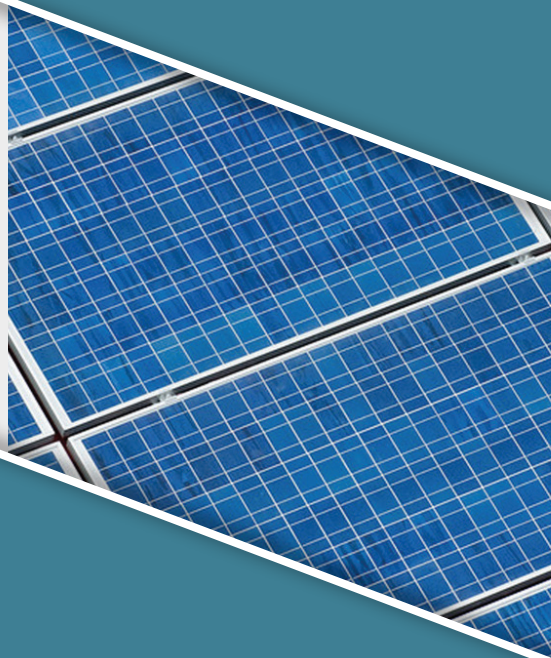


50 States of SOLAR

Q1 2020 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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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 2020 POLICY ACTION

In the first quarter of 2020, 43 states plus DC took a total of 155 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 2020. Of the 155 actions cataloged, the most common were related to DG compensation rules (48), followed by residential fixed charge and minimum bill increases (34), and community solar (32).

Table 1. Q1 2020 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
DG compensation rules	48	31%	24 + DC
Residential fixed charge or minimum bill increase	34	22%	21 + DC
Community solar	32	21%	16 + DC
DG valuation or net metering study	19	12%	13 + DC
Third-party ownership of solar	17	11%	7
Residential demand or solar charge	3	2%	2
Utility-led rooftop PV programs	2	1%	2
Total	155	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 2020

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

Iowa Lawmakers Enact Net Metering Compromise Legislation

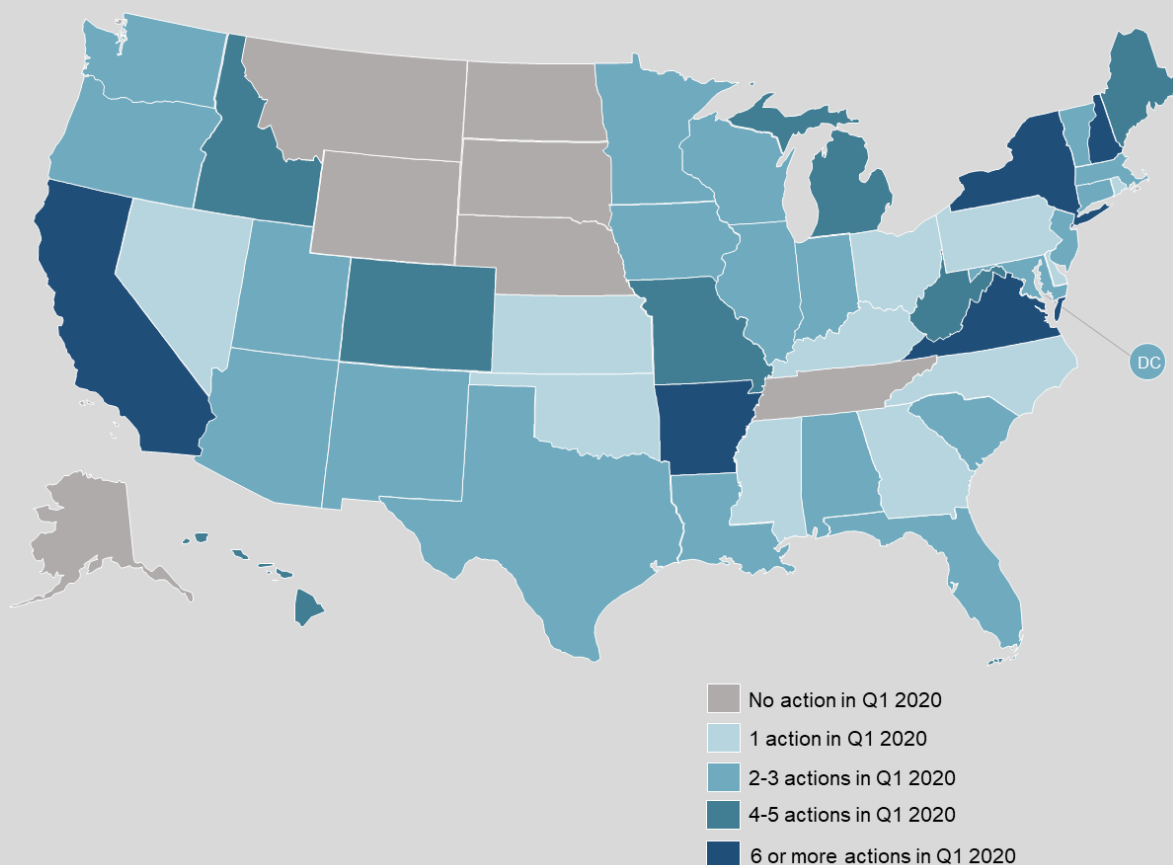
In March 2020, the Iowa General Assembly enacted legislation extending the availability of retail rate net metering until at least July 1, 2027 or when statewide DG penetration reaches 5%. At this point, a utility may petition the Iowa Utilities Board to develop a value of solar methodology, which may be used as the basis for outflow credit rates. The bill also prohibits utilities from treating DG customers as a separate rate class until the transition point.

