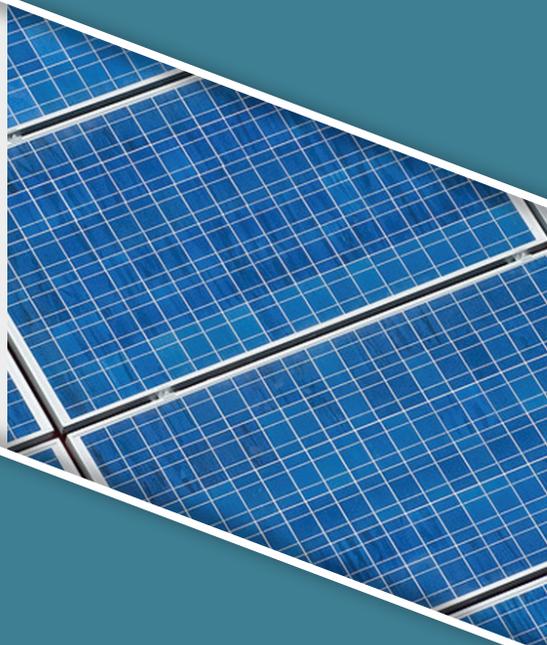


50 States of SOLAR

Q2 2019 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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ACKNOWLEDGMENTS

We would like to thank Tom Stanton of the National Regulatory Research Institute for his review of a draft of this report.

PREFERRED CITATION

North Carolina Clean Energy Technology Center, *The 50 States of Solar: Q2 2019 Quarterly Report*, July 2019.

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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 2019 POLICY ACTION

In the second quarter of 2019, 42 states plus DC took a total of 172 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 2019. Of the 172 actions cataloged, the most common were related to DG compensation rules (59), followed by residential fixed charge and minimum bill increases (37), and community solar (33).

Table 1. Q2 2019 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
DG compensation rules	59	34%	28 + DC, PR
Residential fixed charge or minimum bill increase	37	22%	22 + DC
Community solar	33	19%	21 + DC
DG valuation or net metering study	22	13%	17 + DC
Residential demand or solar charge	11	6%	9
Third-party ownership of solar	6	4%	5
Utility-led rooftop PV programs	4	2%	4
Total	172	100%	42 States + DC, PR

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 2019

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

South Carolina Legislators Unanimously Pass Net Metering Extension and Reform Bill

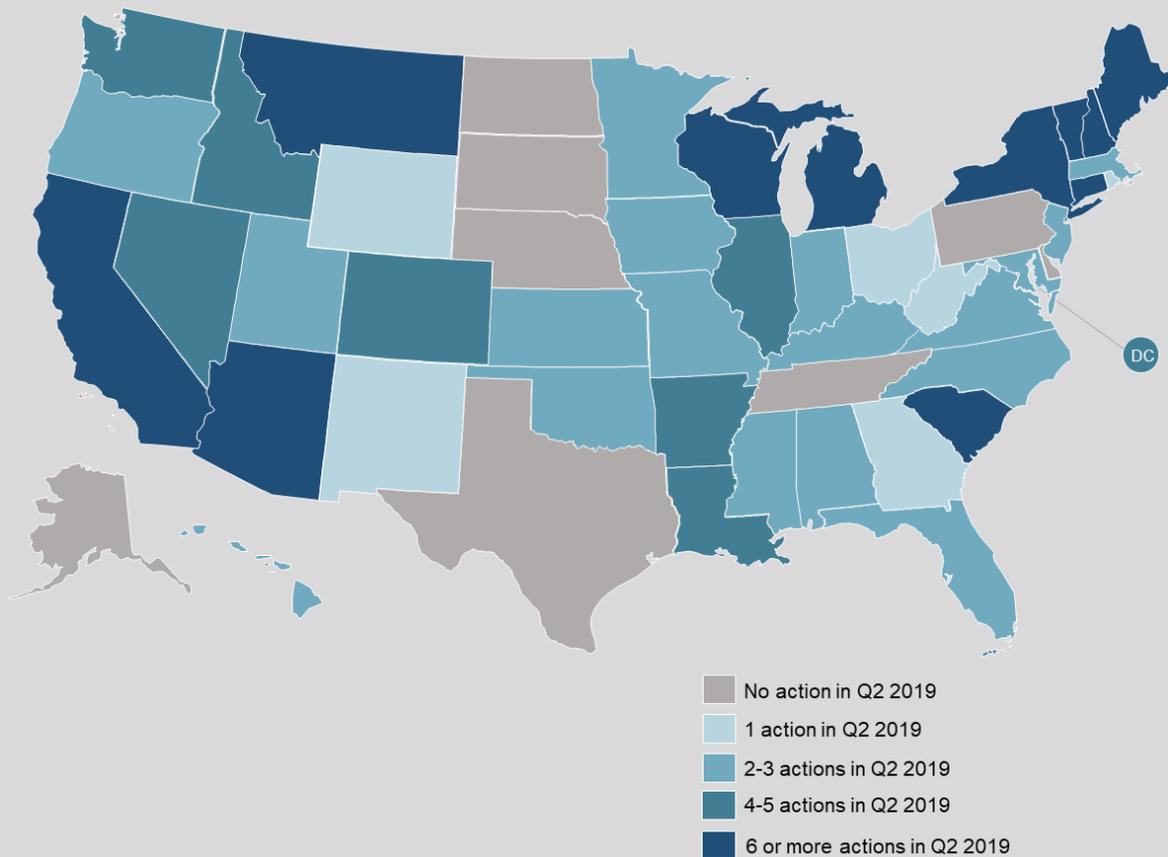
The South Carolina Legislature unanimously passed H.B. 3659 in May 2019, which extends the availability of net metering until June 2021 and initiates an investigation of the costs and benefits of net metering. The Public Service Commission is to establish a methodology for calculating the value of energy produced by customer-generators, which will aid in the development of a successor tariff.

