Decision 19-07-009 July 11, 2019

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U39E) for Approval of Demand Response Programs, Pilots and Budgets for Program Years 2018-2022.	Application 17-01-012
And Related Matters.	Application 17-01-018 Application 17-01-019

DECISION ADDRESSING AUCTION MECHANISM, BASELINES, AND AUTO DEMAND RESPONSE FOR BATTERY STORAGE

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DECISION ADDRESSING AUCTION MECHANISM, BASELINES, AND AUTO DEMAND RESPONSE FOR BATTERY STORAGER BATTERY STORAGE

Summary

The demand response auction mechanism (Auction Mechanism) has been successful in engaging new customers and third-party demand response providers and in offering competitive bidding prices for resource adequacy. For the Commission to continue its operation, however, the Auction Mechanism needs several immediate critical changes to address shortcomings in performance, reliability, and offering competitive prices in the wholesale energy market. We approve a four-year continuation of the Auction Mechanism to improve these shortcomings, beginning with critical improvements in a 2019 solicitation. We establish a procedural schedule to address related policy matters by the end of 2019, which will be followed by an informal process to address technical and contractual improvements to the Auction Mechanism.

We authorize annual budgets of $14 million for solicitations in 2020 through 2022 (to procure one-year capacity contracts) and a pro-rated budget of $12.78 million for the 2019 solicitation (to procure seven-month capacity contracts).

This decision also makes several determinations regarding baselines for demand response. We adopt, for settlement purposes in the Auction Mechanism, four baseline methods recently approved by the Federal Energy Regulatory Commission, including the five-in-in ten method for residential customers. We also direct Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) to include in their 2020 mid-cycle review, a proposal for costs and schedules to

implement a 5-in-10 baseline for residential customers in the Capacity Bidding Program. To address future options for retail demand response baseline methods, we establish a working group to develop proposal to be included in the Utilities' 2023-2027 demand response portfolio applications.

With respect to the matter of Automated Demand Response, this decision declines to make policy changes as it relates to battery energy storage.

1. Background

Decision (D.) 17-12-003 adopted demand response activities and budgets for years 2018 through 2022 but kept open the demand response applications filed by Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE) (jointly, the Utilities)[1] (Applications (A.) 17-01-012, 17-01-018, and 17-01-019) in order to consider remaining matters in the consolidated proceeding. Below we present the subsequent procedural history of the three remaining issues in this case: 1) demand response baselines, 2) Automated (Auto) Demand Response Control Incentives (Control Incentives) for battery storage, and 3) the demand response auction mechanism (Auction Mechanism).

D.17-12-003 established that alternative wholesale baselines had been developed through the California Independent System Operator's (CAISO) energy Storage Distributed Energy Resources (ESDER) Phase II process.[2] Further, D.17-12-003 concluded that alternative baselines should be addressed in a future decision in this proceeding[3] and instructed the Utilities to file a copy of

[1] The singular term "Utility" is used throughout this decision to generically refer to any one of the three Utilities (PG&E, SDG&E, and SCE).

[2] D.17-12-003 at Finding of Fact 149.

[3] *Id*. at Conclusion of Law 74.

the wholesale baselines tariff, following adoption of the tariff by the Federal Energy Regulatory Commission (FERC).[4] On November 8, 2018, in compliance with D.17-12-003, the Utilities filed a copy of the *FERC Tariff Amendment to Implement Energy Storage and Distributed Energy Resource Requirements, i.e., baseline methods.*

The Administrative Law Judge presided over a prehearing conference on January 10, 2019 to establish next steps for addressing baselines. A workshop was held on March 22, 2019, at which time the Utilities presented information on the current Commission-approved retail baselines, the CAISO wholesale baselines, similarities and differences between retail and wholesale baselines, interaction between the wholesale and retail baselines and the costs and funding options for expanding baseline options. A ruling was issued on April 8, 2019, directing parties to respond to a set of questions regarding baselines. Parties filed responses to the April 8, 2019 ruling questions on April 24, 2019; replies were filed on May 3, 2019.[5]

With respect to the issue of Auto Demand Response, D.17-12-003 directed the Utilities to file a set of draft guidelines to implement the adopted Auto Demand Response device policy. Subsequently, D.18-11-029 adopted the *Auto Demand Response Control Incentives Guidelines and Adopted Policies* (Guidelines).[6] A discussion of the Guidelines also raised questions regarding battery storage. In D.18-11-029, the Commission found that the relationship of battery storage to Auto Demand Response is an emerging issue not initially

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[4] *Id*. at 153.

[5] The following parties filed opening comments: Council, OhmConnect, PG&E, SDG&E, and SCE. The following parties filed reply comments: Council, OhmConnect, PG&E, and SCE.

[6] D.18-11-029 at Ordering Paragraph 6. The decision also revised the Auto Demand Response device policy renaming it the Auto Demand Response Control Incentive Policy.

contemplated in this proceeding.[7] Furthermore, the decision noted that battery storage was not present in the marketplace when the Auto Demand Response incentives were designed.[8] D.18-11-029 found that the time is ripe for establishing policies for battery storage in Auto Demand Response and directed a stakeholder process to develop an overall strategy proposal for battery storage that addresses six specific issues regarding battery storage and Auto Demand Response control incentives (Control Incentives).[9] The decision directed that until the Commission adopts guidance on battery storage policy issues, the Utilities shall not provide Control Incentives for battery storage controls except in the case where such applications were received before October 26, 2018.

On January 10, 2019, the Commission's Energy Division (Energy Division or Staff) hosted a teleconference with various stakeholders, including SCE, PG&E, and SDG&E Auto Demand Response staff. The purpose of the teleconference was to engage stakeholders and inform the agenda for the stakeholder workshop on January 31, 2019. During the workshop, also hosted by the Energy Division, participants examined battery storage eligibility for control incentives, explored communication protocol differences between utility and CAISO systems, and pursued an understanding of the incremental capacity value of batteries to provide demand response.[10] On March 7, 2019, the Utilities filed an update on the progress of discussions regarding a battery storage strategy proposal. The Utilities stated that the report represented both the

[7] *Id.* at Finding of Fact 80.

[8] *Id.* at Finding of Fact 81 and 82.

[9] *Id.* at Ordering Paragraph 10.

[10] Joint Investor-Owned Utility Update on Progress of Strategy Proposal for Battery Storage Participation in Auto Demand Response, March 7, 2019 at 6.

Utilities' requirement to file a progress report and a final proposal recommending solutions to the six issues indicated in D. 18-11-029.[11] However, the Utilities filed the March 7, 2019 proposal again as a final proposal on April 15, 2019. No party filed comments to the Utilities' final report.

The final issue to be addressed in this proceeding, the Auction Mechanism, was originally addressed in Rulemaking (R.) 13-09-011. However, on May 22, 2018, the assigned Commissioner to this proceeding issued an *Assigned Commissioner's Amended Scoping Memo and Ruling*, which explained that complexities with the evaluation had resulted in a delay to the final evaluation, and, thus, amended the scope of A.17-01-012 *et al*. to include the consideration of the Auction Mechanism evaluation. D.18-11-029 stated that the evaluation of the Auction Mechanism would be completed at the end of 2018 and that proposals for improvements to the Auction Mechanism would be developed during the first quarter of 2019.

On January 4, 2019, an Administrative Law Judge issued a ruling releasing the final report of the *Energy Division's Evaluation of Demand Response Auction Mechanism* (Evaluation Report). The ruling also noticed upcoming workshops. Three days of workshops were held (January 16 and February 11-12, 2019) to discuss the evaluation and proposed improvements. Following the workshops, the Administrative Law Judge issued a February 28, 2019 Ruling directing parties to respond to a series of questions. The Ruling allowed parties to provide general comment on the Evaluation Report and party proposals discussed

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11 *Id.* at 3.

during the workshops. Parties filed responses to the ruling on March 29, 2019; reply comments were filed on April 10, 2019.[12]

2. Issues Before the Commission

In this decision, the Commission will consider issues related to three subjects: 1) whether to adopt revised demand response retail baselines; 2) whether to adopt battery storage policies for Auto Demand Response; and 3) whether to adopt a permanent Auction Mechanism. The specifics of each of these subjects are described in detail below.

