



1111 Broadway, Suite 300 (WeWork)
Oakland, CA 94607
Tel: 925-286-1710
Email: gwikler@cedmc.org

California Efficiency + Demand Management Council Informal Comments on May 25, 2021 **Distributed Energy Resources and Flexible Load Management Workshop**

Introduction

The California Efficiency + Demand Management Council (“Council”) appreciates the opportunity to comment on the May 25, 2021 California Public Utilities Commission (“Commission”) Workshop on Advanced Distributed Energy Resources (“DER”) & Flexible Load Management (FLM). We greatly appreciate the level of detail that the Energy Division put into its various proposals. As the Commission continues pursuing advanced DERs and FLM, the Council looks forward to further engagement and commits to offering more specific feedback during the appropriate opportunities.

General Comments

The Council appreciates the Energy Division’s effort and creativity in developing its proposal. The Council takes to heart Commissioner Houck’s remark that the State must shift from a grid of flexible generation and inflexible load to a grid of less flexible generation and more flexible load, which can only be done through a major effort to cultivate greater load flexibility. It is particularly important that the Commission focus on the load side of the grid in light of the massive amounts of new and extended fossil generation that will be procured through the Integrated Resource Plan and Emergency Reliability proceedings. If the potential of load flexibility is not nurtured and developed now, the State will never reach its grid decarbonization goals because new resource needs will continue to be met with more carbon-emitting resources.

The Commission should take a comprehensive approach to integrate all behind-the-meter DERs.

If the Commission opens a new rulemaking, it should take a broad-based look at how all behind-the-meter (“BTM”) DERs can be collectively utilized under the dynamic rates regime that the Energy Division envisions rather than limit the focus solely to Load Modifying Resource (“LMR”) demand response (“DR”). Addressing a single type of DER in isolation ignores the complementary capabilities of DERs such as energy efficiency (“EE”), Supply Resource (“SR”) DR, and exporting BTM DERs to deliver capacity reductions and persistent load shifts. The Commission should seek to create a dynamic rates landscape that promotes specific outcomes through customer adoption of customized DER solutions that are optimized to each customer’s needs while providing value to the grid. In addition, the Commission should be sure to coordinate with the CEC’s Flexible Demand Appliance Standards to ensure that consumers have the products to support the Commission’s load shifting goals.

The first plank of DERs is and has been EE because it should be the first option for shaping customer load profiles to better fit the new grid as described by Commissioner Houck. EE delivers persistent and predictable energy and capacity savings in such a way as to act as baseload demand reductions. The primary recognized value of EE has been its energy and capacity savings, but it can also be effective in reducing the capital costs of dispatchable DERs by reducing the required magnitude of dispatchable load necessary to deliver a customer load shape that reduces consumption and shifts it “from the dirty hours to the clean hours” to realize carbon reductions.

The Council is certainly encouraged by the Energy Division’s new-found focus on LMR DR which has been sadly neglected since the Commission adopted bifurcation. LMR DR has the advantage of being nimbler in how it operates relative to market-integrated resources because it is not constrained by a specific market product and can be utilized to optimize a specific customer’s load shape relative to dynamic rates that will in turn provide value to the wholesale market through a smoother and flatter load curve. The Lawrence Berkeley National Laboratory’s DR Potential Study contains several valuable recommendations for how LMR DR can be deployed in this way.¹

The Commission should not disregard the current and potential contributions of SR DR. These resources by far represent the largest proportion of DR; the investor-owned utilities (“IOUs”), DR providers, and participating customers have made significant investments of time and resources in implementing market integration, so the Commission should be open to new ideas involving this type of DR that are as creative as those put forth by the Energy Division at the workshop. If the Commission adopts a new rulemaking, SR DR should be within the scope along with EE, LMR DR, and exporting BTM resources. However, the Council respectfully cautions that for SR DR to grow, simplification is critical, especially in the areas of Qualifying Capacity (“QC”) valuation and their treatment in the California Independent System Operator (“CAISO”) market.

The Step 4 proposal to develop bi-directional prices could be an excellent way to fully take advantage of the capabilities of exporting BTM DERs by allowing them to export to the grid when their energy is most valuable and/or not needed by the host customer. This will require changes to Electric Rule 21, an affirmation that these resources may forgo market integration, and changes to RA rules that recognize exported energy against a customer’s load curve.

The Commission should adopt a practical yet ambitious goal.

If the Commission is to initiate a rulemaking to further develop and implement the Energy Division proposal, it should adopt a clear, overarching goal. One of the Energy Division slides stated a goal of “improv[ing] demand-side resource management through more effective DR and retail rate structures.” The Council fully supports this goal, but a higher goal beyond “improvements” would be more effective in driving this effort to ensure that the definition of success is both practical and ambitious. As an example, the Council suggests a straw proposal goal of “Developing an environment for demand-side resource management through the coordinated deployment of BTM DERs and dynamic retail rate structures to achieve grid decarbonization.” Such an ambitious goal with a clear desired outcome would be more effective in defining success; otherwise, a more ambiguous and less forward-looking goal risks a potential scenario in which the rulemaking loses momentum and achieves only a few improvements without achieving the Commission’s overall vision.

