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June 2, 2021

Mark L. Johnson
Executive Director Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop S.E.
Lacey, WA 98504

Re: Relating to Electricity Markets and Compliance with the Clean Energy Transformation Act, Docket UE-210183

Dear Mr. Johnson,

The U.S. Energy Storage Association ("ESA") appreciates the opportunity to provide comments to the Washington Utilities and Transportation Commission ("Commission") in Docket UE-210183, in response to the May 3 Notice of Opportunity to File Written Comments ("Notice"). ESA applauds the Commission for its attention to storage in the implementation of the Clean Energy Transformation Act ("CETA").

In its Notice, the Commission states that "potentially significant complications arise when considering energy storage in the context of compliance and verification of CETA requirements under Chapter 19.405 RCW." However, these complications only arise if energy storage is considered to be a source of energy, a characterization with which ESA disagrees. In these comments, ESA explains that energy storage is not a source of energy and therefore does not need to be "accounted for" in the context of compliance with CETA requirements. Instead, we suggest that the Commission consider other measures to ensure that energy storage is valued for the flexibility that it provides the energy grid. These measures may include resource planning reforms, compensation programs for customer-sited energy storage, an energy storage procurement target, and an exploration of new mechanisms to provide value for flexibility.

ABOUT THE U.S. ENERGY STORAGE ASSOCIATION

ESA is the national trade association dedicated to energy storage, working toward a more resilient, efficient, sustainable, and affordable electricity grid—as is uniquely enabled by energy storage. With over 200 members, ESA represents a diverse group of companies, including independent power

producers, electric utilities, energy service companies, financiers, insurers, law firms, installers, manufacturers, component suppliers, and integrators involved in deploying energy storage systems around the globe. Further, our members work with all types of energy storage technologies and chemistries, including lithium-ion, advanced lead-acid, flow batteries, zinc-air, liquid air, compressed air, and pumped hydropower, among others. A number of ESA members have offices and/or operations in Washington.

ENERGY STORAGE PROVIDES FLEXIBILITY BENEFITS TO THE GRID

Energy storage enables the increased penetration of renewable energy resources and reduced dependency on emitting technologies that will be essential in meeting the requirements of CETA. Storage can serve as a cost-effective and low impact solution for integrating growing levels of renewable energy, both by complementing or substituting for more expensive traditional transmission facilities and by avoiding curtailment of renewable energy and other clean energy resources. At the distribution level, energy storage systems can facilitate adoption of clean energy resources such as customer-sited solar systems by enhancing hosting capacity along the distribution grid.

Importantly, energy storage also has unique attributes that are complementary to any portfolio of resources, regardless of the grid's carbon content, owing to its ability to make the grid more flexible and affordable. Energy storage enhances resilience to withstand or recover from extreme weather conditions, including through deployment on the distribution system and at customer premises. Storage can also significantly reduce the need for spare generation capacity to meet peak demand and thereby save ratepayers the expense of carrying the burden of underutilized assets. Strategically placed energy storage is increasingly deployed as an alternative to polluting "peaker" plants, delivering significant pollution reduction benefits to vulnerable communities.[1]

[1] NYPA and Environmental Justice Groups Agree to Explore Options for Transitioning NYPA's Natural Gas 'Peaker' Plants to Cleaner Energy Technologies," New York Power Authority, October 2020, https://www.nypa.gov/news/press-releases/2020/20201013-ej

ENERGY STORAGE IS NOT A SOURCE OF ENERGY, AND STORAGE OPERATIONS SHOULD NOT BE INCLUDED IN GENERATION ACCOUNTING SUCH AS RENEWABLE ENERGY CERTIFICATES

Energy storage is not generation. ESA agrees with the UTC in its 2017 Energy Storage Policy Statement ("Policy Statement"), which states in P. 15 that storage is "a scalable resource that can act as either supply or demand, as generation or delivery," and "is fundamentally a new class of resource." Like generation, energy storage can supply load to meet resource adequacy needs. Similar to a distribution or transmission asset, energy storage can deliver power generated elsewhere to a specific location on the grid when and where it is needed. This can effectively increase the net capacity of the distribution or transmission system at a given location where the energy storage system is located.