There are several issues with respect to the subject of demand response baselines. First, the Commission will consider whether there is an interaction between the wholesale baseline methods recently adopted by the CAISO and the current retail baseline that creates issues for calculating performance. Further, the Commission will determine whether to adopt in total or limit adoption of these methods for settlement purposes in the Auction Mechanism. Secondly, the Utilities contend that retail energy baseline influences retail capacity payment in the Capacity Bidding Program. Hence, the Commission will determine the extent to which this is true and whether the Commission should revise the current retail energy baseline, what such revisions should entail, and what the timeline should be. Third, with respect to baselines for retail demand response programs, the Commission will consider whether there are any other reasons for

[12] The following parties filed responses to the February 28, 2019 ruling: California Efficiency +Demand Management Council (Council); California Energy Storage Association (CESA); CAISO; Joint Demand Response Parties (filed jointly by CPower, EnelX North America, Inc., and Energy Hub); Joint Proposal Parties (CPower, EnelX, EnergyHub, Olivine, and Stem); OhmConnect, Inc.; PG&E, Public Advocates Office of the Public Utilities Commission; SDG&E, and SCE. The following parties filed reply comments to the February 28, 2019: Council; CESA; CAISO; California Large Energy Consumers Association (CLECA); Joint Demand Response Parties; OhmConnect; PG&E, Public Advocates Office; SDG&E, and SCE.

revising the current 10-in-10 baseline, what the revisions entail, and what timeline should be for those revisions.

The Commission directed the Utilities to propose a draft battery storage policy that addresses the following six issues: 1) whether the Commission should authorize the Utilities to continue to provide Control Incentives for battery storage controls to non-residential customers; 2) whether the Commission should allow residential customers to receive an incentive for battery storage controls; 3) whether the Commission should limit the Control Incentives for battery storage to hardware and software costs; 4) whether the Commission should adopt the same incentive structure developed in the annual Auto Demand Response Guidelines update process established in Ordering Paragraph No. 8 of D.18-11-029 or adopt a separate control incentive structure for battery storage controls; 5) if the Commission adopts a separate Control Incentive structure for battery storage controls, what should the structure entail; and 6) what precautions should the Commission adopt to ensure ratepayers are not paying more than one incentive for the same control. The Commission will review the draft battery storage strategy policy as proposed by the Utilities and determine whether to adopt the policy as proposed or modify it in response to party comments.

With respect to the Auction Mechanism, in D.16-09-056, the Commission found it reasonable to adopt the following criteria for determining the success of the demand response auction mechanism: a) Were new, viable third-party demand response providers (Providers) engaged; b) Were new customers engaged; c) Were bid prices competitive; d) Were offer prices competitive in the wholesale markets; e) Did demand response providers aggregate the capacity they contracted, or replace it with demand response from another source in a timely manner; and f) Were resources reliable when dispatched, (*i.e.*, did customers perform appropriately.) We stated that the Commission considers "these criteria as objectives that the demand response auction mechanism must meet in order to expand its role in the resource adequacy market." The Commission instructed Energy Division to perform its analysis and present its findings and recommendations on whether to proceed from a pilot to permanent implementation of the Auction Mechanism.

Accordingly, in this decision the Commission will consider whether the Auction Mechanism has been successful, based on the six criteria, and whether to allow an expansion of the mechanism's role in the resource adequacy market and elevate it from a pilot to a permanent mechanism. Further, if the Commission determines the Auction Mechanism has not been successful, the Commission will also consider whether to continue the mechanism as a pilot with modifications to improve success and what those modifications entail.

3. Auction Mechanism

This decision finds that the Auction Mechanism has been successful to a certain extent but requires several immediate critical changes to address its shortcomings in order for the Commission to continue its operation. To be clear, we cannot expand the role of the Auction Mechanism or adopt it as a permanent mechanism until improvements are evident. However, as discussed further below, we are buoyed by the positive statistics of the Auction Mechanism and consider the number of new customers and new Providers to be encouraging. Accordingly, we approve a four-year continuation of the Auction Mechanism to improve performance and reliability, beginning with a 2019 solicitation. We authorize annual budgets of $14 million for solicitations in 2020 through 2022 (to procure one-year capacity contracts) and a pro-rated budget of $12.78 million for the 2019 solicitation (to procure seven-month capacity contracts. We discuss the immediate critical improvements below and the process for further refinements. But first we begin with overviews of the Auction Mechanism, the Evaluation Report, including Staff recommendations, and the February 11-12, 2019 workshop (February Workshop).

3.1. Overview of Auction Mechanism

The Auction Mechanism is a pay-as-bid solicitation through which each of the Utilities (PG&E, SDG&E, and SCE) seek monthly demand response system capacity, local capacity, and flexible capacity, which contributes to the Utilities' resource adequacy obligation. Winning bidders in the Auction Mechanism, or Sellers, are required to bid aggregated demand response directly into the CAISO energy markets. The Utilities acquire the capacity and receive resource adequacy credit for it but have no claim on revenues the winning bidders may receive from the energy market. The Commission created the Auction Mechanism as a tool to encourage new participation in the demand response market and to ensure reliability of demand response.

The Auction Mechanism process begins with a request for offer in which bidders submit offers. A demand response resource is required to comply with the Commission's Prohibited Resources Policy and the CAISO must-offer obligation for demand response. Bidders may submit multiple offers. The Utilities then evaluate and rank the offers.

There are several players involved in the Auction Mechanism: Utilities, the CAISO, Sellers (Providers and Aggregators), Scheduling Coordinators, and an Independent Evaluator. The following provides a broad overview of the current roles and responsibilities within the Auction Mechanism process.

Sellers (Providers or Aggregators) providing capacity to the Utilities must register their Proxy Demand Resources and Reliability Demand Response Resources with the CAISO. Electric Rules 24 and 32 (*i.e.*, Direct Participation Demand Response Rules) governs how the Utilities interact with Providers, including Sellers.[13] Rule 24/32 requires that Sellers submit a Customer Information Service Request for Providers to the appropriate Utility to obtain customer data necessary for wholesale market participation.

In third-party demand response direct participation, the Seller aggregates customers for the Auction Mechanism resource and bids directly into the CAISO market through the Seller's Scheduling Coordinator, who is qualified by the CAISO to conduct market and business transactions. Dispatches of the resources and Settlements are conducted between the CAISO and the Seller's Scheduling Coordinator. Again, all revenues from the CAISO market go to the Seller and the Seller's customers.

Currently, the Seller provides a Supply Plan to the Utility approximately 60 days prior to the initial delivery month. The Seller provides an invoice to the Utility for Demonstrated Capacity at the end of each delivery month. The Utility pays the Seller for demand response capacity after delivery month, upon receipt of Demonstrated Capacity.

The CAISO is responsible for receiving product registrations from the Provider and bidding and scheduling activity from the Scheduling Coordinator. The CAISO operates the market, dispatches resources, and determines the performance and settlement of the provider and resources with the assistance of the Scheduling Coordinator.

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[13] Rule 24 pertains to PG&E and SCE and Rule 32 pertains to SDG&E.

The Scheduling Coordinator (which can also act as a Provider) facilitates a Provider's scheduling and bidding activity with the CAISO, facilitates settlement and calculation of baselines and performances, and handles all business relationships and transactions with the CAISO. The Scheduling Coordinator may also provide information during any Utility audit of demonstrated capacity.

An Independent Evaluator ensures reasonable and uniform treatment of all potential counterparties in the solicitation process; monitors Utilities' solicitation processes, valuation methodologies, and selection processes; and reviews counterparties' bids to assure a fair competitive process with no market collusion or manipulation. The Independent Evaluator reports to the Commission on the auction process after the solicitations have been completed and winning bids have been selected.

3.2. Auction Mechanism Evaluation Results and Staff Recommendations

On January 4, 2019, the assigned Administrative Law Judge issued a ruling that provided parties the Evaluation Report.[14] The Evaluation Report discusses the study conducted by Energy Division to assess the performance of the Auction Mechanism pilot in terms of the six criteria adopted by the Commission. Again, these six criteria are: a) Were new, viable Providers engaged; b) Were new customers engaged; c) Were bid prices competitive; d) Were offer prices competitive in the wholesale markets; e) Did Providers aggregate the capacity they contracted, or replace it with demand response from another source in a timely manner; and f) Were resources reliable when dispatched, (*i.e.*, did customers perform appropriately.) The study focused on results from contracts

[14] A copy of the January 4, 2019 Ruling and the attached public version of the Evaluation Report can be found on the Commission's web site at: http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M254/K771/254771618.PDF

in 2015 (for delivery in 2016) and 2016 (for delivery in 2017). However, analysis of some issues considered data from contracts in 2017 (for delivery in 2018 and 2019.) Below is an overview of the evaluation results with respect to the six criteria, followed by Staff recommendations.

