BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking To Enhance the Role of Demand Response in Meeting the State's Resource Planning Needs and Operational Requirements.	Rulemaking 13-09-011 (Filed September 19, 2013)

REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

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On June 19, 2015, the Administrative Law Judge issued a Ruling Requesting Comments Regarding the Cost Effectiveness Protocols and the Valuation Working Group Report (Ruling). The Ruling requested comments regarding the California Independent System Operator Corporation's (CAISO) load modifying resource (LMR) demand response valuation proposal the and the Commission's proposed cost effectiveness protocols. Pursuant to the Ruling, parties submitted comments on July 31, 2015. The CAISO's reply comments focus primarily on the issues raised by parties commenting on the CAISO's LMR demand response valuation proposal.

I. INTRODUCTION

The Commission has made clear that it is on a path to retool demand response to better serve the needs of the grid and meet California's long-term clean energy goals. The Commission has taken deliberate steps to prudently change long-standing conventions regarding the development, use, and capacity counting of demand response resources. The Commission promulgated a finding of fact in its bifurcation decision that all demand response programs must be customer-focused.[1] The CAISO concurs with the Commission that demand response requires customer engagement. The CAISO understands the Commission's goal is to rebalance customer's desires with the need to ensure that demand response effectively supports the grid,

[1] D. 14-03-026, p. 26.

delivers demonstrable ratepayer value, and, importantly, helps California cost-effectively meet its clean energy goals. Supporting this understanding, the Commission succinctly stated as a finding of fact in its recent proposed decision on integrated demand side resources that "[h]armonization between system and customer benefits is required in the integration of demand-side resources."[2] The Commission reiterated its goals for demand response in the bifurcation decision, stating that demand response should meet the following goals:

1. Helping California meet its long-term clean energy goals

"There are two roles for demand response programs: 1) to meet the state's long-term energy goals including those for renewable and low greenhouse gas emitting resources; and 2) to maintain both system and local reliability."[3]

2. Improving the use and efficiency of demand response and maintain its value

"We reiterate that the Commission's goals are to improve the efficiency of demand response and increase the use of all demand response programs; but there is no intention to diminish the value of demand response in either [supply or load modifying] category."[4]

3. Aligning demand response with the needs of the grid

"...we move forward with our original intention to 'retool demand response to align with the grid's needs and enhance the role of demand response.'"[5]

The Commission should screen all arguments, criticisms, and proposals made in opening comments against these goals. Consistent with these goals, the CAISO has put forth a viable proposal for using and valuing LMR demand response. The CAISO's valuation proposal would

[2] Proposed Decision Adopting an Expanded Scope, A Definition, and a Goal for the Integration of Demand Side Resources, August 13, 2015, Finding of Fact No. 21, at p. 24.

[3] D.14-03-026, Finding of Fact No. 7, p. 26.

[4] D.14-03-026, p. 2.

[5] D.14-03-036, p. 6.

enable LMR demand response to achieve value equivalent to supply resources by demonstrably avoiding the need for incremental supply capacity. The CAISO's proposal does this by establishing hard triggers for the dispatch of LMR demand response. The CAISO has proposed three distinct hard triggers that are designed to avoid specific capacity requirements. The first hard trigger is designed to avoid short-term capacity and is based on reducing the California Energy Commission's (CEC) monthly resource adequacy peak load forecasts. The second hard trigger is designed to avoid long-term capacity and is based on reducing the CEC's annual peak load forecasts in its Integrated Energy Policy Report (IEPR). The last hard trigger is designed to avoid flexible capacity and is based on reducing the CAISO's forecast of a Category 3 ramp.

Contrary to criticisms in the opening comments, the CAISO's valuation proposal does not seek merely to avoid a few high energy prices spikes each year; rather, it seeks to "bend the curve" on growing capacity needs by consistently and persistently targeting and reducing coincident peak demands. If demand response does not reduce coincident peak demands and avoid the need for incremental capacity, demand response will not play an effective role in fulfilling the loading order. Focusing LMR demand response almost exclusively on high energy prices is, and has been, the wrong primary target. Although avoiding high energy prices and responding to reliability events are important uses of LMR demand response, the higher, more beneficial purpose of LMR demand response is, and should be, to avoid the need for incremental non-preferred capacity from conventional resources. A properly functioning LMR demand response program is one that effectively supports achievement of California's long-term clean energy goals by enabling preferred capacity resources to replace conventional, non-preferred capacity.

The Commission and parties have expended significant time and effort in this proceeding to develop consensus on how to value LMR demand response that promotes the Commission's demand response goals. However, opening comments would undermine these efforts and stall the advances that have been made. Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) criticize the CAISO's LMR demand response valuation proposal, focusing almost exclusively on the issue of avoiding energy costs rather than the more important issue of avoiding capacity costs and reducing the need for conventional resources. Importantly, they fail to offer substantive proposals of their own. Instead, they offer limited suggestions on how to adjust the CAISO-proposed triggers to target higher energy priced periods and, unlike the CAISO, do not provide the details necessary to adequately test and scrutinize their alternatives. Rejecting the CAISO's valuation proposal, will, in effect, leave the status quo in place and stall progress toward full bifurcation by 2018.

Although the May 1, 2015 LMR Demand Response Valuation Working Group Compliance Report indicated a consensus for hard triggers,[6] that support now seems to have evaporated.[7] Thus, on the critical matter of whether hard triggers are appropriate, there appears to no longer be a consensus. With polarized positions, the Commission must continue to implement its principled and goal-oriented path to retool demand response into resources that are well-suited to help achieve California's long-term clean energy goals, especially avoiding the

[6] LMR Demand Response Working Group Compliance Report, p. 5. ("For the GC subgroup, there was strong consensus on the major issues with alternatives presented on how to implement some of the details. The strong consensus was that: LMR DR should receive value for system capacity in the RA, LTPP and TPP processes if they are dispatched on pre-defined 'hard triggers.'"

[7] Pacific Gas & Electric Company (PG&E) states that "[i]ndeed, no hard trigger is needed as soft triggers and reliability triggers provide the appropriate use of the resource..." SCE states "SCE originally supported the concept of hard triggers as a compromise to ensure full Resource Adequacy (RA) value for Load Modifying Resource (LMR) DR."

need for incremental conventional, non-preferred capacity. The hard triggers proposed by the CAISO are critical to ensuring that LMR demand response meets these goals.

II. RECOMMENDATION

The CAISO strongly recommends the Commission adopt the following steps to retool LMR demand response into a valuable capacity avoiding resource consistent with the loading order. The CAISO is confident these important refinements will generate greater customer value and better align LMR demand response programs with California's long-term clean energy goals. The CAISO recommends that the Commission:

Adopt the CAISO's 3-part valuation proposal in 2015.

Adopt the CAISO's 3-part valuation proposal in 2015, specifically, the hard triggers, capacity nominations, and penalties. Parties can vet specific penalty structures in the demand response proceeding.

Transition to the hard trigger and capacity nomination construct in years 2016 and 2017.

Transition to the hard trigger and capacity nomination construct in years 2016 and 2017, with each IOU nominating a capacity quantity in 2016 and 2017 to test and compare with end-of-year weather-normalized ex-post results. These results should refine utility LMR demand response programs for 2018 and beyond. The Commission should avoid deploying penalties until 2018 and treat the next 2 1/2 years as a transition period, providing an opportunity for participants to learn and gain experience under the new paradigm. During this period, the Commission should vet appropriate penalty and non-compliance structures in the demand response proceeding, with a decision on penalties issued prior to full bifurcation starting 2018.

Instruct the IOUs to submit detailed proposals and plans for implementing the hard trigger and capacity nomination process by the end of 2015.

Direct DRMEC to report changes needed to forecast LMR demand response programs under the CAISO's valuation proposal.

