

50 States of SOLAR

Q1 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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PREVIOUS EDITIONS AND OTHER 50 STATES REPORTS

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 Q1 2019 POLICY ACTION

In the first quarter of 2019, 43 states plus DC took a total of 160 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 Q1 2019. Of the 160 actions cataloged, the most common were related to DG compensation rules (47), followed by residential fixed charge and minimum bill increases (32) and community solar (25).

Table 1. Q1 2019 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
DG compensation rules	47	29%	27 + DC, PR
Residential fixed charge or minimum bill increase	32	20%	20
Community solar	25	16%	18 + DC
DG valuation or net metering study	21	13%	17 + DC
Third-party ownership of solar	16	10%	10
Residential demand or solar charge	13	8%	9
Utility-led rooftop PV programs	6	4%	6
Total	160	100%	43 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 Q1 2019

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

Maine State Legislature Restores Retail Rate Net Metering

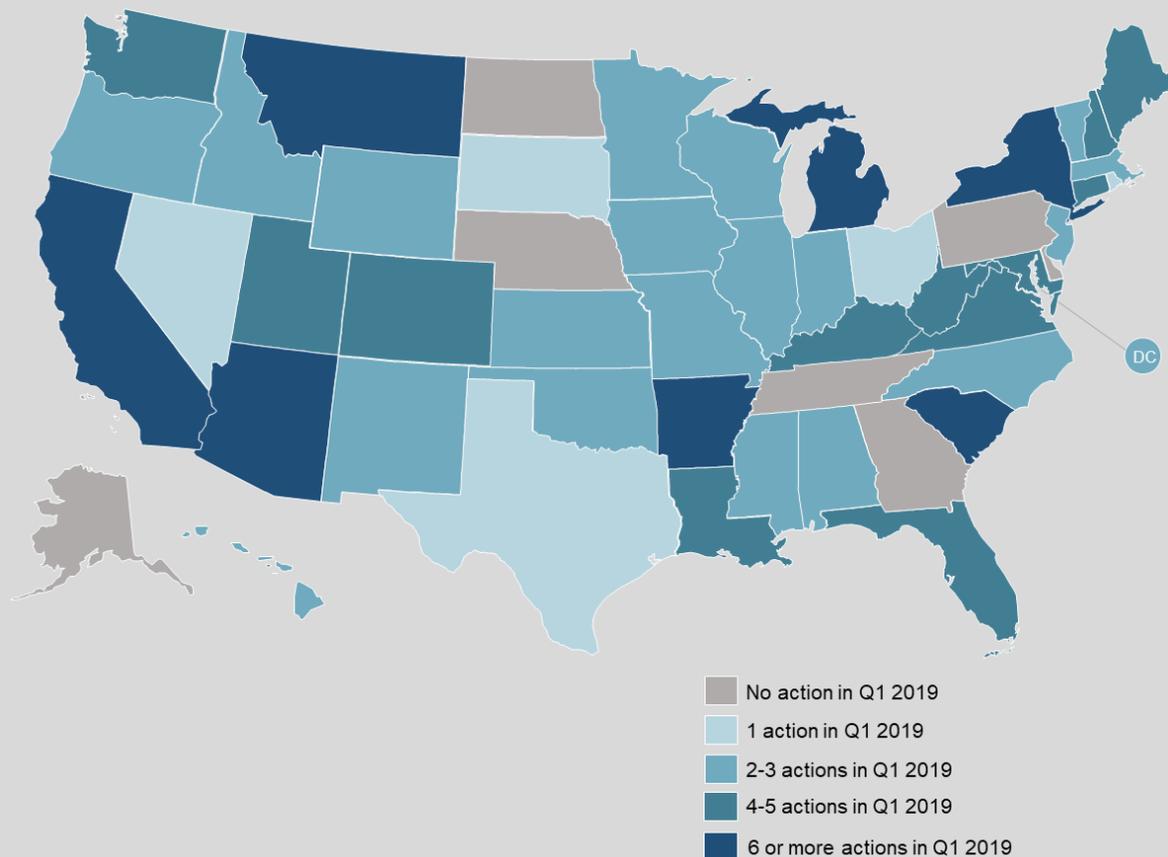
The Maine State Legislature passed L.D. 91 in March 2019, which restores traditional retail rate net metering in the state and prohibits the buy-all, sell-all successor tariff adopted by the Public Utilities Commission in 2017. The Governor signed the bill in early April 2019, and the Commission opened an emergency rulemaking to amend the state's net metering regulations.

