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October 17, 2022

California Energy Commission
Docket Office
Docket No. 21-DR-01
715 P Street
Sacramento, CA 95814

SUBJECT: San Diego Gas & Electric Company Comments on Demand Response Qualifying Capacity Proposals Submitted to the Working Group (Docket No. 21-DR-01)

San Diego Gas & Electric Company ("SDG&E") appreciates the opportunity to provide comments on the Demand Response Qualifying Capacity Proposals that were submitted to the Commission Staff Working Group.

Five proposals were submitted to the CEC Working Group for consideration. Commission Staff requested that Working Group participants provide feedback on each proposal, with specific direction to include the following:

1. Discuss the organization's position on each of the five proposals;
2. Discuss the organization's position on the extent to which each proposal does or does not meet the nine principles developed by the working group;
3. Discuss your organization's position on whether, and if so what, enhancements to intracycle adjustments to demand response qualifying capacity are feasible and appropriate to account for variability in the demand response resource in the month-ahead and operational space;
4. Discuss your organization's position on whether implementation of any elements of demand response qualifying capacity method modifications that might be adopted by the commission should be phased in over time.

5. Discuss your organization's position on whether, and if so how, any changes to demand response adders should be reflected in demand response qualifying capacity methodology.

Accordingly, SDG&E is pleased to offer feedback on each of these points, for each proposal, in the attached document. Please note that the attachment was developed jointly with Demand Side Analytics (DSA).

Thank you for your consideration of these comments. We welcome the opportunity to discuss the issues we have raised in greater detail and look forward to continued engagement with the Working Group to finalize recommendations for consideration at the California Public Utilities Commission.

Sincerely,

/s/ Sarah M. Taheri
Sarah M. Taheri
Regulatory Affairs Manager

Attachment: SDG&E and DSA Comments on Demand Response Qualifying Capacity Proposals Submitted to the Working Group

Comments on Demand Response Qualifying Capacity Proposals Submitted to the Working Group

Prepared by:
San Diego Gas & Electric
Demand Side Analytics

October 17, 2022

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1 INTRODUCTION

Decision 22-06-050 OP11 states "*The California Energy Commission (CEC) Working Group is requested to continue to develop long-term recommendations for a new demand response (DR) qualifying capacity (QC) methodology for the 2025 Resource Adequacy (RA) year, consistent with the Reform Track framework adopted in this decision*". The California Energy Commission (CEC) working group requested comments on five proposals submitted as part of the Supply Side Demand Response (SSDR) Qualifying Capacity (QC) working group. Before the proposals were submitted, the working group developed nine principles for assessing the various proposals. Draft proposals were initially circulated in April 2022 and updated in September 2022 to align with the adoption of the 24 Hour Slice-of-Day resource adequacy framework[1]. Specifically, the CEC requested written comments that, at minimum:

1. Discuss the organization's position on each of the five proposals;
2. Discuss the organization's position on the extent to which each proposal does or does not meet the nine principles developed by the working group;
3. Discuss your organization's position on whether, and if so what, enhancements to intracycle adjustments to demand response qualifying capacity are feasible and appropriate to account for variability in the demand response resource in the month-ahead and operational space;
4. Discuss your organization's position on whether implementation of any elements of demand response qualifying capacity method modifications that might be adopted by the commission should be phased in over time.
5. Discuss your organization's position on whether, and if so how, any changes to demand response adders should be reflected in demand response qualifying capacity methodology.

In total, five proposals were submitted. The table below identifies each of the proposals and provides a concise summary of them. For clarity, the remainder of our comments are presented in separate sections that address each of the CEC's request for comments. We complete our comments with our conclusions and recommendations.

[1] Decision 22-06-050 OP12 states "*Southern California Edison Company's 24-hour slice framework is adopted, with modifications, as outlined in Appendix A. Appendix A is adopted in its entirety. To the extent that the decision contains requirements or guidance for the 24-hour slice framework, in addition to those in Appendix A, the additional requirements or guidance shall be complied with. The 24-hour slice framework requires each load-serving entity (LSE) to demonstrate it has enough capacity to satisfy its specific gross load profile (including planning reserve margin) in all 24 hours on the California Independent System Operator's (CAISO) "worst day" in that month*".