Direct the Demand Response Measurement and Evaluation Committee (DRMEC) to report to the Commission what changes are needed to forecast LMR demand response programs under the hard trigger and nomination proposal, including producing weather normalized ex-post results.[8] DRMEC should also assist the IOUs to develop and document methods to perform year-to-year capacity nominations. This will help the Commission evaluate the reasonableness of each utility's nomination.

Collaborate with the CEC to refine the monthly resource adequacy forecast methodology as appropriate.

Collaborate with the California Energy Commission (CEC) through the Commission's resource adequacy proceeding to assess the CEC's method for deriving monthly resource adequacy coincident peak demand. The Commission should work with the CEC to adjust the CEC's monthly resource adequacy forecast methodology, if needed. The CAISO's hard trigger has no bias, but the number of dispatches in a month is driven largely by each month's forecast resource adequacy coincident peak demand, so confidence and accuracy in the resource adequacy forecast is important.

III. REPLY COMMENTS ON THE CAISO'S VALUATION PROPOSAL

A. Purpose of LMR Demand Response

1. The loading order is designed to displace non-preferred resource capacity with preferred resource capacity to meet California's future energy needs. It is not focused on maximizing a preferred resource even if that preferred resource cannot demonstrably offset non-preferred resource capacity.

[8] PG&E states that "[o]ne of the primary reasons that ex-post load impacts are not appropriate for evaluating the operational performance of DR programs is that they are not weather-normalized. Without weather normalization, ex post load impacts cannot be compared with ex ante load impacts which are determined based on standardized weather conditions (e.g. 1-in-2, 1-in-10, etc.). (PG&E at p. 61). The Commission should ensure this is resolved and not a barrier to forward progress.

PG&E states that the loading order requires the IOUs to maximize the amount of cost-effective DR.[9] PG&E conveys an overly simplistic view of the loading order, suggesting that the loading order merely requires the IOUs to maximize the amount of cost-effective demand response.

The purpose of the loading order is more than simply maximizing a particular preferred resource; its primary focus is offsetting the need for conventional, non-preferred resource capacity by investing in and building preferred resources that are suitable replacements for conventional, non-preferred resources. If a utility maximizes its procurement of demand response, but the demand response is not used or it does not have the attributes required to offset conventional, non-preferred resources, then the expected environmental and cost benefits are not realized. To achieve its clean energy goals, California must offset procurement of conventional, non-preferred resources, and preferred resources must actually deliver the attributes required to ensure system reliability. Maximizing the amount of "cost-effective" demand response without carefully considering and demonstrating how it actually offsets the need for non-preferred resources would be imprudent.

2. Demand response should first and foremost avoid capacity costs and the need to build conventional, non-preferred resources.

There is a clear divide between the parties concerning the purpose of demand response. For example, CLECA states: "[w]e would assume that the Commission would want to use DR, which is a use-limited resource, when it provides the greatest value to the system. Traditionally, this would mean when it would provide the greatest reliability value or the greatest value in decreasing system costs and market prices.[10]

[9] PG&E Opening Comments, p. 28.

[10] CLECA Opening Comments, p. 9.

The Commission must definitively explain in its decision that the primary purpose of demand response is to avoid capacity costs, not avoid energy costs. As the CAISO has consistently argued, demand response is first and foremost funded to avoid capacity costs because only the avoidance of incremental non-preferred capacity will enable California to achieve its clean energy goals. Demand response that only avoids a few energy price spikes during a year will not necessarily avoid the need for incremental conventional capacity.

In fact, the June 2015 Cost-Effectiveness Protocols issued by the CPUC's Energy Division recognizes that avoided capacity provides the greatest value, stating "for demand response, the most significant avoided cost is the avoided cost of generation capacity."[11] The Cost-Effectiveness Protocols also acknowledge the lower value of avoided energy stating that "because energy savings are only a small portion of the overall benefits of demand response programs, avoided renewable energy purchases procurement costs will not be applied to demand response cost-effectiveness, as they are to energy efficiency and distributed generation programs."[12]

The CAISO also notes that studies performed for the Department of Energy support the premise that the primary purpose of demand response is to offset capacity needs:

> One of the primary reasons for implementing demand response programs is to defer or postpone the need for new generation capacity, or otherwise reduce the cost of peaking generation capacity. Therefore, avoided capacity costs are one of the most important and significant benefits associated with demand response programs.[13]
>
> Demand response avoids energy costs as it typically results in load curtailments in which customers forego consumption for short time periods. Demand response

[11] 2014 Revised Demand Response Cost Effectiveness, p. 26.

[12] Id., p. 27, emphasis added.

[13] A Framework for Evaluating the Cost-Effectiveness of Demand Response Prepared for the National Forum on the National Action Plan on Demand Response: Cost-effectiveness Working Group, February 2013, found at: http://www.synapse-energy.com/sites/default/files/SynapseReport.2013-02.LBL_.DR-Cost-Effectiveness.11-106A.pdf, p. 35.

> programs can also reduce energy costs by shifting demand from high-priced hours to lower-priced hours. These avoided energy costs are likely to be much less significant than avoided capacity costs, but they are an important benefit to include in the cost-effectiveness analysis nonetheless.[14]

Numerous comments wrongly criticize the CAISO's valuation proposal, stating that the hard triggers do not target high energy priced hours and therefore will cause inefficient dispatches in non-high energy priced months. These arguments fail to acknowledge that the CAISO's valuation proposal addresses the highest value priority—avoided capacity costs--not avoided energy costs. Designing hard triggers to primarily avoid energy costs is sub-optimal if such dispatches reduce the opportunity to avoid capacity costs.

Under the CAISO's valuation proposal, IOUs will still maintain their ability dispatch LMR demand response programs to avoid high energy costs. The CAISO proposal provides for this flexibility by ensuring that dispatches to avoid capacity are triggered infrequently.[15] This enables the IOUs to use remaining program hours at their discretion to avoid high energy prices or to address reliability events. However, the CAISO's proposal will achieve the more important goal of reducing avoiding capacity costs and displacing the use of non-preferred resources with preferred resources.

3. Focusing LMR demand response almost exclusively on high energy prices is, and has been, the wrong primary target.

The statement that the CEC forecasting process will ignore the effects of the hard trigger is incorrect.[16] The CAISO's valuation proposal first reconstitutes the prior year's hard trigger

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[14] Id., p. 42, emphasis added.

[15] The CAISO notes that its proposed hard trigger would have dispatched LMR a maximum of 29 hours per year based on historical data from 2010 through 2014, and only a maximum of 18 hours if supply demand response resource adequacy availability requirements were applied to LMR demand response.

[16] SCE Opening Comments, p. 6. ("The CAISO's main rationale for hard triggers is that it will "bend the curve" of the growing need for capacity. In fact, dispatch via hard triggers will have no effect on future forecasts of capacity need because the California Energy Commission (CEC) forecasting process will reconstitute the load, ignoring the effect of hard trigger dispatches. With or without hard triggers, load forecasts and resource planning decisions can

dispatches back into the load so the CEC can establish its base forecast without demand response. Critically, the CEC then subtracts the next year's capacity nominations from the short-term resource adequacy forecast and or the long-term California Energy Demand forecast, resulting in lower forecasts used for resource adequacy and long-term procurement planning purposes. These lower forecasts translate to lower capacity requirements. This critical second step allows capacity to be avoided or deferred.

The CAISO's hard trigger "bends the curve" on capacity needs by consistently and persistently targeting and reducing coincident peak demands. It achieves this result through two separate channels: (1) in the short term, reducing the twelve monthly coincident peak demands used to set resource adequacy requirements, or (2) in the long term, reducing the single highest annual coincident peak demand forecast for each year of the CEC's IEPR planning horizon used to set long-term capacity requirements. Demand response will not play its full role in fulfilling the loading order without growing demand response and dedicating it to avoiding coincident peak demand. This demonstrates why focusing LMR demand response almost exclusively on high energy prices is, and has been, the wrong primary target.

