



ELECTRONIC FILING

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Secretary Kathleen Burgess

New York State Public Service Commission

Empire State Plaza, Agency Building 3

Albany NY 12223

RE: Case 18-3-0130: Reply Comments In the Matter of Energy Storage Deployment Program

Key Capture Energy (KCE) is an energy storage development company with a focus on utility-scale battery storage projects in the northeastern United States. The company selects project sites, secures all necessary permits, procures full battery systems and oversees construction to move battery storage projects into operation. KCE is starting construction on its first 20 MW project in New York in fall 2018 and has amassed a development portfolio of stand-alone energy storage projects ranging from 2 to 200 MWs in the state, ready for deployment in 2019.

KCE commends the New York State Energy Research and Development Authority (NYSERDA) and the Department of Public Service (DPS) for the development of the Energy Storage Roadmap and for this stakeholder process.

KCE respectfully submits the following reply in response to the comments of other stakeholders.

In particular, this reply:

- Supports that the market bridge incentives must account for currently nonmonetizable value streams and echoes numerous other stakeholders in asserting that an environmental value-adder is an efficient way to supplement funding for storage systems.
- Supports the specific incentivization of standalone energy storage systems.
- Supports proposed market changes at NYISO that allows for full participation from energy storage projects
- Disputes the arguments that energy storage will be unfairly subsidized and that the program will result in additional charges to customers.

Please note that these reply comments are not intended to supersede KCE's previous comment filings in the Energy Storage Roadmap proceeding but should be viewed as supplements to the initial recommendations.

I. Market Bridge Incentives and "E" Value

Numerous stakeholders have noted the necessity of the market acceleration incentives to eliminate uncertainty for developers. As stated by the New York Battery and Energy Storage Technology Consortium (NY-BEST) along with GlidePath Development, in order for the market acceleration incentives to be effective, the market bridge must eliminate revenue uncertainty and funding currently nonmonetizable value streams. KCE echoes these statements: The structure for market bridge



incentives must efficiently allow storage to be competitive in the market, and providing funds based on benefits the systems provide is a fair method of doing so.

The Natural Resources Defense Council (NRDC) also states the importance of the market bridge incentives, but specifically adds that the funds should be distributed partially upfront. KCE agrees, noting that this will aid in the development of the market and advance decreasing cost curves.

Many commenters have agreed with the proposal to add an environmental or “E” Value to the value stack, which KCE also supports. Both NY-BEST and the NRDC have expanded on this idea, stating that the “E” Value should include an adder for NO_x and SO_x emissions reductions. The NRDC comments also note that the current proposed structure for the “E” Value does not adequately incentivize emissions reductions, as it relies on the long-term averages of marginal emissions rather than hourly or sub-hourly rates. Instead, comments suggest using granular data because storage can respond to rapid signal changes. Borrego Solar recommends time-varying E-value to maximize energy storage benefits. KCE agrees with time-varying E-values, and emphasizes both the inclusion of NO_x and SO_x calculations as well as modeling the storage systems on a sub-hourly basis. Both of these measures will lead to the development of systems that maximize benefits and therefore produce the highest environmental impact.

KCE agrees with NY-BEST to make projects constructed after January 1, 2019 qualify for the Market Bridge Incentive, as giving clear guidance of eligibility will inform developers actions in 4Q18. Likewise, KCE agrees with Borrego Solar Systems on the retroactive E-Value for all energy storage systems. The first movers in the market should not be penalized for moving the industry forward in New York state.

KCE disagrees with the approach several parties has taken for the allocation of market bridge incentives. For instance, Fluence Storage recommends a split of 1/3, 1/3, 1/3 for residential, C&I and bulk power markets. KCE believes that market bridge incentives should be neutral to location and use case and should be the same across the entire state, as the projects that are most beneficial to the electric grid (thus corresponding to highest wholesale prices) will be the ones that developers prioritize.