Rocky Mountain Power Files Net Metering Export Credit Proposal in Utah

Rocky Mountain Power filed its proposed net billing program with Utah regulators in February 2020. The proposed tariff would credit DG customers for exported generation on a 15-minute

interval basis at rates varying by time of day and season from 1.3247 cents per kWh to 2.6293 cents per kWh. The export credit rate is comprised of values for avoided energy cost, avoided line losses, and integration costs.

Figure 1. Q1 2020 Action on DG Compensation, Rate Design, & Solar Ownership Policies, by Number of Actions



Kansas Supreme Court Overrules Mandatory Residential DG Demand Charge

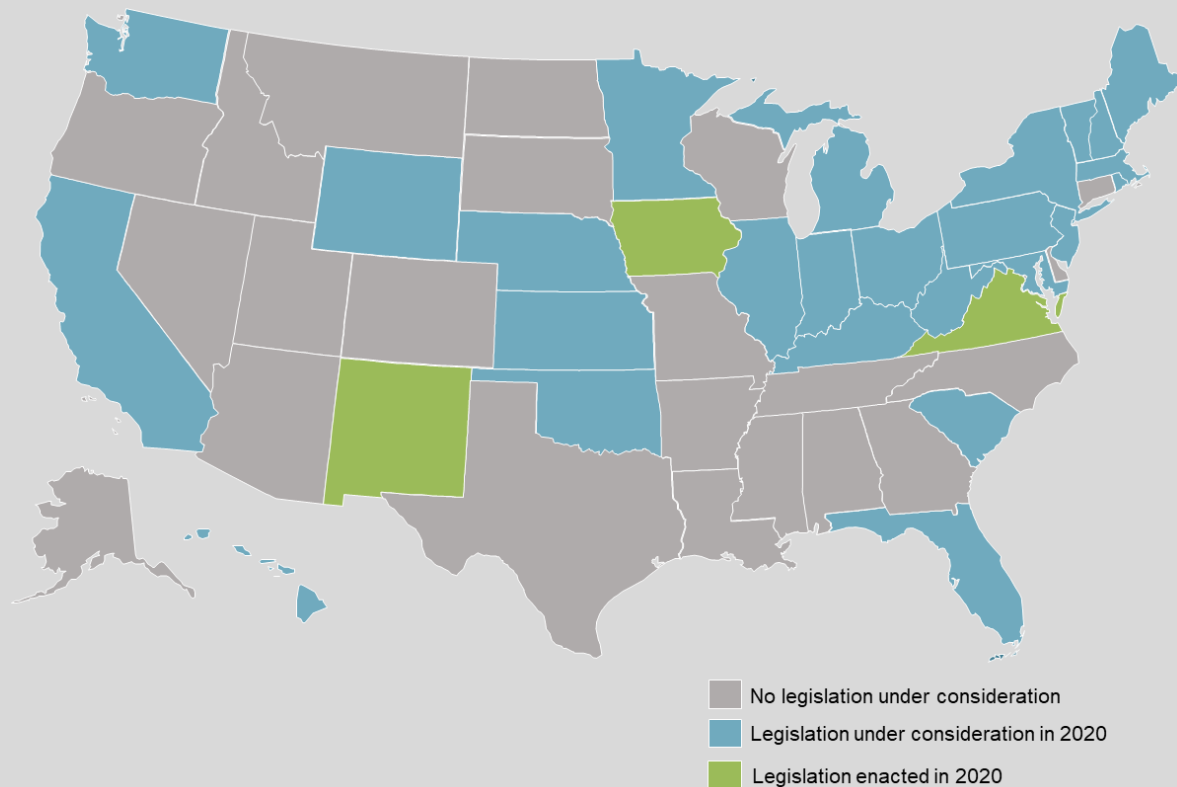
In early April 2020, the Kansas Supreme Court overruled the Corporation Commission’s approval of Evergy’s mandatory demand charge for residential DG customers. Under Kansas law, utilities may not charge customers producing their own energy more than other customers based on that distinction. The matter has been remanded to the Corporation Commission to implement this decision.

