

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Forward Resource Adequacy Procurement Obligations.

Rulemaking 19-11-009
(Filed November 7, 2019)

**COMMENTS ON FINAL TRACK 3B.2 PROPOSALS OF
THE DEPARTMENT OF MARKET MONITORING OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

The Department of Market Monitoring (DMM) of the California Independent System Operator Corporation (CAISO) submits these comments on parties’ final Track 3B.2 proposals, filed February 26, 2021. As outlined in the Assigned Commissioner’s Amended Track 3B and Track 4 Scoping Memo and Ruling, Track 3B.2 of this rulemaking considers the “examination of the broader RA capacity structure to address energy attributes and hourly capacity requirements, given the increasing penetration of use-limited resources, greater reliance on preferred resources, rolling off of a significant amount of long-term tolling contracts held by utilities, and material increases in energy and capacity prices experienced in California over the past years.”¹

I. INTRODUCTION

DMM shares the concerns of the Commission and other parties concerns that as California increases its reliance on intermittent, availability-limited and energy-limited resources, the current resource adequacy framework may no longer ensure that sufficient capacity and energy will be available to meet gross and net load requirements. As storage resources begin to comprise a larger portion of the resource adequacy fleet and displace thermal

¹ *Assigned Commissioner’s Amended Scoping Memo and Ruling*, R.19-11-009, December 11, 2020.

generation, the energy required to charge storage resources and the storage capacity required to dispatch energy through the night must also be accounted for in resource adequacy requirements.

DMM views PG&E's slice of day proposal as the most viable option for capturing gross and net load peak capacity requirements, storage charging requirements, and the energy required to serve load across the day. Compared to other proposals, PG&E's proposal could provide better assurance that load serving entities will contract with resources which could collectively meet energy requirements across all hours of the day. PG&E's proposal would account for resources' energy and availability limitations by only allowing resources to count towards meeting capacity and energy requirements in certain slices of the day if a resource could feasibly provide capacity and energy in a given timeframe.

DMM supports PG&E's slice of day proposal as a viable resource adequacy framework for addressing capacity and energy needs in the foreseeable future. However, as the resource mix in California continues to shift towards energy and availability limited resources and the CAISO energy market design continues to evolve, DMM believes there is merit in revisiting the Energy Division's standardized fixed price forward energy contract proposal.

An energy-only framework which shifts risks and rewards to suppliers could strengthen incentives for suppliers to only sell in the forward timeframe what they believe they could actually deliver, and to actually deliver contracted energy when needed. However, DMM believes that other key structural changes may be necessary to complement an energy-only framework including higher energy market prices and very active demand-side participation which is highly responsive to wholesale market conditions. As these types of market features are discussed and developed further at the CPUC and CAISO, DMM supports PG&E's slice of day

proposal as a major enhancement to the current resource adequacy framework that could be implemented in a shorter timeframe and with less risk to the reliable operation of the grid.

II. DISCUSSION

A. DMM supports the PG&E slice of day proposal as a viable design for capturing gross and net load peak capacity requirements, and the energy required to serve load across the day.

DMM views PG&E's slice of day proposal as a viable option for capturing gross and net load peak capacity requirements, storage charging requirements, and the energy required to serve load across the day. Compared to other proposals, PG&E's proposal could provide better assurance that load serving entities will contract with resources that could collectively meet energy requirements across all hours of the day. PG&E's proposal would account for resources' energy and availability limitations by only allowing resources to count towards meeting capacity and energy requirements in certain slices of the day if a resource could feasibly provide energy and capacity in a given timeframe.

PG&E's proposal appears to better address inter-temporal issues associated with resource availability than other proposals. Other proposals would require estimates of how much total energy resources could provide within a compliance period but do not consider when resources could actually deliver the contracted energy.

For example, if inter-temporal availability limitations aren't accounted for, then a load serving entity could contract with a portfolio of solar and battery resources with battery resources that are limited to providing energy for four hours at NQC values. While total energy and gross and net peak load requirements may be met in aggregate, this type of resource portfolio may not be able to serve load across the night and early morning after batteries exhaust their discharge capabilities. Not accounting for the inter-temporal nature of resource availability may result in

energy shortfalls in certain periods of the day and potentially create leaning issues among load serving entities.