Table 1: Proposal Summary

Proposal Name and Proponents	Summary
Incentive-Based Method DR Counting **(California Efficiency + Demand Management Council (CEDMC))**	▪ The provider submits their estimate of claimed qualifying capacity value by temperature and hour of day with supporting evidence. ▪ The CPUC approves the amount, and providers are free to sell resources to LSEs. ▪ Performance is assessed using settlement baselines on a monthly basis. If there is a market dispatch, performance is assessed based on the best hour. If there is no dispatch in the month, the test results or bids (in that order) are used to assess performance. ▪ DR resource performance is tied to penalties and assessed on a monthly basis
Simplified Load Impact Protocols Proposal **(Ohm Connect)**	▪ Modify the existing load impact protocols to essential components in order to reduce the burden on DRPs. ▪ Shorten and simplify the evaluation process. ▪ Increase transparency around how qualifying capacity values are determined based on the ex-ante estimates.
Demand Response Resource Counting for Slice of Day **(California Large Energy Consumers Association)**	▪ A single MW value is not compatible with the Slice-of-Day framework. An expected load reduction for demand response is required for each hour. ▪ The current load impact protocols already require hourly results by month and hour and should be kept but modified to align with the worst-day-of-month conditions as defined by the Resource Adequacy 24 Hour Slice of Day Framework ▪ The DR qualifying capacity should: o Require use of the resources' performance history o Include spillover effects (snapback, pre-cooling, persistence), whether positive or negative. ▪ Minimum Demand Response program requirements should be kept to address consecutive hours dispatch duration and number of monthly and annual hours available. However, the minimum should provide load serving entities the ability to select the window when DR resources are shown and remove the requirement that resources be available from 4-9 pm.

Proposal Name and Proponents	Summary
	▪ Continue to include transmission and distribution adders and the planning reserve margin adders.
Demand Response Qualifying Capacity Proposal **(Demand Side Analytics and San Diego Gas & Electric)**	▪ The Load Impact Protocols (LIP) should be retained but modified to address the 24-hour slice-of-day framework. In specific, the protocols should be modified to: ✓ Align weather conditions with the worst day of the month as defined in resource adequacy. ✓ Ensure the load impacts for the worst day of the month is an output of the ex-ante impacts ✓ Produce a summary 24-slice of day table that shows impact of the resource for all 24 hours for each of the 12 months on the worst day ✓ Ensure the 24-hour worst day profiles account for: 1. The coincidence of the resource with the risk of capacity shortages 2. The availability of the resource as defined by the program rules (e.g., 12–9 pm) by month, hour, and weekday/weekend conditions 3. Max event duration (consecutive hours) 4. Spillover effects such as snapback, pre-cooling, or persistence of load reductions beyond the event window (for non-residential). ✓ Allow DR providers flexibility to target the hours that maximize value and coincide with need (i.e., don't force everyone into 4–9 pm), but not without boundaries. ✓ Produce a Time-Temperature Matrix for variable or weather-sensitive resources using a standard data format. A time-temperature matrix quantifies the relationship between demand reductions, temperature conditions, the hour of the day, event start times, and hours into an event. It can be used to compare ex-ante predictions to actual reduction delivered during events under the same set of conditions ▪ Keep DR minimum requirements for annual maximum dispatch hours, monthly maximum dispatch hours, and maximum consecutive days in order to qualify for capacity. ▪ Evaluation of ex-post load impacts (rather than settlement heuristics) should be used as the basis for assessing performance since they are more accurate

Proposal Name and Proponents	Summary
	and have a long history using a standard output template. CAISO should allow evaluation results to be used for settlement as long the evaluation is produced in advance and the results are produced within the settlement period. ▪ Develop a standardized performance alignment metric (PAM). The main objective of this metric is to assess if the actual performance during operations aligns with the historical forecasted capability at the meter, given the conditions actually experienced during operations and the resources dispatched. ▪ Develop a standardized bid alignment metric (BAM). The main objective of this metric is to assess if the bids align with the historical forecasted capability, given the conditions actually experienced.
Hourly Regression Capacity Counting Methodology **(California Energy Commission)**	▪ Produce a capability profile that projects how resources are expected to perform under different temperature conditions for each hour. ▪ The capability profile directly determines the ex-ante capacity value at the point where the temperature matches the planning temperature. It's subject to a reasonableness finding from CPUC. ▪ Individual ex-post impacts are calculated using CAISO baselines. Alternate methods are allowed if they are more accurate and they are not possible to implement for settlement. ▪ Ex-post impacts are adjusted relative based on the amount bid. ▪ The adjusted load impacts are used to develop a model of ex-post demonstrated capability. ▪ Penalties are applied to any shortfall in delivered capability.

2 POSITION ON EACH OF THE PROPOSALS

The proposals that were submitted are not mutually exclusive. In many cases, such as the CLECA and DSA-SDG&E proposal, the proposals share common elements. In some instances, proposals are complimentary. For example, the proposals to simplify Load Impact Protocols by Ohm Connect can be combined with multiple other proposals. As DSA-SDG&E noted in our proposal, we are open to modifications to simplify, add transparency, and further standardize outputs, and are also open to streamlining the process to make it more concise and timely.

Thus, in summarizing our position for each proposal, we have elected to indicate if we support, support in part, or do not support the proposal. For proposals we support in part, we identify the components of the proposal that we support, oppose, or have reservations about. Table 2 summarizes our position and our reasoning for each proposal.

