

May 19, 2017

Rhode Island Office of Energy Resources
Division of Public Utilities and Carriers
89 Jefferson Boulevard
Warwick, RI 02888

RE: Comments from Sunrun Inc. in Response to Power Sector Transformation Initiative Notice of Inquiry into the Electric Utility Business Model

To the Rhode Island Division of Public Utilities and Carriers & Office of Energy Resources:

Sunrun, Inc. (“Sunrun”) respectfully submits the following preliminary comments in response to the Rhode Island Division of Public Utilities and Carriers (“Division”) and Office of Energy Resources (“Office”) Notice of Inquiry into the Electric Utility Business Model and Request for Stakeholder Comment (“Notice”) issued on May 1, 2017.

Sunrun is a leader in residential solar, storage, and energy management. We pioneered the “solar-as-a-service” model 10 years ago and today are the largest dedicated residential solar company in the United States.

Sunrun commends Governor Raimondo’s call for this Power Sector Transformation Initiative (“Initiative”) to develop a new energy compact for Rhode Island.¹ As Governor Raimondo describes, a more nimble electric grid is needed to strategically integrate clean energy resources and enable customers to take advantage of new clean energy technologies. The Division and Office’s Notice states that the Initiative seeks to shape the ongoing transformation of the electric grid to achieve three policy objectives:

1. Control the long-term costs of the electric system
2. Give customers more energy choices
3. Build a flexible grid to integrate more clean energy generation

The purpose of this particular inquiry into the utility business model is to determine (a) what functions the utility of the twenty-first century should perform, (b) how it should earn revenue, and (c) what kind of metrics should shape its operation. The answers to these questions are necessarily informed by Rhode Island’s energy policy, grid modernization, and other public policy goals. Indeed, in addition to this Initiative, the Governor’s “1000 by 20”

¹ Correspondence from Governor Gina Raimondo to the PUC, DPUC, and OER. March 2, 2017. Available at:



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goal and the Public Utilities Commission (“Commission”) Investigation into Issues Related to the Changing Electric Distribution System (“Docket No. 4600”) are examples of Rhode Island’s leadership in the clean energy transition. It is also essential that the inquiry into the utility business model be informed by guiding principles for achieving Rhode Island’s goals of a cleaner, more reliable and resilient electric grid through increased deployment of distributed energy resources (“DER”) and other clean energy technologies. Sunrun has participated in similar important inquiries across the country from Hawaii to New York, and offers the following principles as additional guideposts for consideration throughout this inquiry. The twenty-first century utility should be structured, incentivized, and operated such that it:

1. Empowers and enables customer choice.
2. Ensures non-discriminatory access to facilitate and seamlessly integrate DER and other clean energy technologies to the grid.
3. Conducts open and transparent distribution system planning to allow competition between private market participants through non-discriminatory access to opportunities to provide grid solutions and other energy services.
4. Maintains and advances a reliable and resilient electric grid capable of seamlessly integrating increasingly higher penetrations of DER and other clean energy technologies.
5. Is motivated to empower customers and other non-utility market participants to manage power consumption, contribute to system reliability through demand management and other system services, and reduce the carbon intensity of the electric system.

Sunrun appreciates the opportunity to submit these comments and looks forward to the opportunity to engage further as this proceeding continues.

I. What functions should the electric utility perform?

Determining the functions that the electric utility should perform is a critical first step in transforming the utility’s business model and achieving Rhode Island’s energy policy and grid modernization goals. Aligning the role and functions of electric utilities with the principles outlined above will further Rhode Island’s energy policy and grid modernization goals.

1. *Empower and enable customer choice.*

Today’s consumers have the option to invest in DERs as an alternative to bulk power system energy, and the option to self-generate and self-consume should not only be preserved, but also encouraged and facilitated by the utility. Because customer (i.e. non-rate-based) investment in self-generation and other DER provides benefits to all ratepayers, the



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electric utility business model must become more customer-centric to enable and empower customers to choose their energy supply, manage their electricity use, and participate in energy markets as producers of energy and providers of energy services. The entire concept of “customer service” is being redefined as consumer relationships with the utility and the grid evolution in response to advances in communication, electric generation, and other grid management technologies. Utility customers are no longer simply consumers of electricity or a “cost” to the grid; they now have the ability to generate power, provide demand reduction, load support, and other valuable grid services. The utility can and should be an integrator of these services, performing functions that grant individual customers and DER providers a platform for offering these and other services for fair compensation.