On the subject of engaging new, viable, Providers (criterion a.), the evaluation results indicate that the pilot was successful in engaging new Providers. In the first three years of the pilot, 16 companies bidding in the Auction Mechanism had not previously participated in a utility administered demand response program. Further, seven new Providers won contracts from the first two auctions and three new Providers won contracts in the third auction. The evaluation, however, did not provide clarity regarding the viability of the new Providers. Of the seven new Providers who won contracts in the first two auctions, only three fulfilled full terms of their contracts. The other four either terminated or reassigned contracts one or more times. Another outcome of the pilot that questions the viability of Providers is the consolidation of market leaders; the top three companies controlled up to 95 percent of the total contract value and capacity megawatts by the end of the third auction.

With respect to the engagement of new customers in demand response (criterion b), the evaluation results indicate that the pilot was highly successful. In the 2017 delivery year, over 52,000 customers were enrolled in demand response through the Auction Mechanism, 98 percent of which were residential customers. During the 2016 and 2017 delivery years, 74 to 95 percent of customers enrolled in demand response through the Auction Mechanism had not previously participated in a Utility demand response program, as of

January 1, 2017. (PG&E asserts in comments to the proposed decision that this data is only for a subset of Auction Mechanism Sellers.)[15]

To determine whether auction capacity bid prices were competitive (criterion c), the evaluation looked at whether the bids were less than the long-term avoided cost of generation and whether the bids dispersed in a narrow range. The evaluation results indicate that the capacity price offers were initially high in the 2016 auction for PG&E and SCE but then were generally competitive during the 2017 through 2019 auctions. For SDG&E, the bids were generally lower than the long-term avoided cost of generation in 2016, higher in 2017 and 2018, but lower in 2019.

The evaluation also looked at the competitiveness of the energy bid prices in the CAISO market (criterion d). Staff looked at three proxy metrics to assess energy bid price competitiveness: scheduling rate, bid price distribution, and scheduling effectiveness. The results of the evaluation indicate that the Auction Mechanism is generally not competitive in the CAISO market. First, Auction Mechanism resources were less active in the day ahead market than other resources, with exceptions. The evaluation also showed that average bid prices in the Auction Mechanism were less competitive in the day ahead market than bid prices for other resources. Finally, Auction Mechanism resources were scheduled less frequently during the highest CAISO system peak load hours than other resources.

For criterion e, Staff examined the Providers' ability to aggregate resources and compared this to their contract obligations. The results of the evaluation indicate a mixed but improving record in aggregating resource capacity on Supply Plans and making this capacity available in the wholesale market via

[15] PG&E Opening Comments to the Proposed Decision, June 20, 2019, Attachment at 1.

Demonstrated Capacity. As pointed out below in staff recommendations, challenges associated with the process may have hampered underperforming providers. Furthermore, a gap in the design of the Auction Mechanism pilot makes the earlier findings regarding capacity aggregation inconclusive, at best.

The final criterion examines the performance of resources in the CAISO market (criterion f). The results of the evaluation indicate mixed results. Some Providers performed well and delivered reliable dispatch performance between 80 and 100 percent. Other Providers failed to perform in terms of rarely capturing day-ahead market awards and not delivering meaningful load reductions.

Staff makes the following three-part recommendation regarding the Auction Mechanism:

1. Adopt a revised Auction Mechanism based on the evaluation results, with critical and necessary changes incorporated in the revised design.
2. Authorize a 5 to 6-year Auction Mechanism extension, predicated on implementing identified critical and necessary improvements in program design.
3. Create a process that allows for ongoing monitoring and additional improvements to the Auction Mechanism design.

Staff recommends the following improvements to the solicitation process:

1. Set a limit on the allowed market share of any one provider within a single utility territory.
2. Maintain a reduced residential set-aside that is limited to new market participants to encourage market diversity.
3. Allow a voluntary offer bid parameter indicating the minimum market dispatch activity level that the provider is willing to commit to for the resource capacity it offers to an auction.

4. Require bidders to deposit up-front bid fees to discourage bidders from declining offers after being shortlisted.
5. Price cap screens:
   a. Eliminate the simple average August bid price cap to improve offer valuation.
   b. Replace the price cap based on Long-Run Avoided Cost with a Net Market Value cap based on an adjusted or "net" Long Run Avoided Cost.
6. Include qualitative criteria promoting past performance, bidder viability and market diversity. Remove criteria penalizing bidders for suspected violations without a transparent review process.
7. Require Utilities to publish summaries of awarded Auction Mechanism contracts and clearly report Auction Mechanism administrative costs.

Staff recommends the following improvements with respect to the areas of performance and accountability:

1. Require implementation progress milestones from contract execution to year ahead resource adequacy showing.
2. Establish ex-ante standards for estimating the Qualifying Capacity of an Auction Mechanism resource applicable to Supply Plans.
3. Require Auction Mechanism resources to be dispatched at least 30 hours between May through October, during the hours most beneficial to the grid.
4. Demonstrated Capacity Invoicing
   a. Require Demonstrated Capacity to be invoiced based on dispatch results when available.
   b. Cap the Demonstrated Capacity on Must Offer Obligation-based invoices to an averaging function of available test/dispatch results.
5. Penalties and Incentives for Performance

a. Establish penalties for non-performance when the Qualifying Capacity indicated on Supply Plans falls significantly below contracted capacity and when Demonstrated Capacity falls significantly below the Qualifying Capacity for the delivery month.

b. Establish an incentive to encourage dispatch performance exceeding the Qualifying Capacity.

6. Require providers to submit market performance data to the Commission on a periodic basis.

Staff recommends the following improvements to the Auction Mechanism pro forma contracts:

1. Allow Auction Mechanism Sellers at risk of defaulting on their contracts to partition those contracts for reassignment. Develop an improved process for reassigning contracts.
2. Clarify guidelines related to Utilities' audits of Demonstrated Capacity invoices to ensure a level playing field.
3. Add deadline for Seller submission of Demonstrated Capacity invoices.
4. Clarify dispute resolution process and Utilities' discretion to adjust invoices and withhold payment.
5. Develop a remedy in the Pro Forma contracts for Utility failure to deliver timely, complete and correct Revenue Quality Meter Data.
6. Condition Utility payment of invoices upon the Seller meeting Commission registration requirements.

3.3. Overview of Workshop

Following a one-day workshop on January 16, 2019, where Staff presented an overview of the Evaluation Report, parties met in working groups to develop Auction Mechanism improvement proposals that either built off the Staff recommendations above or were new ideas generated by the parties. These proposals were served to parties on February 6, 2019. During the February Workshops, participants[16] discussed the following matters related to the Auction Mechanism: 1) a goal for the Auction Mechanism; 2) objectives for the Auction Mechanism; 3) Evaluation Report and working group proposals to ensure Qualifying Capacity; 4) Evaluation Report and working group proposals to improve performance; 5) Evaluation Report and working group proposals to ensure accuracy of demonstrated capacity invoicing; 6) Evaluation Report and working group proposals for contract improvements; and 7) whether the Auction Mechanism should have an energy component and Evaluation Report and working group proposals to increase dispatch hours.

In addition to the specific details of the Auction Mechanism and related policies, workshop participants discussed the option of the Commission adopting two plans: a short-term plan and a long-term plan (Two-Step Approach). PG&E first presented this option with its working group proposals that it served on February 6, 2019. PG&E explained that, in its proposed short-term plan, it envisions the Commission would authorize a bridge period for the Auction Mechanism with critical improvements to the mechanism. PG&E proposed that a bridge period would involve a solicitation in 2019 with deliveries in 2020. In its proposed long-term plan, PG&E envisions the Commission would continue to work with parties to resolve longer-term improvements to the Auction Mechanism.

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[16] Organizations represented by the workshop participants: California Efficiency Demand Management Council, California Energy Storage Alliance, California Independent System Operator, California Large Energy Consumers Association, Clean Energy Regulatory Research, CPower, Enel X, Leap, OhmConnect, Inc., Olivine, Pacific Gas and Electric Company, Public Advocates Office of the Public Utilities Commission, San Diego Gas & Electric Company, Southern California Edison Company, and Stem, Inc.

Several participants voiced support for the Two-Step Approach, but others contend that the evaluation results indicate the mechanism needs more than a few minor tweaks. The PG&E Two-Step Approach is comparable to the Pilot Evaluation recommendation whereby the Commission adopts the Auction Mechanism on a limited term basis with "critical and necessary improvements in program design" and "ongoing monitoring and additional improvements."

