Distributed Solar in the Draft CT Comprehensive Energy Strategy

Proposals Risk Stalling Deployment at Crucial Moment

August 3, 2017

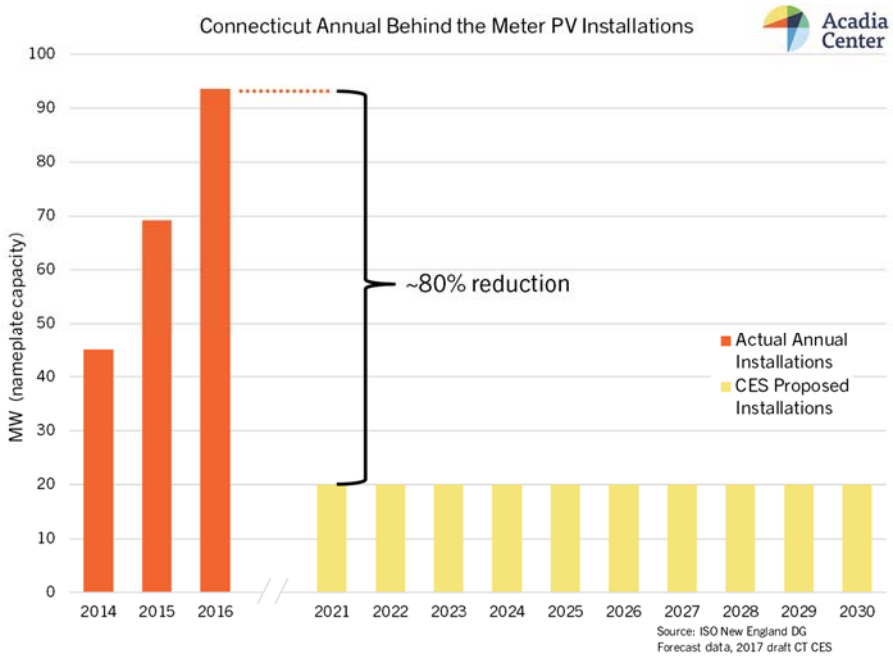
Overview

Distributed solar will play a key role in reducing Connecticut's greenhouse gas ("GHG") emissions,[1] which have increased since 2012 and currently exceed the state's mandatory emissions cap for 2020.[2] Yet reforms proposed in the 2017 draft Comprehensive Energy Strategy ("CES") appear to raise significant new challenges to distributed solar deployment that put its crucial climate mitigation role at real risk.

Acadia Center has four high-priority concerns regarding distributed solar. Each concern must be resolved in the final CES through revisions that: (1) continue the expansion of new distributed solar capacity; (2) improve, but do not end, net metering; (3) properly account for all ratepayer benefits from distributed solar; and (4) seriously commit to a full statewide community solar program. Each is addressed in more detail below. Connecticut should be heading down a path towards consumer choice and ambitious goals, not new arbitrary limits.

Distributed Solar Cap Imposes Severe Deployment Cut

The draft CES recommends a cap of 20 MW[3] a year through 2030 for customer-sited solar installations. In 2016 alone, Connecticut installed about 90 MW of customer-sited solar. The new cap would result in a nearly 80% cut in new installations in 2021 compared to 2016, as shown in the following chart.



If enacted, the CES recommendation for a new cap would place an arbitrary limit on the future growth of Connecticut's in-state market for distributed solar—with major downsides for the state's climate plans, growing clean energy economy, in-state solar industry, and local job growth, as well as the ability of residents and businesses to control their energy use and costs.

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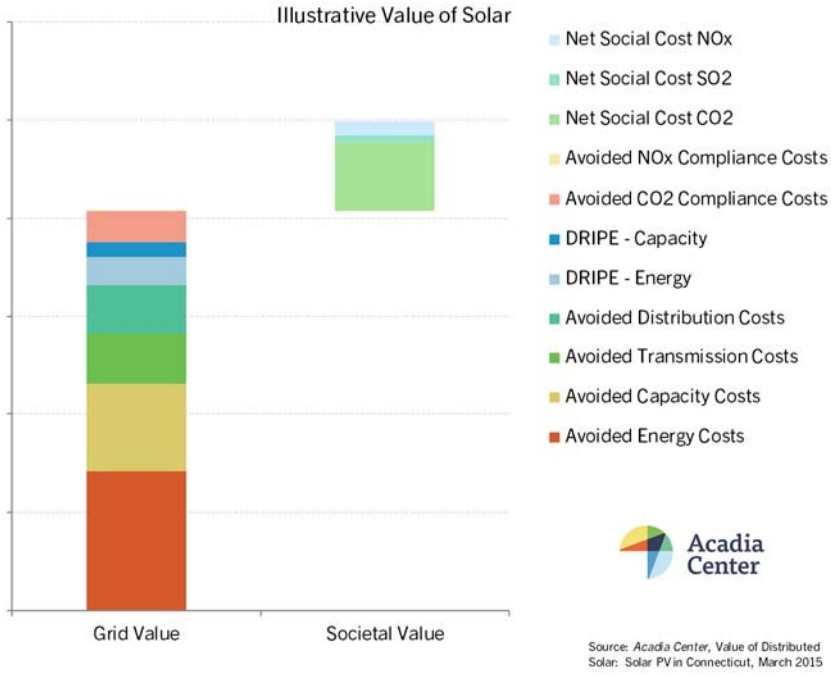
New Feed-In-Tariff Proposal Restricts the Right to Self-Consumption

The draft CES recommends that customer-sited solar would be metered separately from the customer's consumption, effectively ending net metering.[4] This fundamentally changes the relationship between customers and the grid, because customers would no longer be consuming their own clean generation and a rooftop would merely be a convenient place to locate a project. This approach is contrary to important principles of consumer control and would interfere with a customer's right to produce and consume her own clean energy. It also moves Connecticut away from a future of integrated smart homes, where clean generation, energy storage, electric vehicles, and smart appliances operate collectively to optimize a customer's energy usage.