To align utility operations with this principle, the utility should function to ensure customer protection and customer benefits. Central to the goal of enabling customer choice and control is customer and third-party access to data – including both customer and distribution grid data. Policies and practices must be designed to balance market innovation and participation, customer protections, safety, and grid reliability. Customer access to near or real-time data about their electricity use is essential to enabling customers to make informed energy choices. A core objective of the Initiative should be to determine how the utility should perform the essential function of providing customers with data access portals and tools to monitor and assess their energy use, protect the privacy of that information, and provide appropriate avenues for the release of customer data to competitive market participants, such as DER providers. The utility’s function would be that of a facilitator of customer data access and sharing.

Customer choice involves not just the ability to choose a commodity supplier, but also the ability to access high-tech information services. Therefore, it is critical that third party providers have easy access to customer data. Third party access to customer data enables innovation in customer home energy management programs. Current processes for third party providers to access this information are clumsy, time-consuming, and can lead to customer confusion. The Green Button Connect standard,² when coupled with a streamlined customer experience, would help consumers access services provided by third party providers, which will cost-effectively save them money on utility bills.

The Notice of Inquiry specifically identifies “customer engagement services, such as home energy optimization, appliance automation, intelligent load management, backup energy services including energy storage, energy efficiency program delivery, customer support, low-income engagement and electric vehicle education” as a potential utility function.³ Sunrun supports certain utility functions in customer engagement services as a

² The Green Button standard enables utilities to provide customers and third party providers electric, gas, and water data in a consumer-friendly and computer-friendly format.

³ Notice of Inquiry, at p. 3. http://www.ripuc.org/utilityinfo/electric/PST_Comment1.pdf

means to promote customer choice; however, this function must be conducted in a manner that does not provide the utility an unfair competitive advantage over private non-utility market participants.

By virtue of its status as a regulated utility, the utility has the opportunity to earn a guaranteed rate of return on investments, enhanced marketing opportunities through a captive customer base, exclusive access to certain customer data, informed interconnection opportunities, information regarding the system's capacity to host DER without infrastructure upgrades, and the ability to include the cost of DER systems in its rate base and spread those costs among its ratepayers, and other competitive advantages. This advantaged posture also means that pursuant to the traditional utility business model, the utility does not have the same incentive to reduce capital costs and innovate as private, non-regulated market participants. Participation in competitive customer services markets should be limited to non-rate regulated affiliates of the regulated utility and other private, non-utility market participants. Moreover, non-utility affiliated private market participants should be the sole providers of behind-the-meter services.

2. *Ensure non-discriminatory access and seamless integration of DER and other clean energy resources to the grid.*

Enabling and empowering customer choice also requires that customers and third-party providers of DERs have fair and equal access to the grid. This requires the utility to function as a facilitator of grid access, rather than a barrier. Examples of steps the electric utility can take toward this end include streamlining and simplifying its interconnection processes, improving application protocols, and making grid capacity maps and grid data available to DER providers and other market participants. The utility should also engage with stakeholders in periodic interconnection reform processes to expedite the interconnection process. Modernized distribution interconnection, planning, sourcing, and data sharing processes will allow for innovation, but this must be conducted through transparent and non-discriminatory processes.

Operation pursuant to this principle also requires the utility to leverage the value of existing grid assets to facilitate private, competitive DER markets. This allows private market participants, including non-rate regulated affiliates of the utilities, to compete in a private market while ensuring that the public interest is protected while the utility continues to provide operations and services that are best performed by a monopoly entity. The Notice of Inquiry does not specifically state it as such, but elements of this "distribution system platform provider" type function are captured in pole and line maintenance, circuit configuration, distribution system engineering, network integration services, such as scheduling, multi-directional power plan and management services, as well as providing certain reliability, connectivity, network integration, and transaction management services to

ensure access to the grid and safe and reliable grid operations. ISO-NE or third parties could also perform some of these functions, as well as other functions identified in the Notice.

3. *Conduct open and transparent distribution system planning.*

This Initiative and the April 5, 2017 Stakeholder Working Group Process Report (“Stakeholder Report”) prepared in Docket No. 4600⁴ both recommend the initiation of distribution system planning (DSP) to be conducted by the electric utility. While DSP will be addressed in a separate work stream under this Initiative, we offer preliminary comments on it here with respect to how it relates to utility functions.

