BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

POLICY PROCEEDING – UTILIZATION OF STORAGE RESOURCES AS ELECTRIC DISTRIBUTION ASSETS	**:**	**DOCKET NO. M-2020-3022877**

COMMENTS OF THE
ENERGY ASSOCIATION OF PENNSYLVANIA IN RESPONSE TO
SECRETARIAL LETTER DATED DECEMBER 3, 2020

I. INTRODUCTION

The Energy Association of Pennsylvania ("EAP" or "Association") submits these comments on behalf of its electric distribution company members[1] in response to a Secretarial Letter issued in the above-captioned proceeding on December 3, 2020 by the Pennsylvania Public Utility Commission ("PUC" or "Commission"). The Commission seeks public input concerning potential opportunities for the deployment of energy storage technologies in the Commonwealth that may have "less significant rate impact than other more conventional utility restoration or improvement investments" to enhance or maintain the reliability of electric utility distribution systems. Secretarial Letter at p. 2. Three specific questions are included to initiate this proceeding with the hope that information provided "can guide any potential future regulatory policies related to utilization of electric storage within electric utility distribution resource planning." *Id.*

[1] Hereinafter referred to collectively as "EDCs", the Association's electric distribution company members include: Citizens' Electric Company; Duquesne Light Company; Metropolitan Edison Company; PECO Energy Company; Pennsylvania Electric Company; Pennsylvania Power Company; Pike County Light & Power Company; PPL Electric Utilities; UGI Utilities Inc. – Electric Division; Wellsboro Electric Company; and West Penn Power Company.

Along with its EDC members, EAP welcomes the interest of the Commission in this topic particularly at a time where the economics of energy storage technologies continue to improve and EDCs seek innovative solutions to address variables, such as the growth in distributed energy resources, the future of electric vehicles, and the worsening weather patterns, all of which impact grid operations.

In its comments, EAP details the availability and benefits of energy storage as a distribution asset that can improve operation of the energy grid; increase reliability, resiliency and operational flexibility; and support the integration of distributed energy resources such as solar and wind power. These comments will further suggest guiding principles to assist the Commission as it looks to establish policies related to EDC utilization of storage resources as electric distribution assets. EAP offers that such policies will best serve customers if: (1) policies are inherently flexible; (2) policies seek to maximize the value that can be achieved through energy storage, and (3) policies account for the continued evolution of energy storage resources and for the innovative ways such resources can be used to enhance reliability and resiliency of the energy grid for the benefit of all customers. Finally, EAP defers to its member EDCs to respond directly to the individual questions posed in the Secretarial Letter.

II. AVAILABILITY AND BENEFITS OF ENERGY STORAGE TECHNOLOGY

At a basic level, energy storage is a way to save previously generated energy and use it at a later time; that attribute makes energy storage a useful and versatile resource capable of addressing a number of operational issues for electric companies. Energy storage does not consist of a single technology but comprises a number of different technologies with distinct operating characteristics, cost structures, and benefits. The technology deployed at a given location by an electric company would consider the service area's physical attributes and

resources, needs, and market structure. Examples of storage technology include pumped hydro storage systems, battery storage technology, thermal storage technology, compressed air energy storage systems, and flywheel storage systems. The recent and continuing decrease in cost of battery storage technology makes it a cost-effective energy grid asset and, in some cases, a viable solution for individual customer needs.

For Pennsylvania EDCs, the storage of previously generated energy (which is purchased and delivered to its transmission or distribution grid by the terms of its default service plan or via a third-party supplier) is best characterized as a distribution asset subject to inclusion in rate base and recovery proceedings. Energy storage resources can also provide multiple services and that versatility adds to the value of these assets. EAP contends that a classification scheme, i.e., generation vs. transmission vs. distribution, should not be imposed to disqualify EDC ownership or automatically prohibit certain uses of storage resources by EDCs to improve grid operations or benefit customers. Restricting EDC access or ownership of energy storage technology based on a particular classification scheme eliminates an increasingly cost-effective option to enhance the reliability and resiliency of the electric grid to the detriment of both the utility, responsible for ensuring reliability, and its customers.

By way of example, electric utilities are in the best position to identify the most valuable applications and optimal locations to situate energy storage resources on the electric grid, a key consideration in alleviating congestion. Improper placement can hurt reliability and have a negative cost impact by requiring additional investment in new capacity or distribution upgrades as contrasted with proper placement of storage technology that has the potential to defer or to reduce the need for incremental investments.[2]

[2] *See*, EEI, "Harnessing the Potential of Energy Storage: Storage Technologies, Services, and Policy Recommendations," 2017.
https://www.eei.org/issuesandpolicy/generation/Documents/EEI_HarnessingStorage_Final.pdf

Energy storage provides a number of benefits to electric utilities and their customers. First, energy storage enhances *reliability* in a variety of ways that are crucial to managing the grid and maintaining service without interruption. For example, energy storage can be used as a resource to help manage peak loads. If properly sized, storage technology can provide an alternative to resources such as peaker plants by enabling peak shifting, i.e., charging at low demand times of the day, such as at night, and then releasing energy during peak periods, such as early morning or late afternoon. Energy storage can also be used to improve basic reliability services such as frequency regulation, voltage support, or meeting required reserve capacity.

Second, energy storage technology supports *resiliency* and can improve the ability of an electric utility to restore service safely and efficiently following a disruption caused by severe weather or equipment failures. Such technology can serve as a backup energy source to individual loads or even entire substations in the event of an outage to quickly restore power while a permanent solution is implemented. Or, in certain situations, storage may provide an effective long term alternative solution to a needed transmission or distribution upgrade.