Connecticut Lawmakers Delay Net Metering Successor Transition

Connecticut lawmakers enacted H.B. 5002 in June 2019, which delays the implementation of a net metering successor tariff until 2022. The bill also amends previously enacted guidance

for the successor tariff, now allowing the tariff to use up to a monthly netting period. The bill also initiates a value of distributed energy resources study to help inform the successor tariff development.

Figure 1. Q2 2019 Action on DG Compensation, Rate Design, & Solar Ownership Policies, by Number of Actions



Michigan Public Service Commission Approves New DG Tariffs for DTE and UPPCO

The Michigan Public Service Commission approved net metering successor tariffs, using the “inflow-outflow” model approved in 2018, for DTE Electric and Upper Peninsula Power Company (UPPCO) in May 2019. The decisions approve outflow compensation rates equal to the power supply rate, but do not approve the system access contribution charges proposed by the utilities.

Idaho Power and PacifiCorp Propose Major Net Metering Reforms

Idaho Power and PacifiCorp both proposed significant net metering changes for their Idaho customers during Q2 2019. Idaho Power requested approval to close the current net metering

THE BIG PICTURE: INSIGHTS FROM Q2 2019

States Undertaking Studies to Guide Net Metering Successor Development

A growing number of states are taking a study first, act second approach to net metering successor tariff development. In Q2 2019, lawmakers in Connecticut and South Carolina both called for studies related to the value of net-metered generation that will inform the development of net metering successor tariffs. These states join Idaho, New Hampshire, and Utah, where regulators are undertaking distributed generation valuation or cost-benefits studies to inform further changes to net metering. Specifically, these studies are focused on calculating the value of energy produced by customer-generators in order to establish a more precise credit rate for excess generation. This also indicates growing movement toward successor tariffs based on the value of distributed energy resources. Several states have conducted value of solar studies that have not ultimately been used in making policy decisions, but legislators or regulators in states recently undertaking studies have expressed clearer intentions about how they will apply the findings.

Utilities Withdrawing Proposals to Adopt Additional Fees for Solar Customers

Several charges based on solar system capacity or monthly peak generation have recently been withdrawn by utilities. In California, Sacramento Municipal Utility District (SMUD) withdrew a proposal for a new grid access charge shortly after it was introduced, and We Energies in Wisconsin, in a settlement with a renewable energy advocacy group, withdrew a proposed fee for net metering customers. SMUD intends to instead undertake a public stakeholder process and an analysis to consider the costs and benefits of net-metered systems. In Michigan, Upper Peninsula Power Company entered into a settlement agreement in its recent rate case, withdrawing the utility's initial proposal for a system access contribution charge. Thus far, the majority of mandatory residential demand, standby, or grid access charge proposals that have not been withdrawn by utilities have been ultimately rejected by state regulators.

States Establishing Longer Transitions to Net Metering Successors

Recently, states have been establishing longer transition periods to net metering successor tariffs. In Q2 2019, Connecticut lawmakers extended net metering until January 2022, while the South Carolina Legislature extended the availability of net metering until June 2021. Meanwhile, those states will undertake extensive efforts to develop successor tariffs. Washington legislators also extended the availability of net metering to 2029, or whenever installed net-metered capacity reaches 4% of 1996 peak demand. Net metering is available in Indiana until 2022, or when the 1.5% aggregate cap is reached, and the Utah Public Service Commission has allowed for three years to develop Rocky Mountain Power's successor tariff, while a transitional tariff is in effect. These longer transition periods may be intended to provide greater market certainty and provide sufficient time to conduct cost-benefit analyses and engage stakeholders in the successor tariff development process.

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.

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- 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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