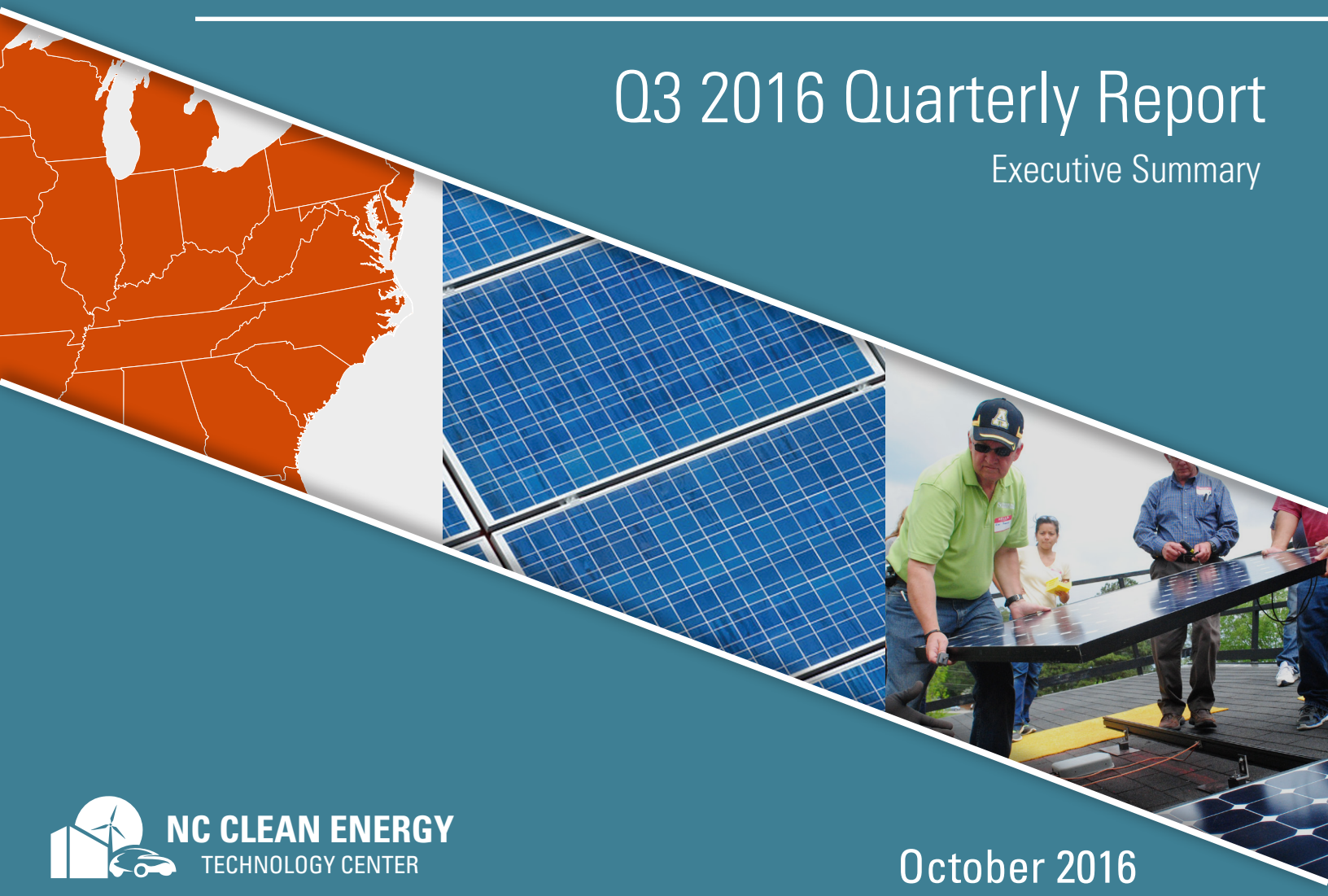
50 States of SOLAR

Q3 2016 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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COVER PHOTO CREDIT

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PREVIOUS EDITIONS

The 50 States of Solar is a quarterly publication. Previous editions of *The 50 States of Solar* are available for complimentary download at www.nccleantech.ncsu.edu or by clicking here:

- 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

OVERVIEW OF Q3 2016 POLICY CHANGES

In the third quarter of 2016, 42 states plus DC took a total of 117 actions related to distributed solar policy and rate design (Figure 1). These actions span at least 95 unique regulatory dockets.