Kentucky Lawmakers Initiate Development of Net Metering Successor

Kentucky legislators enacted S.B. 100 in March 2019, directing the Public Service Commission to establish new monetary credit rates for energy exported to the grid. The bill also allows utilities to implement rates to recover fixed and demand-based costs of serving customer-

generators. Customer beginning to net meter before the new credit rates are established will be grandfathered for 25 years.

Figure 1. Q1 2019 Action on DG Compensation, Rate Design, & Solar Ownership Policies, by Number of Actions



Arkansas Legislature Legalizes Solar Leasing and Addresses Net Metering

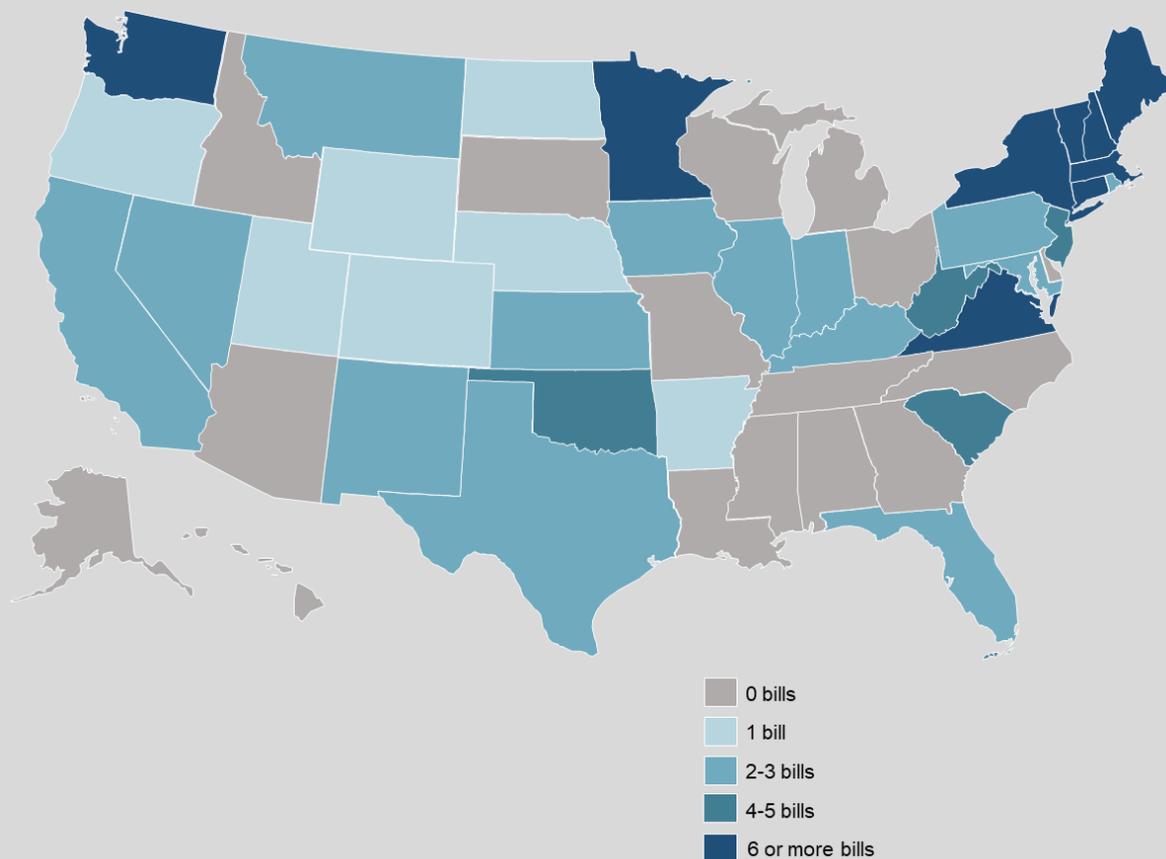
Arkansas lawmakers enacted S.B. 145 in March 2019, which legalizes solar leasing, increases the net metering system size limit, and allows solar-plus-storage systems to net meter. The bill also requires utilities to offer retail rate net metering to DG customers that are subject to rates that include demand charges, and directs regulators to establish a netting period and credit rates for DG customers served on rates that do not include demand charges.