The value of energy storage is not the production of energy; it is the delivery of energy that has been generated elsewhere precisely when and where it is needed on the grid. This characteristic is an excellent complement to intermittent renewable generation, and essential in any zero-carbon electricity scenario. It is the flexibility of an energy storage system that should be valued, not the emissions-free electrons that it did not produce. It is for that reason that federal[2] and state[3] regulation has previously deemed storage to not be equivalent to generation for various regulatory purposes.

Therefore, energy storage systems should neither mint nor retire renewable energy credits ("RECs"), as suggested in the Notice. RECs should be created at the meter of the renewable generator and retired at retail delivery (including retail delivery for which the customer has installed energy storage behind the meter). If CETA compliance requires a utility to claim the source of a specific MWh of electricity, the "source" would never be an energy storage system, it would be the generator from which the MWh was initially produced.

If CETA compliance requires comparison of the total volume of electricity purchases with retail sales, round-trip energy loss that occurs as electricity is charged and discharged from energy storage

[2] FERC Order 841 states, "Through this Final Rule, we seek to ensure that RTO/ISO market rules account for the unique physical and operational characteristic of electric storage resources, namely their bidirectional capability to both inject energy to the grid and receive energy from it," FERC Order 841, P. 32, https://www.ferc.gov/media/order-no-841

[3] Massachusetts H4568 of 2016 allows for utility ownership of energy storage provided that the system shall "defer or substitute for an investment in generation, transmission or distribution assets." https://malegislature.gov/Bills/189/H4568.pdf

may need to be considered, but this is no different than line losses in transmission and distribution infrastructure. Electricity passing through energy storage systems in front of the meter should be treated just as one would treat transmission or distribution infrastructure for the purposes of REC accounting, although storage is neither transmission nor distribution.

RECs, which represent the environmental attributes of a MWh of generated electricity, are a market mechanism to regulate the generation of electricity. Since energy storage is not generation, any attempt to assign RECs to energy storage will fail to recognize the value of energy storage and will incorrectly classify the discharge of energy from the storage system as "clean" or "dirty" generation – it is neither clean generation nor dirty generation because it is not generation at all.

TRACKING THE SOURCE OF CHARGED ELECTRICITY IS IMPRACTICAL

As described in the previous section, it is not necessary to determine the source of electricity discharged by a specific energy storage device, because the device is not a generating asset and should not receive credit as such. In addition to being unnecessary, this level of accounting is impractical with any reasonable precision.

Energy storage systems can deliver electricity at the sub-hourly intervals, and frequently provides services on a sub-hourly basis, including regulation reserve, load following, and spinning reserve. In order to accurately determine the source of electricity used to charge a given energy storage system, it would be necessary to determine the generation source of the marginal unit of electricity at a sub-hourly interval. Moreover, any time the grid is experiencing congestion, the energy storage system would not charge with the marginal kWh on the entire system, but rather at that specific point on the grid. Absent a publicly accessible computational system in place to track electricity operations in this manner, the level of spatial and temporal granularity required would render inaccurate any attempted accounting of the generation source of specific charging and discharging.

Instead of attempting to measure the source of the electricity that an individual energy storage system charges and discharges, a complete accounting of RECs need only measure the electricity at the point of generation and at ultimate delivery to retail customers. Energy storage does not need to be accounted for to fulfill the public policy goals and accounting mechanisms of the CETA.