Virginia Legislators Pass Array of Distributed Solar Bills

Virginia lawmakers passed nine bills making changes to distributed solar policies during the quarter, with the Governor signing several of these into law in April 2020. The bills increase

the net metering aggregate cap, call for a net metering study when this cap is reached, and increase the system size limit. The bills also expand options for community solar and third-party ownership.

Figure 2. DG Compensation, Rate Design, and Solar Ownership Legislation Under Consideration in 2020 (as of 4/13/2020)



California Public Utilities Commission Rejects Utilities' Fixed Charge Proposals

The California Public Utilities Commission issued a decision in March 2020 rejecting fixed charge increases proposed by Pacific Gas & Electric, San Diego Gas & Electric, and Southern California Edison. Additionally, the decision rejects proposed minimum bill increases, but authorizes annual increases in line with inflation. The Commission also rejected an optional high fixed charge rate option proposed by San Diego Gas & Electric.

THE BIG PICTURE: INSIGHTS FROM Q1 2020

Proposed Legislation Focused on Expanding Distributed Solar Options

State lawmakers considered at least 130 bills related to distributed solar policies during Q1 2020. While proposed legislation in previous sessions has often featured highly controversial net metering successor bills, states' 2020 legislative session have thus far been tamer, with compromise legislation and bills expanding distributed solar options dominating discussions. Iowa lawmakers enacted compromise net metering successor legislation during the quarter, while the Virginia General Assembly passed several bills expanding net metering, community solar, and third-party ownership options in the state. In New Hampshire, legislation increasing the net metering system size limit is pending, and New Mexico lawmakers passed a memorial requesting that the legislative council convene a community solar working group.

States Blocking Additional Fees for DG customers

In Q1 2020, policymakers and regulators in multiple states took actions blocking the application of additional charges for customer-generators. The Kansas Supreme Court overruled the approval of Evergy's mandatory demand charge for residential DG customers. Kansas is currently the only U.S. state with such charges in effect. In Iowa, lawmakers enacted net metering successor tariff legislation that prohibits utilities from charging customer-generators additional fees that are not applicable to other customers in the same rate class. The bill also does not allow utilities to propose a separate rate class for DG customers until at least July 2027. Furthermore, in Virginia, legislators passed bills limiting the ability for utilities to assess standby charges for residential DG customers.

States Opting for Slower, Study-Based Approaches to Net Metering Successor Tariff Development

Recently, states addressing net metering successor tariff development have been opting for slower, study-based approaches. In Iowa, legislation enacted during Q1 2020 maintains retail rate net metering until at least July 2027, when the Iowa Utilities Board may begin developing a value of solar methodology that can be used as the basis for compensating exported energy. Virginia lawmakers enacted legislation preserving net metering until increased aggregate capacity limits are reached. Once these caps are reached, the Commission is to study the costs and benefits of net metering before adopting revisions. Washington legislators pursued a similar approach last year, allowing for the creation of net metering successor tariffs after an increased aggregate cap is reached. Meanwhile, solar valuation studies are being conducted in Connecticut, New Hampshire, and South Carolina to inform net metering successor tariff development, and Idaho regulators recently rejected a net metering successor settlement in favor of conducting a comprehensive cost-benefit study.

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 biweekly legislative & regulatory solar tracking, policy data sheets, & quarterly webinars)</i>	\$4,500	N/A
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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