June 19, 2017

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

Re: Notice of Inquiry into Distribution System Planning and Request for Stakeholder Comment

Dear Division of Public Utilities and Carriers,

Pursuant to the Notice of Inquiry into Distribution System Planning and Request for Stakeholder Comment (Notice of Inquiry)[1] to inform the ongoing inquiry into distribution system planning on June 2 asking for comments and suggestions on distribution system planning, Environmental Defense Fund (EDF) provides the following comments.

I. Distribution System Planning (DSP) Elements

1) *How important are each of the DSP elements described here to the future electric utility? Are there additional elements not described here that should be included as a strategic focus of the electric utility? What does success look like for each element?*

EDF strongly recommends that the development of short and long-term plans as well as investments related to DSP reforms follow the overarching policy objectives of the Power Sector Transformation Initiative (PSTI). While the four "DSP elements" as listed in the Notice of Inquiry are common elements of grid modernization initiatives across the country, EDF recommends that stakeholders, the Public Utilities Commission (PUC), the Office of Energy Resources (OER) and the Division of Public Utilities and Carriers (DPUC) revisit the PSTI objectives and evaluate these as basic threshold requirements the DSP reforms are expected to advance. This would help to determine and prioritize the key functionalities and technologies

[1] Public Utilities Commission and Division of Public Utilities and Carriers, Notice of Inquiry into Distribution System Planning and Request for Stakeholder Comment, June 19, 2017, available at http://www.ripuc.org/utilityinfo/electric/PST_DSP_NOI.pdf

Rhode Island's future grid must have; and further facilitate comprehensive and transparent distribution system planning that is more responsive to the challenges posed by DER penetration.

Tying DSP reforms back to transparent goals ensures that DSP upgrades and investments not only support desired objectives, it would further provide an opportunity for stakeholders to assess whether updated DSP practices are in fact having the desired effect.

In addition, EDF recommends that the DSP elements identified in the Notice of Inquiry be further defined collaboratively. For example, while enhanced system planning elements such as forecasting and hosting capacity analysis will increasingly be important for DSP to advance beneficial DER integration, they are not terms of art. We recommend a collaborative process to identify and define required DSP elements tailored specifically to the PSTI's objectives and to develop respective transparent methodologies.

2) *Utility investment in grid modernization capabilities will provide increasing visibility into the system, allowing a more sophisticated and granular approach to DSP. What should the future state of planning look like as visibility improves? What should the transition look like between current DSP and the future state of DSP?*

Absent a vision of a desired future electric grid and DSP, it is difficult to lay out a strategic and cost-effective transition plan that will be able to adapt to anticipated market developments (e.g., increases in DER deployment, changes in technologies). While grid modernization drivers often overlap across the country, the degree to which individual drivers like DER penetration and customer preferences affect individual distribution systems and customer bases vary. This vision should be defined prior to implementing DSP reforms taking into account the most pressing energy market pressures and needs in Rhode Island.

It will similarly be challenging to chart a path to the future DSP absent a well-defined starting point. EDF recommends that the utility and stakeholders perform a self-assessment to understand what the present state of the grid is, including grid functionalities and DSP; what and where data gaps are and how much work needs to be done to reach the desired end state. This is especially important given how disparate different distribution systems can be across service territories.

For reference, the NYPSC recently required utilities to file distribution system implementation plans (DSIPs) outlining physical systems, processes, data (e.g., historical load

levels, reliability performance, and forecasts), and gaps related to the distribution system planning and operations efforts needed to integrate DER.[2]

EDF further recommends meaningful stakeholder engagement to:

- create agreement / understanding / consensus around modeling assumptions and planning scenarios
- improve standardized and transparent distribution planning and operations
- identify and prioritize near-term and long-term DSP reforms based on the policy objectives, self-assessment, as well as on-going market developments

II. DSP Transparency

1) *Who are the users of system and customer data? What data do users need to guide investment decisions, support business models, or guide policy/program activities? What are the specific use cases for each dataset? What is the desired format of each dataset? What is the frequency with which datasets should be updated?*