Table 1 provides a summary of state actions related to net metering, rate design, and solar ownership during Q3 2016. Of the 117 actions catalogued, the most common were related to residential fixed charge increases (44), followed by net metering (31), and solar valuation or net metering studies (17).

Table 1. Summary of Policy Actions (Q3 2016)

Policy Type	# of Actions	% by Type	# of States
Residential fixed charge increase	44	38%	25 + DC
Net metering	31	26%	22
Solar valuation or net metering study	17	15%	15 + DC
Community solar	10	9%	9
Residential solar charge	9	8%	7
Third-party ownership of solar	3	3%	3
Utility-led rooftop PV programs	3	3%	3
Total	**117**	**100%**	**42 States + DC**

Note: The "# of States/ Districts" total is not the sum of the rows, as some states have multiple actions.

TOP FIVE SOLAR POLICY DEVELOPMENTS OF Q3 2016

Five of the quarter's top policy developments are highlighted below. Several major regulatory decisions were made in Q3 2016, as well as continued work in other significant solar proceedings.

Demand Charge and Net Metering Decisions Delayed in Unisource Energy Services Rate Case Until Arizona Value of Distributed Generation Proceeding Concludes

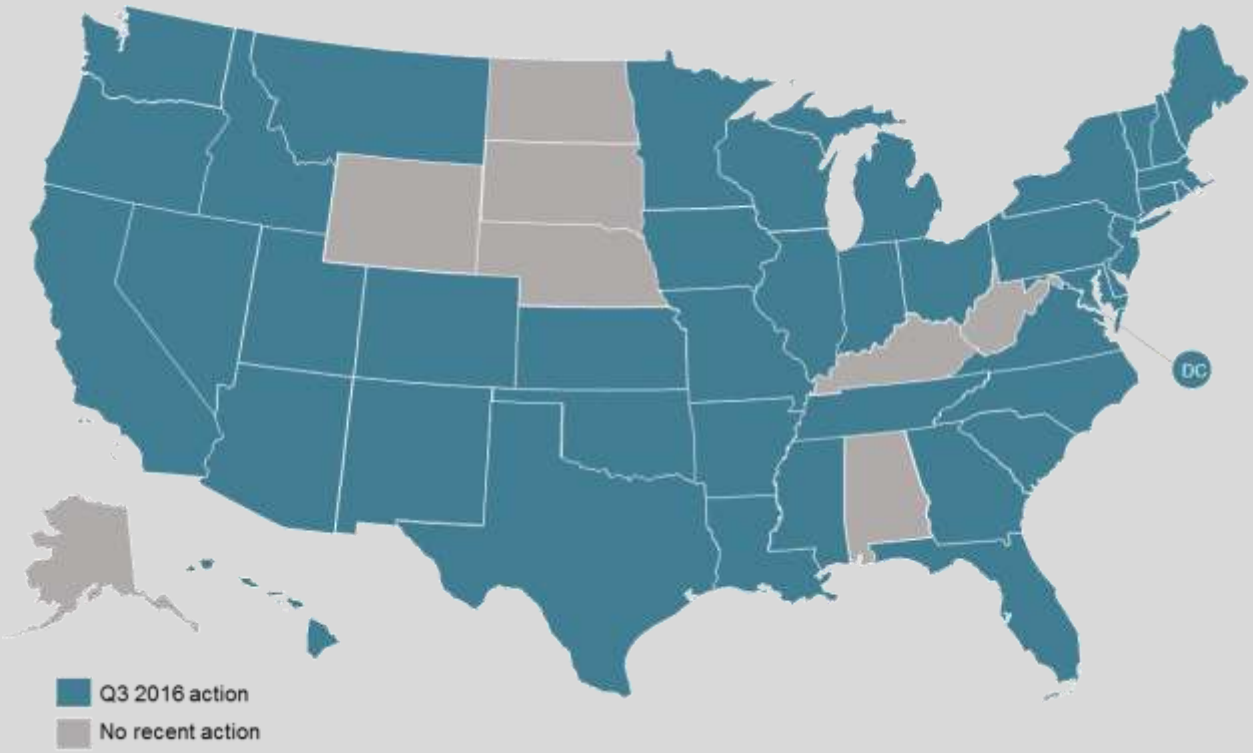
In August 2016, the Arizona Corporation Commission (ACC) issued a decision in Unisource Energy Services' general rate case, which includes proposals to increase the residential fixed charge, adopt a demand charge for customers with on-site distributed generation (DG) systems,