Table 2: SDG&E-DSA Position on Each of the Proposals

Proposal Name	Position	Why
Incentive-Based Method DR Counting **(California Efficiency + Demand Management Council (CEDMC))**	Do not support	▪ The testing/performance requirements are inadequate and are not well defined. If there is a market dispatch, performance is assessed based on the best hour, and approach that is inherently biased and does not accurately reflect actual multi-hour performance. If there is no dispatch in the month, the best hour from test results, or bids (in that order) is used to assess performance. In practice, most of payments will be tied to bids rather than actual performance. ▪ The proposal does not address weather sensitivity of demand response resources and is not well suited for them. ▪ The proposal does not address characteristics of DR, including shape, limitations on max dispatch hours, decay, or spillover effects. ▪ The proposal relies on settlement baselines, which are heuristics and less accurate than load impact evaluation results. The ex-post estimates using the baseline methods for settlement purposes will produce estimates quickly. For example, the day-matching method is designed to produce estimates within a few days after an event in order to provide payments to participants in a timely manner. The load impact evaluations collect more data variables such as temperature, customer notification, event performance over the entire season, and wide range of interval data. ▪ It is premature to assign the same penalty structure for residential and non-residential customers. Recommend performing a study and/or a working group session to identify an accurate penalty structure for residential and non-residential customers.

Proposal Name	Position	Why
Simplified Load Impact Protocols Proposal **(Ohm Connect)**	Support in part	▪ The Ohm Connect proposal aims to shorten and simplify the evaluation and qualifying capacity process. It attempts to modify the existing load impact protocols to essential components, shorten timelines, and increase the transparency of QC determination by the CPUC. We agree with the broader goals of the proposal, which are complimentary to rather than a substitute for the DSA-SDG&E and CLECA proposals. The Ohm Connect proposal does not address the modifications needed to align with the 24-hour slice-of-day framework. Rather, as the proposal states, "it can be compatible with any number of approaches to modify the LIP outputs for the slice of day RA program." ▪ Our position is that the load impact protocols need additional modifications to align with Slice-of-Day 24 hours RA framework beyond those proposed by Ohm Connect. ▪ We support most, but not all, of the changes to the load impact protocols identified by Ohm Connect. In section 7, we detail for each protocol the changes proposed by Ohm Connect and note the DSA and SDG&E positions on the recommendation.
Demand Response Resource Counting for Slice of Day **(California Large Energy Consumers Association)**	Mostly support, with small reservations	We agree with the CLECA proposal on most components. As they noted, the load impact protocol outputs produce the demand reduction capability under planning conditions and align with the 24-hour Slice-of-Day resource adequacy frameworks. We also agree with CLECA that both demand reductions and spillover effects outside of the dispatch window should be included to accurately reflect the effect on DR on planning. Last, we also agree with CLECA to continue to define minimum DR requirements. However, we do not agree on two areas: ▪ CLECA recommends removing the requirement of availability from 4-9pm. While we agree more flexibility is needed, we think it should come with boundaries and DR providers still need to cover four consecutive hours in the 4-9pm. The added flexibility is to allow DR resources that can be used for six hours (e.g., BIP, load control programs) should be able to show six hours of

Proposal Name	Position	Why
		load reduction. Likewise, we recommend some flexibility, with bounds, for 4-hour resources. They should be able to decide whether to show reductions from 4-8pm or 5-9 pm. ▪ The proposal recommends inclusion of the planning reserve margin (PRM) adders. For reasons we explain in DR qualifying capacity adders (Section 6), we recommend that only the T&D adders be applied.
Demand Response Qualifying Capacity Proposal **(Demand Side Analytics and San Diego Gas & Electric)**	Support	▪ The proposal clearly defines how the slice-of-day 24 framework is met and provides applied examples. ▪ The proposal factors in the range of characteristics for DR, including weather sensitivity, maximum event duration, spillover effects, and limitations on availability. ▪ It provides a clear connection and metrics that link actual DR performance, ex-ante resource capability, and market bids (PAM and BAM) ▪ It retains an existing, well tested framework and does not produce substantial, untested changes ▪ It uses more accurate methods than baseline heuristics yet provides a path for settlement/evaluation to align ▪ It is compatible with simplifications to the load impact protocols and process. As the early discussions in the working group indicated, many of the complaints were with the existing process for qualifying capacity.
Hourly Regression Capacity Counting Methodology **(California Energy Commission)**	Do not support	▪ The proposal is an earnest attempt at reflecting the reality that DR is a variable resource. We agree that for any proposal to work, it is necessary for the DR provider to be able to bid their true resource availability rather than the qualifying capacity value. We also agree with the recommendation for a streamlined approval for DR providers and resources that have a proven track record. However, we have several reservations.