Colorado Regulators Open Rulemaking on Community Solar and Net Metering

The Colorado Public Utilities Commission opened a rulemaking in February 2019 addressing several of the state’s electric rules, including community solar and net metering. The proposed

rules include provisions related to net metering under time-of-use rates, installation of additional meters, and contribution of excess community solar credits for low-income energy assistance.

Figure 2. DG Compensation, Rate Design, & Solar Ownership Legislation Considered During Q1 2019



Note: Figure 2 includes all bills under consideration, regardless of status. The numbers of actions reflected in Table 1 and Figure 1 include only bills that have passed at least one chamber, in addition to regulatory actions.

Sacramento Municipal Utility District Proposes Grid Access Charge

In March 2019, Sacramento Municipal Utility District (SMUD) proposed a new Grid Access Charge for customers with on-site generation. The charge would begin at \$8.00 per kW of DG system capacity in 2020 and increase to \$11.00 per kW by 2025. Existing systems would be grandfathered for a period of 10 to 20 years from the initial billing period after installation. SMUD withdrew the proposed charge in a revised proposal filed on April 22, 2019.

THE BIG PICTURE: INSIGHTS FROM Q1 2019

State Legislatures Weigh in on DG Rate Design

Several state legislatures are considering bills either authorizing or prohibiting additional fees for DG customers. A bill enacted in Arkansas in March 2019 allows the Public Service Commission to establish a per-kWh fee to recover quantifiable, direct demand-related distribution costs from net metering customers, while a bill enacted in Virginia allows electric cooperatives to adopt demand charges for net metering customers. A bill pending in Iowa would establish four alternatives to the state's current net metering policy, one of which includes a minimum bill and one including a demand charge. On the other hand, bills pending in Kansas and Texas prohibit additional charges for DG customers. A Kentucky bill would have limited the types of costs that may be recovered through fixed charges, while a South Carolina bill takes a study approach, directing regulators to consider the cost of service impacts of customer-generators on other customers within the same rate class.

States Move in Different Directions on Net Metering

The first quarter of 2019 was characterized by states moving in very different directions regarding net metering. Kentucky lawmakers enacted a bill that will move the state to a net billing regime, while Maine legislators voted to restore net metering in the state after regulators adopted a buy-all, sell-all compensation framework in 2017. Arkansas also established certain guidelines for net metering successor tariff development, while other states, such as New Hampshire and Washington, moved forward bills that expand net metering by increasing system size limits or aggregate capacity limits. While many states are actively considering net metering successor tariffs, it is worth noting that two states that had previously adopted particularly dramatic policy changes – Maine and Nevada – have now reversed course and re-implemented traditional net metering.

New States Eye Community Solar Programs

A number of states without community solar enabling legislation considered major community solar bills during Q1 2019. Among these states are Florida, Nevada, New Mexico, Pennsylvania, and South Carolina. Each state's proposed legislation would establish community solar guidelines that allow participation by third-party developers. Notably, these bills all also include provisions to encourage participation by low-income customers, such as carve-outs. Low-income access is a program design consideration that is starting to become standard practice in community solar policy. The Michigan Public Service Commission is also conducting a stakeholder proceeding to consider barriers to third-party community energy projects in the state.

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
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All-Tech Subscription <i>(Includes 50 States of Solar report, 50 States of Grid Modernization report, & 50 States of Electric Vehicles report; plus biweekly legislative & regulatory tracking; policy data sheets, & quarterly webinars for solar, grid modernization/energy storage, & electric vehicles)</i>	\$10,500	N/A

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