II. Standalone Storage

Both NY-BEST and the NRDC supported standalone energy storage systems in their comments. NY-BEST noted that standalone storage must also be included in the “E” Value, and expressed concern over its exclusion from the Value of Distributed Energy Resources (VDER) tariff. The NRDC not only argued for the inclusion of energy storage but also asserted that a portion of the market bridge incentives should be dedicated to standalone systems. The organization notes that these systems are uniquely suited for densely populated places such as New York City and states there are numerous other benefits to standalone storage such as transmission and distribution (T&D) deferral.

KCE strongly agrees with the suggestion to specifically incentivize standalone storage. In addition to T&D deferral, standalone systems can provide congestion relief and replace inefficient and expensive peaker plants – especially in urban areas where space is at a premium and large-scale wind, solar, or hydro plants are unfeasible. These are benefits that storage is unable to provide when exclusively paired with



renewables, yet standalone is the only type of energy storage system that does not currently receive any form of subsidization at the state or federal level.

III. NYISO Market Changes

Many stakeholders proposed ideas for market changes at NYISO that allows for full participation for energy storage. KCE agrees with the ideas proposed by Sunrun – that market bridge incentives should take into account that NYISO market participation pathways and revenue earning opportunities are uncertain.

KCE supports many of these ideas for NYISO market changes, in particular:

- Borrego Solar Systems proposes delivery rate design for front of the meter standalone storage that reflects the costs and benefits of the resources; specifically, at a minimum energy storage should not be penalized for exporting electricity during times of peak system load through supply-based or transmission and distribution demand charges. Likewise, Enel details the demand charges in off-peak hours that exceed the costs that customers/batteries impose when they charge during those times.
- Enel recommends NYISO to reconsider its approach in ignoring flexibility in the capacity market, with four hour storage resources having the same capacity value as any other resources.
- Enel recommends that NYISO create an option for new resources in NYISO capacity market to have a price lock for upwards of 7 years.

Specifically regarding capacity values, KCE would like to highlight a 2016 ICF study: “Unlocking the Hidden (Capacity) Value in Energy Storage”, in which their analysis for a specific use case showed a 100 MW energy storage system with 1-hour of stored energy can provide 46 MWs of firm capacity, while a 100 MW storage resource with 4-hour of stored energy can provide 99 MWs of firm capacity¹. KCE also supports NY-BEST’s position of NYISO and stakeholders should undertake a fundamental review of “capacity”, including evaluating the reliability contribution of energy storage, with, for example, one hour or two hours duration, as well as longer durations.

IV. Fair Subsidization

In its comments, Multiple Intervenors states support for energy storage, but it expresses concern over subsidization for storage through the market bridge incentives, believing it to provide unfair advantages in the market compared to traditional resources. The group also worries that market bridge incentives will result in customers carrying additional charges.

However, KCE notes that the energy storage subsidies are intended to fill gaps from revenue streams and benefits that are currently nonmonetizable in the NYISO wholesale market. Therefore, the incentives are not unfair by providing incentives to tip the scales in favor of storage, but rather they make up for the lack of funding from the benefits that storage provides to the system, such as T&D

¹ ICF notes that the Capacity value of Energy Storage is highly correlated with the underlying load and generation mix. In the case of the ERCOT grid, their analysis indicates that a 4-6 hour storage system should be able to capture a capacity value of 100%



deferrals, electricity congestion relief, emissions reductions, and increased reliability. While bridge incentives would not increase rates for customers, the benefits that storage provides greatly outweigh costs. For example, the Massachusetts “State of Charge” study concluded that the addition of 600 MW of advanced energy storage by 2025 would capture \$800 million in system benefits to Massachusetts ratepayers through a cleaner and more resilient grid.² The benefits of storage deployment will greatly outweigh the costs of the market bridge incentives, and they will not result in unfair added costs to customers.

Thank you for the opportunity to continue to comment and participate in this stakeholder process.

Jeff Bishop
CEO, Key Capture Energy
jeff.bishop@keycaptureenergy.com

² Massachusetts Department of Energy Resources. *State of Charge: A Comprehensive Study of Energy Storage in Massachusetts*. 2016. <https://www.mass.gov/service-details/energy-storage-study>.