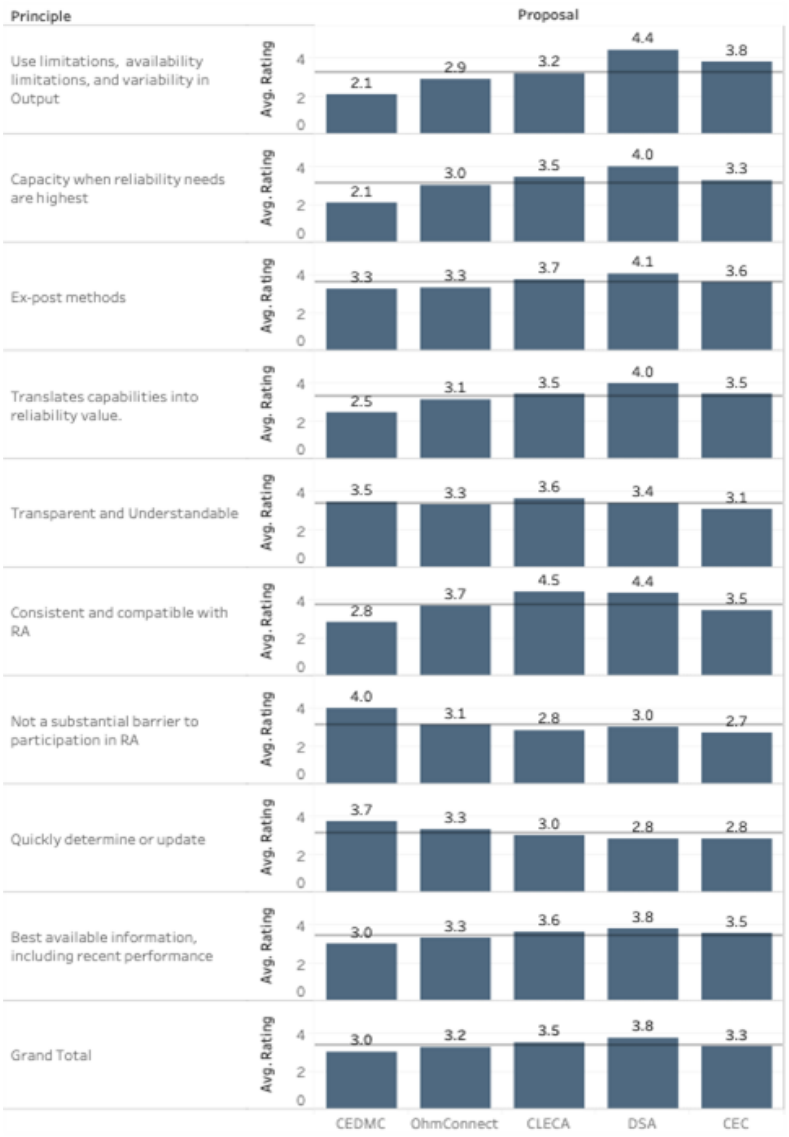
Proposal Name	Position	Why
		▪ The proposal discards in its entirety the ex-post and ex-ante impact load impact tables, which have provided a record of actual demand reductions (ex-post) and reduction capability since 2008. ▪ The proposal overly relies on penalties. Outside of penalties, there is no mechanism to ensure the capability profiles submitted by DR providers are realistic. It is premature to move toward penalties, especially with novel, prescriptive approach that has not been tested in the field. ▪ The proposal did not explicitly demonstrate how produced outputs are consistent with the 24-hour Slice of Day resource adequacy framework. Many parties found the proposal challenging to understand. ▪ The proposal makes the less accurate methods, baseline heuristics, the de facto approach for measuring performance. While it allows room for alternate approaches, it sets a high bar which would make less accurate baseline heuristics the default and de factor approach ▪ The proposal does not clearly address how different characteristics of DR, such as max event duration, decay (if applicable), and spillover effects are incorporated ▪ The proposal overly relies on bids on assessing performance and developing the ex-ante capacity value. In specific, it assumes the current bid structure adequately incorporates the characteristics of DR. The current bid structure was developed for generators, not for DR, and CAISO has declined requests to modify it to better reflect the fact that DR resources delivered vary as a function of weather, event start time, and hours into the event. In addition, the bid-normalized load impact (NBLI) metric introduces an asymmetric, downward bias in assessing performance. If a DR resource is called for 60 MW, but delivers 80 MW, the overperformance is ignored. By contrast, if a DR resource underperforms, the underperformance counts against it.

3 ALIGNMENT OF PROPOSALS WITH WORKING GROUP PRINCIPLES

On September 28th, 2022, Tom Flynn from the California Energy Commission requested the CEC SSDR QC Working Group indicate the degree to which each proposal met or aligned with each principle on a 5-point scale, with 5 indicating high agreement and 1 indicating low agreement. There were no open-ended/text responses requested. The respondents were:

- CAISO
- California Energy Commission
- California Large Energy Consumers Association (CLECA)
- Demand Side Analytics
- California Efficiency + Demand Management Council
- LEAP
- Olivine
- PG&E
- SDG&E
- Southern California Edison
- Sunrun, Inc.

