

## **Enel X and Stem Comments on MA SMART 400 MW Review Process**

### **Introduction**

Enel X<sup>1</sup> and Stem<sup>2</sup> greatly appreciate DOER's careful deliberation in developing the 400 MW review changes. The following comments are intended to improve upon DOER's proposed changes, and if our recommendations are adopted, will better enable the Commonwealth to meet the objectives of the SMART program.

### **Recommendations for Behind-the-Meter ("BTM") C&I Solar + Storage > 25 kW**

While we support DOER's proposed changes for BTM C&I, we believe the changes by themselves will fail to jumpstart participation in the BTM C&I segment. In this section, we detail the benefits of BTM C&I participation, focusing on solar + storage,<sup>3</sup> why DOER's proposals are insufficient, and propose recommendations for increasing C&I participation in a cost-effective manner.

In slide 11 of their 400 MW review presentation, DOER recognizes that BTM C&I participation in SMART can lead to "greater grid benefits." These grid benefits include but are not limited to the following:

- Increased reliability and resilience, as projects that are closer to load do not rely on long transmission and distribution lines to be delivered to load. In the event of storms that knock out power lines, having sources of energy close to load are likelier to avoid disruptions in service, especially with initiatives like the resilience multiplier proposed under Clean Peak.

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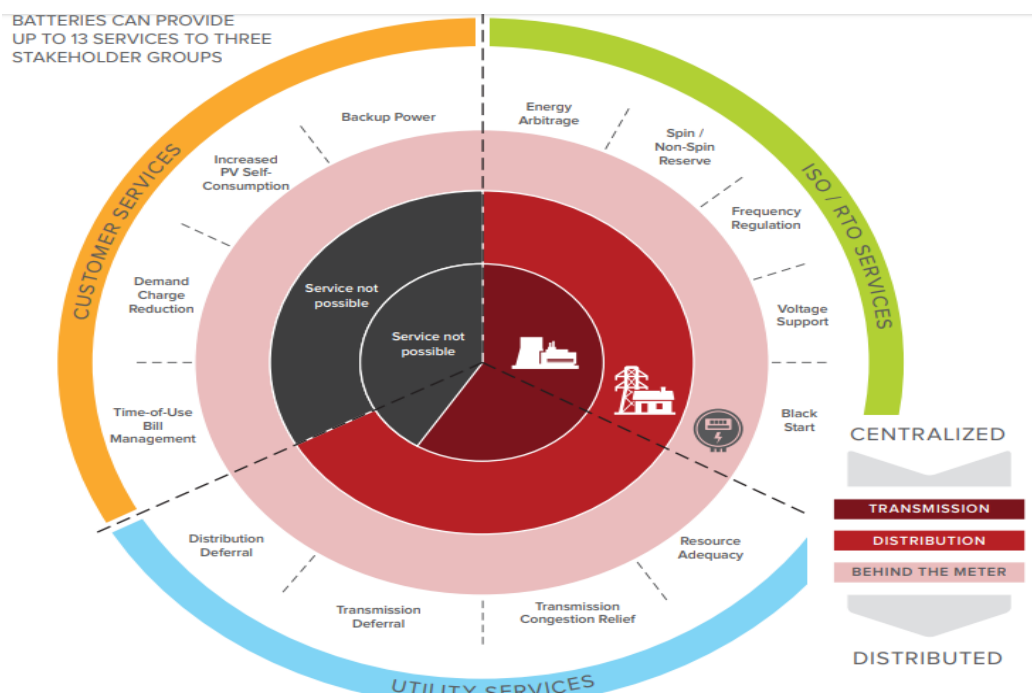
<sup>1</sup> Enel X is leading the transformation of the energy sector through harnessing the flexibility of energy storage, load curtailment, electric vehicles, and distributed generation. Enel X in North America has approximately 3,400 business customers, spanning more than 10,400 sites, representing more than 4.6 GW of demand response capacity and over 20 behind-the-meter storage projects. Enel X's e-Mobility offering has deployed 42,000 charging stations across its footprint, completed 12.7 million charging sessions, and currently provides Day-Ahead and Real-Time Energy as a demand response provider in the California ISO Market. Enel X started as EnerNOC in the Commonwealth in 2003, and has been a pillar of the Commonwealth's clean energy landscape ever since, partnering with several hundred C&I customers across the Commonwealth during that time. Just recently, Enel X was pleased to announce an agreement with UMASS-Boston, where Enel X will install a 1 MW solar photovoltaic (PV) facility integrated with a 0.5 MW/2.0 MWh lithium-ion energy storage system, as well as 11 Enel X JuiceBox electric vehicle (EV) smart charging stations at the campus. The project is expected to be operational by the first half of 2020 and will participate in the SMART program.