DSP should be a core function of the utility as part of its role as a distribution system platform provider. Through the DSP process, the utility should be providing DER providers and other market participants access to opportunities to provide grid solutions, including non-wires alternatives (NWAs), to traditional utility infrastructure, such as distributed generation, energy efficiency, energy storage, and demand response. Rhode Island’s grid modernization and other energy policy goals are directly tied to transforming the electric utility’s traditional strategic and investment planning approach to one that accommodates the changing electric sector and grid modernization efforts. This requires the utility to perform functions that facilitate the integration of more DERs, to balance distributed resources, and to better incorporate the role of the modern customer in its operations and planning processes. The DSP design and decision-making process must be flexible and transparent to accommodate new technologies and solutions, as well as evolving goals and priorities.

The utility must conduct the DSP process in a proactive manner and include distribution circuit studies to determine hosting capacity in advance, rather than the utility reacting to interconnection applications as they arrive. If anticipated growth in DERs exceeds a circuit’s hosting capacity, the utility planning process should provide for identifying how additional DERs, NWAs, or other infrastructure necessary can accommodate that growth. This planning can reduce the inefficiencies that often arise when individual DG customers pay for system upgrades that can impede customer choice and DG growth, as discussed above. Aligning DSP with grid modernization efforts allows solutions such as advanced meter functionality and communications systems to inform the types of NWAs and other DER solutions that can be incorporated into the DSP and enhance customer energy choices.

In order to accomplish the goals of distribution system planning, the utility could perform the functions of a provider of essential network integration services as identified in the Notice of Inquiry. Specifically, the utility’s role would need to change to provide transparency into its capital planning process, and to provide data and analysis related to

⁴ Docket 4600: Stakeholder Working Group Process. Report to the Rhode Island Public Utilities Commission. April 5, 2017. Available at: http://www.ripuc.org/eventsactions/docket/4600-WGReport_4-5-17.pdf

hosting capacity, load, and voltage through a more open process that facilitates competition with traditional utility infrastructure solutions. Moreover, the utility would be required to assist in the process of issuing requests for proposals for NWAs. As the utility begins to rely more on NWAs as an element to its DSP process, the utility (or, in some cases, ISO-NE), may need to provide transaction management services, connectivity services, and reliability services to accommodate non-traditional solutions.

In moving to a more inclusive DSP model, it is also important to maintain the distinction between the wholesale and retail markets. Coordination will be needed in order to allow DERs to participate in the wholesale market and be compensated for grid services (e.g., ancillary services). However, jurisdictional boundaries must be clear. Specifically, the service of on-site load with DG should continue to unambiguously be a retail, state jurisdictional matter. That foundation should be built upon with features that create opportunities for wholesale market participation, but those features must be designed so as to not upend or otherwise intrude upon the retail nature of self-supply. Demand response is a classic example of how a wholesale market design can co-exist with, and complement the use of, on-site generation to serve customer energy needs.

It is also important to note that efforts to implement a DSP process will also likely raise the question of the value of DERs, and specifically the locational valuation of DERs, as recommended in the Stakeholder Report⁵ and the subsequent April 21 memo from Commission Staff,⁶ to be addressed in Docket 4600. DERs can provide grid supportive services and reduce system costs, and these values should be reflected in DSP decision-making. Proper valuation of DERs on the grid will be necessary to inform cost-benefit analyses conducted in DSPs, thus the timing of these proceedings is important to consider. Similar to NWAs, locational value of DERs should be additive to general, mass market value propositions, which may include temporal value. Tariffs and programs for DERs must take into account the value those technologies provide to the utility, and must evolve to accommodate technology advancements.

4. Maintain and advance a modern grid.

Grid modernization should become a part of normal business practices for the electric utility. Investments in the electric grid and innovative solutions to infrastructure needs should be evaluated in rate case proceedings and held to the same standards as other capital investments – using a long-term cost-benefit analysis that takes into account long-term energy goals. A modernized grid enables NWAs to become standard solutions to utility

⁵ Docket 4600: Stakeholder Working Group Process. Report to the Rhode Island Public Utilities Commission. April 5, 2017. Available at: http://www.ripuc.org/eventsactions/docket/4600-WGReport_4-5-17.pdf

⁶ PUC Staff Memorandum Re: Docket 4600 Report – Summary and Staff Recommendations. April 21, 2017. Available at: [http://www.ripuc.org/eventsactions/docket/4600-PUC-Staff-OM-Memo\(5-4-17\).pdf](http://www.ripuc.org/eventsactions/docket/4600-PUC-Staff-OM-Memo(5-4-17).pdf)

infrastructure needs, reducing costs for ratepayers. Though an initial grid modernization proceeding may be necessary to identify a framework and goals, the utility business model must be such to encourage these investments and improvements to be made proactively through the DSP process and through the utility's roles and responsibility as a distribution system platform provider discussed above.

