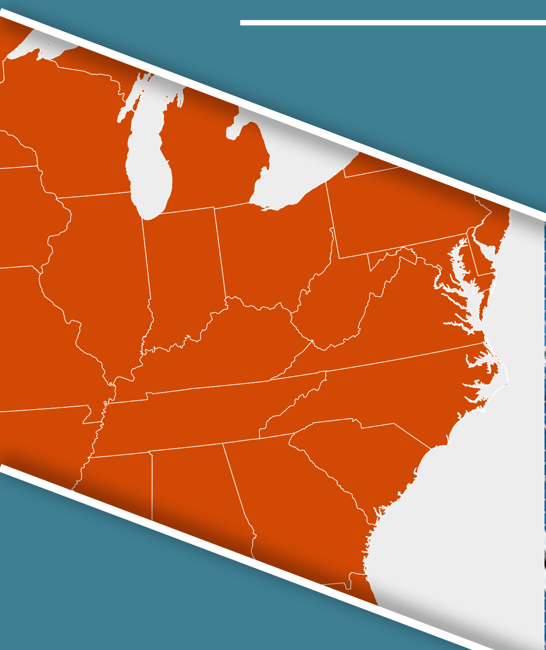
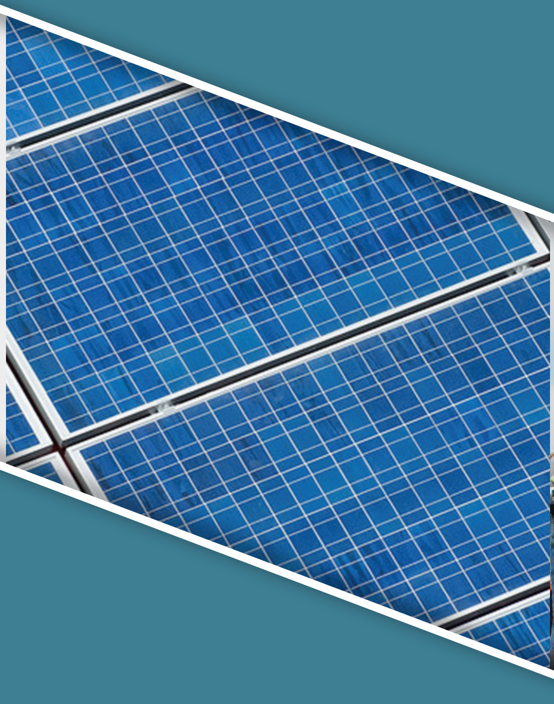
50 States of SOLAR

Q3 2017 Quarterly Report

Executive Summary





NC CLEAN ENERGY
TECHNOLOGY CENTER

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AUTHORS

Autumn Proudlove
Brian Lips
David Sarkisian
Achyut Shrestha

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.

CONTACT

Autumn Proudlove (afproudl@ncsu.edu)

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PREVIOUS EDITIONS

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:

- Q2 2017 Executive Summary
- Q1 2017 Executive Summary
- Q4 2016 and 2016 Policy Review – Executive Summary
- Q3 2016 Executive Summary
- Q2 2016
- Q1 2016
- Q4 2015 and 2015 Policy Review
- Q3 2015
- Q2 2015
- Q1 2015
- Q4 2014

ABOUT THE REPORT

PURPOSE

The purpose of this report is to provide state lawmakers and regulators, electric utilities, the solar industry, and other energy stakeholders with timely, accurate, and unbiased updates on how states are choosing to study, adopt, implement, amend, or discontinue policies associated with distributed solar photovoltaics (PV). This report catalogues proposed and enacted legislative, regulatory, 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 provides regular quarterly updates of solar policy developments, keeping stakeholders informed and up to date on a timely basis.

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 (1) state regulatory bodies and legislatures and (2) 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 focuses on cataloguing 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 this issue include:

- Significant changes to state or utility **net metering** laws and rules, including aggregate caps, system size limits, aggregate net metering rules, and compensation rates for net excess generation
- Changes to statewide **community solar** 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 residential 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 specifically related 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 policies and incentives are available at www.dsireusa.org.