Providing customers with meaningful access to their energy consumption data not only empowers them to lower their utility bills, but data access is also integral to realizing a more efficient and cleaner electricity system that can smoothly integrate new DERs. Data access can further spur the development and adoption of innovative technologies, products and services designed to support consumers in managing energy consumption and expenditures (e.g., demand response, energy efficiency, and conservation programs).[3]

Advancing data access to engage all customers is also in alignment with PSTI's objective to realize more energy choice to customers. Lastly, given that New England electricity rates are currently trending higher than anywhere else in the contiguous US, data access can be a key component of Rhode Island's grid modernization initiative. For reference, the New York Public Service Commission (NYPSC), as part of the Reforming the Energy Vision initiative, recently emphasized the importance of data and the ability for customers and other non-utility market participants to make informed energy choices stating that "customer data collection and sharing is

[2] ORDER ADOPTING DISTRIBUTED SYSTEM IMPLEMENTATION PLAN GUIDANCE. April 20, 2016, available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BB1C7035C-B447-459A-8957-20BF3BDB6D0F%7D

[3] Most recently the NYPSC made this point on page 19 in the March 2016 NYPSC Order approving ConEdison's AMI plan stating: "AMI can empower customers to become active in their energy usage by providing them with information to assist in the management of their usage, which will allow them to better manage their electric and gas costs," available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B8C26CF58-5669-4A16-85BC-7D4AE21BFF8D%7D

necessary to enable DER suppliers and customers to make investments and effectively participate in DER markets."[4]

The NYPSC also emphasized the importance of third-party data access and the ability for all market participants to develop and offer solutions that can improve system efficiency and add customer value.[5] More specifically, innovative third-party products and services can provide tremendous support to customers navigating this evolving energy landscape by translating the abundance of data into actionable insights and potential dollar savings. It is therefore paramount that customers are able to share meaningful data with third-party service providers of their choosing at no additional charge. Considering third party engagement in tandem with designing comprehensive meter data access policies for customers can prevent unnecessary delays and costs. In this context, the emerging industry standard Green Button Connect My Data (GBC) functionality should be considered as a basic service to all customers.[6]

As the Notice of Inquiry identifies access to system data is just as essential to maximizing grid related investments and customer value. As noted in a recent NYPSC order, third-parties rely on location-specific information on where there are impending or foreseeable infrastructure upgrades needed, in order to assess whether DERs could avoid or defer infrastructure upgrades or provide other reliability or system benefits.[7]

For example, in evaluating Non-Wires Alternatives (NWAs) – alternative solutions to traditional infrastructure investments – the NYPSC recently directed all utilities to list specific infrastructure projects by location and indicate the potential for DERs to address the forecasted system requirements. The Commission noted that in any market "potential investors in DERs or other investments that can enhance the value of the grid require meaningful and timely

[4] New York Public Service Commission, "ORDER ADOPTING DISTRIBUTED SYSTEM IMPLEMENTATION PLAN GUIDANCE," ordered April 20, 2016 in CASE 14-M-0101 at p. 24, available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BB1C7035C-B447-459A-8957-20BF3BDB6D0F%7D

[5] Ibid, p. 23, p. 40.

[6] GBC is an industry-led technical standard for exchanging energy usage data automatically and was originally championed by the White House under President Obama. GBC has been adopted by utilities in regions with AMI including California, Illinois and will soon be launched by ConEdison in New York. Most recently, Xcel Energy filed a settlement agreement on proposed grid modernization investment in Colorado, enabling Xcel to install 1.5 million smart meters throughout its territory while giving customers the ability to share their energy-use data with any technology provider of their choice via GBC