ENERGY STORAGE NEEDS VALUE STREAMS FOR FLEXIBILITY SERVICES

In order for Washington to effectively deploy energy storage at the level necessary to cost-effectively meet the requirements of CETA, mechanisms should be in place to compensate the flexibility value of energy storage. ESA recommends the following:

- Utility modeling should be improved to ensure that energy storage is appropriately valued. The Policy Statement provides excellent guidance on the evaluation of IRPs and the steps that utilities should take to ensure that the net benefits of energy storage are being fully valued. Washington's investor-owned utilities have made progress, particularly in the use of sub-hourly modeling, but energy storage continues to be undervalued. Avista does not add any storage until 2038 under its preferred resource plan.[4] Puget Sound Energy ("PSE") included 25 MW of energy storage by 2025 in its 2021 IRP,[5] yet assigns storage a very low Effective Load Carrying Capacity ("ELCC")[6] in its most recent All-Source RFP that will make it difficult for energy storage to compete as a capacity resource. Future reviews of utility resources plans and procurement practices should ensure that utilities are following the Policy Statement's directive in P. 34 to "[work] diligently to identify and pursue cost-effective opportunities to incorporate energy storage into their systems."

- For customer-sited storage, new utility tariffs or compensation programs are needed to ensure that energy storage owners and operators are able to receive value for the services that their energy storage systems provide. As the Policy Statement recommends in P. 54: "the Commission and utilities may have a role to play by establishing appropriate pricing through tariffs that provide an economic signal conducive to cost-effective storage applications located behind the meter." Four years after the Policy Statement was issued, Washington has plenty of models to follow. For example, the Arizona Corporation Commission directed Arizona Public Service ("APS") to develop a tariff to compensate distributed resources included storage for capacity,

[4] Avista 2021 Electric Integrated Resource Plan, https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/2021-electric-irp-w-cover-updated.pdf
[5] PSE 2021 Electric and Natural Gas Draft Integrated Resource Plans, Presentation to WUTC, https://oohpseirp.blob.core.windows.net/media/Default/Reports/Draft/General/UE-200304-UG-200305-PSE-Presentation-2021-IRP-(02-19-21).pdf
[6] PSE's ELCC value for 4-hour battery storage is 24.8%, compared to 79% proposed by PJM in its recent FERC filing https://www.pjm.com/directory/etariff/FercDockets/6010/20210301-er21-278-001.pdf

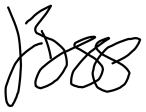
demand reduction, load shifting, locational value, voltage support, ancillary and grid services, and any other demonstrable operating benefits. APS recently submitted a draft RFP to solicit proposals from third parties to deliver these attributes.[7]

- Just as renewables have benefited from supplementary market incentives such as RECs, it may be necessary to provide additional compensation for energy storage to accelerate deployment and meet the ambitious goals of CETA. Leading states such as California, New York, and Massachusetts have all passed energy storage procurement targets to jumpstart the energy storage market and ESA recently developed policy principles for energy storage target design.[8] Absent a significant and immediate progress in the deployment of energy storage through utility IRP and RFP processes, ESA recommends that the Commission consider whether a procurement target or other mechanism to compensate energy storage for its flexibility values is necessary to achieve the requirements of CETA.

CONCLUSION

ESA appreciates the opportunity to submit these comments for the Commission's consideration. Washington has the potential to be a national leader in energy storage policy, and we encourage thoughtful consideration of the best approach to ensure energy storage is properly valued in the implementation of the state's ambitious energy goals. ESA looks forward to continued conversation on this topic with the Commission and other stakeholders.

Sincerely,



Julian Boggs
State Policy Director
U.S. Energy Storage Association

[7] 2021 Distributed Demand-Side Resources Request for Proposals DRAFT, Arizona Public Service, May 20, 2021, https://docket.images.azcc.gov/E000013623.pdf?i=1621870023174

[8] Policy Position on State-level Energy Storage Target Design, Energy Storage Association, Feb 2, 2021 https://energystorage.org/wp/wp-content/uploads/2021/02/Final-Policy-Position-on-State-Level-Energy-Storage-Target-Design_clean-and-uploaded-3.pdf