EXECUTIVE SUMMARY

Q3 2017 SOLAR POLICY ACTION

In the third quarter of 2017, 41 states plus DC took a total of 142 actions related to distributed solar policy and rate design (Figure 1). Table 1 provides a summary of state actions related to net metering, rate design, and solar ownership during Q3 2017. Of the 142 actions catalogued, the most common were related to residential fixed charge and minimum bill increases (44), followed by net metering (36), and solar valuation or net metering studies (23).

Table 1. Q3 2017 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
Residential fixed charge or minimum bill increase	44	31%	26 + DC
DG compensation rules	36	25%	24
DG valuation or net metering study	23	16%	19 + DC
Community solar	18	13%	13
Residential demand or solar charge	14	10%	7
Utility-led rooftop PV programs	5	4%	5
Third-party ownership of solar	2	1%	1
Total	**142**	**100%**	**41 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 Q3 2017

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

NV Energy Submits Proposal to Implement A.B. 405 Net Metering Changes

After terminating net metering in 2015, the Nevada Legislature restored it with A.B. 405, which the Governor signed in June 2017. The Public Utilities Commission of Nevada held expedited proceedings to implement the policy changes. In its July filing, NV Energy presented tariffs that represented net billing, rather than net metering, and proposed an increase in the fixed charge for all residential customers. In a September decision, the Commission rejected NV Energy's tariffs, arguing that the plain language of A.B. 405 requires a return to traditional net metering, which utilizes a monthly netting period.

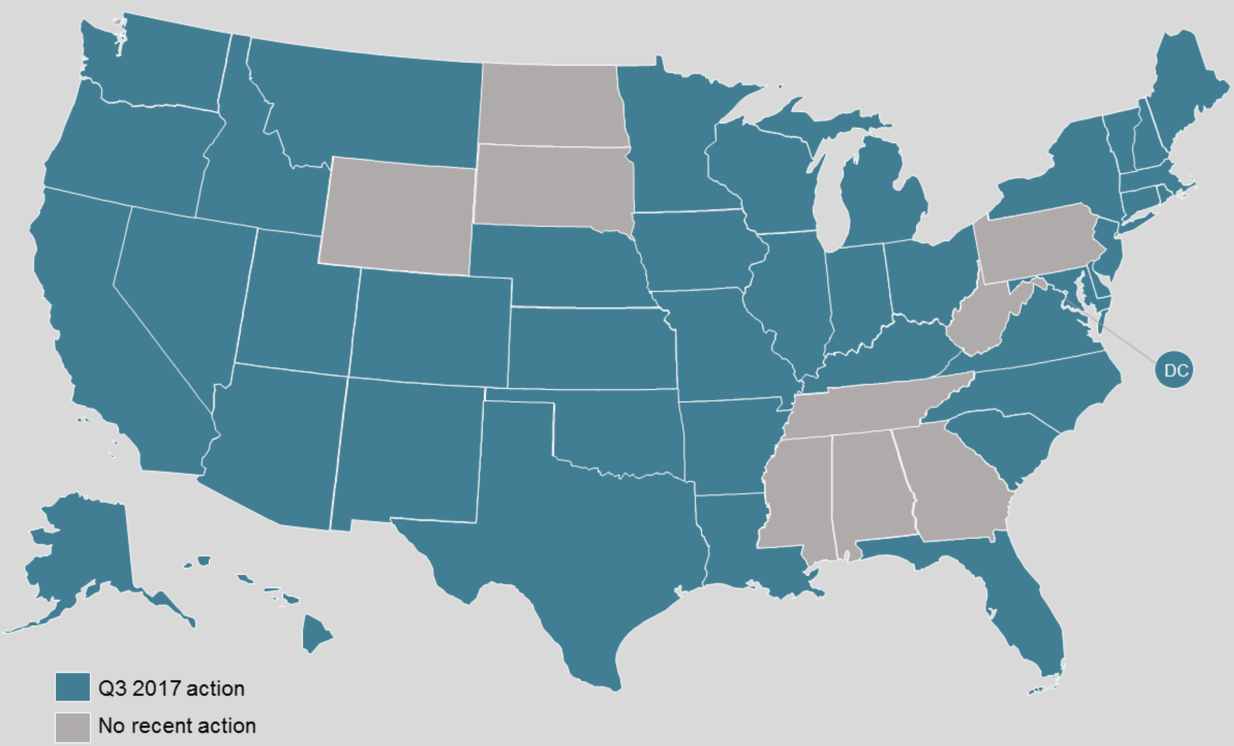
Utah Begins Transition Away From Net Metering