In presenting its Two-Step Approach, PG&E expressed concern that the Commission has not adopted a goal or objectives for the Auction Mechanism. In terms of the Two-Step Approach, workshop participants agreed that an adopted goal for the Auction Mechanism is necessary but disagreed on whether a goal should be determined in the short-term or be further developed and adopted as part of the long-term plan.

As a result of small group discussions, workshop participants developed several recommendations for the goal of the Auction Mechanism. Participants were instructed that a goal should not be specific but rather should be a broad, primary outcome, which is not measurable. Table 1 below lists each group's recommendation as the goal for the Auction Mechanism.

Table 1 **Small Group Discussions** **What is the goal of the Auction Mechanism?**
a. to grow resources that meet grid needs while ensuring value to the customer; b. to represent a percentage of resource adequacy procurement to cost-effectively provide for reliable carbon-reduction that also provides market certainty to third-party demand response providers; c. to cost-effectively (in terms of least-cost, best-fit procurement) displace flexible gas-fired resources by providing flexible resources to meet grid needs through a market-based, fungible, standardized product; d. to use a cost-competitive mechanism to procure reliable demand response to meet grid needs and grow demand response; e. to drive the growth of third-party standardized, fungible, reliable demand response products that benefit the grid through the wholesale market where the benefits exceed the costs; or f. to enable third-party providers to compete to provide integrated grid services that meet grid needs where benefits are greater than costs.

The workshop participants also discussed each of the working group proposals.[17] The sponsor of each proposal answered clarifying questions from workshop participants. Then, the workshop participants joined in small group discussions. While no formal agreements were reached, at the end of the exercises, participants expressed a better understanding of both the proposals and the perspective of other parties in the small groups. The small group

[17] The working groups' proposals can be found online at: http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=268738788 The seven proposals are labelled Attachments 2 through 8.

discussions led to a larger prioritization discussion of short-term and long-term activities for improving the Auction Mechanism.

3.4. The Auction Mechanism Has Been Successful to a Certain Extent but Needs Critical Improvements

As described further in this section, we agree with the results of the Evaluation Report that the Auction Mechanism has been successful with respect to engaging new customers and new third-party providers and providing competitive capacity bid prices, but experienced mixed results with respect to aggregating contracted capacity in a timely manner and providing reliable resources when dispatched. Furthermore, we also agree that the Auction Mechanism was not successful in offering competitive energy prices in the wholesale market but recognize that the current mechanism design contributed to this inadequacy. In our determination of whether the Auction Mechanism has been successful, it is important to keep in mind that the success of the mechanism is predicated on these six criteria. As further discussed below, we find that the Auction Mechanism has been successful to a certain extent but requires several critical improvements to address the shortcomings in order for the Commission to continue its operation.

The Commission recognized early on that the Auction Mechanism would be an opportunity to enhance the role of demand response in meeting the state's resource planning needs and operational requirements. The Commission wanted to engage both new customers and new Providers in this opportunity. The Evaluation Report indicates that the Auction Mechanism was successful in increasing the engagement of new customers in demand response. Between 74 and 95 percent of customers (from a subset of Sellers) participating in the Auction Mechanism in the first two years of the pilot had never participated in a utility demand response program in California, at the time they enrolled.[18] Furthermore, over the course of the four-year pilot, the Auction Mechanism has successfully engaged new Providers to bid into the mechanism, sixteen of which had never participated in any utility demand response program.[19] Out of the fifteen companies winning one or more contracts, ten had not previously participated in a utility demand response program in California.[20] According to the Evaluation Report, the Auction Mechanism was also mostly successful in offering competitive capacity prices (*i.e.*, below the long-term avoided cost of generation.)

With any new tool, however, along with successes there are challenges and concerns. One of the biggest challenges the Auction Mechanism faced was integration into the CAISO market. Providers identified a range of challenges when integrating with the processes and systems of the Utilities and the CAISO. According to the Evaluation Report, integration challenges in Providers' efforts to participate in the Auction Mechanism were real and pervasive.[21]

With respect to engaging new Providers, the Evaluation Report also found three concerns. First, the percentage of new companies bidding into the Auction Mechanism declined with each solicitation, since 2017. Second, contract terminations and reassignments during the course of each year of the pilot led to only six bidding companies completing the full terms of their contracts.[22] Third, despite an initial robust bidding pool, five companies captured 94 percent of the

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18 Evaluation Report at 47.

19 *Id*. at 23.

20 *Ibid*.

21 *Id*. at 30-31.

22 *Id*. at 24-25.

total contract capacity for the Auction Mechanism and 95 percent of the total contract value across the first three auctions before accounting for contract reassignments. Hence, while the Auction Mechanism succeeded in engaging new third-party providers, concerns and challenges occurred and, in some cases, led to market concentration.

With a new process like the Auction Mechanism, where all involved entities are learning the processes, it is not surprising that the Evaluation Report showed mixed to negative results on some criteria. We discuss each of the mixed to negative results separately below.

The Evaluation Report looked at scheduling rates, scheduling effectiveness, and bid price distribution to determine whether energy bid prices were competitive in the wholesale market. The Evaluation Report found that compared to Auction Mechanism resources, Utility and Local Capacity Requirements Demand Response resources "are substantially more active in the market in terms of dispatch events."[23] The report also indicated that many Providers received few or no day-ahead market awards.[24] Most telling is that Auction Mechanism resources' energy bid prices were noticeably higher than Utility demand response resources as well as higher than other non-demand response resources.[25] Furthermore, the Evaluation Report found that Auction Mechanism resources were scheduled far less during the CAISO's highest system peak hours compared to other resource categories suggesting that peak load reduction may not be the important driver for the bidding strategy utilized by

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[23] *Id*. at 60.

[24] *Id*. at 58.

[25] *Id*. at 62.

the Auction Mechanism Providers.[26] Ultimately, and for multiple reasons, energy prices offered by Auction Mechanism Providers were not competitive in the wholesale market.

Because the Auction Mechanism results in contracts for capacity to achieve the Utilities' resource adequacy requirements, the Commission found it important to determine whether Providers met their contractual obligations to provide the capacity. The Evaluation Report found that in the first two years of the Auction Mechanism, Providers performed at an acceptable to good standard in fulfilling their contract obligations in aggregating the required capacity in Supply Plans and achieving the required Demonstrated Capacity. As depicted in Table 2 below, Providers improved in terms of meeting commitments on their contracted capacity by aggregating the required Supply Plan capacity and achieving the required Demonstrated Capacity.

Table 2
Performance Improvement in Supply Plans and Demonstrated Capacity

Auction Mechanism Year	Performance Levels in Supply Plans	Performance Levels in Demonstrated Capacity
2016	65% of Megawatt (MW)	58% of MW
2017	90% of MW	88% of MW
1 H 2018	97% of MW	86% of MW

The Evaluation Report indicates that the Providers were improving their performance in providing capacity but, here again, there were Utility and CAISO integration challenges. Highlighting that Providers provided 90 percent of their contracted amounts in Supply Plans in 2017, the Evaluation Report notes this

[26] *Ibid.*

amount increased to 98 percent for the Providers that did not terminate or reassign contracts.[27] Along with the integration challenges, the Evaluation Report states that some Providers admitted to overly optimistic capacity projections when submitting auction bids, difficulties related to restrictions on dual enrollment, and setbacks stemming from delayed receipt of SGIP incentives.[28] It is important to note that the Evaluation Report also exposed a gap in the design of the Auction Mechanism: the lack of an ex-ante forecasting method to estimate the contract capacity or Supply Plan capacity.[29] This gap results in the absence of a standard to evaluate the accuracy of the capacity claimed on either the Supply Plan or the Demonstrated Capacity invoices. Consequently, the Evaluation Report concludes that comparisons of Supply Plan or Demonstrated Capacity versus the contract capacity can only be regarded as inconclusive.[30]

The final criterion focuses on reliability and whether the Auction Mechanism resources were reliable when dispatched. Here again, the results of the Evaluation Report are mixed with some Providers delivering reliable performance while others did not. The Evaluation Report describes the spectrum of performance, which ranged from an individual Provider's average performance in excess of 100 percent to Providers who failed to deliver any meaningful load reductions.[31]

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[27] *Id*. at 78.

[28] *Ibid*.

[29] *Id*. at 69.

[30] *Id*. at 69.

[31] *Id*. at 83. (*See* also Evaluation Report at Table 26.)