4. The CAISO's hard trigger leaves many available hours for the IOUs to direct the use of their LMR demand response programs for avoiding high energy prices and responding to reliability events.

The CAISO's valuation proposal sets a reasonable and rational trigger to best ensure LMR demand response reduces coincident peak demands, and, as a result, avoids capacity.[17] However, it also maintains IOU discretion for the vast amount of LMR demand response

consider the impact and value of LMRs. Hard triggers are unnecessary for valuing DR for planning purposes. Nor will the presence of hard triggers ensure that LMRs are fully valued in planning processes.")

[17] SCE Opening Comments, p. 7. ("More important, the Commission should not set a precedent in which the only dispatchable resources that receive RA value are those resources that are under the direct control of CAISO – either through market integration or through a CAISO-controlled trigger regime.")

program hours. Figure 1, below, shows between 2010 and 2014 based on the CAISO's proposed hard trigger, LMR demand response programs would only have been called an average of 23 hours per year. If the Commission applied the same availability rules to LMR demand response as it does to resource adequacy qualifying supply demand response, a maximum dispatch of four hours per day for three consecutive days, then LMR demand response would have only been called an average of 15.25 hours per year. This exceptionally low number of hours will require minimal obligations for LMR demand response. Given typical program availability hours and historic use, the IOUs will have a significant number of hours outside of hard triggered dispatch to use their LMR demand response programs at their discretion. The CAISO valuation proposal is specifically designed to limit the number of hours of required dispatch while providing real capacity benefits. The significant discretion left to the IOUs to dispatch their LMR demand response illustrates that the CAISO is not seeking or requiring control over their demand response programs.

Figure 1: Minimal Dispatches Result from the CAISO's Hard Trigger

Trigger Date	Hour Ending 13	14	15	16	17	18	19	20	21	Daily Total Hours	Consecutive Days	Trigger Hours/Year	Apply RA Availability Rules
7/16/2010				1	1					2			
9/27/2010				1	1	1				3	2		
9/28/2010					1					1			
10/1/2010		1	1	1	1	1		1		6			
11/3/2010			1	1	1	1	1	1		6			
11/4/2010		1	1	1	1	1	1	1		7		25 hours	18 hours
9/14/2012					1					1			
10/1/2012	1	1	1	1	1	1	1	1	1	9	3		
10/2/2012	1	1	1	1	1	1	1	1	1	9			
10/3/2012				1	1					2			
11/5/2012			1	1	1	1	1	1		6	2		
11/6/2012						1	1			2		29 hours	17 hours
1/14/2013						1	1	1	1	4	3		
1/15/2013							1	1		2			
1/16/2013							1	1		2			
6/28/2013					1					1			
6/30/2013					1	1				2			
7/1/2013					1					1		12 hours	12 hours
4/30/2014			1	1	1	1			1	5			
5/13/2014					1	1				2	4		
5/14/2014				1	1	1				3			
5/15/2014		1	1	1	1	1	1	1	1	8			
5/16/2014		1	1	1	1	1	1		1	7			
9/16/2014					1					1		26 hours	14 hours
Total Hours	2	6	9	13	20	15	11	10	6	92		23 hours avg.	15.25 hours avg.

B. Value of LMR Demand Response

1. The CAISO valuation proposal is a superior to other proposals and the current IOU practice for ensuring least-cost dispatch.

Contrary to assertions by opposing parties,[18] the CAISO's valuation proposal upholds the Commission's least-cost dispatch principle in a manner that is superior to current utility practice. As discussed above, the value of demand response primarily stems from avoided capacity costs, not avoided energy costs. If demand response can be triggered to avoid setting higher capacity costs and needs 8760 hours per year, or for all hours in a particular resource adequacy month that the IOU nominated capacity, LMR demand response has a much greater chance of reducing

[18] PG&E Opening Comments, p.27. ("Unfortunately, CAISO's proposal dictates the dispatch of all LMRs in a manner that prevents the optimization of these resources. The high frequency of dispatches under the proposed hard triggers, particularly during spring and autumn, will occur when energy and capacity prices are typically low, which would be contrary to the principle of least-cost dispatch.")

overall system and societal costs compared to avoiding high energy costs during peak periods.[19] The CAISO's valuation proposal targets this greater "avoided capacity cost" opportunity. PG&E's least-cost dispatch approach fails to capture much of the value of LMR demand response because it focuses too intently on avoiding energy costs instead of focusing on the higher purpose of avoiding high value capacity costs.

2. LMR demand response is not a supply resource, although its value stream can be equivalent.

Parties state that the CAISO's valuation proposal creates a structural problem in which LMR is unlikely to be valued as highly as integrated supply resources.[20] This argument illustrates the weaknesses of existing LMR demand response program structure and use, generally. Under the IOUs' existing processes, dispatch is not guaranteed at optimal times, such as when locational marginal prices are highest, because dispatch is self-directed and self-optimized by the utility independent of the actual real-time needs of the grid and setting of locational marginal prices.

Second, this argument conflates load modifying and supply resource values. LMR can achieve equivalent values of a supply resource by avoiding costs, not directly as a capacity or energy serving supply resource. Unlike LMR demand response, a supply resource is integrated into the market and the systems that determine the value of energy. SCE states there is a structural problem where LMR demand response is not used as effectively as a supply resource and therefore is unlikely to be valued as high. Understand that this is not a direct criticism of the

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[19] For a reference on the number of dispatch hours experienced by SCE's programs in 2012, see Table 4-1: Summary of 2012 Events by Date and Program, pages 17-18, in a report prepared by Freeman, Sullivan and Co. titled Southern California Edison's 2012 Demand Response Load Impact Evaluations Portfolio Summary, April 1, 2013 found here: http://www3.sce.com/sscc/law/dis/dbattach5e.nsf/0/62A8F5E44C447F0688257B410052EC7B/$FILE/R.07-01-041_DR+OIR-SCE+DR+Portfolio+Summary+2012+-+Final.pdf

[20] SCE Opening Comments, p. 7-8.

CAISO's valuation proposal, but an acknowledgement of a fundamental, inherent structural flaw that exists with self-directed, non-integrated LMR demand response generally. This structural flaw implicates current program dispatch practices as would any dispatch practice that relies on self-optimization, independent of organized market structures and price formation mechanisms. The CAISO's valuation proposal is imperfect for this same reason, as are all utility LMR programs and rate/pricing structures that operate outside of the normal power flow and market optimization and price formation functions. However, when market integration is not possible or desirable, then the objective is to design a solution that minimizes these inherent structural problems. The CAISO's valuation proposal achieves this objective and is superior to existing utility practices and any proposal proffered given the CAISO's valuation proposal strictly adheres to avoided cost principles.

C. Elements of the CAISO's Valuation Proposal

1. Penalty Provisions are appropriate for protecting buyers and ensuring a good or service is delivered.

PG&E states that layering on new penalties is not justified, and would only serve to discourage customers and DR providers from participating because any new penalties on LSEs would get passed onto DR providers and participants.[21] SCE adds that imposing penalties on DR when similar penalties are not imposed on resources lower in the Loading Order is contrary to state policy.[22]

Penalties are appropriate and common in procurement practices and should apply to demand response providers, like the IOUs when they assume this role. Appropriate penalty structures will help ensure the procurement of quality demand response products on behalf of

[21] PG&E Opening Comments, p. 33.

[22] SCE Opening Comments, p. 17.

ratepayers by the IOU as the demand response provider. Penalty provisions protect the buyer from non-delivery of a good or service per the contract terms and conditions. For utility demand response programs, the ratepayer is ultimately the buyer of the capacity and the energy to be delivered, thus the ratepayer should have protections.