In September 2017, the Utah Public Service Commission approved a settlement agreement ending retail rate net metering for new DG customers starting November 15th. A transition program with a reduced export credit rate will begin for new DG customers at this time, until a more permanent export credit rate is determined through an in-depth proceeding. The export credit proceeding is expected to conclude within three years.

Kansas Corporation Commission Makes DG Policy Determination

The Kansas Corporation Commission approved a settlement in September 2017, making a general determination that residential DG customer rates should be cost-based and not include any unquantifiable benefits. The Commission also noted that it is appropriate to create a separate customer class for DG customers and apply demand or DG capacity-based charges. However, any changes to tariffs will take place in utility-specific filings.

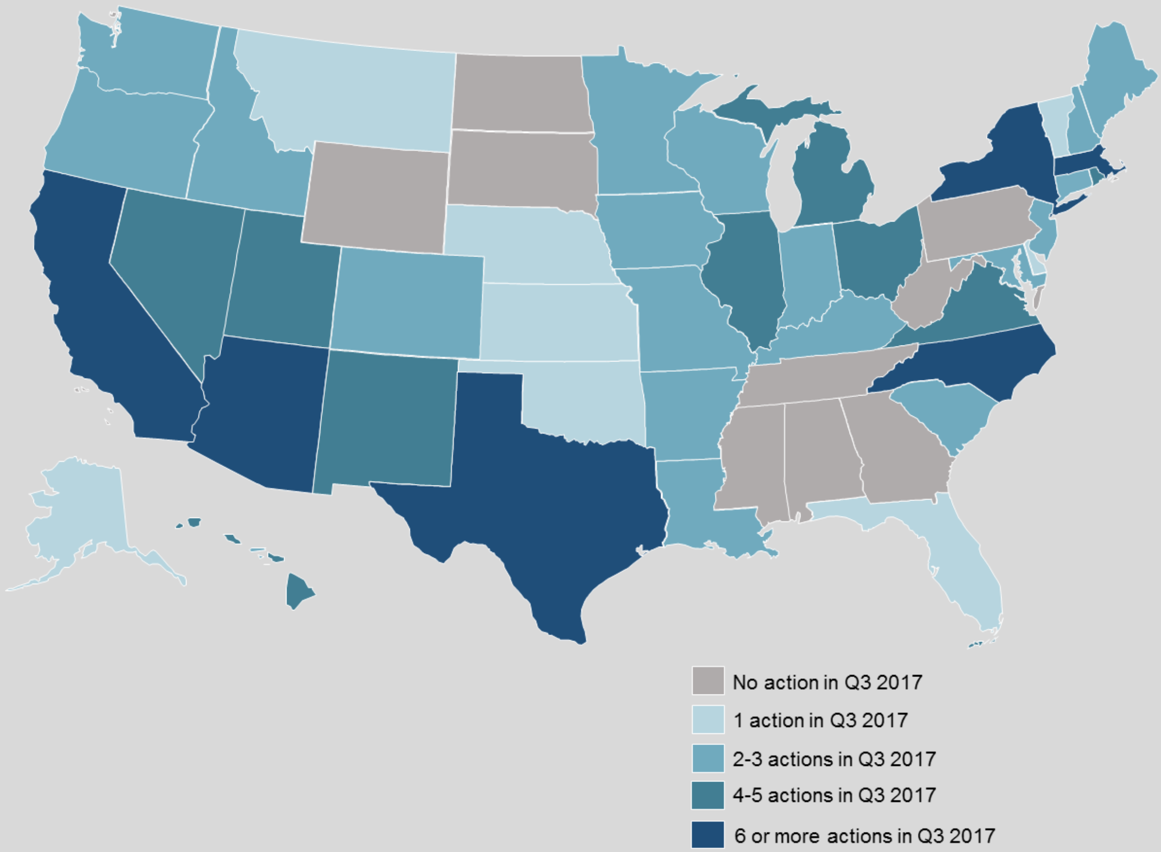
Figure 1. Q3 2017 Action on Net Metering, Rate Design, & Solar Ownership Policies