¹ <https://buildings.lbl.gov/potential-studies>

The Commission should adopt a DER and FLM rulemaking under a reasonable timeframe.

The new framework put forth by the Energy Division contains some highly complex issues that could take a substantial amount of time to work through; so, should the Commission open a new rulemaking, it should seek to conclude it in as short a time as is reasonably possible. Considering the importance of getting these issues right, the likely need for new technical standards, and varying degrees of potential controversy that can be expected for the various proposed steps, the rulemaking should be segmented to allow for each step of the roadmap to be implemented as it is approved without approval of the entire framework as a precondition.

The Commission also should strive for simplicity and allow for an iterative process to the greatest extent possible, noting that in some cases pilots will likely be necessary. It will be challenging to avoid the temptation to seek perfection on the first try, but the Council cautions against devoting too much time to false precision. One potential approach is to build in check-in points along the way to assess whether adjustments are needed to the framework rather than spending too much time try to plan for the perfect outcome.

Dynamic rates must have a significant differential to incentivize load shifting.

The Council supports a close examination of how dynamic rates can be used to effectively incentivize load reduction and shifting to smooth out customer load curves. Structuring variable rates by location and time of day, and in some instances linked to wholesale market conditions, will be very complex and the Commission must be prepared for this. The key factor in all of this is dynamic rates that reflect sufficiently steep price differentials to motivate shifting of load from the “dirty hours” to the “clean hours.” This is especially critical if the new dynamic rates are to be opt-in; there needs to be a large enough differential to create a value proposition to attract customers and third-party providers to shift their loads. In instances when perhaps dynamic rates do not provide the necessary financial incentive, the Council finds the Step 5 subscription option proposal interesting because it appears to envision creating another option in which a customer could commit to a specific load curve that would presumably be flatter and more evenly distributed than its current load curve. It would be up to the customer, in collaboration with third party providers or on their own, to develop a load management plan to conform with the committed curve. However, any such framework would need to include compensation for the avoided capacity and lower cost energy associated with a flatter load curve.

As a related issue, a new framework will need to include a methodology for calculating a locational, marginal value of capacity, that includes the value of avoided transmission & distribution (“T&D”) investments, for incorporation into localized dynamic rates to attract DER deployment in the highest-need areas. Without a significant capacity price signal, DER providers will lack any indication of how to optimally deploy their resources.

The Council was also intrigued by the Energy Division’s apparent openness to eliminating demand charges. In their current form, they tend to disincentivize load shift by non-residential customers to lower net load (and lower energy cost) periods; therefore, the Commission should consider either eliminating them or at the very least, make them coincident with net peak load periods.

Regardless of how the Commission ultimately revises dynamic rates and demand charges (if at all), it is essential that cost allocation be equitable.

Third party providers must have a major role in implementing the new framework.

Whatever the Commission seeks to accomplish through a potential rulemaking, there must be a prominent role for third-party aggregators, technology providers, and program implementers. History has shown in the energy efficiency, DR, and DER spaces that third parties (along with IOUs) are the keys to driving customer adoption. This in turn rests on the value proposition for customers and third parties. Therefore, any adopted framework should allow equal access to participation of third-party and direct-enrolled customers.

The new framework will need to fit within the Resource Adequacy regime.

For any new framework to be successful, the Commission will need to develop clear and transparent rules with respect to how it will fit into the prevailing Resource Adequacy (“RA”) regime. The RA rules are very clear in how the RA (i.e., MW) value of SR DR is counted and accounted for but there are no clear guidelines for IOUs and LSEs to determine the RA value of new LMR DR programs. Decision 14-03-026 defined LMR DR as reducing or reshaping the net load curve but a process is needed to quantify the impact of peak load reductions on RA requirements at the customer and LSE level.² In addition, if exporting BTM DERs are to play a role in this new framework, rules will also be necessary to address how to determine their RA value.

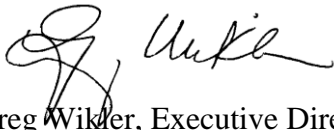
The impact of this new framework on the CAISO needs to be taken into consideration.

Another key consideration of developing the Energy Division’s proposed framework is the CAISO’s role and their need to have awareness of the nature of potentially significant out-of-market load drops that would be occurring throughout its control area. Market-informed LMR DR could be useful in this regard because it would provide the certainty and predictability necessary for the CAISO to manage the grid despite these load movements occurring outside their market optimization process. This will likely require a greater degree of communication between LSEs and the CAISO to keep the CAISO informed of load reduction potentials in each subLAP and when they are most likely to occur so that that CAISO can incorporate into their operations and forecasting.

Conclusion

The Council appreciates this opportunity to provide feedback on the May 25 workshop and urges the Commission to open a new rulemaking dedicated to developing a flexible load management framework for all BTM DERs.

Sincerely,



Greg Winkler, Executive Director, California Efficiency + Demand Management Council

² Decision 14-03-026, at Ordering Paragraph 2.