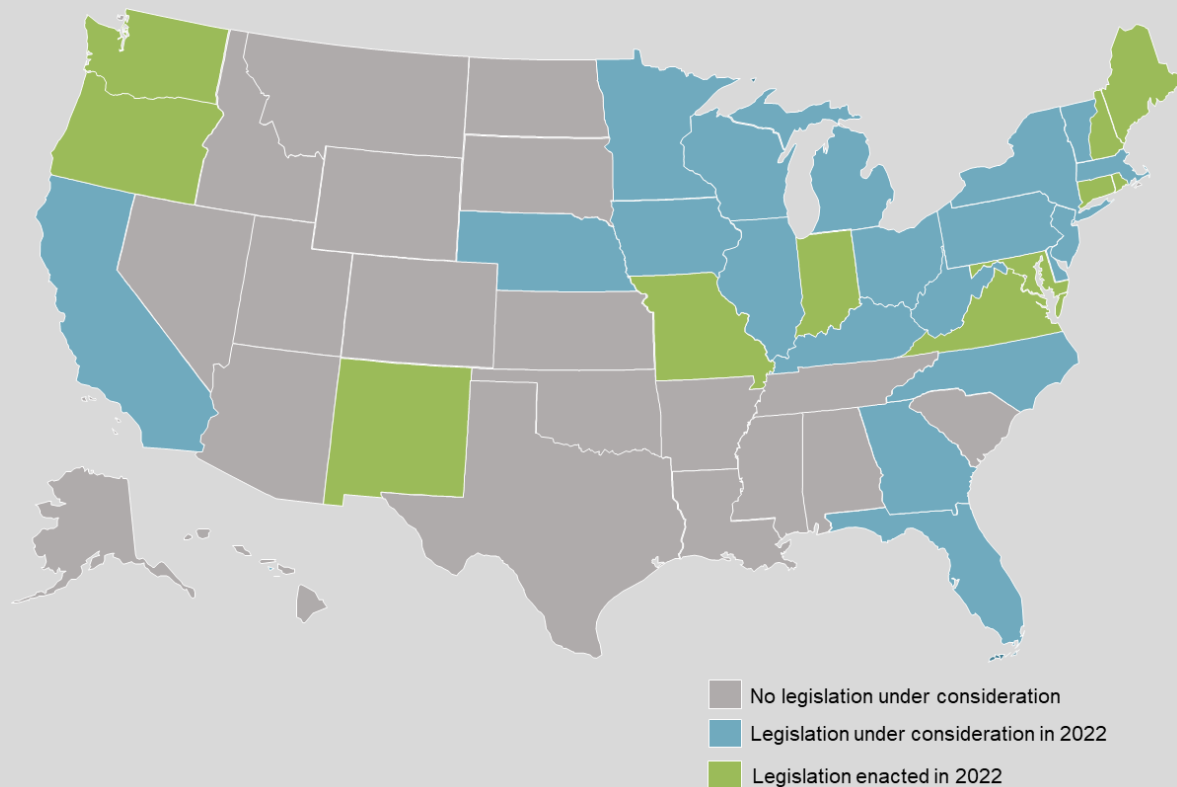
Idaho Power Completes Value of Distributed Energy Resources Study

Idaho Power released its value of distributed energy resources study in late June 2022, as required by the Public Utilities Commission. The study calculated a real-time export credit rate value of \$27.96 to \$40.26 per MWh, depending on the energy price methodology and assumptions used. This value includes avoided energy, avoided generation capacity, avoided transmission and distribution capacity, avoided line losses, and integration costs.

Missouri Lawmakers Establish Distributed Energy Resources Task Force

In June 2022, Missouri lawmakers enacted two bills – S.B. 745 and S.B. 820 – establishing a task force on distributed energy resources and net metering issues. The task force is to prepare a value of solar study by the end of December 2023. The bills also instruct the task force to develop recommendations on potential net metering and community solar legislation.

Figure 2. DG Compensation, Rate Design, and Solar Ownership Legislation Under Consideration in 2022 (as of 7/18/2022)



Petitions to Clarify Third-Party Ownership Legality Filed in Wisconsin

Two clean energy advocacy organizations filed petitions for declaratory rulings with the Wisconsin Public Service Commission in May 2022, seeking clarification on whether the owner of a third-party financed solar PV system will be regulated as a public utility. This issue has been considered in multiple venues over the last few years in Wisconsin without resolution.