In contrast to PG&E's and SCE's comments, penalizing demand response participants under existing IOU programs is common practice. For example, SCE's Capacity Bidding Program and Base Interruptible Program both have penalty provisions.[23] The CAISO's valuation proposal brings a new rigor to ensure delivery of LMR demand response by holding the IOU, as the demand response provider, responsible for delivering its capacity nomination on behalf of its buyers, the ratepayers, just as the IOU holds its participants responsible for their delivery of capacity and energy. How the IOU, as the demand response provider, choses to share or manage this performance risk with its participants is ultimately the IOU's and Commission's prerogative, the same as it is for third-party demand response providers and their participants.

2. Parties mistakenly conflate how the ISO's hard trigger is applied to avoiding short-term capacity versus avoiding long-term capacity.

PG&E claims the CAISO proposal will result in more dispatches during winter, spring, and autumn months, when peak loads and capacity values are likely to be lowest.[24]

[23] For instance, participants enrolled in SCE's Base Interruptible Program are charged an Excess Energy Charge if they do not meet their agreed-to Firm Service Level. Refer to SCE's TOU BIP overview sheet, Credits and Penalties section, found here at: https://www.sce.com/NR/rdonlyres/7A1BC024-698D-44A0-98D1-ABD8DEE9E451/0/NR572V20810_BIP.pdf. Additionally, at page 33 in PG&E's comments, PG&E states "[f]or example, Base Interruptible Program (BIP) participants are penalized at the rate of $6,000/MWh. The AMP and CBP programs have very high capacity-based penalties for not meeting performance. Similarly, the critical peak pricing (CPP) programs (Peak Day Pricing and SmartRate) charge customers 5 to 10 times the normal rate during the time of an event."

[24] PG&E Opening Comments, p. 34.

The Utility Reform Network (TURN) suggests the CAISO proposal may trigger DR in shoulder months, when there is little likelihood of a system peak occurring.[25]

Certain parties misunderstand the CAISO's valuation proposal and confuse the CAISO's proposed triggers for short-term capacity avoidance (monthly resource adequacy coincident peaks) with the trigger for long-term capacity avoidance (annual system coincident peak). The CAISO proposed three distinct hard triggers to avoid short-term, long-term, and flexible capacity. A demand response provider can respond to all three triggers or a subset depending on the "avoided capacity" the demand response provider is seeking to offset. The following is a summary of the CAISO-proposed avoided capacity hard triggers.

1.) The short-term avoided generation capacity trigger

To avoid short-term capacity, a demand response provider must nominate a capacity quantity for individual months of the resource adequacy compliance year. Because resource adequacy is a monthly obligation, the demand response provider need not nominate LMR demand response in each month; rather the demand response provider has the option to nominate LMR demand response if it can, and desires to reduce its resource adequacy procurement obligation in that month. The CEC uses the monthly nominations (if any) to reduce its monthly resource adequacy peak demand forecasts, which, in turn, reduce the resource adequacy requirement. The hard trigger is based on the 1-in-2 year peak demand forecast for the month in which the LMR demand response has been nominated. Thus, LMR demand response will be triggered in conditions that constitute "high load" relevant to the coincident peak demand forecast for that particular resource adequacy month. In nominating LMR demand response capacity in a particular month, the demand response provider should expect that the resource will

[25] TURN Opening Comments, p. 8.

be triggered in the event of high load in relation to the monthly resource adequacy load forecast. Because the demand response provider elects to offset resource adequacy capacity in that month, any use of the LMR demand response in that month should be expected, not considered anomalous or inappropriate.

2.) The long-term avoided generation capacity trigger

The CAISO proposed hard trigger to avoid long-term capacity is based on the 10-year series of annual system coincident peak demand forecasts set by the CEC in its Integrated Energy Policy Report (IEPR). The Commission uses these 1-in-2 year annual system coincident peaks in the base case for its long-term procurement plan to determine the need for long-term capacity additions. Reducing the annual system coincident peak by year will lower long-term capacity needs, thus avoiding long-term generation capacity and the associated costs.

The CAISO's valuation proposal allows a demand response provider to nominate quantities of LMR demand response for each individual year in the 10-year IEPR forecast horizon. This would trigger dispatch of LMR demand response when the CAISO day-ahead forecast indicates system coincident peak demand that meets or exceeds the CEC's 1-in-2 year annual system coincident peak demand for that particular forecast year. The demand response provider's nominated capacity quantity would reduce the CEC's 1-in-2 year coincident peak demand in that planning year, thereby reducing the potential for long-term capacity additions.

The CAISO applied its proposed avoided long-term capacity hard trigger to the CAISO's forecast day-ahead load data from 2012-2014 and compared that to the previous IEPR 1-in-2 peak demand forecasts. The table below provides a summary of the results.

Avoided Long-term Capacity			
		1-in-2	
Trigger at IEPR Coincident Peak	2012	2013	2014
2007 IEPR	0	0	0
2009 IEPR	0	0	0
2011 IEPR	0	0	0
2013 IEPR	NA	1	0

Under the CAISO's proposed hard trigger, the data indicates LMR demand response would only have been triggered one time in the past three years.

3.) The avoided flexible capacity trigger

Under the CAISO's valuation proposal, a demand response provider can avoid monthly flexible capacity by nominating a quantity of demand response in a particular month in a resource adequacy compliance year that will be triggered when the CAISO forecasts a Category 3 ramp. The CAISO would reduce its Category 3 monthly flexible capacity needs by the demand response providers' nomination, thus avoiding the need to procure that much flexible capacity from supply resources.

All three capacity types represent separate demand response provider nominations and unique triggers. Short-term and flexible capacity triggers are based on monthly system needs, whereas the long-term capacity trigger is based on annual system needs. These triggers are transparent to the participant and can be implemented through simple program or tariff language that allows dispatch when the respective CEC and or CAISO forecasts are exceeded. In fact, the CAISO day-ahead load forecast is an existing trigger for some of the IOUs' demand response programs already.[26]

[26] See PG&E's triggers for its Demand Bidding Program for example.

3. There is no inherent bias in the CAISO's hard trigger that causes more events in the shoulder months versus peak months.

PG&E claims the CAISO hard trigger is biased. Specifically, PG&E states there is a bias toward shoulder months, particularly in the autumn.[27]

The CAISO's hard trigger has no inherent bias because it is a simple trigger based on the resource adequacy monthly forecasts (avoided short-term capacity), the CAISO's flexible capacity need (avoided flexible capacity), or the CEC's California's Energy Demand forecast (avoided long-term capacity). There is no algorithm or formulation embedded into the hard CAISO's trigger.

Parties have noted that based on recent historical data, the CAISO's short-term avoided capacity trigger would have occurred more often in the shoulder seasons than in the summer season. If any bias exists, it would be in the method used to estimate the monthly resource adequacy coincident peak demand forecasts. However, the CAISO believes that the calculated monthly resource adequacy coincident peaks are reasonable, and the number of trigger-events under the CAISO's valuation proposal for avoiding short-term capacity are reasonable[28] and aimed at reducing resource adequacy requirements in each month throughout the year.

Opposing parties fail to acknowledge that the CAISO's proposal provides demand response providers with flexibility to determine which months LMR demand response is eligible to be triggered to meet short-term and flexible resource adequacy needs. There is no requirement that a demand response provider nominate capacity in all resource adequacy months. Instead, if particular LMR demand response programs are not designed to respond in the non-summer

[27] PG&E Opening Comments, p. 44.

[28] When compared to program availability limits and historic program use.

months, the demand response provider can elect to make no capacity nomination in those particular months.

The strength of the CAISO's valuation proposal is the requirement that utilities realistically shape their monthly nominations and avoid resource adequacy capacity considering program triggers and participant capability. The CAISO's believes this feature should interest the Commission because it will help ensure the integrity and appropriate value of demand response programs throughout the year.

