STATE OF NEW YORK PUBLIC SERVICE COMMISSION

In the Matter of the Value of Distributed Energy Resources	**Case 15-E-0751**

COMMENTS OF CONSUMER POWER ADVOCATES REGARDING THE VALUE OF DISTRIBUTED ENERGY RESOURCES

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Introduction

Consumer Power Advocates (CPA) is a coalition of not-for-profit commercial health care and educational customers in the Consolidated Edison service territory that advocates on behalf of consumer interests before the Commission, NYISO and elsewhere. CPA's members have been at the forefront of employing distributed energy resources (DERs,) including demand response (DR,) combined heat and power (CHP,) and solar systems.

The primary purpose of New York's Reforming the Energy Vision (REV) initiative is to bring greater innovation and competition to the manner in which customers receive services from and interact with the electric power system, the state's utilities and other participants. Ultimately the goal is to lower costs to consumers, and expand opportunities, all while maintaining safe and adequate service, protecting consumer interests, and promoting fair competition.

CPA's interests are focused most on the Con Edison (ConEd) service territory and issues that affect customers in the greater New York City region. We have not extensively reviewed the Value of Distributed Energy Resource (VDER) implementation plans filed by the Upstate utilities, so our comments here should not be construed as either support or opposition to those filings.

CPA is generally supportive of the implementation plan filed by ConEd (ConEd Plan), as it appears to enact the relatively prescriptive directives outlined by the Commission in its March 9, 2017 *Order on Net Energy Metering Transition, Phase One Value of Distributed Energy Resource, and Related Matters* (VDER Order) in a manner consistent with the Commission's intention. Where a specific approach was not prescribed, the ConEd Plan proposes approaches that make sense. CPA's comments here are limited to two of the issues raised in the May 12 *Notice*.

First, CPA believes that energy storage, paired with combined heat and power (CHP) will be a prominent contributor to achieving REV objectives if allowed to do so, and that methods for compensating such resources under the Value Stack compensation approach should be developed and implemented. Second, CPA believes that, particularly in New York City, meeting the aggressive REV objectives and meaningfully substituting cleaner and more efficient customer-sited resources for central-station generating plants will not be possible without a major expansion in CHP development. For this to occur, the Commission must allow much larger CHP facilities to participate in the Value Stack.

In addition, CPA wishes to make an additional point relevant to VDER issues in general. By their nature, the large majority of DERs in New York City will be located on customer premises and installed primarily to address customer concerns regarding the cost and reliability of their electric service. The majority of the investments in DER projects are being made by customers using their own capital. To be sure, the revenues from the Value Stack will play a key role in influencing the size and design of the projects that make sense, and in some cases whether it makes sense to pursue a project at all.

The point is that customers are taking a substantial risk when they make a major capital investment based upon expected future revenues from the Value Stack, a risk that such value could change significantly and possibly render the investment not beneficial in hindsight. To some extent, this is unavoidable. The value for capacity and energy are based on inherently uncertain NYISO markets. Even the environmental value can change over time. Of particular concern, though, are the Locational System Relief Value (LSRV) and Demand Response (DRV) revenues, since these will necessarily change based on changes in both the degree of loading on the various networks, as well as changes in marginal costs.

To the extent possible, the Commission needs to recognize that customer participation will be the key to REV's success and customers need to have some confidence, notwithstanding the inherent uncertainties, that if they make these investments and then hold up their end of the bargain by operating their facilities as they have committed to do (with reasonable credit for partial performance,) that there will be a *quid pro quo,* and that neither the Commission or the utilities will not unilaterally change the "deal" in a way that upsets legitimate expectations.

Many details remain to be worked out over the coming years, but there should be a fundamental framework established that the Commission and utilities preserve. Otherwise, customers will not make the investments that need to be made for REV to be a success.

Comments

Storage Should Be Chargeable By Non-Renewable Resources

While one of the goals of REV is certainly a cleaner electric system, and while much of the focus to date has been on non-emitting resources, such as solar, this does not mean that emitting DERs are to be excluded. Phase II of the Value of Distributed Resources process recently commenced and one of the principal areas to be addressed is how (not whether) to accommodate non-Net Energy Metering resources. Incorporation of battery storage, presently excluded outside the mass market sector, is one priority, while incorporation of combined heat and power (CHP) is another.

Several of CPA's members are considering investments in battery storage, CHP, or both[1]. The addition of battery storage to CHP provides an important degree of additional flexibility not afforded by either technology alone. For example, a CHP system in isolation might not necessarily have its maximum output occur during the peak period, while one coupled with storage could charge off-peak and inject on-peak, helping to reduce T&D costs and possibly reduce more problematic on-peak emissions. Capturing these potential synergies will require that the Commission permit the use of CHP to charge the battery systems.

CHP facilities utilize fuel much more efficiently than a standalone power plant, anywhere from two to three times as efficient. Combining CHP with storage (battery or thermal) presents opportunities to further increase their efficiency by better optimizing thermal and electrical output. To be sure, efforts will need to be made to develop rules that ensure injections from batteries charged with emitting resources receive an appropriate level of the "E" or environmental component of the Value Stack, but this should not be a reason to reject the approach altogether.

The Commission should affirm the eligibility of fossil-charged battery storage for Value Stake payments and direct the Value Stack Working Group in Case 15-E-0751 to include the development of such rules in its work effort.

[1] / Consideration is also being given to the installation of fuel cells, which may have similar opportunities for pairing with storage.

Projects Up To 15 MW Should be Eligible For Value Stack Compensation

The current 10kW maximum output limitation on CHP to receive Value Stack compensation acts as a *de facto* prohibition on CHP participation, since the vast majority of potential CHP projects are likely to be several orders of magnitude larger[2]. In areas like New York City, where the space to install large solar or other non-emitting resources is limited, CHP is likely to continue to represent the largest single opportunity for DER development. Excluding CHP through the imposition of unreasonable low maximum sizes will simply exacerbate an already large and growing upstate/downstate disparity in DER opportunity.

As a general matter, significant economies of scale apply to generation investments, whether at the wholesale level or behind the customer meter. While the size of a given project will be driven in large part by specific customer needs and situations, it should not be constrained to a sub-optimal size by virtue of an arbitrary limit above which critical Value Stack revenues will no longer be available.

We are mindful that there may need to be some limit on the size of CHP DERs eligible for Value Stack compensation in order not to encourage otherwise wholesale generators to go "behind the fence" in search of compensation greater than would be afforded by participation only in the NYISO markets.

Because there are several projects in the ConEd service territory that are larger than 10 MW, CPA recommends a limit of 15 MW. This limit should apply to both new and existing resources that desire to expand and opt in to the Value Stack.

The 15 MW figure is not arbitrary. Pursuant to ConEd's Standby Tariff, customers installing a CHP facility sized between 1 MW and 15 MW, and meeting certain other requirements, are exempt from Standby Rates for a period of four years[3]. Facilities meeting these requirements should not be rendered ineligible for Value Stack compensation.

As for battery storage charged with emitting resources, CPA recommends that the Commission endorse the basic principal outlined above, but refer the issue to the Value Stack Working Group to work out the details.

[2] / Similarly, there may be opportunities to cost-effectively install fuel cells at a size greater than the 2 MW currently permitted

[3] / See Leaf 162, page 171 - https://www.coned.com/_external/cerates/documents/elecPSC10/GR1-23.pdf

Conclusion

CPA supports the expanded participation of battery storage, including battery storage charged using CHP, as well as the ability of larger resources to receive Value Stack compensation. CHP respectfully urges the Commission to favorably consider and adopt the recommendations set forth herein.

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Albany, New York

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