Third, these technologies allow additional *flexibility* for grid operators to better manage the fluctuations of supply and demand particularly as related to the integration of distributed energy resources onto the transmission or distribution systems. Certain storage technology, such as batteries, can help address the variability of renewable energy generation, such as solar or wind, by providing an option to store output generated by third parties that is in excess of immediate demand and saving it for a later time when demand exceeds supply. Energy storage technology can also be an effective tool for balancing fluctuations in the output of renewable generation owned by third parties if the technology has the ability to quickly ramp up or ramp down to manage sudden spikes in output that can occur as the sun rises or sets, clouds pass over solar panels, or wind speeds fluctuate.

Fourth, energy storage technology can *improve the customer experience*. For example, these technologies provide enhanced resiliency services to customers directly on either side of the meter AND can be used to maximize the benefits of customer side distributed energy resources by reducing the demand for electricity provided through the grid with storage used to balance production and demand.

In the United States today, electric companies are key partners in implementing energy storage technologies, accounting for about half of battery storage capacity deployed in 2019, and owning, procuring, or utilizing 97% of all energy storage installed.[3] EAP notes that energy storage technology has already been utilized in Pennsylvania by at least one EDC as a means to enhance electric distribution system reliability and resiliency.[4] Continued deployment of energy storage resources has the potential to offer multiple benefits to electric utilities and their customers, including enhanced reliability, improved resiliency in the event of service disruptions, and increased flexibility in the management of distributed energy resources. As outlined above, energy storage technology, properly deployed, can be used in various cost-effective ways to strengthen EDC operations, optimize and support the distribution system, and enhance customer experience.

III. GUIDING PRINCIPLES TO CONSIDER IN DEVELOPING POLICY CONCERNING UTILIZATION OF ENERGY STORAGE RESOURCES

While the specific interest of the Commission here is focused on the availability of energy storage technology as a cost-effective alternative to conventional utility restoration or

[3] See EEI, Energy Storage Trends & Key Issues, June 2020. https://www.eei.org/issuesandpolicy/Energy%20Storage/2020_June_Storage_Key_Trends_Solutions_FINAL.pdf

[4] PPL installed a 50kW battery storage device on its distribution system, improving reliability in a cost-effective manner.

improvement investments, EAP maintains that the technology can also be a cost-effective way to resolve operational issues arising from the anticipated growth in distributed energy resources in the Commonwealth. Further, as the technology matures and evolves, it will be important that policies developed in the near term provide pathways for EDCs to explore new ways to utilize improved technology and resources. Thus, as the Commission explores policies that "can allow electric utilities the opportunity to substitute conventional distribution upgrades with alternatives that may provide sound economic investments"[5], EAP requests that any new policies do not inhibit the innovative use of future technical improvements in energy storage that may further enhance grid reliability and resiliency for the benefit of all customers.

EAP encourages the Commission to develop policies that are flexible and reflect the key role electric utilities play in deploying energy storage resources to the benefit of all customers. Building on the industries broad experience with technology deployment and operations, electric utilities have and will continue to demonstrate the potential of this technology to enhance grid reliability and resiliency at the lowest cost to all customers. EDCs can leverage economies of scale and lower cost of capital to deploy energy storage effectively and efficiently. EDCs can deploy such resources on property they already own or on public rights-of-way and in locations determined to be optimal from an operational and cost perspective. Any new policy should reflect that the utility role and involvement in the wide-spread adoption of energy storage technologies into the distribution system is critical to maximize the value and benefits those assets can bring to the electric grid and utility customers.

With this in mind, EAP suggests the following guiding principles for consideration in the development of any new policies:

[5] Secretarial Letter at p. 2.

1. Enable full participation by EDCs in the ownership and/or operation of energy storage resources and allow flexibility for the utility to test, evaluate, and deploy such technology;
2. Ensure safe connection and operation of energy storage system or device;
3. Ensure, for planning and operational purposes, visibility by EDCs, impact assessment, and some level of utility input into and control of third party owned energy storage resources that are connected to the distribution grid;
4. Ensure that retail ratemaking avoids cost-shifting from customers who own storage technology to customers who do not own storage technology;
5. Ensure fair and timely cost recovery of utility investment in energy storage technology;
6. Encourage optimal location as determined by the EDC, when possible, to increase the value that energy storage provides to customers, the electric grid and distribution system; and
7. Encourage appropriate coordination among the transmission and distribution systems to the extent that energy storage systems will impact the transmission system.

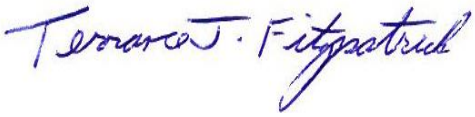
IV. CONCLUSION

In conclusion, EAP supports the Commission's inquiry into the utilization of storage resources as electric distribution assets and contends that energy storage technology, properly deployed, can deliver enhanced levels of reliability, resiliency, and improved grid operations to the benefit of all EDC customers. EAP believes that any policy adopted should support ownership by EDCs as well as third-party stakeholders while ensuring flexibility to EDCs to test, evaluate, and deploy energy storage technologies at locations that meet the needs of their

customers and enhance grid operations. Policies should encourage utility involvement in the integration of energy storage into the distribution system to ensure safety, visibility, and control at the time of interconnection and throughout the operable life of the device. This is critical to optimize value and benefits to the electric grid and customers. Policies should further support fair and timely cost recovery of utility investments in energy storage while ensuring that retail ratemaking avoids cost-shifting among customers in situations where the storage resource is owned by a third party.

EAP appreciates that this is an initial step in the process of developing policy, looks forward to the next steps in this proceeding and to working with the Commission and interested stakeholders as the conversation continues.

Respectfully submitted,



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