[7] New York Public Service Commission, "ORDER ADOPTING DISTRIBUTED SYSTEM IMPLEMENTATION PLAN GUIDANCE," ordered April 20, 2016 in CASE 14-M-0101 at p. 24, available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BB1C7035C-B447-459A-8957-20BF3BDB6D0F%7D

information on the needs of the system so that they may in turn seek investment opportunities that support customer desires and/or enhance the value of the system."[8]

Though there is general agreement that the availability of system data will play an important role for future grid design and operations, the discussion around how and what types of system data should be shared with whom, is arguably just beginning to take shape. Only a few states, notably California and New York, have been pushing for more system data transparency to improve[9] distribution system planning and facilitate strategic DER penetration.[10] In this context, it is particularly important that PSTI objectives determine desired grid capabilities and outcomes that may be enabled or enhanced by system data. EDF recommends stakeholders collaboratively identify state-specific system data needs, applications, and potential use cases needed to plan and operate the future grid taking into account how the value of data can vary geographically.

To this end, understanding what data is currently collected and how it is shared is also an essential step in assessing the value of DER and beneficial DER penetration. More specifically, any attempt to properly balance costs vs. benefits require an understanding of the full system value of a DER on a time and locational basis. Absent granular data or price signals, which can provide information about when and where generation is most beneficial to the grid and the environment, DERs can fall short of maximizing societal benefits.

III. DSP Process

1) *What DSP information – such as information associated with the DSP elements identified earlier in this document – should be made available to users, including the market, regulators, and policymakers?*

As discussed earlier, NWAs can be strategically deployed to realize deferrals in planned transmission and distribution investments that would otherwise be needed. For instance, the detailed identification of NWA solutions that may aid in the control the long-term costs of the

[8] New York Public Service Commission, "ORDER ON DISTRIBUTED SYSTEM IMPLEMENTATION PLAN FILINGS," ordered March 9, 2017 in CASE 14-M-0101 at p. 18, available at http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BB1C7035C-B447-459A-8957-20BF3BDB6D0F%7D

[9] More than Smart. DATA AND THE ELECTRICITY GRID: A ROADMAP FOR USING SYSTEM DATA TO BUILD A PLUG & PLAY GRID, 2016, at p. 6, available at http://morethansmart.org/wp-content/uploads/2016/10/Data-and-the-Electricity-Grid-MTS-System-Data-Paper.pdf

[10] Smart Electric Power Alliance, 51st State Perspectives, December 2016, available at http://www.scottmadden.com/wp-content/uploads/2016/12/SEPA-ScottMadden-51st-State-Report_DER-Integration-CA-NY.pdf

electric system, such as those that provide reactive power management, voltage optimization, and lower power delivery losses, can result in a long-term increase in system asset utilization.[11]

To ensure that these alternative planning solutions materialize it is essential that they are incorporated into core utility planning processes and that stakeholders have the opportunity to engage substantively. Non-utility stakeholders including municipalities and public interest groups can play a crucial role in designing optimal DER investments that can help to "[c]ontrol the long-term costs of the electric system" in accordance with PSTI goals.[12] In addition to having access to information on system needs and NWA opportunities, stakeholders should also have the opportunity to provide input on the process and analysis, e.g., screening criteria, that inform how DER alternatives are weighed against potential infrastructure investments.

IV. CONCLUSION

EDF thanks the PUC, the OER, and the DPUC for the opportunity to provide comments on this inquiry into distribution system planning and looks forward to further engaging in this process.

Respectfully Submitted,

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[11] For example, New York utility Consolidated Edison ("ConEd") is deferring investments in new substations and transmissions lines. Instead of relying on capacity expansion, the utility is opting for innovative alternatives to meet increasing energy demands in dense urban areas, like Brooklyn and Queens, which led New York's population growth in 2015. ConEd's Brooklyn-Queens Demand Management Program ("BQDM"), which is also one of Con Ed's demonstration projects under New York's Reforming the Energy Vision ("REV") initiative, through a combination of demand reductions and distributed resource investments, aims to defer the need for a $1.2 billion substation upgrade.

[12] See Notice of Inquiry, p. 1