

Solar America Board for Codes and Standards



A GENERALIZED APPROACH TO ASSESSING THE RATE IMPACTS OF NET METERING

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A GENERALIZED APPROACH TO ASSESSING THE RATE IMPACTS OF NET ENERGY METERING

Study Report Overview

This report presents a thorough examination of the impact of net-metered solar facilities on non-participating customers' utility rates. It puts forward a methodology for the valuation of net energy metering (NEM) focused on best practices. Information in this report will assist state policy makers, utility planners, utility regulators, and all other stakeholders who must evaluate the potential rate impacts of NEM in their states. The report centers on the impact of net-metered solar facilities (because solar facilities comprise the majority of net-metered generation) and does not address economic impacts, environmental impacts, or impacts on participating customers investing in distributed generation (DG) resources. The report also includes an analysis of the methodology used to determine rate impacts but does not undertake a review of any particular state renewable energy program.

Why the Report is Important

NEM has consistently been identified as a critical component supporting customer investment in renewable DG. Although there are various policy options related to NEM, the basic structure is to allow a utility customer's on-site generation to offset the customer's load and deliver any excess electricity to the utility in exchange for an equal amount of electricity from the utility at a later time. To promote opportunities for customers to invest in DG, forty-three states, the District of Columbia, and Puerto Rico have implemented different NEM programs. Increasing interest in NEM programs has come at a particularly important juncture in the development of the solar industry as module prices declined markedly in 2009-2010. This decline in prices resulted in increased consumer interest in solar energy despite the economic climate. However, while many NEM programs in this two-year period broadened in scope, the effectiveness of programs continued to vary widely among states.

Issue

The establishment of NEM programs has not been without resistance. The most significant resistance comes from investor-owned utilities concerned that a large NEM program in their service territory may result in increased rates for nonparticipating customers and a loss of profit for investors. At present, a detailed analysis of the potential rate impacts of NEM has only begun to be developed. There is disagreement over the appropriate inputs needed for such an analysis. Despite this disagreement, efforts to rigorously quantify the rate impacts of NEM programs have begun to move forward in Arizona, California, Texas, and elsewhere. It is anticipated that these efforts will facilitate the development of a consensus view of the components that need to be considered in the valuation of renewable energy resources such as distributed solar energy systems.

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Solar America Board for Codes and Standards Recommendation

This Solar ABCs report presents guidelines that utility regulators can follow to determine the rate impacts of NEM. In particular, this report recommends that:

- Studies comparing the costs and benefits of NEM should include the specific costs and benefit inputs identified in the report.
- None of the benefits identified in the report should be arbitrarily set to zero based on unproven assumptions.
- Capacity benefits associated with deferral of utility generation on transmission and distribution facilities should be modeled under a long-term framework to ensure that the value of photovoltaics to defer or avoid these resources under a long-term planning framework is properly captured.
- Assessment of the costs and benefits of net metering should be based only on exported energy, not the entire production of the facility.
- Program administrative costs should be based on a long-term assessment of costs based on the expectation that updating utility billing software to accommodate and support grid-modernization efforts, which include net metering, will be necessary.

At the earliest stages of a NEM program, the cost of such studies may be greater than any net costs or net benefits themselves, and regulators may understandably be hesitant to undertake studies prior to significant NEM deployment. The results discussed in this report should give regulators confidence that rate impacts at the earliest stages will be negligible and need not be a concern that leads to restrictive NEM policy.

For more information please contact

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Download the full report:

www.solarabcs.org/rateimpact

About Solar America Board for Codes and Standards

The Solar America Board for Codes and Standards (Solar ABCs) is a collaborative effort among experts to formally gather and prioritize input from the broad spectrum of solar photovoltaic stakeholders including policy makers, manufacturers, installers, and consumers resulting in coordinated recommendations to codes and standards making bodies for existing and new solar technologies. The U.S. Department of Energy funds the Solar ABCs as part of its commitment to facilitate widespread adoption of safe, reliable, and cost-effective solar technologies. For more information, visit the Solar ABCs website: www.solarabcs.org

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