The Evaluation Report discovered several crucial problems with the Auction Mechanism that require repairs or corrections. Given the objectives of the Auction Mechanism: to engage new Providers and customers, to provide competitive prices, and to provide reliable demand response, we conclude that the Commission should approve a continuation of the Auction Mechanism but with crucial improvements. We find that the Auction Mechanism has succeeded in engaging new Providers and customers, thus enhancing the role of demand response in meeting the state's resource planning needs and operational requirements. We also find that the bidders offered competitive capacity prices. While we are concerned about the confidence in contract capacity aggregation and the reliability of the demand response, the Evaluation Report indicates that the poor performances are not systemic. Nonetheless, the poor performance must be reined in with process improvements.

We are not dissuaded by the less than perfect outcomes of the Evaluation Report but, instead, buoyed by the positive statistics of the Auction Mechanism. Beginning with R.07-01-041, the Commission envisioned prioritizing demand response such that it would grow into a utility procured resource that is competitively bid into the CAISO market. We consider the number of new customers and new Providers to be encouraging. We also recognize that the Auction Mechanism is still a work in progress that may require iterations of improvements. In the next section, we discuss the next steps for the Auction Mechanism improvements.

3.5. The Commission Should Adopt a Hybrid of the Two-Step Approach

In D.16-09-056, the Commission determined that expansion of the role of the Auction Mechanism in the resource adequacy market would not occur until it met the key objectives of increasing third party and customer engagement, price competitiveness, and reliability of the demand response. Previously, we found that the Auction Mechanism has met several of these objectives but not all of them. Because the Auction Mechanism has not successfully met all six criteria, we should not expand its role nor adopt it as a permanent mechanism at this time. However, we find it reasonable to continue the Auction Mechanism, given its successes. Accordingly, we adopt a hybrid Two-Step Approach. As described below, the Two-Step Approach will be a limited continuation of the Auction Mechanism with initial critical improvements (as defined in this decision) in Step One and required future and continuous improvements in Step-Two. Due to the concerns discussed in Section 3.4, we limit the timeframe of the Two-Step Approach to a total of four years and maintain the current budget of the mechanism, until performance and reliability results indicate success. The permanency of the Auction Mechanism will be reviewed again in the next demand response portfolio application proceeding.

Several options have been presented regarding the continuation of the Auction Mechanism. In workshop discussions and comments in this proceeding, parties coalesced around a PG&E proposal to continue the Auction Mechanism using the Two-Step process discussed in Section 3.3 by following one of two options: 1) Two-Step Approach of a one-year extension of the Auction Mechanism with critical improvements and allowing future extensions of the Auction Mechanism solely based on positive outcomes of the critical improvements; or 2) Two-Step Approach of a one-year extension of the Auction Mechanism with critical improvements and allowing future but limited extensions of the Auction Mechanism with iterative improvements. In comments, parties also recommended other options for the Auction Mechanism including: 1) termination of the Auction Mechanism in favor of all source request for offers;[32] 2) Three-year extension;[33] and, as previously recommended in the Evaluation Report, 3) a five to six-year extension.[34]

Almost all parties support the Two-Step Approach to a degree: the CAISO, CESA, Council, Joint Demand Response Parties; Joint Proposal Parties, OhmConnect, Public Advocates Office, and the Utilities.[35] Public Advocates Office and the Utilities support the Two-Step Approach but oppose continuation of the Auction Mechanism into Step Two until the critical improvements implemented in Step One have been determined to be successful.[36] PG&E asserts it is absolutely necessary to have the evaluation results of Step One to support any continuation of the Auction Mechanism.[37] Explaining that the primary focus of Step One should be making revisions that ensure the resource adequacy capacity functions in a reliable manner,[38] the Public Advocates Office contends that the capacity purchased in the Auction Mechanism must be real and

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[32] SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 2.

[33] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 12-13.

[34] The Joint Demand Response Parties support the five to six-year extension but also support the Two-Step Approach with a one-year bridge year followed by a three to five-year extension. (*See* Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8.) (*See* also Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 2 and 5-6.)

[35] SDG&E prefers that the Commission terminate the Auction Mechanism and replace it with all source Request for Offers. However, SDG&E also states that if the Commission decides to continue the Auction Mechanism with significant improvements, it would support the Two-Step Approach. *See* SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 2.

[36] Public Advocates Office Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 3.

[37] PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

[38] Public Advocates Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 1 and 3.

deliverable.[39] Further, Public Advocates Office cautions that maintaining market certainty and continuity are important but should not come at the expense of accountability, transparency, reliability, and reasonable costs.[40]

Joint Demand Response Parties, Joint Proposal Parties, the Council and CESA support a Two-Step Approach whereby the Commission adopts critical improvements in the first step but continues forward with iterative improvements to the Auction Mechanism for a defined time. CESA asserts this Two-Step Approach presents a reasonable path forward that ensures market opportunities and certainty for third-party providers and continued market transformation in engaging new customers in demand response while allowing the Commission and stakeholders to resolve longer-term improvements to the Auction Mechanism.[41] Expressing concern about past disruptions and changes in demand response, the Joint Demand Response Parties contend this Two-Step Approach would ensure continuity by allowing for a solicitation in the first step while exploring more complex improvements during the second step.[42] The Council cautions that the start and stop approach experienced throughout the life of the Auction Mechanism created tension and pressure on the relationship between the Provider and the customer, additional costs on the Provider, and discouraged new entrants due to the regulatory risks. Providers maintain that continuity and certainty are the signals to current and prospective market actors

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[39] Public Advocates Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 4.

[40] *Id.* at 3.

[41] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 4.

[42] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

that their participation in the Auction Mechanism is not likely to result in stranded investments.[43]

We have previously determined that because the Auction Mechanism has not successfully met all six criteria, we cannot expand its current role nor can we adopt it as a permanent mechanism but, given its successes, it is reasonable to continue the Auction Mechanism on a limited basis. This limited basis will allow us to continue to improve the mechanism to successfully meet all six criteria. We agree with SCE that it is reasonable to test targeted corrections and contract amendments that will address the more critical changes needed to ensure reliability of Auction Mechanism resources and improve performance inadequacies.[44] We also agree with the Providers that a start and stop approach does not present a solid regulatory foundation for the industry to flourish. However, we are mindful of the concerns expressed by the Public Advocates Office and the Utilities that the Commission should put ratepayer protections and reliability assurances above continuity concerns. While the Commission has previously stated that it cannot guarantee consistent business opportunities,[45] it can provide a solid regulatory foundation for the demand response industry.

We have already found that the Auction Mechanism has been successful in meeting three of the required criteria. While we are not ready to adopt the Auction Mechanism as a permanent function of the demand response portfolio at this time, we are encouraged by the initial results and are of the opinion that corrections can be made to allow the mechanism to successfully meet the remaining three criteria and move on to permanency.

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[43] OhmConnect Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 5.

[44] SCE Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 1.

[45] D.18-11-029 at Finding of Fact 106.

Accordingly, we adopt a hybrid of the Two-Step Approach that: 1) ensures the most critical inadequacies of the Auction Mechanism are addressed for a 2019 solicitation; 2) continues to improve the more challenging processes of the Auction Mechanism to ensure reliability and performance; 3) and preserves the successful efforts of the past four years while minimizing program disruption. Step One is the adoption, in this decision, of critical improvements to allow for a 2019 solicitation. Step Two is an iterative approach to continuous improvement of the Auction Mechanism that will begin with a second decision to address additional Auction Mechanism policies but then evolve into an informal process through 2022 and use a combination of working groups, workshops, and advice letters. The process steps and schedule for the informal process will be determined in the second decision.

We have concluded that we should not expand the role of the Auction Mechanism until improvements are evident. Accordingly, we maintain the current funding levels and authorize annual budgets of $14 million for solicitations in 2020 through 2022 ($6 million each for PG&E and SCE and $2 million for SDG&E) and a pro-rated total budget of $12.78 million for a shortened demand response season for the 2019 solicitation ($5.70 million for PG&E, $5.16 million for SCE and $1.92 million for SDG&E).

This authorization of $54.78 million allows for deliveries in 2020 through 2023. The Utilities recommend similar budget amounts, which are consistent with the amount authorized for the most recent solicitation.[46] We decline party recommendations to authorize annual budgets of $40 million or greater to

[46] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5, PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5-6 and SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5-6.

establish a trajectory to meet the 1,000 MW target originally established in D.15-11-042 and D.16-09-056.[47] We have already determined that we should not expand the Auction Mechanism until it has been deemed successful in the areas of performance and reliability. Hence, we should not expand the budget significantly until we improve performance and reliability.