<sup>2</sup> Stem is the leading developer of behind-the-meter energy storage for the C&I market in North America with over 600 operating installations and over 10 million system runtime hours. Over 100 of the operating and contracted sites include solar PV. Stem recently announced partnerships with 2 major solar PV developers in the Commonwealth where Stem will be the storage partner for over one dozen large scale SMART projects.

<sup>3</sup> Enel X has chosen to focus on BTM C&I solar + storage because the other BTM segments, including BTM solar only and residential, have seen a significantly higher MW number of SOQs as demonstrated in Table 1.

- Lower energy bills for ratepayers; BTM SMART projects, especially with storage, can defer or avoid the need for expensive distribution infrastructure upgrades in areas with high load; storage can also participate in the MA utility programs, including Targeted Dispatch and Daily Dispatch, that have high cost-effectiveness or the ISO-NE demand response program, which the DPU (through NECPUC) has previously recognized as saving ratepayers hundreds of millions of dollars annually.<sup>4</sup>
- In urban areas including environmental justice zones, there is limited potential for large Front-of-the-Meter projects. BTM projects in these areas can offset the need for fossil generation and lead to cleaner air
- Reduced interconnection costs

The following graphic from Rocky Mountain Institute depicts that BTM storage can provide up to 13 services to three different stakeholder groups, more than distribution or transmission connected storage.<sup>5</sup>



<sup>4</sup> Letter from the New England Conference of Public Utility Commissioners to FERC Acting Chairman Cheryl LaFleur. July 1, 2014. At P. 1: "In New England, demand response plays a critical role in maintaining electric power system reliability, while reducing costs to consumers and providing environmental benefits.... Elimination of demand response participation in the capacity market would not only cost consumers hundreds of millions of dollars but would remove an important and relied-upon tool for protecting reliability across New England and other regions."

<sup>5</sup> <https://rmi.org/wp-content/uploads/2017/03/RMI-TheEconomicsOfBatteryEnergyStorage-FullReport-FINAL.pdf>

The Baker Administration has done tremendous work to enable business growth in the Commonwealth, and increasing direct SMART participation from C&I customers will also reap economic benefit through lower energy bills for these businesses and other ratepayers.

DOER's proposals to expand Alternative on Bill Credits ("AOBC") to all BTM projects and modify the Value of Energy incentive calculation demonstrate that DOER understands the benefits of C&I and wants increased participation. Unfortunately, these changes by themselves will be insufficient for achieving the objective of meaningful increased participation from BTM C&I solar + storage. Most notably, the decision making process for C&I customers is incredibly lengthy (often 1-2 years), as a number of stakeholders within an organization including but not limited to energy managers, facilities, legal, finance, procurement, sustainability teams must sign off on a project before agreeing to move forward. While BTM C&I customers may be educated on solar, storage is still a new phenomenon to many customers. Considerable education is required, especially when installing storage on-site. It is a far more expeditious project acquisition process to build front-of-the meter projects or even residential projects where fewer decision makers are involved. **The evidence of this is clear in the paltry number of BTM solar + storage projects > 25 kW that have advanced under SMART. As of early September, there were only five such approved projects according to the DOER database, with some of the projects recipients of MA ACES funding.**

The SMART waiting lists in the National Grid and Eversource West territories are so lengthy that even if a developer wanted to start pursuing the BTM C&I solar + storage market in response to DOER's proposed 400 MW review changes, by the time they finally got a customer to sign and got an Interconnection Services Agreement, the tranches would either be completely filled or pricing would be considerably worse than when the conversation started, jeopardizing the agreement. Therefore, if a developer in these territories wants to focus activity in a manner that is most likely to secure SMART participation, they will not pursue the BTM C&I solar + storage market.

Moreover, given that only five BTM C&I solar + storage projects have received SOQs when pricing was in earlier capacity blocks (and had ACES funding), it's unreasonable to believe that there will be an increase in BTM C&I solar + storage development as the program moves into lower-priced capacity blocks. While the cost of solar + storage technology may be gradually decreasing, for BTM C&I projects, the cost of customer acquisition and Engineering, Procurement, and Construction ("EPC") costs comprise a significantly higher percentage of total project costs than larger-scale, standalone projects. These costs are not seeing the same declines as the technology costs, and therefore, declining block pricing further erodes the economics of BTM C&I solar + storage.

