BEFORE THE CONNECTICUT

PUBLIC UTILITIES REGULATORY AUTHORITY

PURA INVESTIGATION INTO DISTRIBUTION SYSTEM PLANNING OF THE ELECTRIC DISTRIBUTION COMPANIES	**DOCKET NO. 17-12-03**

COMMENTS OF THE ENERGY STORAGE ASSOCIATION

Pursuant the Public Utilities Regulatory Authority ("Authority") Notice of Request for Written Comments in the matter of Investigation into Distribution System Planning of the Electric Distribution Companies, issued on March 9, 2018, the Energy Storage Association ("ESA") respectfully submits these comments. ESA's comments focus on providing an initial template for the Authority's consideration for new rules for Distribution Resource Planning (DRP).

I. ABOUT THE ENERGY STORAGE ASSOCIATION

Since its inception 27 years ago, ESA has promoted the development and commercialization of safe, competitive, and reliable energy storage delivery systems for use by electricity suppliers and their customers. ESA's nearly 150 members comprise a diverse group of electric sector stakeholders, including electric utilities, energy service companies, independent power producers, technology developers—of advanced batteries, flywheels, thermal energy storage, compressed air energy storage, and other technologies—component suppliers, and system integrators.

II. COMMENTS ON DISTRIBUTION RESOURCE PLANNING

ESA acknowledges the Authority for seeking input from stakeholders on distribution resource planning for the State of Connecticut. If developed effectively, distribution resource planning can facilitate a dynamic, transparent, resilient and sustainable distribution system.

i. Storage's unique characteristics require special consideration in distribution resource planning

Energy storage plays a unique role in distribution system planning. Energy storage can be deployed as a cost-effective solution for deferring or avoiding costlier distribution system upgrades, increasing power quality on distribution circuits, and increasing circuit and substation hosting capacity to meet the system demands posed by increasing proliferation of distributed energy resources (DERs), particularly non-dispatchable generation. Utilities outside of Connecticut have begun to demonstrate the use of energy storage as a distribution asset, for example:

- In Massachusetts, Eversource has received regulatory approval to procure one 5 MW battery and one 12 MW battery, both of which enable the utility to defer or avoid upgrades to existing transmission and distribution facilities.[1]

[1] See pages 489-495 of Massachusetts Department of Public Utilities, *Order Establishing Eversource's Revenue Requirement*, Docket No. 17-05, 30 Nov 2017, http://170.63.40.34/DPU/FileRoomAPI/api/Attachments/Get/?path=17-05%2f1705_Final_Order_Revenue_Requi.pdf

- Arizona Public Service purchased a 2-megawatt (MW), 8-megawatt-hour (MWh) battery-based energy storage system for less than half the cost of the traditional investment of a wires alternative in August 2017.[2]
- National Grid has proposed a 6 MW, 48 MWh battery for Nantucket, Massachusetts, to delay the need for the construction of another submarine cable to bring electricity to support the island's growing demand.[3]
- New York's Con Edison is deferring a $1.2 billion substation upgrade through its non-wires alternative program, the Brooklyn-Queens Demand Management Program, by contracting for 52 MW of demand reductions and 17 MW of distributed resource investments, including energy storage.[4]

ii. Effective distribution planning starts with transparency and data access

Ensuring transparency and access to data is one of the most important first steps to modernize the distribution system and increase effective and efficient deployment of energy resources. The Commission should seek transparency and access to data between utilities, customers, and developers while ensuring the necessary privacy and cybersecurity provisions for the utilities. Providing access to hosting capacity data, relevant forecasting data, and locational

[2] APS Press Release, 9 August 2017, APS Brings Battery Storage to Rural Arizona, available at: https://www.aps.com/en/ourcompany/news/latestnews/Pages/aps-brings-battery-storage-to-rural-arizona.aspx.

[3] National Grid Press Release, 6 November 2017, National Grid Develops Innovative Solution for an Island's Community's Unique Energy Challenges, available at: https://news.nationalgridus.com/2017/11/national-griddevelops-innovative-solution-island-communitys-unique-energy-challenges/.

[4] Con Edison, Distributed System Implementation Plan (DSIP), 30 June 2016, available at: https://www.coned.com/-/media/files/coned/documents/our-energy-future/our-energy-projects/ceconydsip.pdf?la=en.

valuation will help utilities and industry to identify upcoming grid needs and weight the cost effectiveness of non-wire alternatives ("NWA") to fill those needs through open-source solicitations or other mechanisms, which we will address later in these comments. The Interstate Renewable Energy Council ("IREC") has made immense progress in identifying best practices and providing guidance to regulators on developing hosting capacity analysis in their recently published *Optimizing the Grid: A Regulator's Guide to Hosting Capacity Analyses for Distributed Energy*.[5]

iii. Approval for cost recovery should be considered separately and following distribution plan approval

Utilities should incorporate a rigorous distribution resource planning component in their existing resource planning process. To ensure that distribution plans provide customers with the most cost-effective and flexible resources, the plans should be integrated with utility rate cases and other planning processes at the Authority. To that end, ESA proposes the following format for distribution planning at the Authority.