Idaho Power Requests a Separate Customer Class for DG Customers

In July 2017, Idaho Power filed a proposal to separate new residential and general service customers with on-site generation into unique customer classes. Idaho Power is not currently proposing any rate changes for these customers, but the utility requested that a generic docket be opened to develop a new compensation structure for customer-sited DERs. Idaho is one of five states without statewide net metering or other DER compensation rules.

Figure 2. Q3 2017 Action on Solar Policy & Rate Design, By Number of Actions



Illinois Begins Implementation of Community Solar Program

Pursuant to the Future Energy Jobs Act, the Illinois Power Agency published a draft version of its Long-Term Renewable Resources Procurement plan in September 2017, while utilities filed proposed community net metering tariffs. The new tariffs compensate participants at the retail electric supply rate, but do not include transmission and distribution components. The draft plan includes funding for a low-income community solar incentive program and a competitive bidding program for low-income community solar pilot projects.

THE BIG PICTURE: INSIGHTS FROM Q3 2017

States Taking an Incremental Approach to Net Metering Reforms

In several states' recent net metering decisions, the principle of gradualism has emerged as a common thread. For example, state utilities commissions in Louisiana and New Hampshire opted to make minor changes to their net metering policies this year while more comprehensive reforms are considered. In Q3 2017, the Utah Public Service Commission approved a settlement agreement including a net metering transition tariff that will be in effect while parties determine the export credit rate structure over a three-year period.

Diverse Community Solar Credit Rate Structures Under Consideration

Following in the footsteps of net metering, community solar programs are beginning to deviate more and more from traditional retail rate crediting. Furthermore, states are taking quite diverse approaches to community solar credit rates, just as they are with net metering rates. Minnesota, New York, and Oregon are utilizing value-based approaches, while Hawaii is considering time-varying rates, and Illinois and North Carolina are using rates based upon avoided cost or energy supply costs.

New Efforts to Create Separate Customer Classes for DG Customers

Utilities, as well as some policymakers and regulators, are showing increased interest in the separation of DG customers into a unique customer class. Utilities in Idaho and Iowa recently requested the creation of a new customer class for DG customers without proposing any changes to rates for these customers at this time. Legislation in Montana opens the door to this type of differentiation, and regulators in Kansas recently issued a determination that it is appropriate to separate DG customers into a separate class.

Questions Emerge About Solar-Plus-Storage Compensation

Multiple states, primarily in the northeast, are considering the eligibility of solar-plus-storage systems to participate in net metering. Following multiple requests for advisory rulings on the topic, the Massachusetts Department of Public Utilities opened an inquiry into solar-plus-storage net metering eligibility in early October, while Rhode Island and New York are also addressing this issue.

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, including a separate Powerpoint file of all summary maps
- 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 $1,600 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

Visit https://commerce.cashnet.com/NCSU-NCCETC to purchase the full 50 States of Solar Q3 2017 Quarterly Report.

Customer Type	Annual Subscription	Single Report – Current Quarter
Business or Individual	$1,600	$500
Non-Profit, Government, or Education	$1,300	$400

Previous editions of the 50 States of Solar are offered at a discounted rate. Visit the link above for details. Customers purchasing an annual subscription, receive complimentary access to all past editions of the report.

COMPLIMENTARY COPIES FOR POLICYMAKERS

Policymakers and regulators (limited to federal and state legislators and staffers, utility commissioners, utility commission staff, state consumer advocate office staff, and state energy office staff) and **students** (for academic purpose only): Contact us to receive a complimentary copy of the most recent report.

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