September 24, 2018

Mr. Kenneth Sheehan
Director, Division of Clean Energy
New Jersey Board of Public Utilities
44 S. Clinton Avenue
Trenton, NJ 08625

Dear Mr. Sheehan:

Enclosed please find Sunrun, Inc.'s preliminary comments for the Modern Grid workshop in New Jersey's 2019 Energy Master Plan process. Sunrun will file more formal comments in response to the specific discussion questions by the October deadline. Please feel free to contact me at any time regarding the enclosed comments.

Respectfully submitted,

Nicole W. Sitaraman

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Sunrun, Inc.'s Preliminary Comments
New Jersey 2019 Energy Master Plan
Modern Grid Session
September 24, 2018

Introduction

My name is Nicole Sitaraman and I serve as a Senior Manager of Public Policy for Sunrun, Inc. Thank you for the opportunity to provide preliminary input today regarding how to facilitate grid modernization in New Jersey. Sunrun supports the overall energy master plan process to develop a strategic, inclusive and cost-effective roadmap to reaching Governor Murphy's goal of reaching 100% renewable energy by 2050. We appreciate this opportunity to share our perspective on grid modernization and offer policy options being considered in other jurisdictions.

At the outset we acknowledge that the transition to a more modern grid will be a complicated process with a multitude of issues and challenges to overcome. However, we believe that it is an achievable goal. We are committed to working with stakeholders to facilitate a consumer-centric, equitable pathway to greater solar energy and battery storage deployment that will enable a resilient and sustainable grid infrastructure. We plan to submit detailed responses to the discussions questions by the October 12, 2018 deadline.

Background on Sunrun

Sunrun is the largest residential solar, storage, and energy services company in the country, with more than 200,000 customers in 23 states, the District of Columbia and Puerto Rico. We pioneered the "solar-as-a-service" model 10 years ago to make solar energy more accessible. Sunrun believes there is a better, less expensive, and cleaner way for families to power their homes, and with Sunrun's residential rooftop solar, storage and energy services, homeowners are saving money while dramatically reducing the amount of air pollution and carbon dioxide released into the atmosphere. As a leader in residential distributed energy resource ("DER") deployment, Sunrun has great interest in distribution system planning, DER programs, non-wires alternatives ("NWAs") programs, and rate design. Sunrun is committed to ensuring that all customers have a viable choice in how they procure and consume electricity.

Definition of Modern Grid

In our view, the first step towards facilitating grid modernization is defining what this means for New Jersey consumers. We believe that a fundamental element in grid modernization should be the decentralization of the energy delivery system though greater deployment of distributed energy resources such as solar and battery storage. Sunrun offers a solar-plus-storage service ("BrightBox") in several jurisdictions such as Arizona, California, Hawaii, Massachusetts, New York, Florida and Puerto Rico.

Our Brightbox battery paired with solar, a smart inverter, and load management capabilities typically utilizes a DC-coupled system for 100% solar charging of the battery, with connectivity

through WiFi or cellular for remote asset monitoring and dispatch. In the event of a power outage, the system safely islands from the grid and powers the home. In an extended outage, solar panels in island mode are capable of powering the home and charging the battery for backup, providing a new form of site-level resiliency not previously available to homeowners. Residential solar-plus-storage is a crucial component of grid modernization, and Sunrun is proud to provide consumers tools to manage rising energy costs while at the same time providing grid management solutions.

Supporting Competition

As more solar plus storage resources are deployed in New Jersey, we must ensure that there is a level playing field for all current and future market participants to compete in the distributed energy resource marketplace. The development of a more modern grid system, should enable – and not obstruct – greater entrepreneurship, innovation and participation of competitive DER providers.

Value Streams of Battery Storage

Sunrun encourages New Jersey stakeholders to explore the tremendous benefits that residential or "customer-sited" solar-plus-storage can provide to customers, the distribution system and at the wholesale level. These benefits include These benefits include distribution and transmission deferral, distribution and transmission cost reductions, energy and wholesale market cost reductions, increased renewable energy integration, resource adequacy, peak reduction, and ancillary services. Indeed, there is a general recognition that maximizing the benefits energy storage can provide requires the "stacking" of value streams at the customer, distribution, and bulk system or wholesale level. This requires coordination of the operation and control of storage devices so that they can be used to provide multiple services (i.e., "multi-use applications" or "MUAs") without creating conflicts between the provision of one service and another. Customer-sited energy storage is considered to have the most *potential* value because it allows benefits to be created within all three domains.

Non-Wires Alternatives/Solutions

Further, we support a greater focus on the potential for non-wires alternatives ("NWAs") in the state. NWAs that incorporate solar energy and battery storage should be a primary component of any grid modernization initiative. NWAs provide significant benefits to distribution system planning, including the ability to defer and/or completely avoid the need for the ratepayer-funded utility capital expenditures on unnecessary distribution network poles and wires. NWAs further provide the benefit of peak demand reduction and reduce the need for expensive, dirty power plants.

As noted in the Solar Energy Industries Association's ("SEIA") recent whitepaper, "DER and the Non-Wires Solution Opportunity," NWAs produce tremendous ratepayer benefits, encourage customer adoption of clean energy, and improve grid resilience and reliability. SEIA states,

"[Non-Wires Solutions ("NWS")] will be a key part of holding down utility system

costs in the future, which will lead to significant ratepayer savings. As utilities are required to make public more of their system planning and expected investments, in many instances, DER providers will be able to offer solutions to meet utility needs that may otherwise be met through additional distribution grid infrastructure investments at a fraction of the cost. This will ultimately result in savings for ratepayers as utilities are able to contract with DER providers for more cost-effective solutions, and policymakers can develop tariffs that support DER to offset or relieve grid needs."[1]

SEIA further adds,

NWS are an important tool in moving to a more customer-centric electric system. In many instances, NWS will be met by deploying technology that allows customers to reduce and manage their energy usage. For example, to defer the need to upgrade an overloaded substation or feeder, utilities may develop tariffs that incentivize customers to reduce their energy use and shift load away from peak hours by using distributed resources such as smart home technology, distributed solar, or storage."[2]

Sunrun is actively engaged in grid modernization proceedings, where non-wires alternatives are being discussed, in various other jurisdictions across the country, including New York, Maryland, New England states, California and Hawaii. We are happy to share more about our participation in these initiatives.

Bring-Your-Own-Device Tariffs

Finally, as acknowledged by SEIA, Sunrun supports the development of tariff structures that will enable more customers to utilize battery storage and share the benefits of the technology with all ratepayers, such as the Bring-Your-Own-Device tariffs. Such tariffs are being implemented in New York and New England and they enable customers to purchase batteries through any source and receive credits on their monthly bills. Customers can install battery storage at their residences and then share access to the storage with the utility to drive down costs for all ratepayers during peak hours. This approach makes customers true partners with the utility in the effort to reduce costs, shift peak consumption and facilitate greater grid resiliency.

We look forward to continuing the conversation about developing a modern grid in New Jersey.

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1 *See* Umoff, Rick, et al., Solar Energy Industries Association, "DER and the Non-Wires Solutions Opportunity," May 2018, available at: https://www.seia.org/sites/default/files/2018-05/SEIA-GridMod-Series-5_2018-May-Final.pdf.

2 *Id.*