Figure 1: Summary of Stakeholder Scoring of Proposal Alignment with Working Group Principles



Error! Reference source not found., produced by the CEC, shows the results at the aggregate level, so that no individual respondent is identified. SDG&E and DSA largely agree with the collective scoring by all stakeholders, which scored the SDG&E-DSA and the CLECA proposal highest. Below we add additional detail about

our perspective on whether the different proposals meet, do not meet, or do not directly address each of the Working Group's principles.

Table 3: Alignment of Proposals with Working Group Principles

No.	Principle	CEDMEC Incentive-Based	Ohm Connect Simplified LIPs	CLECA Counting for Slice of day	DSA-SDG&E Qualifying Capacity Proposal	CEC Hourly Regression Capacity
1	Transparent and understandable	**Somewhat.** The proposal is understandable but lacks applied examples. The process is transparent, but how DR providers estimate the DR capability for planning is not.	**Yes.** The proposal is understandable but focused exclusively on simplifying the load impact protocols and shortening and simplify the evaluation process.	**Yes.** Very understandable and transparent with applied examples.	**Yes.** Very understandable and transparent with applied examples and templates for 24-hour slice-of-day outputs.	**Somewhat.** Except for how the DR capability profiles are produced, the proposal is transparent. We found the proposal difficult to understand without multiple re-reads. Making the proposal more concise and clear would help make it more understandable.
2	Uses best available information regarding the resource capabilities, including historical performance and enrollments	**No.** Parties can submit whatever they want without a direct connection to historical performance and enrollments. It does, however, reduce the gaps between updates.	**Not addressed.** But by retaining the LIPs, the proposal keeps a direct alignment between resource capabilities and historical performance.	**Yes.** By retaining the LIPs, the proposal keeps a direct alignment between resource capabilities and historical performance.	**Yes.** By retaining the LIPs, the proposal keeps a direct alignment between historical performance. It also enhances the ability to directly compare actual performance with ex-ante DR capability under the same set of conditions.	**No.** Parties can submit whatever they want without a direct connection to historical performance and enrollments. It does, however, reduce the gaps between updates.
3	Allows providers to quickly determine and update QC values	**Yes.** The proposal allows for more frequent updates to the QC value.	**Not addressed.** The proposal only discusses LIP modifications.	**Yes.** The DRPs can update QC values very quickly under the proposed approach.	**Yes.** The proposal outlines the key steps for producing a slice of day table and monthly QC using an excel template.	**Yes.** However, the bid-normalized load impact (NBLI) metric introduces an asymmetric, downward bias in assessing performance.
4	Consistent and compatible with the resource adequacy program	**Somewhat.** Proposed methodology has DRPs provide an hourly showing. However, basing performance on the best	**Yes.** Modifications are compatible with the slice-of-day framework.	**Yes.** DR capability aligns with the slice-of-day framework.	**Yes.** DR capability aligns with the slice of day framework. The proposal also provides applied	**Not directly addressed.** The proposal did not explicitly demonstrate how produced outputs are consistent with the slice-

No.	Principle	CEDMEC Incentive-Based	Ohm Connect Simplified LIPs	CLECA Counting for Slice of day	DSA-SDG&E Qualifying Capacity Proposal	CEC Hourly Regression Capacity
		hour is inherently biased and does not accurately reflect multi-hour performance. The proposal doesn't template or examples for how to directly meet the framework.			examples and templates for output.	of-day framework, though its implied.
5	Accounts for any use limitations, availability limitations, and variability in output of DR resources	**Not addressed.** The proposal does not address characteristics of DR, including shape, limitations on max dispatch hours, decay, or spillover effects	**Not addressed.** The proposal only discusses LIP modifications.	**Yes.** The proposal keeps minimum requirements for DR dispatch and allows for flexibility in the DR showing hours. It also recommends including spillover effects of DR.	**Yes.** The proposal accounts for the coincidence of the resource with the risk of capacity shortages, the availability of the resource as defined by the program rules, max event duration, spillover effects such as snapback, pre-cooling, or persistence of load reductions beyond the event window (for non-residential).	**Partially addressed.** The proposal addresses weather sensitivity and hour of day but does clearly address how other characteristics of DR are incorporated.
6	Translates a DR resource's load reduction capabilities into its reliability values	**Yes.** Retains existing methodology.	**Not addressed.** The proposal only discusses LIP modifications.	**Yes.** Proposes using wind and solar as guidance for determining DR QC value.	**Yes.** The outputs and examples show how to use the 24-hour slice-of-day outputs to produce reliability risk weighted value. By requiring a heat risk, it help DR providers target the highest reliability need hours.	**Yes.** Proposes final QC value be based on planning temperature for that month.

