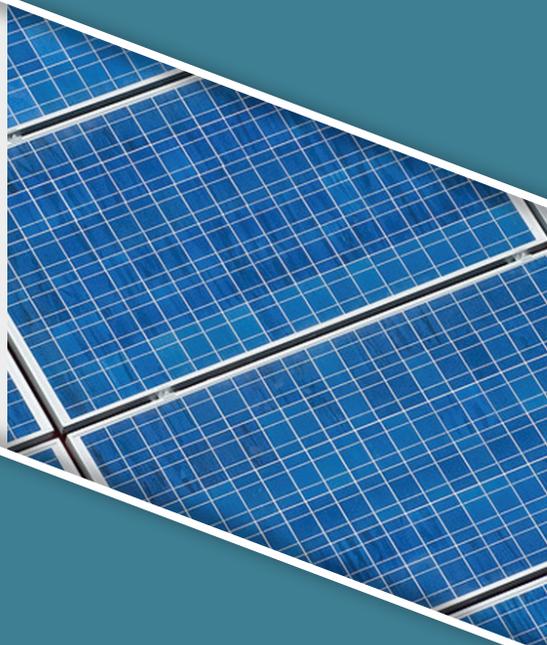


50 States of SOLAR

Q2 2017 Quarterly Report
Executive Summary



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)

ACKNOWLEDGMENTS

We would like to acknowledge the Solar Energy Industries Association for its support of the NC Clean Energy Technology Center.



PREFERRED CITATION

North Carolina Clean Energy Technology Center, *The 50 States of Solar: Q2 2017 Quarterly Report*, July 2017.

COVER DESIGN CREDIT

Cover design is by [Capital City Creative](#).

COVER PHOTO CREDIT

Photo by Wayne National Forest. “Wayne National Forest Solar Panel Construction.” July 15, 2009. CC-BY 2.0. Retrieved from <https://www.flickr.com/photos/waynenf/3725051641>

Photo by North Carolina Clean Energy Technology Center. “Training Class – PV Installation.” April 25, 2014.

DISCLAIMER

While the authors strive to provide the best information possible, neither the NC Clean Energy Technology Center nor NC State University make any representations or warranties, either express or implied, concerning the accuracy, completeness, reliability or suitability of the information. The NC Clean Energy Technology Center and NC State University disclaim all liability of any kind arising out of use or misuse of the information contained or referenced within this report. Readers are invited to contact the authors with proposed corrections or additions.

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:

- [Q1 2017 Executive Summary](#)
- [Q4 2016 and 2016 Policy Review – Executive Summary](#)
- [Q3 2016 Executive Summary](#)
- [Q2 2016 Executive Summary](#)
- [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

Q2 2017 SOLAR POLICY ACTION

In the second quarter of 2017, 39 states plus DC took a total of 140 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 Q2 2017. Of the 140 actions catalogued, the most common were related to residential fixed charge and minimum bill increases (42), followed by net metering (39), and solar valuation or net metering studies (21).

Table 1. Q2 2017 Summary of Policy Actions

Policy Type	# of Actions	% by Type	# of States
Residential fixed charge or minimum bill increase	42	30%	25 + DC
DG compensation rules	39	27%	24
DG valuation or net metering study	21	15%	17 + DC
Community solar	14	10%	12
Residential demand or solar charge	13	9%	8
Third-party ownership of solar	8	6%	6
Utility-led rooftop PV programs	3	2%	3
Total	140	100%	39 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 2017

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

Nevada Changes Course, Nearly Restoring Net Metering

In June 2017, Governor Sandoval signed A.B. 405 into law, increasing the credit rate for excess generation from avoided cost to 95% of the retail rate. This rate will step down over time to a floor of 75% of the retail rate as certain installed capacity thresholds are reached.