D. The CAISO's Valuation Proposal is Necessary

1. Capacity nominations and hard triggers are essential to give the CEC and CAISO the confidence to adjust forecasts knowing that a guaranteed quantity of LMR demand response will be delivered under the conditions that affect capacity planning decisions.

SCE argues that with or without hard triggers, load forecasts and resource planning decisions can consider the impact and value of LMRs, and hard triggers are unnecessary for valuing DR for planning purposes and the presence of hard triggers will not ensure that LMRs are fully valued in planning processes.[29]

The Commission should insist on incorporating a nomination process and hard trigger to given planners and operators the confidence knowing LMR demand response will show up when needed and in the amount nominated. A capacity nomination and hard trigger create a necessary paradigm shift for future expected conditions where preferred resources will be relied on more and more to achieve California's clean energy goals. No longer should capacity requirements or forecasts be reduced without an express obligation by the provider to deliver. Simply having a resource be "available" is no longer reasonable or sufficient to reliably meet clean energy goals. All resources should abide by an appropriate must offer obligation if the buyer and seller are

[29] SCE Opening Comments, p. 6.

receiving capacity or capacity offsetting benefits from the resource. Capacity nominations, hard triggers, and non-compliance penalties ensures this value is delivered and not withheld.

2. The capacity nomination process simplifies existing ex-ante LMR demand response determinations.

PG&E states that there is already a nomination and penalty mechanism in place for DR customers and LSEs for underperformance.[30] For LSEs, the DR Load Impact Protocols and RA process incorporate the consequences for low-performing DR by reducing a program's RA value the following year. PG&E argues that this has a financial impact on LSEs who are then forced to procure additional RA capacity to make up lost RA MW. For DR providers and customers, there is a nomination and penalty framework in place in the existing DR programs.[31]

PG&E misses a significant benefit of the CAISO's proposed nomination process – namely, it simplifies existing, often convoluted and somewhat opaque processes that currently quantify the amount of demand response that counts toward satisfying resource adequacy requirements. The demand response load impact protocol is essential for evaluating ex-post, weather normalized performance, compliance, and the assessment of penalties. It can also be useful in informing future demand response nominations.

However, the nomination process frees the utility, with Commission oversight, to elect a capacity quantity that can reasonably be delivered. The utility is bound to its capacity nomination decision and judgement, not simply accepting or abiding by the results of a load impact study for future year potential. In other words, the utility may have insight or an approach that will help deliver more LMR demand response than what a study estimates. With Commission oversight, the IOU should be allowed to make such an election given the

[30] PG&E Opening Comments, p. 33.

[31] PG&E Opening Comments, p. 33.

responsibility to deliver is on the utility as the demand response provider. A capacity nomination creates a simple and transparent metric for quantifying reductions to short-term, long-term, and flexible capacity needs, which should be helpful to the Commission.

Finally, CLECA states that "CLECA does not see the need for a nomination process and is not at all sure how one would work. Ex ante load impacts will not provide a good basis for "nominations" since the actual load impacts for temperature-sensitive loads will be influenced by the weather during the dispatch."[32] The Commission should not allow the capacity nomination process to be obstructed by technicalities in ex-ante or ex-post load impact calculations. These are issues that can be overcome using the DRMEC's expertise. As the CAISO stated above, the Commission should direct the DRMEC to study, resolve and report to the Commission on options to support and accomplish the capacity nomination process.

3. Penalties are an essential component of the CAISO's valuation proposal to ensure the integrity and due-diligence behind the IOUs' LMR demand response capacity nominations.

PG&E claims that the nomination and penalty structure could be perceived as too risky by some customers if they will be penalized twice for under-performance: once pursuant to the provisions of their DR program tariff/contract, and a second time pursuant to the CAISO's penalty regime.[33] PG&E adds that this additional penalty risk will discourage participation in LMR DR programs.[34]

PG&E offers no support for claiming that penalties will discourage participation in LMR DR programs. Under the CAISO's valuation proposal, an IOU, with Commission oversight, nominates the amount of LMR demand response capacity it can deliver under the pre-defined

[32] CLECA Opening Comments, p. 16.)

[33] PG&E Opening Comments, p. 29.

[34] PG&E Opening Comments, p. 28.

triggers. The IOU, as the demand response provider, need not limit customer participation, but it must be judicious in its assessment of what its participants can deliver when making capacity nominations. Like third-party demand response providers in the current construct, it will be the utility's decision whether to penalize individual participant underperformance. PG&E currently employs a similar penalty construct under its Capacity Bidding Program, by differentiating the aggregator from the aggregator's participants. On its website, PG&E explains non-compliance penalties under its Capacity Bidding Program as follows:

> The aggregators are penalized if they fail to deliver their committed load reductions. The penalties vary based on the shortfall, with larger penalties for larger shortfalls. Aggregators determine compensation and/or penalties for their participating customers.[35]

The CAISO's valuation proposal is similar. The IOU delivers value as the demand response provider by making a capacity nomination similar to the "committed load reduction" referenced in the PG&E's Capacity Bidding Program. The IOU is then held responsible to deliver that committed capacity. The IOU has the discretion whether and how to penalize or reward its participants for under- or over-performance.

The capacity nomination construct is just and reasonable because the CEC and CAISO will make deliberate adjustments to forecasts that directly affect planning and capacity additions. Adding the capacity nomination process and enforcing the results through the implementation of penalties will require a higher level of due-diligence in forecasting the performance capabilities of LMR demand response programs. The outcome will be superior to the current practice because the Commission and ratepayers will know the minimum capacity quantity that must be delivered, and ratepayers are protected via penalties for non-compliance. The capacity

[35] Located on PG&E's website, explaining its Capacity Bidding Program, non-compliance penalties section, found here: http://www.pge.com/en/mybusiness/save/energymanagement/cbp/index.page

nomination process is reasonable and sets a clear and unambiguous performance standard the Commission can easily monitor.

4. The IOUs have not provided evidence that hard triggers are not needed to ensure capacity is demonstrably avoided.

PG&E claims that the CAISO provided no evidence that hard triggers are needed.[36] To the contrary, PG&E has provided no evidence that capacity nominations and hard triggers are not needed to ensure capacity is demonstrably avoided. Furthermore, PG&E has not provided evidence that its existing programs and triggers are affirmatively avoided building generation projects and transmission and distribution facilities.

PG&E admits:

> DR programs are dispatched based on whether the trigger conditions have been met and the DR is needed. Some discretion is exercised by the LSE to reflect "opportunity cost" of the DR resource. However, because no entity has complete control over the actual system conditions, but many entities and outside uncontrollable circumstances influence the system conditions, determining the value of a LMR DR program based on its dispatch history invites mistakes and has no logical basis.[37]

The IOUs have not demonstrated that their existing dispatch practices result in least-cost dispatch, nor can they ensure that dispatches will not exacerbate over-generation conditions because utility programs are currently self-optimized, self-dispatched and operated independent of the grid's security constrained economic dispatch process. The criticisms leveled against the CAISO's valuation proposal must equally be leveled at the current LMR demand response program triggers and IOU dispatch processes as well.

[36] PG&E Opening Comments, p. 33.

[37] PG&E Opening Comments, p. 12.

5. The CAISO's hard trigger is superior for preserving demand response value and avoiding capacity costs and requires no modification.

Several opposing parties suggest the CAISO's valuation proposal could cause unintended consequences such as over-generation.[38] TURN recommends that the triggers be redesigned to increase dispatch in the summer and decrease dispatch in the shoulder seasons to minimize this risk. However, there is no evidence that TURN's proposal mitigates peak capacity concerns or provides avoided capacity value.

The CAISO designed its valuation proposal knowing that all non-optimized dispatch proposals run the risk of exacerbating system conditions. Any trigger that is not based on CAISO's market optimization could potentially exacerbate power flow conditions and create congestion or stability problems because it is not incorporated into the security constrained economic dispatch process. This is a fundamental concern with any hard trigger, soft trigger, critical peak pricing, time-of-use rate, or other intentional energy adjustment that is self-directed and self-optimized. In any of these cases, the critical question is whether the trigger aligns dispatch with the primary purpose of the product, which, in the case of LMR demand response, is avoiding incremental non-preferred capacity.