No.	Principle	CEDMEC Incentive-Based	Ohm Connect Simplified LIPs	CLECA Counting for Slice of day	DSA-SDG&E Qualifying Capacity Proposal	CEC Hourly Regression Capacity
7	Includes methods to determine delivered capacity (ex-post) and compatible with the determination of qualifying capacity	**Yes.** However, the settlement methods are less accurate than evaluation results.	**Yes.** Advocates continued use of the LIPs, with modifications. The protocols require the ex-ante values used for qualifying are grounded in actual ex-post performance.	**Yes.** Advocates continued use of the LIPs. The protocols require the ex-ante values used for qualifying are grounded in actual ex-post performance.	**Yes.** Advocates continued use of the LIPs. The protocols require the ex-ante values used for qualifying are grounded in actual ex-post performance.	**Yes.** However, the settlement methods proposed are less accurate than evaluation results.
8	Not a substantial barrier to participation in RA program	**Yes.**	**Yes.** The main barrier is the prolonged process dictated by the CPUC and limited opportunity for updates.	**Yes.** The main barrier is the prolonged process dictated by the CPUC and limited opportunity for updates.	**Yes.** The main barrier is the prolonged process dictated by the CPUC and limited opportunity for updates.	**Yes.**
9	Accounts for a resource's capacity when reliability needs are highest	**Not addressed.** The proposal does not specify whether the submitted QC values should align with worst-day-of-the month conditions.	**Not addressed.** The proposal only discusses LIP modifications.	**Yes.** Looks at the worst day of the month when determining the QC value.	**Yes.** Looks at the worst day of the month when determining the QC value.	**Yes.** Looks at the worst day of the month when determining the QC value.

4 ENHANCEMENTS TO INTRACYCLE ADJUSTMENTS TO DEMAND RESPONSE QUALIFYING CAPACITY

SDG&E concurs with the following items adopted in CPUC Decision D.20-06-031 and believes they are feasible and appropriate to account for variability in the demand response resource in the month-ahead and operational space.

- Biannual QC update process described on Order Paragraph (OP) 15 "*Mid-year updates are permitted to reflect changes in customer enrollment if the change is reasonably large. In the compliance year, on a biannual basis, Energy Division shall update qualifying capacity (QC) values based on the actual customer enrollment volume associated with that resource in the California Independent System Operator's Demand Response Registration System. LIP results will be updated if QC values vary by more than 20 percent, or 10MW, whichever is greater*." SDG&E believes the proposed QC methodology should be able to produce a mid-year QC updated value.
- A further study LIPs and potential enhancements to improve the accuracy, transparency and applicability of the methodology. SDG&E coincides with D.20-06-031, the LIP guidance document should be revisited to incorporate any necessary changes for the determination of RA QC.

Background - D.20-06-031

OP15 states "The following clarifications to the Load Impact Protocol (LIP) process for third-party demand response (DR) resources are adopted:
(a) Ex post and ex ante load impacts are required at the sub[1]Load Aggregation Point level.
(b) Mid-year updates are permitted to reflect changes in customer enrollment if the change is reasonably large. In the compliance year, on a biannual basis, Energy Division shall update qualifying capacity (QC) values based on the actual customer enrollment volume associated with that resource in the California Independent System Operator's Demand Response Registration System. LIP results will be updated if QC values vary by more than 20 percent, or 10MW, whichever is greater."

OP 16 states "Energy Division is directed to coordinate with the Supply Side Working Group, authorized in Decision 19-12-040, to address the following issues related to the Load Impact Protocols (LIPs):
(1) define the details of biannual qualifying capacity (QC) update process;
(2) further study LIPs and potential enhancements to improve the accuracy, transparency and applicability of the methodology; and
(3) re-evaluate the QC Update threshold (20 percent, 10 MWs) for potential future updates. The working group shall submit a recommendation into Track 4 of this proceeding."

5 PHASING IN DEMAND RESPONSE QUALIFYING CAPACITY METHOD MODIFICATIONS

SDG&E recommends performing a study and/or a working group session to assess whether the Capacity Shortfall Penalty (CSP) or any other penalty methodology is an accurate penalty structure for residential and non-residential customers before it is phased in over time for the DR QC method.

6 DEMAND RESPONSE QUALIFYING CAPACITY ADDERS

SDG&E believes the following items should be reflected in the demand response qualifying capacity methodology:

- The hours in which DR resources can be shown and whether those hours must be consecutive.

The CPUC currently uses the average for the 4–9pm time period under 1-in-2 utility peak conditions to determine the qualifying capacity for each month. The CPUC also specifies minimums a DR resource must meet to qualify for capacity. Currently, DR resources must be available Monday through Saturday for four (4) consecutive hours between 4pm and 9pm, and at least 24 hours per month from May to September.

SDG&E agrees to comply with the minimum RA requirements (that 4pm-9pm need to be four consecutive hours) but can add more hours if the resource is available based on DR program rules. For example, the DR program can be dispatched over the course of a day (e.g., 6 hours per day) and the hours should be consecutively or non-consecutively. If the DR program is designed that can be triggered multiple times a day then we should be allowed flexibility and the hours should not be consecutive.

- Whether or not the value of DR resources can vary by hour.