New Hampshire PUC Issues Net Metering Successor Tariff Decision

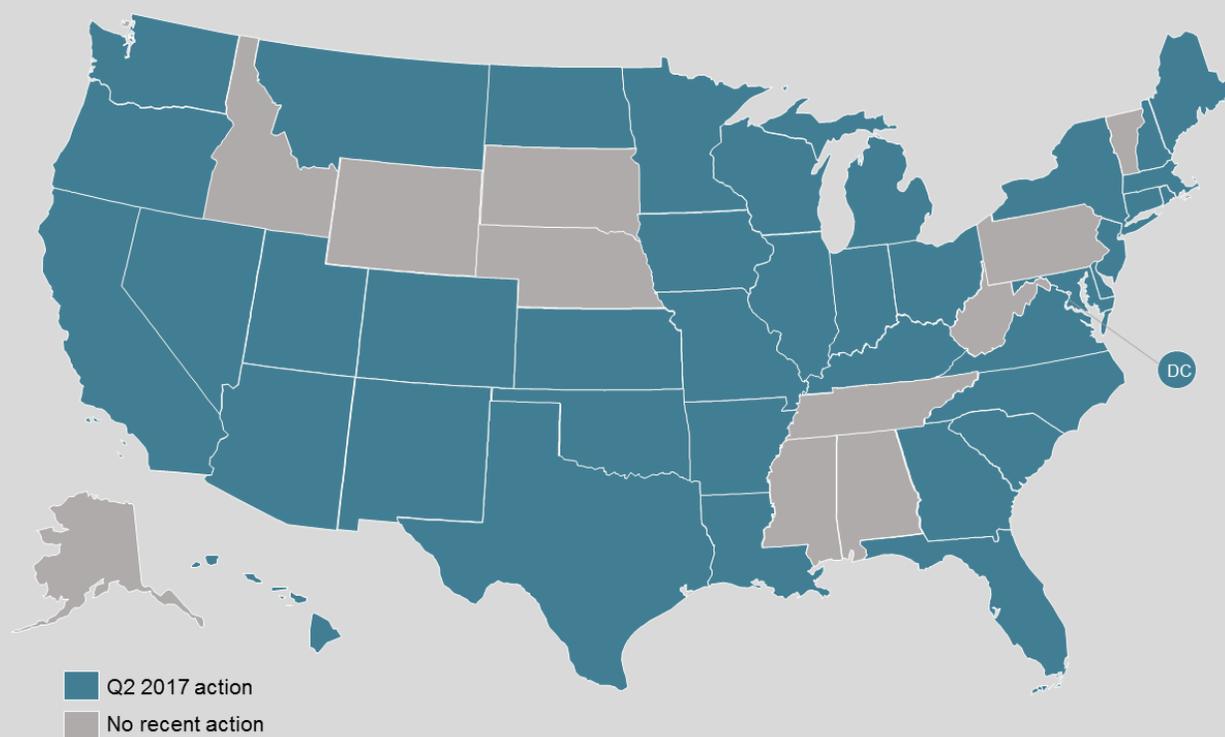
In June 2017, the New Hampshire Public Utilities Commission issued a decision in the state's net metering successor tariff proceeding. The Commission adopted a successor tariff that largely retains net metering, with certain non-bypassable charges applied to grid imports, as well as a reduced net excess generation credit rate. The Commission also ordered a value of

distributed energy resources study and four pilot programs to be conducted to inform future decisions to the state's policy.

Montana Legislature Directs Utilities to Review Net Metering Costs and Benefits

The Governor signed S.B. 219 into law in May 2017, directing the state's public utilities to conduct studies of the costs and benefits of net metering by April 2018. After these studies are submitted, the Public Service Commission may make a determination within each utility's rate case whether customer-generators should be served under a separate class of service.

Figure 1. Q2 2017 Action on Net Metering, Rate Design, & Solar Ownership Policies



North Carolina Bill Enabling Solar Leasing and Initiating a Net Metering Review Moves Forward

The North Carolina legislature passed H.B. 589 in June 2017, which makes many changes to the state's current solar policies. The bill would authorize solar leasing in certain utility territories (Duke Energy and participating municipal utilities) and allow these utilities to lease solar systems to customers as well. Additionally, the bill directs the state's public utilities to file revised net metering rates after an investigation of the costs and benefits of net metering is conducted.

Maine Governor Vetoes Second Net Metering Reform Legislation

In June 2017, the Maine legislature passed legislation that would restore retail rate net metering in the state and direct the Public Utilities Commission to conduct a net metering cost-benefit study. The Commission would also be responsible for developing recommendations for transitioning from net metering to time-varying rates, market-based rates, or other rate designs. The Governor vetoed the bill in early July.

THE BIG PICTURE: INSIGHTS FROM Q2 2017

Revisiting Net Metering Successor Decisions

A common thread standing out in Q2 2017 was that of states reconsidering prior net metering successor decisions. State legislatures in both Nevada and Maine passed bills significantly altering net metering successor policies adopted by the states' public utilities commissions. In New Hampshire, the Commission adopted a net metering successor tariff with the intent of revisiting these rules after completion of a DG valuation study and multiple pilot programs. Hawaii is also considering adjustments to its successor tariffs, and California is set to consider further changes in 2019.

Renewed Interest in Value of Distributed Generation Studies

Over the past several quarters, state action on DG valuation studies has waned slightly, with more states proposing specific changes to DG compensation policies rather than conducting studies. However, renewed attention to these studies emerged in Q2 2017, including in states where such studies have been previously completed. Maine, Montana, Nevada, and New Hampshire all took legislative or regulatory action toward conducting DG valuation or net metering cost-benefit studies in Q2 2017, while stakeholders in Arkansas and Utah recommended completion of studies prior to adopting significant changes within ongoing net metering dockets. This trend toward greater interest in valuation studies is coupled with increasing use of pilot programs to gain data to inform policy decisions.

Movement Toward Broad Investigations

Several states are undertaking broad investigations related to distributed energy resources, grid modernization, and regulatory reform, rather than considering individual solar policy changes in isolation. Illinois, Maryland, Missouri, and New York are currently engaged in such proceedings with varying degrees of depth and scope. Similarly, some state legislatures, such as those in Michigan, Nevada, and North Carolina, have recently chosen to address several energy or solar policy topics together, whether through comprehensive legislative packages or a series of bills.

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-NCCECTC> to purchase the full 50 States of Solar Q2 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.

CUSTOMIZED SOLUTIONS

The NC Clean Energy Technology Center also offers customized policy research and analysis services. Visit <http://www.dsireusa.org/services/> to learn more.