In comments to the proposed decision, the Joint Parties argue that the budget for solicitations in 2020 through 2022 are not sufficient and should be increased by $13 million per year based upon D.17-10-017, which authorized an additional $13.5 million for a second auction for 2019 deliveries.[48] As noted by CLECA, this second auction with the additional $13.5 million budget should be considered a special case.[49] CLECA suggests that in light of the issues concerning delivery of demonstrated capacity, it is not clear that increased funding is warranted. We agree that the second auction approved by D.17-10-017 is a special case. Furthermore, we have already concluded that we should not expand the budget until we improve performance and reliability.

Also in comments to the proposed decision, the Joint Parties[50] and CLECA recommend pro-rating the 2019 solicitation based on the value of the capacity for June to December 2020, the seven months the resulting Auction Mechanism contract will be valid, and weighting the value using the Capacity Bidding

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47 Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 6, Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8, and OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 4-5.

48 Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 1-2.

49 CLECA Reply Comments to the Proposed Decision, June 25, 2019 at 2.

50 The Joint Parties include the Council, CPower, Enel X North America, Leapfrog Power, Inc, and OhmConnect.

Program capacity value.[51] CLECA recommends using a weight of 86 percent for SCE, 95 percent for PG&E and 96 percent for SDG&E.[52] We agree with CLECA and the Joint Parties that using these values better "reflect the higher capacity value of the summer months relative to the first four winter months of the year."[53] This approach should ensure that the appropriate amount of capacity will be available when it is needed the most. Accordingly, we approve a pro-rated budget of $12.78 million for the 2019 solicitation ($5.70 million for PG&E, $5.16 million for SCE, and $1.92 million for SDG&E.)

The Utilities are authorized cost recovery through the same methods as those adopted in D.17-12-003:

- PG&E: a subaccount in the Demand Response Expenditure Balancing Account tracks costs associated with the Auction Mechanism;[54]
- SDG&E: its Advanced Metering and Demand Response Memorandum Account tracks its Auction Mechanism related costs;[55] and
- SCE: its Base Revenue Requirement Balancing Account tracks all Auction Mechanism related costs, which is reviewed annually in Energy Resource Recovery Account Compliance Applications.[56]

Parties offered recommendations for a schedule to allow for a 2019 solicitation with deliveries to begin in 2020. We adopt the schedule as indicated

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[51] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 3-4 and CLECA Reply Comments to the Proposed Decision, June 25, 2019 at 2-3.

[52] CLECA Reply Comments to the Proposed Decision, June 25, 2019 at 2-3.

[53] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 3-4.

[54] D.17-12-003 at 138.

[55] *Id*. at 139.

[56] *Id*. at 138.

in Table 3 below, which allows adequate time to process advice letters approving revised pro forma contracts and request for offer protocols that include the adopted changes herein while expediting advice letters for the executed contracts. We will allow for a Tier One Advice Letter submittal for the executed contracts. We agree with CESA that the appropriate due process can occur on the front end of the process with review and approval of the solicitation structure, evaluation criteria, and pro forma contract.[57] Furthermore, in response to oversight concerns voiced by the Council,[58] we find that the participation of the Independent Evaluator and Energy Division in the Procurement Review Groups provides additional oversight of the contracts. The proposed schedule in Table 3 balances appropriate regulatory oversight with the necessary urgency voiced by parties. The result of this schedule is that the first Supply Plans are submitted on April 1, 2020 and deliveries can begin on June 1, 2020, allowing for seven full months of deliveries, including the important demand response months of July through September.

Table 3

Schedule for 2019 Solicitation with First Deliveries in 2020

Activity	Date
Joint Utilities Submit Tier Two Advice Letters with Contract Improvements and Request for Offer Guidelines	August 12, 2019
Commission Approves Advice Letters	September 11, 2019
Utilities Launch Request for Offers for Deliveries Beginning 2020	October 11, 2019

[57] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

[58] Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

Utilities Submit Tier One Advice Letters with Executed Contracts	January 10, 2020
First Supply Plans Submitted	April 1, 2020
Deliveries Begin	June 1, 2020

We decline to adopt recommendations by the Council and Joint Demand Response Parties to bypass advice letter approval of the improvements adopted herein.[59] The improvements contained in the advice letters are crucial and the Commission should ensure that they have been adhered to properly through the advice letter process. We also decline to adopt schedules proposed by the Council, Joint Demand Response Parties, and OhmConnect, which would provide only one week to file the first advice letters, three to four weeks to allow for approval of the advice letters, and four days to launch the Request for Offers.[60] We recognize the urgency expressed by the Providers to move the process along but the expedited timelines recommended by these parties are not realistic. We agree with SDG&E, that there is too little value and much risk in these compressed schedules.[61] Furthermore, PG&E points out that insufficient time at each of these steps threatens the success of the Auction Mechanism.[62]

We anticipate that the annual Auction Mechanism solicitations for 2020 through 2022 (with deliveries in the following year) will occur in the first quarter of each year. In comments to the proposed decision, the Joint Parties maintain

[59] Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8 and Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 9.

[60] Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8, Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 9, and OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 6.

[61] SDG&E Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 3.

[62] PG&E Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 6.

that the 2019 solicitation timeline will result in the 2020 capacity procurement by the Utilities occurring after the Utilities' year-ahead resource adequacy filings for 2020. Because we require that 100 percent of the Local resource adequacy requirements be submitted in the year-ahead filing, this decision clarifies that only System and Flexible resource adequacy may be procured in the 2019 solicitation.[63] For post-2019 solicitations, System, Local and Flexible resource adequacy may be procured. In addition, to allow the Utilities to gain experience verifying Qualifying Capacity, we find it reasonable to waive the resource adequacy penalties for the 2019 solicitation (for 2020 deliveries) as recommended by PG&E.[64]

Additional implementation details will be addressed in Step Two.

As discussed below, parties have offered recommendations and have general agreement on the elements of the mechanism where changes need to be made in order to improve performance and reliability. Parties have presented arguments regarding which improvements are critical and must be implemented in Step One. Prior to and during the February Workshop, parties created an initial framework of proposals for making those changes, these can be further developed over the next few weeks for implementation in Step Two. Before we address the required changes for a 2019 solicitation, we discuss and adopt a goal for the Auction Mechanism.

3.6. The Goal for the Auction Mechanism

In initial comments on the Evaluation Report, PG&E observed that the Commission had not formally adopted a goal for the Auction Mechanism.

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[63] Joint Parties Opening Comment to Proposed Decision, June 20, 2019 at 5 and PG&E Opening Comments to Proposed Decision, June 20, 2019 at 13.

[64] PG&E Opening Comments to Proposed Decision, June 20, 2019 at 3.

During the February Workshop, participants discussed and developed several proposals for such a goal. In the February 28, 2019 Ruling, parties were asked to build upon the proposals from the workshop and propose a goal for the Auction Mechanism. Parties were instructed that a goal is abstract, long term, and not measurable.

Parties overwhelmingly agree that the goal of the Auction Mechanism should be to meet changing grid needs or benefit the grid,[65] and also mostly agree that the goal should be to ensure a competitive market[66] and to ensure reliable resources.[67] Several parties also recommend that the Auction Mechanism should meet environmental goals.[68] These responses suggest that the Commission may not need to establish a completely new goal for the Auction Mechanism but rather build upon the previously adopted goal for demand response: *Commission-regulated demand response programs shall assist the State in meeting its environmental objectives, cost-effectively meet the needs of the grid, and enable customers to meet their energy needs at a reduced cost.*[69]

In reviewing prior Commission decisions on the Auction Mechanism, the Commission has made statements regarding the intentions of the Auction Mechanism. For example, the Commission stated that the Auction Mechanism is a "primary tool to fulfill its goals of expanding the role of demand response and

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[65] *See* Opening Comments of Public Advocates Office, CESA, Joint Demand Response Parties, OhmConnect, the CAISO, PG&E, SCE, and SDG&E.

[66] *See* Opening Comments of the Public Advocates Office, CESA, Joint Demand Response Parties, OhmConnect, the CAISO, the Council, PG&E, and SDG&E.

[67] *See* Opening Comments of Public Advocates Office, Joint Demand Response Parties, OhmConnect, the CAISO, PG&E, SCE, and SDG&E.

[68] *See* Opening Comments of the CAISO, PG&E, SCE, and SDG&E.