II. How should the utility be compensated for each of the functions it performs?

Ensuring that the utility is properly incentivized to operate in accordance with the principles identified above, relies upon a regulatory paradigm that ensures fair and open competition. This ties into the principle that the utility:

5. *Is motivated to empower customers and other non-utility market participants to manage power consumption, contribute to system reliability through demand management and other system services, and reduce the carbon intensity of the electric system.*

Utility compensation should be aligned with the principle of empowering customers and non-utility market participants to manage power consumptions and deliver system solutions, and with the utility's role in achieving renewable energy procurement, energy efficiency and demand reduction, grid modernization, safety and reliability, customer service, emissions, cost and affordability goals, and other state energy policy priorities and customer service goals. Sunrun supports performance-based incentives that provide financial rewards to the utility for meeting and exceeding the state's energy policy objectives, as well as expanding customer choice. We envision a future in which a majority of utility earnings are from performance-based incentives, with return-on-equity declining as a share of earnings. These incentives should be sufficient to overcome the bias toward capital investment while still providing the utility the opportunity to earn adequate revenues. The key is to design the compensation mechanisms to incentivize the right kinds of investment: those that advance the state's energy and other public policy goals.

In order to develop the appropriate compensation mechanisms and amounts in a fair and efficient manner, Sunrun supports a three-step process, each step informed by stakeholder input.

1. The PUC identifies existing state goals and priorities to set goals in policy areas where specific goals may not already be clearly identified or stated. For example, while the state has specific renewable energy portfolio targets, it may not have quantifiable goals related to grid modernization or customer service. Where specific goals are not set, the utility, the Commission, and stakeholders should establish baseline, or minimum performance standards, and develop goals based on industry best practices and experiences from other states.



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2. These goals should inform the establishment of metrics to be used to measure progress toward the goals.
3. The incentives the utility can earn should be established based on the identified metrics.

Moreover, as this Initiative moves forward into DSP, the utility should incorporate DERs into forecasting and sourcing efforts. The compensation mechanism for performing this function should be based on a system in which DERs are treated like load so that the cost of distribution system upgrades needed to accommodate DERs are recovered like expenses necessary to meet the required load. Recovering costs in this manner will eliminate unwarranted cost allocation to customer-generators and enhance system efficiency. All ratepayers that benefit from capital infrastructure investments should pay for those benefits, and no one DER customer should be required to pay for upgrades that benefit the primary distribution system or the transmission system as whole. Interconnection upgrade costs at the secondary level should be limited to localized issues that the individual customer is causing.

III. What is the appropriate role of performance based regulation in utility compensation and what metrics should drive utility compensation?

Sunrun supports the goal of establishing performance-based ratemaking for electric utilities. Specifically, Sunrun supports incentive mechanisms in the following categories:

- Increased reliance on DERs to reduce peak demand, ensure system reliability, reduce bulk power purchase, and lower electricity costs;
- Emissions reductions;
- System reliability and resilience improvement;
- Interconnection timeliness and reduced costs for behind-the-meter DER improvements
- Effective use of DER as a hedge against generation fuel price risk
- Effective and efficient implementation of grid modernization technologies and systems
- Electricity affordability
- Customer service

Stakeholder proceedings provide a transparent and effective process for establishing consensus on specific goals, metrics, and incentives. Once established, incentives may be awarded to the utility based on annual evaluations, and specific goals and metrics can be reassessed, as needed, at the initiation of the Commission or the request of the utility or stakeholders.

IV. The Power Sector Transformation Initiative and Related Proceedings

The issues to be addressed in the four work streams in this Initiative – reforming the utility business model, distribution system planning, grid connectivity functionality, and beneficial electrification of transportation and heating, as well as the potential grid modernization proceeding proposed in Commission Staff’s April 21st memo,⁷ address integrated and closely related issues and considerations. Addressing these topics in a coordinated fashion will promote efficient and productive stakeholder engagement, and Sunrun appreciates the Governor’s leadership and the work of the Division, the Office, the Commission, and stakeholders on these important inquiries.

Thank you for the opportunity to provide these comments.

Sincerely,

Chris J. Rauscher
Director of Public Policy

⁷ PUC Staff Memorandum Re: Docket 4600 Report – Summary and Staff Recommendations. April 21, 2017. Available at: [http://www.ripuc.org/eventsactions/docket/4600-PUC-Staff-OM-Memo\(5-4-17\).pdf](http://www.ripuc.org/eventsactions/docket/4600-PUC-Staff-OM-Memo(5-4-17).pdf)