Connecticut's existing solar incentive programs, such as ZREC and RSIP,[5] can be reformed, but separately metered feed-in tariffs should not be required. Massachusetts, for example, is in the final stages of developing a new, more cost-effective solar incentive program that complements net metering structures, but does not infringe on customers' rights.[6] Stand-alone clean distributed generation, separately metered, has a role to play as a complement to behind-the-meter projects or as a choice for the customer.

Net Metering Reform Must Properly Account for All Benefits to Ratepayers

Acadia Center supports net metering reform that properly accounts for the benefits and costs of distributed energy resources and respects customers' right to self-consumption. The proper way to reform net metering is to move away gradually from monthly netting. Instead, consumption and generation should be netted based on more granular time periods through one meter, with customers paying appropriately for imported energy and credited appropriately for the value of exports. This provides better incentives for customers with clean distributed generation and helps advance the future of integrated smart homes, where clean generation, storage, electric vehicles, and smart appliances operate collectively to optimize a customer's impact on the grid.



The draft CES does present some limited information on the value of solar, specifically estimating 15 cents per kilowatt hour for the avoided costs of generation and delivery, but the details of this calculation are not fully explained.[7] While Acadia Center supports reforms to net metering structures based on long run values for

ratepayers, any statutory changes should require DEEP and PURA to consider, through a transparent evidentiary proceeding, the full value to the energy system when evaluating the net benefits of solar PV, including market price suppression, avoided costs of compliance with environmental and public health requirements, and reliability and resiliency. This approach would address concerns about cross-subsidies and, paired with reforms to ZREC and RSIP, can cost-effectively promote clean local generation that also helps optimize the electric grid.[8]

Statewide Community Solar Program Needs Commitment, Not More Hurdles

In the draft CES, DEEP supports pursuing the goals of the current pilot for community solar, known as the Shared Clean Energy Facility (SCEF) program.[9] One goal of this pilot is to help provide access to clean energy for renters, households with shady roofs, and low-to-moderate-income ratepayers. However, the draft CES falls short of the actual commitment needed to scale up the SCEF pilot to a full statewide community solar program and may even put up new barriers by requiring upfront payments or long-term participation by subscribers. The final CES must demonstrate a clear commitment to community solar to promote an equitable distribution of benefits from solar across Connecticut. Voluntary renewable energy products, also discussed by DEEP, are not an adequate substitute for an expanded community solar program.

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[1] *See* Acadia Center, *EnergyVision 2030*, http://2030.acadiacenter.org/wp-content/uploads/2017/05/Acadia-Center_EnergyVision2030_Summary-Overview_05152017.pdf.

[2] *See* Acadia Center, *Updated Greenhouse Gas Emissions Inventory for Connecticut*, June 13, 2016. http://acadiacenter.org/wp-content/uploads/2016/06/CT-GHG-Emissions-Inventory-Report-2.pdf .

[3] The draft CES allocates 0.25% of the proposed 1% annual Renewable Portfolio Standard increase to purchasing energy and RECs from in-state behind the meter projects, with 0.75% for grid-scale procurements. There are no geographic constraints on the grid-scale allotment, which means that it could be fulfilled completely by out-of-state projects. While this does achieve regional GHG emissions reductions, the recommendations curtail in-state behind the meter to a quarter of the overall increase, at most, as energy efficiency procurements also fall under this allocation.

[4] *See* "Shared Clean Energy Pilot Program," Comprehensive Energy Strategy, July 26, 2017, p. 72-73, http://www.ct.gov/deep/lib/deep/energy/ces/2017_draft_comprehensiveenergystrategy.pdf .

5 *See* DEEP's Low and Zero Emissions Renewable Energy Credit Program, http://www.ct.gov/deep/cwp/view.asp?a=4120&Q=503720, and CT Green Banks's Residential Solar Investment Program, https://www.energizect.com/your-home/solutions-list/residential-solar-investment-program.

[6] *See* Development of the Solar Massachusetts Renewable Target (SMART) Program, Massachusetts Department of Energy Resources, http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/rps-aps/development-of-the-next-solar-incentive.html .

[7] *See* Figure E8, "Cost of Behind the Meter Solar from Residential Electric Ratepayer Perspective (20 Year Levelized Cost, Nominal$)," Comprehensive Energy Strategy, July 26, 2017, http://www.ct.gov/deep/lib/deep/energy/ces/2017_draft_comprehensiveenergystrategy.pdf .

[8] *See* Acadia Center, *Next Generation Solar Framework*, November 2015, http://acadiacenter.org/document/nextgensolarframework/.

[9] *See* "Shared Clean Energy Pilot Program," Comprehensive Energy Strategy, July 26, 2017, p. 26, http://www.ct.gov/deep/lib/deep/energy/ces/2017_draft_comprehensiveenergystrategy.pdf .