[69] D.16-09-056 at Ordering Paragraph 8.

expanding the role of third-party providers."[70] The Commission also noted that its objectives for considering a competitive procurement process include "ensuring cost-effective and reliable demand response resources for California and engaging new third parties and customers."[71] Further, one of the adopted principles of demand response is that *demand response shall be market-driven leading to a competitive, technology-neutral, open market in California with a preference for services provided by third-parties through performance-based contracts at competitively determined prices, and dispatched pursuant to wholesale or distribution market instructions, superseded only for emergency grid conditions.*

The goal of the Auction Mechanism should align with these policy statements. Accordingly, with party comments and these policy statements in mind, as well as the adopted principles and goal of demand response, we adopt the following goal for the Auction Mechanism:

To help California meet its environmental objectives, cost-effectively meet the needs of the grid, and enable customers to meet their energy needs at a reduced cost while spurring innovation and growth of a competitive third-party market.

In response to the February 28, 2019 Ruling, parties provided recommendations and comments regarding establishing objectives and principles for the Auction Mechanism. The Commission will continue to explore recommendations regarding objectives and principles for the Auction Mechanism. However, our focus at this time is improving the Auction Mechanism so that it meets the six criteria.

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[70] *Id*. at 71.

[71] Order Instituting Rulemaking 13-09-011, September 19, 2013, at 18.

3.7. Changes Implemented for a 2019 Solicitation

Below we adopt four critical improvements to the Auction Mechanism, two other changes to the mechanism that all parties agree should be made, and two other changes that most parties agree should be made. The purpose of these eight improvements is to move the Auction Mechanism forward in successfully meeting the six criteria and its adopted goal. But we also adopt these improvements recognizing they can be implemented in a short amount of time. The following four critical improvements are adopted for the 2019 solicitation and are further described below:

- Accurate Qualifying Capacity estimates for shall be provided three times: at submission of a bid into the auction, in the year-ahead resource adequacy filing, and in the monthly supply plan, and shall be estimated by referencing historical performance data;
- Penalties shall be imposed for Demonstrated Capacity shortfalls for a delivery month relative to the Qualifying Capacity on the monthly resource adequacy Supply Plan; the Utility is permitted to default a Provider contract if aggregate Demonstrated Capacity falls below 50 percent for two months in a row;
- Demonstrated Capacity on invoices shall be calculated based on a capacity test or market dispatch during six of the 12 months of the contract term, one of which occurs in August; and
- Invoices for Demonstrated Capacity shall be due 60 days after the end of the showing month if the Seller has received 95 percent of Revenue Quality Meter Data for a resource's dispatch event within 30 days after the end of the showing month.

In addition, we eliminate the August Bid Price Cap adopted in D.16-09-056 and we replace the 20 percent residential set-aside with a 10 percent set-aside for new market entrants. These two improvements are supported by a majority of parties in this proceeding, are easily implementable, and, as described below, should lead to improvements in the outcomes of the Auction Mechanism. Lastly, we address the recommendations of excluding Reliability Demand Response Resources from the Auction Mechanism and whether to require the publication by the Utilities of Auction Mechanism awarded contract summaries.

We first address critical improvements. During the workshop and in comments, parties were asked to list the crucial improvements necessary for a 2019 solicitation. Parties generally agree that the Commission should focus on changes to improve performance and reliability in the Auction Mechanism. In Table 4 below, we list the improvements identified as critically necessary for a 2019 solicitation and the parties that support the improvements.

Table 4
Items Identified as Critical Improvements Necessary for a 2019 Solicitation

Proposed Critical Improvements	Supporting the Improvements[72]
Providing accurate Qualifying Capacity estimates	CAISO, Evaluation Report, Joint Demand Response Parties, Joint Proposal Parties, PG&E, Public Advocates Office, SDG&E, and SCE
Imposing penalties for shortfalls in Qualifying Capacity and Demonstrated Capacity	CAISO, CLECA, Evaluation Report, Joint Demand Response Parties, Joint Proposal Parties, OhmConnect, PG&E, Public Advocates Office, SDG&E, and SCE
Incentivizing over-performance	Evaluation Report, Joint Proposal Parties, and OhmConnect
Calculating Demonstrated Capacity on invoices	CLECA, Evaluation Report, Joint Proposal Parties, OhmConnect, PG&E, Public Advocates Office, SDG&E, and SCE
Establishing invoice deadlines	Joint Demand Response Parties, Joint Proposal Parties, OhmConnect, SDG&E,

[72] In opening comments to the February 28, 2019 Ruling, dated March 29, 2019, parties provided a list of the critical improvements necessary for a 2019 solicitation in response to Question 2 of the ruling.

	and SCE

We find it reasonable to adopt the items that received the most support from parties as critical improvements: providing accurate Qualifying Capacity for Supply Plans, imposing penalties for shortfalls in Qualifying Capacity and Demonstrated Capacity, calculating Demonstrated Capacity on invoices, and establishing invoice deadlines. However, for reasons we discuss below, we decline to incentivize over-performance. We discuss the various options for these improvements, as well as our reasons for declining to incentivize over-performance, beginning in Section 3.7.1. below.

In addition to the four critical improvements, we also adopt four other non-critical but easily implementable revisions to the Auction Mechanism: two consensus and two non-consensus revisions. We begin with the consensus revisions.

First, we eliminate the residential set-aside and replace it with a 10 percent set-aside for new market entrants. The Commission authorized the residential set-aside of 20 percent due to the "unique complexities associated with aggregations of residential customers" and to "attract new market players…and test the participation of residential aggregations."[73] However, the Evaluation Report found that the residential set-aside caused the Utilities to skip over lower-cost non-residential bids and procure higher-cost residential aggregations to fill the 20 percent set aside.[74] In comments, most parties support the elimination of the set-aside. The Utilities maintain that the residential set-aside is

[73] Resolution E-4728 at 19.

[74] Evaluation Report at 91.

no longer necessary and, more importantly, resulted in inefficient bid selection.[75] As one of the residential aggregators, OhmConnect supports the elimination of the residential set-aside as long as it represents a true step toward market efficiency and is not substituted by an artificial cap on market share.[76] We find the residential set-aside results in more costs than benefits, the Commission should eliminate this set-aside.

The Joint Demand Response Parties and CESA recommend a 10 percent set-aside for new market entrants. The Joint Demand Response Parties argue that the technical, integration, and enrollment process challenges have kept potentially viable Providers from the market, and a set-aside for new entrants could help reduce market concentration by providing a boost to new Providers.[77] CESA supports a 10 percent set-aside for new market entrants as an alternative to a limit on market share because this set-aside could increase the diversity of providers. CESA adds that this would also allow new market entrants to gain experience in demand response and the CAISO market.[78] SCE also supports a set-aside limited to new market participants to encourage diversity and recommends such a set-aside be tied to benefitting customers located in a disadvantaged community.[79]

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[75] PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 19; SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 22; and SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 25.

[76] OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 24.

[77] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 24.

[78] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 16-17.

[79] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 25.

We find that a new market entrants set-aside could help the Auction Mechanism achieve its newly adopted goal of "spurring innovation and growth of a competitive third-party market" by providing a boost to new Providers with fewer resources to enter and diversify the market. A new market entrants' set-aside could also decrease market concentration, eliminating the need for a cap on market share, as discussed below. Accordingly, we direct the Utilities to implement a 10 percent set-aside for new market entrants in the Auction Mechanism solicitation.

In comments to the proposed decision, parties recommend refining the proposed definition of a new market entrant. SCE recommends a more flexible approach that defines a new entrant as a Provider who is new to demand response but may have worked with the Utilities in the past on non-demand response programs.[80] The Joint Parties suggest more flexibility by defining a new entrant as a Provider who has not previously integrated into the CAISO market.[81] PG&E, supported by the Joint Parties, offer the approach of using qualifying criteria to define a new entrant.[82] CESA contends the proposed definition that a new entrant have no prior business arrangement with the Utilities is too restrictive and may lead to very few or no Providers qualifying as new entrants. CESA recommends the Commission define a new entrant as a Provider with less than 1-MW level of business arrangement with any of the Utilities during the three years prior to a solicitation.[83]

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[80] SCE Opening Comments to the Proposed Decision, June 20, 2019 at 3.

[81] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 13.

[82] PG&E Opening Comments to the Proposed Decision, June 20, 2019 at 11-12 and Joint Parties Reply Comments to the Proposed Decision, June 25, 2019 at 4.

[83] CESA Opening Comments to the Proposed Decision, June 20, 2019 at 9-10.

One of the objectives of the Auction Mechanism pilot is to provide experience in the CAISO market in order to increase its use. Hence, we agree with the Joint Parties that participation in another demand response program does not require the Provider to be capable of participating in the CAISO market, a significant barrier to entry noted by the Evaluation Report.[84] Accordingly, we provide additional flexibility and define a new market entrant as a Provider who has not integrated any demand response resources into the CAISO market during the three years prior to a new Auction Mechanism solicitation involving any form of market-integrated demand response including but not limited to the Auction Mechanism or other resource adequacy contracts.