and reduce the net metering credit rate. The ACC approved an increase in the residential fixed charge, but delayed a decision on the demand charge and net metering proposals until a decision is made in the state's broader Value of DG proceeding.

Nevada Settlement Agreement Grandfathers Existing Net Metering Customers

The Public Utilities Commission of Nevada (PUCN) approved a settlement agreement in September 2016 grandfathering net metering customers who had applied or installed systems by December 31, 2015. The PUCN's December 2015 decision to reduce net metering credit rates did not originally grandfather existing net metering customers. The Governor's New Energy Industry Task Force also recommended that the legislature restore retail rate net metering, with a $25 minimum bill, until the PUCN can implement a compensation mechanism based on the value of solar.

Figure 1. Action on Net Metering, Rate Design, & Solar Ownership Policies (Q3 2016)



Arkansas Evaluates Net Metering Credit Rate Issues

In accordance with legislation enacted in 2015, the Arkansas Public Service Commission is evaluating the state's net metering policy. A major part of this investigation is focused on examining cost-shift issues and determining if changes should be made to net metering credit rates or if customer-generators should pay additional charges.

Grid Access Charges Dropped in Favor of Time-of-Use Rates in Xcel Energy Colorado Settlement Agreement

In August 2016, a settlement agreement was reached in Xcel Energy Colorado's general rate case, in which the utility proposed a new grid access charge for all residential customers. Instead of adopting a grid access charge, Xcel Energy would implement pilot time-of-use rates for residential customers, with the goal of making these default rates. The settlement has not yet been approved, but is supported by a majority of parties.

NARUC Releases Draft DER Compensation Manual

The National Association of Regulatory Utility Commissioners released their draft distributed energy resource (DER) compensation manual in July 2016. The manual does not make recommendations for DER rate design, but rather offers regulators a menu of options and issues to consider. NARUC accepted comments on the draft manual through September 2, 2016.

THE BIG PICTURE: TOP TRENDS OF Q3 2016

A Departure in Fixed Charge Decision Trends

Requests to increase residential fixed charges are showing no sign of slowdown. In contrast to last quarter's fixed charge decisions, where most utilities were not granted an increase, all fixed charge decisions in Q3 granted utilities at least a partial increase. On average, utilities were granted 53% (median of 37%) of their requested increase in Q3 2016.

Net Metering Credit Rate Considerations Continue

The majority of net metering changes relate to credit rates for electricity exported to the grid. There are currently eleven states considering changes related to credit rates, up from seven last quarter.

Increasing Granularity of Community Solar Credit Rates

Most community solar programs are structured such that subscribers receive retail rate per-kWh credits on their bills. However, recently some states have proposed more granular approaches to community solar credit rates, with one state proposing time-of-use rates and another moving toward value of solar rates.

More Action on Demand Charges for All Residential Customers

Residential demand charges remain an emerging area of interest, but few proposals are being put forward by investor-owned utilities. Of note, the two most recent proposals for residential demand charges apply to all residential customers, rather than residential customer-generators only.

FULL REPORT DETAILS & PRICING

Included in the Full Report:

- Detailed policy tables describing each 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
- **Receive a free copy of the Q2 2016 Report when you purchase an annual subscription!**

Visit https://commerce.cashnet.com/NCSU-NCCETC to purchase the full Q3 2016 50 States of Solar Report.

	Annual Subscription	Single Report – Current Quarter	Single Report – Previous Quarter
Business or Individual	$1,600	$500	$300
Non-Profit, Government, or Education	$1,300	$400	$210

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