THE BIG PICTURE: INSIGHTS FROM Q2 2022

States Examining Time-Varying Credit Rates for Excess Generation

A number of states are considering the use of time-varying credit rates for excess generation from net metering systems. In California, a proposed decision would move toward avoided cost rate credits that vary on an hourly basis for new customer-generators. Last year, South Carolina regulators approved a move to time-varying retail credit rates for residential net metering customers, and Duke Energy has filed a similar proposal in North Carolina. The Hawaii Public Utilities Commission has also issued a decision on future distributed energy resource tariffs, specifying that the future tariffs will include time-varying credits. In Idaho, Idaho Power's recently completed value of distributed energy resources study examined time-varying export credit rates as a potential option, calculating separate credit rate values for on-peak and off-peak periods.

States Returning to Value of Solar and Cost-Benefit Studies

For the last few years, few states have conducted and released value of solar or net metering cost-benefit studies, but several states are returning to these methods, often as part of efforts to evaluate changes to credit rates for distributed generation. Idaho Power released a study in late June 2022, as required by the Idaho Public Utilities Commission, which calculates the value of solar export credit rates under a variety of scenarios. Idaho regulators will use this study in determining changes to the utility's distributed generation tariffs. A value of distributed energy resources study is also expected out of New Hampshire as part of a years-long effort to prepare for an examination of future net metering rate changes. Missouri lawmakers recently initiated a value of solar study, to be conducted by a distributed energy resources task force established by the legislation. In Maryland, regulators are aiming to look more holistically at distributed energy resources by creating a unified benefit-cost analysis framework for all types of distributed energy resources.

Utilities Proposing Minimum Bills for Distributed Generation Customers

A growing number of utilities have been proposing new or increased minimum bills applicable specifically to distributed generation customers. These are intended as a rate design tool to ensure recovery of certain fixed grid infrastructure costs. Last year in South Carolina, regulators approved a minimum bill for new residential net metering customers, and Duke Energy has also proposed a minimum bill for residential net metering customers in North Carolina. As part of a rate case recently filed by Consumers Energy in Michigan, the utility requested approval for a new minimum bill for distributed generation customers. The HECO utilities in Hawaii have also proposed a higher minimum bill for residential customers on a distributed energy resources tariff. In Virginia, regulators recently approved a \$55.10 minimum bill for shared solar program participants.

FULL REPORT DETAILS & PRICING

FULL REPORT DETAILS

Content Included in the Full Quarterly Report:

- Detailed policy tables describing each pending and recently decided state and utility action regarding:
 - Net Metering
 - Distributed Solar or DG Valuation
 - Community Solar
 - Residential Fixed Charge and Minimum Bill Increases
 - Residential Solar Charges (Demand Charges, Standby Charges, & Grid Access Charges)
 - Third-Party Ownership
 - Utility-Led Rooftop Solar
- Links to original legislation, dockets, and commission orders for each policy action
- Summary maps of action for each policy category above
- Excel spreadsheet file of all actions taken during the quarter and separate Powerpoint file of all summary maps available upon request
- Qualitative analysis and descriptive summaries of solar policy action and trends
- Outlook of action for the next quarter

WHO SHOULD PURCHASE THIS REPORT

The 50 States of Solar allows those involved in the solar and electric utility industry to easily stay on top of legislative and regulatory changes. The report provides a comprehensive quarterly review of actions, an undertaking that would take any one business or organization weeks of time and thousands of dollars in staff time. At a cost of \$500 per issue (or \$1,500 annually), the 50 States of Solar offers an invaluable time and financial savings. With direct links to original sources for all actions, customers may stay on top of legislative and regulatory developments between quarterly reports.

Solar Installation and Manufacturing Companies

- Identify new market opportunities, as well as changing and risky markets
- Stay on top of state policy developments relevant to your business
- Give your own team a head start in tracking legislative and regulatory proceedings

Investor-Owned and Public Power Utilities

- Learn about the approaches being taken by other utilities facing similar challenges
- Stay on top of relevant state policy developments
- Utilize an objective source of information in legislative and regulatory proceedings

Investors and Financial Analysts

- Identify new investment opportunities and emerging areas of growth, as well as risky investments
- Access rate data that is often buried in regulatory filings

Advocacy Organizations

- Learn about the diverse solar policy and rate proposals in other states
- Learn about the outcomes of other state's policy and rate decisions
- Utilize an objective source of information in legislative and regulatory proceedings

Researchers and Consultants

- Access valuable data requiring an immense amount of time to collect first-hand
- Identify research needs to inform solar policy and rate design proceedings
- Cite an objective source in your own research and analysis

PRICING

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Subscription Type	Annual Subscription	Single Report
50 States of Solar Report	\$1,500	\$500
Single-Tech Subscription (Solar) <i>(Includes 50 States of Solar report, plus comprehensive biweekly legislative & regulatory solar tracking, policy data sheets, & curated monthly policy updates)</i>	\$4,500	N/A
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