PG&E's proposal largely addresses intertemporal issues by allowing resources to qualify to provide energy in certain slices of the day based on whether resources could feasibly deliver energy in those periods. PG&E's proposal also allows load serving entities flexibility in terms of choosing which slices of day to show certain resources in, as long as resources could feasibly provide energy in a particular slice of day.

While multiple capacity and energy requirements (based on number of slices of day) could add complexity to the resource adequacy process, PG&E also proposes to reduce the number of resource adequacy showings required each year. DMM supports moving from monthly to seasonal resource adequacy showings which could also help address shortcomings of CAISO's current planned outage processes by providing a longer runway for the ISO to study and approve planned outages.

B. As the resource mix in California continues to shift towards energy and availability limited resources and as the CAISO energy market design continues to evolve, DMM believes there is merit in revisiting the Energy Division's standardized fixed price forward energy contract proposal.

An energy-only framework which shifts risks and rewards to suppliers could strengthen incentives for suppliers to only sell in the forward timeframe what they believe they could actually deliver, and to actually deliver contracted energy when needed. In contrast to today, some suppliers may have incentives to over-sell capacity they could actually provide especially if resources are rarely called to provide energy and if energy market incentives to be available or deliver are fairly low. However, DMM believes that other key structural changes may be necessary to complement an energy-only framework including higher energy market prices and very active demand-side participation which is highly responsive to wholesale market conditions.

In the near term, it is not apparent to DMM that there is strong support in California for increasing energy bid caps significantly, which would likely be necessary under the standard fixed price forward energy contract proposal in order to drive strong incentives for suppliers to deliver power when needed. However, discussions regarding energy market scarcity pricing are taking place at the CAISO currently which could result in market designs that support higher market prices during periods of limited supply.

Should the CAISO adopt new scarcity pricing mechanisms, for example, which could result in much higher energy market prices in periods of limited supply, the Energy Division proposal could be reconsidered. If potential market energy revenues increase significantly due to higher shortage or scarcity prices, capacity payments may become less significant.

DMM also believes that very active demand-side participation which can respond effectively to wholesale market prices would be a key part of an energy-only forward procurement framework. DMM understands that there are some utility demand response programs today that participate on the demand side as opposed to being modeled as supply (i.e. load-modifying demand response programs), but existing retail pricing structures for these programs may not align well with wholesale market conditions. Additionally, many utility customers are now under time-of-use retail rates. However, many time-of-use retail rate structures are also not perfectly aligned with wholesale market conditions.

Developing demand side programs that are very responsive to wholesale market needs would likely be an important component of an energy-only market design with potentially high scarcity prices. Programs or retail rate structures that provide even higher incentives for demand to respond during tight system conditions (e.g. even more variation of retail rates within a set of peak hours) may be necessary to help customers mitigate exposure to potentially very high

energy costs under an energy-only framework. Deeper penetration of demand response programs to cover a much greater percentage of overall load may also be required in order to shed the lowest priority load first, and to prevent rolling blackouts, during extreme weather or other black swan events.

Furthermore, lessons learned from this past February in Texas highlight the potential risks of energy-only market design with potentially high scarcity prices. DMM's understanding is that many suppliers in ERCOT had signed contracts with load serving entities that shifted the risk of extremely high wholesale market prices from the load serving entities onto the suppliers. Despite their exposure to extremely high prices created by these contracts, many suppliers in ERCOT were evidently not prepared or sufficiently hedged for an extreme weather event. The outcomes in the ERCOT market this winter indicate that shifting the risks and rewards to ensure reliability primarily to profit-seeking firms may not ensure reliability under extreme system and market conditions.

C. PG&E's slice of day proposal does not preclude a hedging element from being coupled with the proposal.

In recent years, DMM has shared some of Energy Division's concerns about the reduction in tolling arrangements and long-term contracts and the increase in shorter term RA-only contracts. To the extent that the Commission would require a hedging component in the resource adequacy program, to ensure load serving entities' exposure to spot market prices is minimized, the PG&E proposal does not preclude a hedging element from being coupled with the proposal.

Respectfully submitted,

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