The DR resources can vary by hour because DR is not a fixed resource, it is a variable resource. For example, if the program is available for 9 hours, then usually for some programs the first hour of the event the LI is higher than the following event hours.

- Whether, and if so, how, snap back effects should be accounted for.

Precooling and snap back effects should be accounted for. Show the event window within RA assessment hours (HE17-HE21), where precooling hour will be at HE16 and snap back at HE22. If the precooling and snap back hours are outside of the RA window, SDG&E should not get penalized.

- Whether the transmission and planning reserve margin adders should be applied.

Operating reserves (6%) and forced outage and forecasting error adders (9%) should be removed and retain Distribution and Transmission Losses. According to Decision 21-06-029 OP12 (page 78), "*the 6% component of the planning reserve margin (PRM) adder associated with ancillary services and operating reserves shall be removed for demand response*

resources. This is effective for the 2022 Resource Adequacy compliance year. The 9% component of the PRM adder associated with forced outages and forecast error shall be retained." However, SDG&E recommends that both the 6% operating reserves and the 9% error adders be removed.

7 ADDITIONAL COMMENTS RELATED TO DR LI PROTOCOLS

The table below shows SDG&E/DSA comments related to Ohm Connect's proposed changes to the DR LI protocols.

Table 4: SDG&E/DSA comments on DR LI Protocols

Group	Protocol	Summary	Ohnmconnect's proposed disposition	SDG&E/DSA Comments
Evaluation Plan	1	Evaluation plan is required	Replace the narrative with a standardized tabular form Mandatory only for DRPs performing evaluations for the first time or if material changes to the DR program or evaluation approach are expected	Agree to replace the narrative with a standardized tabular form
	2	Requirements beyond resource planning and additional to protocol 4-27, i.e., resource adequacy	Eliminate	Agree to eliminate
	3	Questions/issues that must be addressed by the evaluation plan	Mandatory only for DRPs performing evaluations for the first time or if material changes to the DR program or evaluation approach are expected	Do not agree with DRPs only providing an evaluation plan the first time. SDG&E propose to use the standardized tabular form for all years.
Ex post for event-based DR	4	Hour-of-day and daily impact estimate	Keep	Keep
	5	Average and total impact	Eliminate. Not a useful reporting metric.	Do not agree. The IOUs use this information as an input of the DR LI forecast and internal/external data requests.
	6	Percentile-based uncertainties	Keep	Keep
	7	Tabular output format	Keep	Keep
	8	Reporting requirements	Keep at individual event OR representative monthly roll-up level if no of events > n: • list of events • No. of customers enrolled • No. of customers called • Event start and end times Eliminate typical and average event day	Agree with requiring reporting of individual event impacts. We do not agree on eliminating typical and average event day. The IOU's use this information for internal/external data requests. We also do not agree to monthly roll-up level in lieu or individual events.
	9	Error metrics for day matching results	Keep	Keep
	10	Error metrics for regression method results	Keep	Keep
	11	Hour-of-day and daily impact estimates	Eliminate	Keep. Protocols are needed for non-event day resources. We are open to moving a stand-alone set of protocols for non-event resources but do not believe they should be eliminated.
	12	Average and total impact	Eliminate	
	13	Percentile-based uncertainties	Eliminate	

Group	Protocol	Summary	Ohnmconnect's proposed disposition	SDG&E/DSA Comments
Ex post for non-event-based DR	14	Tabular output format	Eliminate	
	15	Reporting requirement	Eliminate	
	16	Error metrics for regression method results	Eliminate	
Ex ante	17	Ex ante based on ex post results	Keep	Keep
	18	Hour-of-day impacts for all day types	Keep for slice-of-day purposes; Align required "day type(s)" with the adopted SOD program	Keep
	19	Change in monthly/annual energy us	Eliminate	Keep
	20	Uncertainty-adjusted impacts by percentile.	Keep	Keep
	21	Tabular reporting format	Keep but reduce "day type(s)" needed to those required for the RA program	Keep
	22	Estimates for typical event, average, and system peak day types (1-in-2 and 1-in-10)	Keep RA-relevant day type(s) only (Currently, this is monthly system peak under IOU 1-in-2 weather)	Keep
	23	Statistical tests and methods (same as 10,16 regression statistics)	Keep	Keep
Misc. technical	24	Portfolio adjustment	Eliminate	Keep. Portfolio are need if dual-participation is allowed in order to avoid double-counting.
	25	Sampling requirements	Eliminate	Keep
Evaluation report	26	Evaluation report requirements	Keep as optional	Keep
		Study methodology	Keep	Keep
		Validity assessment	Keep	Keep
		Detailed study findings	Mostly keep. Eliminate comparison to prior year's study in ex ante. This introduces confusion when done for third-parties that receive a QC based on a two-year old analysis and may sell only a portion of the QC.	Do not agree. Having an ex-ante result comparison with prior year's provide an overview on how well the DR perform over time.
Process and public review	27	Process and public review	Shorten process; eliminate public review unless common transparency metrics are adopted	Agree

In this section, SDG&E is restating the following recommendations for potential improvements to the LIP filing requirement, as provided in Rulemaking 21-10-002 - Implementation Track - Phase 2 on February 14, 2022.