The CAISO proposal is based on this fundamental concept, i.e., that LMR demand response should align dispatch with the avoidance of incremental non-preferred capacity. To this end, the CAISO's valuation proposal works with the net load shape and does not have a structural defect that effects over-generation. Figure 2 and Figure 3 below show the monthly

[38] PG&E Opening Comments, p. 35. ("The dispatches during the spring and autumn months risk exacerbating ramping and over- generation problems during these months if the CAISO peak does not coincide with the net load peak."); TURN Opening Comments, p. 1; CLECA Opening Comments, p. 13-14.

average load and net load profiles for the year 2021. Figure 2 represents average weekday loads, while Figure 3 represents average weekend day loads. As the figures show, the peak and net-load peak are nearly coincident in all months except weekdays in April and October.

Figure 2: Coincidence of the Net Load Peak and the Load Peak in 2021- Weekdays

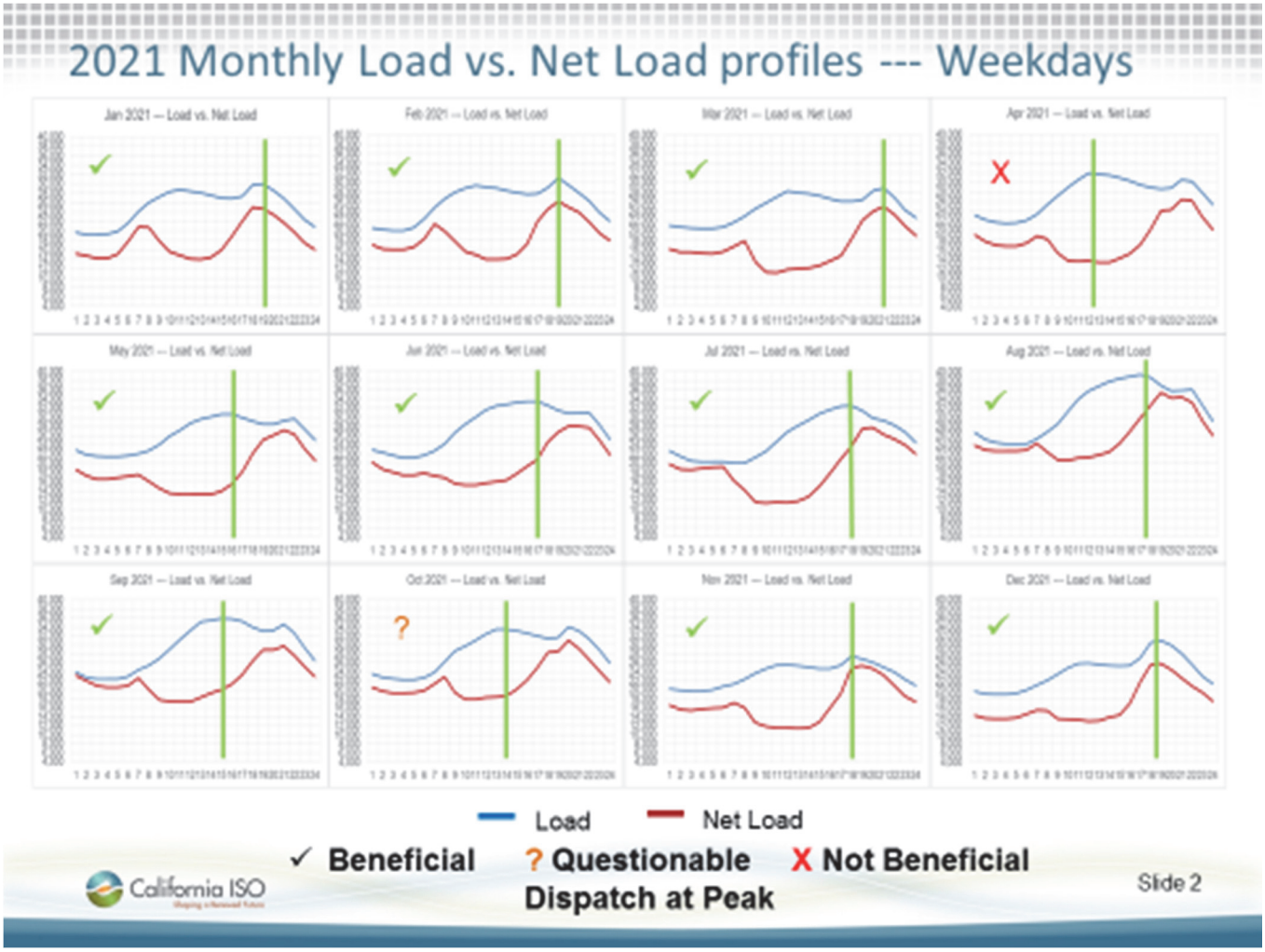
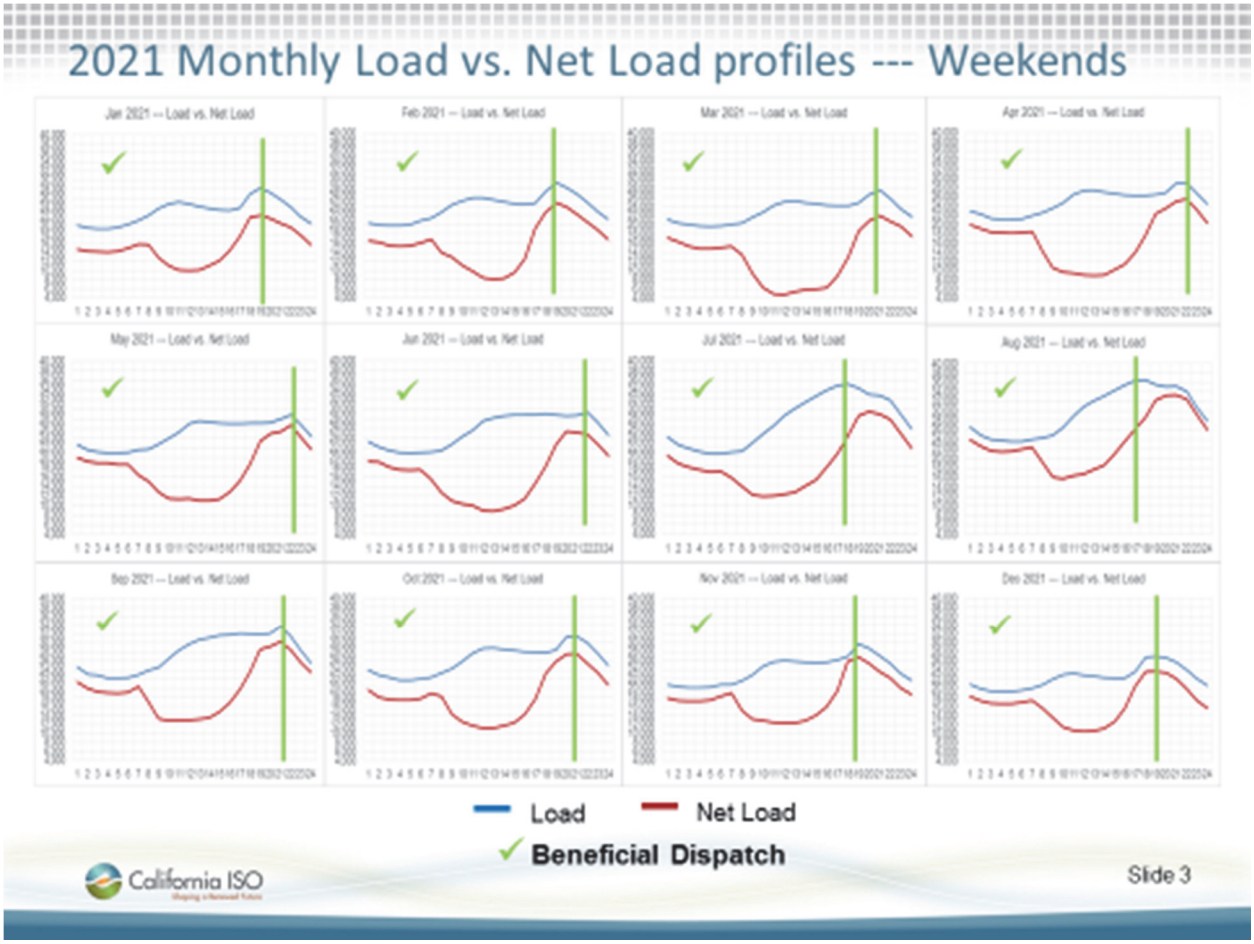