Distribution resource planning is the vehicle by which utilities review their distribution system needs and identify areas where investment is needed, and proposing solutions to those needs which could include the deployment of DERs as non-wires alternatives. This should be submitted to the Authority separately from any request for spending in upgrading assets on the distribution system. The Authority, along with stakeholder input, may choose to outline for the utilities the appropriate criteria that would trigger a review of the ability of DERs to serve any of

[5] Interstate Renewable Energy Council, *Optimizing the Grid: A Regulator's Guide to Hosting Capacity Analyses for Distributed Energy*, December 2017, available at: https://irecusa.org/publications/optimizing-the-grid-regulators-guide-to-hosting-capacity-analyses-for-distributed-energy-resources/.

the distribution needs identified in the plan. New York's non-wires alternatives suitability criteria is a useful model to lean on for this proceeding.[6] Of the areas where the utility identifies a needed distribution system network upgrade that meet the threshold test, the utility would describe in its distribution plan which distribution investment need can potentially be filled by DERs, including both utility-owned and customer- or third-party owned DER assets on the distribution grid. The Authority would then review the DRPs to determine that the utility has sufficiently considered non-wires alternatives.

The distribution resource planning process is the appropriate forum for utilities to identify the needs of the distribution system that DERs – and storage in particular – can serve and to propose a mechanism to solicit DERs for that purpose. Utilities will develop in their plans a proposal for tariffs, contracts, solicitations, or other mechanisms that would ensure that DERs are able to compete as a distribution grid asset. The Authority and stakeholders should have an opportunity to shape these utility offerings so that they are conducted in a way that results in the most flexible, cost-effective resources for ratepayers. Within this discussion, developing clear rules around utility ownership and cost allocation of storage is critical. Those guidelines should also provide opportunity for third-party or customer-owned storage to provide grid services and participate in wholesale markets.

ESA believes that distribution plans are not an appropriate vehicle for utilities to submit requests for spending on distribution assets. Rather, should the utility desire cost recovery for a traditional distribution investment or a utility-owned DER solution, then the utility would

---

[6] See *Joint Utilities' Supplemental Information on the Non-Wires Alternatives Identification and Sourcing Process and Notification Practices.*
(http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B5DA604B3-9CDA-45D3-864292A4C4171787%7D)

propose such an investment in its rate case. The utility should be required to leverage information developed in the distribution planning process to build a case for its requested spending in the rate case. Addressing proposals by the utilities to spend money on the distribution system in the rate case is critical to provide an opportunity for a broader and more robust engagement by affected stakeholders to evaluate the request for funding.

Beyond interaction with the rate case, it is imperative that the information developed in the distribution resource planning process be used widely in other proceedings. For example, forecasting of DERs that is conducted in the distribution planning process should then be incorporated into the integrated resource planning process. Ultimately, the information made available through the DRP should animate the interconnection process as well, with the goal of making data on hosting capacity available and consistently updated to facilitate DER interconnection with greater ease.

iv. Utility plans should be assessed on their cost-benefit evaluation of DERs, both as directly-owned assets and procured via tariffs, contracts or other mechanisms

Distribution resource planning process must effectively identify opportunities for distributed resources and conduct an accurate cost-benefit assessment of those resources to provide the greatest net benefits to ratepayers. Distribution plans should not only include a robust analysis of the locational benefits and costs of distributed resources, but also propose mechanisms by which third parties can provide those benefits to the distribution system, namely through proposed tariffs or contracts. Unless plans examine all options for DER provision, the distribution planning exercise will not harness competition to provide savings to ratepayers and a more clean, flexible and resilient grid.

Getting the cost-benefit assessment is particularly important for energy storage resources, since such resources provide a unique set of benefits to the grid that must be captured correctly. To that end, the Authority should develop a separate valuation methodology for storage that reflects the ability of storage to serve as either a behind-the-meter or a front-of-meter distribution system asset that enables greater integration of DERs. The Authority can approach this by developing a Value of Storage assessment in this proceeding. ESA looks forward to providing input on how this can be done at a future juncture in this or related dockets.

III. CONCLUSION

ESA commends the Authority for working to enhance distribution planning processes and believes that the approach recommended in these comments will provide the State of Connecticut with a more flexible and resilient electric grid. ESA thanks the Authority for the opportunity to provide these comments and looks forward to further participation in this proceeding.

Respectfully submitted this 28th day of March, 2018.

Nitzan Goldberger
State Policy Director
Energy Storage Association