To be clear, we are optimistic that with the right SMART program design, a BTM C&I solar + storage market can flourish.

**To stimulate a robust market for BTM C&I solar + storage, we recommend that DOER create a new, separate, limited tranche for BTM solar + storage projects > 25 kW with Block 1 pricing for both the Base Compensation Rate and the Storage adder.** We are proposing that this be in addition to DOER's 800 MW expansion (or potentially larger), so that

this tranche would not detract from existing opportunities for standalone or residential applications. Our recommendation also contains the following other elements:

- Given that the C&I BTM solar-only market already has a considerable amount of MWs with SOQs and solar only programs have been in existence for several years, we are recommending that the tranche only be available to solar + storage projects > 25 kW.
- To ensure that ratepayers realize as much value as possible from this new separate tranche, resources that participate in this tranche would be required to participate in either a utility demand response program, the ISO-NE demand response program, or Clean Peak. Entities that did not want to participate in these programs would still be eligible for participation in the regular SMART program.
- Further keeping ratepayer costs in mind, we believe that even limited tranche sizes could jumpstart the BTM C&I solar + storage market. We recommend 75 MW total across the Commonwealth for BTM C&I solar + storage > 25 kW broken out in two separate capacity blocks with a 2% pricing decline per block. With 75 MW, we would see the following tranches for solar, with the storage adder staying in Block 1 the entire time:

	Block 1	Block 2
Unitil	.75	.75
National Grid	16.5	16.5
Nantucket Electric	.6	.6
Eversource East + West	19.8	19.8

We note that Eversource East is only in tranche 3 right now and that DOER has proposed combining Eversource East and West capacity blocks in any expanded program. We would be supportive of applying that construct to our proposal, such that pricing would remain different for Eversource East and West, but they would have combined blocks.

We greatly appreciate DOER's consideration of this recommendation. C&I customers are contributing heavily to the SMART program and deserve to have the opportunity to more directly benefit from it (as the residential customers already do). We believe our recommendations are aligned with the Administration's objectives of a cleaner, more affordable, and more resilient electric grid.

### **Requirement to Pair Solar + Storage and Storage Adder**

We support DOER's proposal to require solar > 500 kW to combine with storage.<sup>6</sup> Consistent with our support for the Clean Peak program, shifting solar output to higher priced, higher emissions hours later in the day will reduce energy bills and emissions.

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<sup>6</sup> While Enel X and Stem are both members of NECEC, we respectfully disagree with the position they took on this issue in their filing.

However, as storage MW increase, this will lead to a faster decline in the storage adder and could jeopardize the economics of solar + storage projects. This could have the perverse effect of forcing developers to abandon viable SMART projects or downsize such projects to get below the requirement. Rather than dropping the requirement though, we recommend, for all programs, no further decline in the storage adder (as noted above for BTM C&I, we recommend Block 1 pricing), or even consider a higher adder for participants willing to commit to more stringent operational requirements such as a certain number of hours of Clean Peak participation.

### **Demand Response Exemption**

We fully support DOER's proposal to exempt "Eligible Energy Storage Systems participating in a retail level demand response program" from the 52 cycle requirement." However, we recommend also exempting storage participating in the ISO-NE demand response program. The retail level programs have participation caps, and if a customer is shut out from the retail program, but participates in the ISO-NE program and delivers benefits to all ratepayers through lower wholesale capacity prices and increased bulk level reliability, they should also be exempt.

Similarly, this same exemption should be applied to energy storage systems participating in the Clean Peak program. Such participation has similar benefits as demand response programs and so a cycling requirement is redundant.

### **Conclusion**

Enel X and Stem are grateful to DOER for their dedication to a successful SMART program, and appreciates their consideration of these comments. Please do not hesitate to contact us with any questions.

Greg Geller  
Senior Director, Regulatory & Government Affairs  
Enel X North America  
(617) 692-2527  
[Greg.Geller@enel.com](mailto:Greg.Geller@enel.com)

Ted Ko  
Director of Policy  
Stem, Inc.  
510-381-6159  
[Ted.ko@stem.com](mailto:Ted.ko@stem.com)