Figure 3: Coincidence of the Net Load Peak and the Load Peak in 2021- Weekends

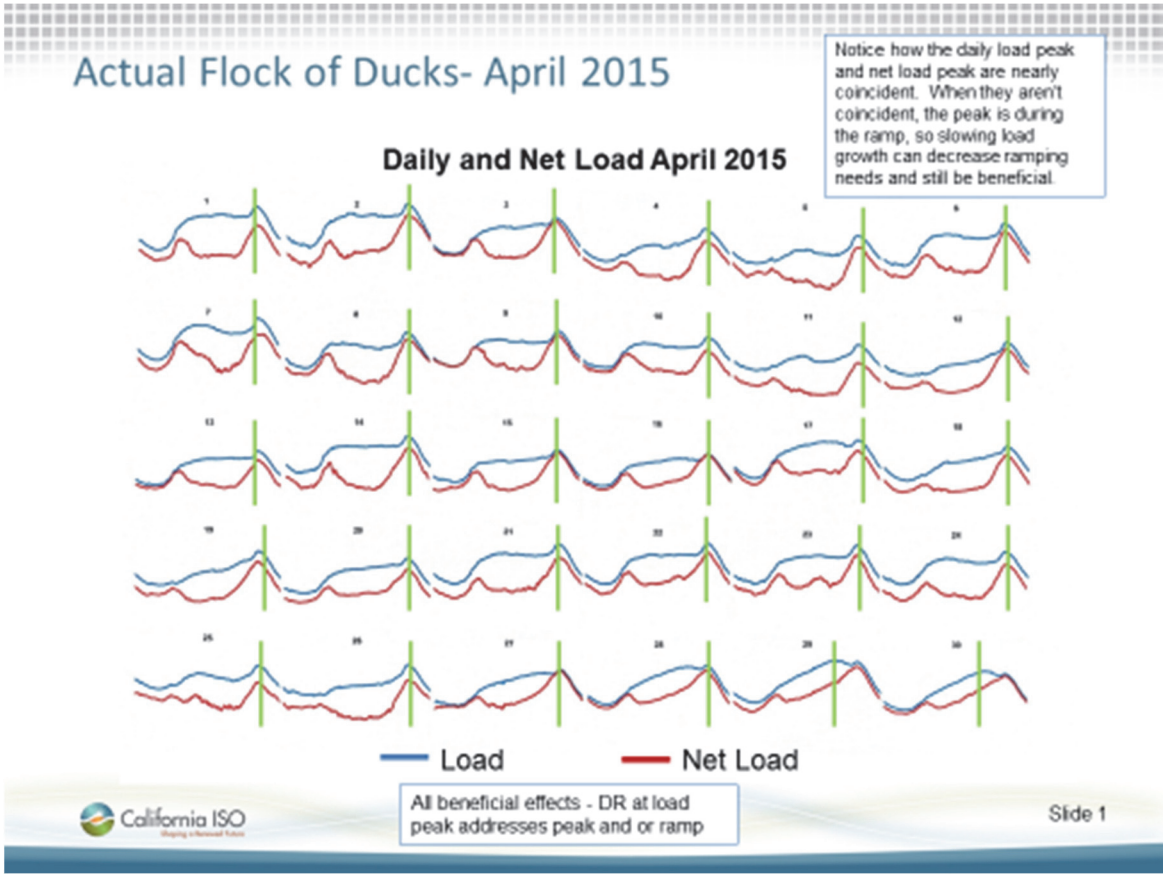


The CAISO's proposal used this data to consider whether dispatch at peak demand would be beneficial. The CAISO defined beneficial and non-beneficial dispatch as follows:

- **Beneficial Dispatch:** When LMR demand response dispatch would occur in periods when the net-demand is increasing or peaking.
- **Non-Beneficial Dispatch:** When LMR demand response dispatch would occur in periods of decreasing or flat net-demand.

Figure 4 depicts that the dispatch of LMR at peak would have been beneficial all days in April 2015.

Figure 4: Coincidence of the Net Load Peak and the Load Peak in April 2015



Looking at the forecast peak load and peak net-load for 2021, the CAISO's proposal triggers demand response at beneficial times almost all months, both on weekends and weekdays. The exception is the average weekday in April 2021 (Figure 2), where the peak occurs when the net-demand is flat. However, the 2021 April weekend is beneficial (Figure 3). Based on this data, in almost all months, the CAISO's hard trigger would be beneficial. This occurs because the CAISO's hard trigger is aligned with grid conditions, where LMR demand response is triggered when the system forecast is at a relatively high 1-in-2 weather year loading conditions, i.e., the same conditions that set capacity requirements. Although this analysis shows the benefits of using the CAISO's hard trigger, the CAISO acknowledges that it is not a fool-proof guarantee of beneficial dispatch in every instance, but this is true of any non-optimized, out-of-market dispatch solution. The risk of unintended consequences and infeasible dispatches

is inherent in any self-directed, non-optimized resource operation, including current utility LMR demand response dispatch practice. The goal is to adopt a solution, like the CAISO's valuation proposal, that minimizes this risk.

E. Clarifications

1. CAISO forecast errors do not lead to more dispatches in the shoulder seasons. The CAISO's forecasts are actually lower in the spring and fall than in the summer and winter months.

SCE does not support the CAISO's proposal because forecast errors do not necessarily indicate either high LMP or high reliability need. SCE states that if load forecast errors are problematic in those months, the correct signal of a problem is high market clearing prices.[39]

Parties wrongly presume that CAISO forecast errors are greater in the more variable load seasons of the spring and fall and, as such, are driving the higher number of dispatches in the spring and fall under the CAISO's hard trigger. This is incorrect. The CAISO's load forecast errors are consistently lower in the spring and fall than in the summer. In summer months, minor errors in forecast temperatures can create large load forecast errors. Because load levels are very sensitive to temperature, a small increase in high temperatures typically results in large increases in load. There is a lower probability of extreme temperatures in the spring and fall, which results in a lower probability of large forecast errors.

This criticism of the CAISO's valuation proposal also implicates existing demand response programs and processes. The utilities currently use load and temperature forecasts as key triggers for dispatching LMR demand response programs. For example, SCE's Demand Bidding Program relies on day-ahead load and or price forecasts and forecasts of extreme or unusual temperature as triggers for dispatch. If, as SCE claims, forecasts are not necessarily an

[39] SCE Opening Comments, p. 16.

indication of either high LMP or high reliability need, then current utility dispatch of LMR demand response suffer the same deficiency because forecasts are commonly used to trigger LMR demand response programs. The Commission should recognize that the criticisms leveled at the CAISO's valuation proposal are due to the nature of LMR demand response dispatch and the fact that, by its nature, LMR demand response is an "out-of-market" solution, whether operated under the CAISO's proposal or under existing IOU dispatch practices.

