Utah Clean Energy Comments on NARUC Draft Manual on Distributed Energy Resources Compensation

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To: NARUC Staff Subcommittee on Rate Design

From: Sarah Wright, Executive Director, Utah Clean Energy

Introduction

Utah Clean Energy appreciates the opportunity to provide comments on the draft Manual on Distributed Energy Resources Compensation prepared by the NARUC Subcommittee on Rate Design. We recognize that the evolution of the utility landscape creates both formidable challenges and opportunities for regulators. Rapid technology advancements and the growth of Distributed Energy Resources (DER) require regulators to venture into new territory and engage in focused exploration of the technical capabilities, costs, benefits, impacts, and potential of new technologies in order to fulfill their obligation to ensure just and reasonable treatment for all ratepayers.

Utah Clean Energy is a 501(c)3 non-profit, non-partisan organization committed to accelerating clean and efficient energy technologies in a cost-effective manner. For 15 years, Utah Clean Energy has provided expertise on matters related to clean energy and energy efficiency in Utah and across the West.

We commend NARUC for undertaking this initiative and creating a tool that will aid regulators across the country. Utah Clean Energy agrees with many of the principles espoused in the Manual and supports NARUC's commitment to assist with the development of policies related to DER. Although we are not able to provide a detailed in-depth response, we wish to provide the following high level comments.

Utilize neutral language

The growth of the DER market has raised many questions about how DER technologies will interact with and impact the grid and the ability of these technologies to provide valuable energy and ancillary services. When considering changes that have the potential to impact the growth of the market or affect customer choice, assumptions underlying those proposed changes must be evidence-based and supported by a robust technical basis. Although understanding of DER technologies will necessarily evolve over time, we must acknowledge information gaps where they exist and avoid implementing changes that discourage investment yet are not based on a full understanding of the evidence.

When discussing cost-shifting, it is important to recognize that costs may be shifted from DER customers to non-DER customers, or the opposite may be true. There is no definitive evidence that DER customers universally shift costs to non-DER customers. In fact, numerous cost-benefit analyses indicate that it is

more common to find that DER customers are providing benefits that exceed the NEM credits they receive. A recent Brookings Institute report stated the following:

> *So what does the accumulating national literature on costs and benefits of net metering say? Increasingly it concludes — whether conducted by PUCs, national labs, or academics — that the economic benefits of net metering actually outweigh the costs and impose no significant cost increase for non-solar customers. Far from a net cost, net metering is in most cases a net benefit—for the utility and for non-solar rate-payers.*[1]

We appreciate NARUC's work to create a Manual that provides guidance related to DER cost and benefit evaluations. However, the Manual should avoid language which presupposes the existence of a cost-shift from DER customers to non-DER customers, avoid insinuations that DER customers are not paying their fair cost of service, and refrain from suggesting that DER customers should be separated into a new rate class without also providing further clarification regarding the methodologies, assumptions, and inputs which underlie each assertion.

Seek to address short-term costs and access long-term benefits

The draft Manual wisely recognizes the difference between a short-term perspective and a long-term perspective.

> *"In the short-term, many of the costs of a utility are fixed. In the long-term, many of the costs of a utility are variable. The question, then, is how much of a utility's costs should be considered fixed for the purposes of setting rates. Here, also, there is much disagreement. In the short- to mid-term, costs are not terribly sensitive to changes in use. As a result, a customer who lowers their use creates an additional burden on others, as the costs must be covered by someone. Others argue that the appropriate time horizon to price these costs over, because of economic theory or the long planning horizon of the utility, is the long-term."*[2]

Utah Clean Energy asserts that just as it is essential to evaluate and quantify both short-term and long-term costs and benefits of energy efficiency investments, it is also essential to do the same for any evaluation of DER. It is important to gain a clear picture of short-term rate impacts resulting from decreasing purchases from the utility in order to understand how ratepayers will be impacted on a year-to-year basis. However, if rate design focuses solely on the recovery of short-term costs and in doing so discourages investment in DER, ratepayers may miss out on long-term benefits resulting from DER even if those long-term benefits significantly outweigh the short-term impacts. Year-to-year rate impacts and long-term impacts must both be considered and regulators should seek to balance short-term rate impacts with potential long-term savings that ratepayers will accrue from the continued deployment of DER.

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[1] Brookings Institute, "Rooftop solar: Net metering is a net benefit," May 23 2016 <https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/>

[2] NARUC Staff Subcommittee on Rate Design, "NARUC Manual on Distributed Energy Resources Compensation," July 21 2016. P7

Address all forms of DER

The phrase "Distributed Energy Resources" describes not just rooftop solar, but a suite of technologies which allow customers increased choice about how and when they use energy. Given the complexity and variety of resources in this category, Utah Clean Energy appreciates that the Subcommittee dedicated Section III to a detailed exploration of the question "What is DER?"

Although rooftop solar is the predominant technology in today's DER market, significant cost declines in batteries and other technologies will introduce new types of DER to the market. Batteries and electric vehicles are likely to play an increasing role in the grid of the future. Even the components of DER systems can, in and of themselves, serve as Distributed Energy Resources and interact with the grid. Advanced inverters can provide grid services that increase grid flexibility and reliability and mitigate some of the challenges associated with high penetrations of solar PV.[3] The growing prevalence of battery storage has the potential to change not just the source of customers' energy, but the temporality of energy usage. A combination of DER resources including distributed energy, demand response and storage has the potential to reduce peak demand, improve the load factor for the system and keep costs and utility investments down.

Solar PV currently dominates the DER market, so much of the discussion about rate design for DER, in this Manual and across the country, focuses on the unique characteristics of solar PV. This Manual should seek to help regulators understand how different types of DER are alike and how they differ, and to design rates for different categories of DER. The Manual will be a more enduring resource to the extent that it helps regulators consider the treatment of all types of existing DER and anticipate near-term changes in the DER market. Periodic revisions of the Manual will almost certainly be necessary to keep pace with the evolution of technology and related research.

The following excerpt from the Regulatory Assistance Project's "Designing Distributed Energy Tariffs Well – Fair Compensation in a Time of Transition" captures the changing landscape and the regulator's challenge well:

> *"The regulator's challenge in this time of transition is to support policies that use the legacy systems wisely while nurturing the evolution of the systems that will facilitate the transition to a far more efficient, environmentally benign transactive electricity sector."*[4]

Thank you for your work to provide guidance helping regulators understand and negotiate a changing energy landscape and for your consideration of these comments.

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[3] National Renewable Energy Laboratory, "Advanced Inverter Functions to Support High Levels of Distributed Solar," November 2014, <http://www.nrel.gov/docs/fy15osti/62612.pdf>

[4] Carl Linville, John Shenot, Jim Lazar, "Designing Distributed Energy Tariffs Well – Fair Compensation in a Time of Transition," November 2013 <http://www.raponline.org/wp-content/uploads/2016/05/rap-linvillshenotlazar-faircompensation-2013-nov-27.pdf> P4