- **Current Requirements**

According with Decision 08-04-050[2], SDG&E follows all filing deadlines regarding content requirements and reporting templates, submitted on April 1st of each year as directed in Protocol 26 (which outlines in detail the required content of the evaluation reports). SDG&E submits the following files:

1. DR Load Impact Evaluation Report in .pdf format for each of the SDG&E's and Statewide DR Programs and DR Load Modifying programs. These files include an executive summary, introduction and purpose of the study, description of resources covered in the study, study methodology, detailed study findings, and recommendations as described in protocol 26.

2. The ex-post and ex-ante table generators in excel for each of the SDG&E's and Statewide DR Programs and DR Load Modifying programs as described in protocol 26 tables 9.1 through 9.3.

3. Executive Summary Load Impact Report provides all relevant information regarding the load impact evaluations for all SDG&E's and Statewide DR Programs and DR Load Modifying programs as prescribed in D.10-04-006. Included are program descriptions, program options, ex-post load impact methodology and event results, ex-ante methodology and ex-ante load impacts. In many cases, the information presented in the executive summary is an excerpt taken directly from the individual load impact reports.

4. The Appendix includes the 11-year ex-ante tables for both SDG&E and CAISO load impacts. The tables include the following weather scenarios for all SDG&E's and Statewide DR Programs and DR Load Modifying programs:

    i. 1 in 2 weather scenario for individual programs;
    ii. 1 in 2 weather scenario for the portfolio;
    iii. 1 in 10 weather scenario for individual programs, and;
    iv. 1 in 10 weather scenario for the portfolio

[2] Load Impact Estimation for Demand Response: Protocols and Regulatory Guidance Attachment A, Protocols 26 and 27, page 141-147.

- **Recommended Refinements**

First, to make the process more efficient, SDG&E is proposing to eliminate the requirement to prepare the Executive Summary (ES) Load Impact Report listed on item #3 above. SDG&E has produced this report since 2009 and based on SDG&E's experience, the internal and external stakeholders generally do not utilize the ES; instead, they look directly to the SDG&E's and Statewide DR Programs and DR Load Modifying individual load impact reports. Over the years, SDG&E has worked to reduce the number of pages in the ES in the summary from 183 to 67 pages; preparing the summary in its current form is extremely laborious. For several years, the ES has included the summary of 9-10 different studies with the intent of making it easier to review all of the studies in one place. But it appears to SDG&E that most interested parties are interested in one or two studies specifically, and that they disregard the summary to instead focus on the specific studies in which they are interested. Further, the process of creating the ES in its current form is extremely laborious. SDG&E receives data requests from the CPUC's Energy Division – regarding program performance or forecasts, all of that data is readily available in the ES. Since the report provides little value, but is highly burdensome to prepare, it should be eliminated.

Second, the Guide to CPUC's Load Impact Protocols (LIP) Process on item #7 states: "7. *The following summary information should be included within the first page of the Executive Summary of the LIP report.*"[3]

Ex-Ante Projections for Qualifying Capacity (Insert Year Here) Under 1-in-2 Utility Weather Conditions						
As of August	Scenario #1		Scenario #2		Scenario #...	
Local or System Capacity Allocation	Number of Customers	MWs	Number of Customers	MWs	Number of Customers	MWs
(If local, state the utility name; if system, state the TAC area[13])						

SDG&E requests that the LIP Guide be revised to clarify what is meant by the reference to scenarios #1, #2, etc. SDG&E submits that it already incorporates the MWs by program into the Appendix described above in Item 4. SDG&E proposes to incorporate the additional information listed on the above table into the Appendix.

[3] Guide to CPUC's Load Impact Protocols (LIP) Process (December 20, 2021), p. 5. Available at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demandresponse/lip-filing-guide-v20.pdf

Finally, Guide to CPUC's Load Impact Protocols (LIP) Process on item #8 (page 5) states: "*8. The summary section should include an attestation by the DRP that for the any given ex-ante month included the LIP report, the customers who are being counted for the ex-ante projected capacity (associated with the DR program for which the QC is being requested) are distinct from (and incremental) to the customers counted by the DRP for any other DR program commitments (such as, DRAM, IOU CBP/BIP, other DR procurement contracts) in the same month.*"[4] SDG&E understands that the two types of ex-ante estimates listed above represent the ex-ante by program and ex-ante by portfolio. SDG&E requests confirmation that Requirement 8 requires DRPs, within their attestation, to provide similar information about program versus portfolio within this definition.

[4] California Public Utilities Commission. Guide to CPUC's Load Impact Protocols (LIP) Process Version 2.0 December 20, 2021