2. The CAISO's valuation proposal does not require emergency demand response programs be subject to a hard trigger.

PG&E asserts that another shortcoming of the CAISO Proposal is that its proposed hard trigger would apply to reliability programs. Dispatching programs such as the Base Interruptible Program (BIP) during the season when system loads are relatively low and temperatures are moderate will very likely create a mass exodus from these programs. PG&E states that these programs were designed to be fast-responding with a very high degree of reliability, but with a very limited dispatch frequency (i.e. when there is an actual or impending local or system emergency, or a CAISO operating reserves shortage because participants typically have a very high opportunity cost of dropping load).[40] For instance, BIP must be dispatched when requested by the CAISO under Operating Procedure 4420. Thus, the CAISO Proposal will lead to many more dispatches of reliability DR programs that have not been moved to Reliability Demand Response Resources (RDRR) and would likely to lead to a significant loss in the MW enrolled in those programs.[41]

The CAISO's valuation proposal does not require emergency demand response programs, such as the BIP, to be triggered as LMR demand response. Under the approved the terms and

[40] PG&E Opening Comments, p. 51.

[41] PG&E Opening Comments, p. 38.

conditions of the 2010 emergency demand response settlement agreement,[42] emergency and reliability-triggered demand response are to be integrated into the CAISO market as supply resources to count as resource adequacy capacity. These programs are not LMR demand response and, thus, the instant proceeding is inapplicable to them. In the settlement decision, the Commission, stated:

> Thus, following the adoption of this Settlement, those customers who desire to receive resource adequacy treatment for their re-configured emergency- and reliability-triggered DR programs must integrate those programs into the wholesale market using this new product, and the programs, as reconfigured, will be reviewed by the Commission in the new 2012-2014 program cycle.[43]

SCE has already integrated a substantial portion of its emergency demand response portfolio into the CAISO market in accordance with the settlement agreement. In contrast, CLECA noted in its opening comments that PG&E will not integrate its emergency programs for several more years.[44] The Commission should explore this issue further and ensure that the terms of the 2010 settlement agreement are properly enforced.

3. TURN's probabilities of dispatch are incorrect and significantly overstated.

TURN claims that the CAISO-proposed hard triggers will lead to excessive dispatch of LMR demand response programs. TURN is incorrect. TURN misinterpreted data provided by the CEC and, as a result, overstated the probabilities of dispatch under the CAISO's hard trigger. The CAISO reviewed TURN's analysis, and after joint vetting with the CEC, found TURN's interpretation of the CEC's probability calculations were incorrect. The CAISO anticipates TURN will correct its data and its interpretation for the record.

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[42] D.10-06-034.

[43] D.10-06-034, p. 15.

[44] CLECA Opening Comments, p. 4. ("Whether or not utility DR is bid into the CAISO markets is a result of factors over which participating customers have no control. For example, SCE began bidding the Base Interruptible Program (BIP) into the CAISO markets in July 2015 but PG&E will not do so for several more years.")

F. Important Next Steps

1. The Commission should require the IOUs to provide a detailed plan to resolve existing program design and dispatch challenges by or before 2018.

SCE states that because of the design of the control systems used to dispatch the DR programs, it is not possible to dispatch the LMR components on their own. Therefore, if those components must be dispatched via the hard trigger, the SR components must also be dispatched. SCE states that the decision it faces is whether to dispatch the whole program to avoid penalties, or to forgo the capacity value of the 10 percent of the program that is not integrated.[45]

SCE asserts that if a hard trigger will cause a demand response program to be dispatched outside of its design parameters (e.g., the operating days, operating hours, etc.) the demand response program should not be dispatched. For example, SCE's Save Power Day program has availability to be dispatched on weekdays from 2 to 6 p.m., however if the hard triggers requires it to be dispatched from 12 to 8 p.m., then SCE should not be required to dispatch the program.[46]

However, the Commission and the parties will have sufficient time to work through these challenges before full bifurcation is implemented in 2018. During this 2½ year transition period, the Commission should expect the IOUs to resolve these dispatch and program design challenges, or, at minimum, be on a clear path to resolve these challenges by a date certain. The Commission should not expect these growing pains to be long-term or to be accepted as business as usual. The IOUs must work to resolve these integration and program design challenges.

IV. REPLY COMMENTS ON THE COST EFFECTIVENESS PROTOCOL

PG&E misinterprets the CAISO's statement of support for considering day-ahead demand response in its forecast. PG&E notes that the CAISO supported a recommendation in the

[45] SCE Opening Comments, p. 9.

[46] SCE Opening Comments, p. 9.

Load Modifying Resource Demand Response Valuation Working Group Report regarding the consideration of day-ahead demand response in its forecast.[47] As a result, PG&E states that the Revised Cost Effectiveness Protocols are incorrect in stating that "[t]he CAISO has indicated that DR would not impact the procurement of AS in the Day Ahead market."

The CAISO supports the Revised Cost Effectiveness Protocols as written. LMR demand response does not directly lower the CAISO's procurement of ancillary services because the CAISO does not incorporate LMR demand response into the CAISO Forecast of CAISO Demand (CFCD) when running the day-ahead market. Further, PG&E overstates the CAISO's support for incorporating LMR demand response into its forecast. In fact, the specific language from section 3.1.1.6.1 of the load modifying working group report states:

> The CAISO has indicated that it would consider adjusting its CFCD for operating reserve procurement in the day-ahead market for LMR DR once CPUC approved HTs are implemented and the IOUs establish a consistent track record of dispatching LMR DR programs at committed levels over a period of 2-3 years.[48]

The CAISO may consider adjusting the forecast once hard triggers are approved and there is a clear track record of performance over a period of years. However, there is no certainty at this time that the CAISO will include LMR demand response in its day-ahead forecast. As a result, the Commission should retain the existing language in the Revised Protocol until there is greater clarity about hard triggers and a proven track record of performance under the new paradigm.

V. CONCLUSION

The CAISO's LMR demand response valuation proposal is coherent, transparent, and based on clear avoided cost principles. The CAISO-proposed hard triggers target and promote

[47] PG&E Opening Comments, p. 15.

[48] Load Modifying Resource Demand Response Valuation Working Group Compliance Report, May 1, 2015, p. 42.

the metrics that drive investment and procurement decisions. If successfully implemented and operated, cost-effective LMR demand response will result in less need for non-preferred resources, less capacity procurement, and lower infrastructure investment costs compared to would have been required absent robust LMR demand response.

The CAISO urges the Commission not to modify the CAISO's valuation proposal because it directly avoids capacity consistent with the spirit of the loading order by reducing the forecasts used to set long-term, short-term, and flexible capacity requirements. The CAISO's valuation proposal will give the Commission, CEC, and CAISO the confidence needed to reduce the forecasts that drive the state's capacity planning studies and decisions. The Commission should transition away from allowing capacity requirements or forecasts to be reduced without an express obligation by demand response service providers, be it an IOU or third-party, to back their capacity commitments because reliable electric service has a significant impact on health and safety. It is also unreasonable to offset resource adequacy requirements for resources that are technically "available" but not bound by an express must offer obligation. The Commission should ensure that all resource owners/operators receiving capacity or capacity offsetting benefits abide under an appropriate form of must offer obligation, whether those resources are supply side or load modifying resources. Capacity nominations, hard triggers (a form of must offer obligation), and non-compliance penalties help ensure that LMR demand response delivers value and performs when needed and anticipated.

Finally, contrary to certain comments, the CAISO's valuation proposal provides the same capacity value to LMR demand response as it does to supply demand response on a megawatt for megawatt basis because the IOU's capacity nomination reduces short-term and long-term forecasts in the same way a megawatt of supply counts toward a capacity requirement. This

upholds the Commission's goal to not diminish the value of demand response. The CAISO encourages the Commission to adopt the CAISO's valuation proposal and the CAISO's 5-point recommendations as its next steps.

Respectfully submitted,

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