We decline to adopt a limit on market share, as proposed in the Evaluation Report. While the Evaluation Report and the Independent Evaluator found that the Auction Mechanism market was becoming concentrated, parties also contend that limiting market share could have unintended consequences including inefficiencies, increased prices, and reduced competition.[85] SCE notes that no other wholesale procurement activity has a limit on market share by Seller.[86] At this time, the Commission should allow market forces to lead the way to a competitive Auction Mechanism. Further, if the Commission must rely on a set-aside to combat market concentration, a new market entrant set-aside is a better alternative.

Second, we revise the Auction Mechanism to eliminate the use of the August bid price cap. The Evaluation Report indicated that the August bid price cap had several negative consequences including limiting competition and,

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[84] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 13.

[85] Evaluation Report at 90.

[86] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 24.

perhaps, encouraging bidders to offer flat pricing throughout the year as opposed to pricing based on market value.[87] In comments to a preliminary version of the Evaluation Report, SDG&E suggested that offer valuation can be improved by moving from a price cap based on the long-term resource adequacy value to a Net Market Value cap based on an adjustment to that value (*i.e.*, the Net Long-Run Avoided Cost), derived by deducting the Long-Run Avoided Cost from the near term Resource adequacy benefit of the Auction Mechanism capacity offered.[88] The February 28, 2019 Ruling asked parties whether the Commission should replace the August bid price cap with the Net Market Value cap. All parties unanimously agree that the August bid price cap should be eliminated. However, at this time, parties also agree that further discussion of the Net Market Value cap or another replacement is warranted. Accordingly, while we eliminate the August bid price, we decline to adopt an alternate at this time. We note that similar to prior solicitations, the long-term avoided cost of generation criteria still applies.

Finally, we address two other recommendations that while they do not have consensus support, there is sufficient evidence to make the related change to the Auction Mechanism. The two changes are exclusion of Reliability Demand Response Resources (RDRR), consistent with the settlement adopted in D.10-06-034, and the publication of Auction Mechanism contract summaries, consistent with D.06-06-066.

We exclude RDRR from the Auction Mechanism as part of our improvements in Step One. CAISO highlights that the Auction Mechanism should be used to procure demand response resources "that are used and useful

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[87] Evaluation Report at 95-96.

[88] *Id*. at 96.

as suitable preferred resources that can avoid or defer the need for existing or new greenhouse gas emitting resources."[89] We agree with the CAISO that the Commission should limit the role of RDRR in the Auction Mechanism because these reliability resources are not designed to be used on a regular basis to address grid reliability needs. Both CLECA and PG&E support the CAISO's recommendation, which is also consistent with the recommendation in the Evaluation Report.[90] The Evaluation Report highlights that because a small quantity of RDRR were contracted through the Auction Mechanism, the evaluation excluded RDRR from the analysis.[91] Hence, the infrequency of RDRR's use could lead to difficulties with ensuring accountability. We recognize that, as the Joint Demand Response Parties highlight, RDRR can participate economically in the Day Ahead energy market.[92] However, the reason that there is a two-percent cap on reliability resources, pursuant to D.10-06-034, is that this is consistent with the CAISO's estimate of the amount of reliability triggered demand response that is useful to the management of the California grid.[93] Accordingly, we exclude the use of RDRR in the Auction Mechanism beginning with the 2019 solicitation and associated contracts.

The last adopted change for the 2019 solicitation is to require the publication by the Utilities of Auction Mechanism contract summaries. The Evaluation Report makes this recommendation to improve transparency. Noting

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[89] CAISO Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5.

[90] *See* CLECA Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 4, PG&E Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 7, and Evaluation Report at 121.

[91] Evaluation Report at 55.

[92] Joint Demand Response Parties Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 15.

[93] *See* CLECA Opening Comments to the Proposed Decision, June 20, 2019 at 3-4.

that SCE publishes this data, the Evaluation Report contends requiring all three Utilities to publish the data is consistent with D.06-06-066.[94] As our objective in this decision is to improve visibility and increase transparency, we find it reasonable to require the Utilities to publish the following data from the awarded contracts:

- Names of the counterparties;
- Product Type (System/Local/Flexible Capacity);
- Customer Class (Residential/Non-Residential);
- Contracted Capacity (August MW volume); and
- Contract Term (Annual/Partial)

3.7.1. Improving the Accuracy of Qualifying Capacity

The Evaluation Report indicates that with respect to performance for capacity aggregation, Providers improved over the three years evaluated both in terms of aggregating the required Supply Plan capacity to meet commitments to their contracted capacity and achieving the required Demonstrated Capacity. However, the report indicated that the lack of a method to estimate the Qualifying Capacity results in the absence of a standard to evaluate the accuracy of the capacity claimed on either the Supply Plan or the Demonstrated invoices.[95] The Evaluation Report suggests various options for estimation methods including: *ex ante* assessment standard, simplified load impact reporting, capacity testing, or performance from a past event.

Prior to the February Workshops, parties developed proposals for accurately calculating Qualifying Capacity for the Auction Mechanism resources.

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[94] Evaluation Report at 101.

[95] The Evaluation Report underscores that D.16-06-045 exempts Sellers from filing Load Impact Protocols to determine Qualifying Capacity through 2019. Instead, Sellers use contracted capacity on Supply Plans. *(See* Evaluation Report at 102-103.)

PG&E, OhmConnect, and Joint Demand Response Parties presented their proposals during the February Workshops.

PG&E's proposal suggests that the method for calculating Qualifying Capacity will require continuous improvement with several iterations.[96] PG&E proposes that the first iteration rely on past Demonstrated Capacity performance, milestone reports, an increased number of event dispatches through testing and dispatch, a feedback loop to determine any deviations between Demonstrated Capacity and Qualifying Capacity, and the use of an independent monitor. PG&E recommends that new entrants without a history of Demonstrated Capacity performance could use contract quantity until historical data is collected to establish performance. PG&E suggests that the first iteration would evolve to the establishment of a simplified load impact protocol.

OhmConnect proposes a two-tier plausibility check as an *ex ante* option.[97] The first tier would provide a simple demonstration that the anticipated load of a Provider's customer base exceeds the capacity submitted in the Supply Plan. The first-tier calculation would look at the aggregate customer non-event load during the hours of highest grid need (where CAISO Day-Ahead Locational Marginal Price is greater than $300/Megawatt-hours (MWh). If the first-tier information is not sufficient, a second tier would be implemented where a calculation of historic event performance would be used to calculate the difference between non-event and event load. OhmConnect proposes to use rolling two-year seasonal data to calculate the aggregate customer non-event load during the hours of highest grid need and the aggregate customer event load during a subset of demand response

[96] February 28, 2019 Ruling, Attachment 1 at 11-17.

[97] *Id*. at 5-10.

event hours with the difference representing the plausible supply for the contract delivery month.

The Joint Demand Response Parties offer a different option for an *ex ante* method, contending that the differences in portfolios between Providers should allow for varying approaches.[98] The Joint Demand Response Parties recommend that the Utilities or an independent evaluator be given discretion as to whether further substantiation of a Supply Plan is necessary based on a reasonable assessment of a Provider and its portfolio. If further substantiation is necessary, the Joint Demand Response Parties propose the Utility can invoke its audit capacity to require further substantiation that could include a review of the customers and historical loads that make up each resource serving the contract. The Joint Demand Response Parties propose that further substantiation should be reviewed only by the Utility's Rule 24/32 staff, subject to a non-disclosure agreement, and protected from dissemination to the Utility or other non-Commission entity. Asserting that such substantiation should not occur on a month basis, the Joint Demand Response Parties explain it should only occur when the Utility has reservation about the supply plan or the Provider's ability to perform consistent with the supply plans.

In the February 28, 2019 Ruling, parties were asked to describe and explain standards the Commission should adopt to estimate Qualifying Capacity. Several parties oppose the development of a method for estimating Qualifying Capacity for the bridge period. Despite the findings of the Evaluation Report, CESA maintains that, for the bridge period, the Commission should continue to allow the contracted capacity to be used to calculate the Qualifying Capacity and

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[98] *Id*. at 3.

use additional testing for Providers found to be bad actors.[99] OhmConnect supports a supplemental process to using the contracted capacity, which it refers to as a plausibility demonstration. Contending this is the simplest means of cross checking Supply Plan capacity, OhmConnect explains that this *ex ante* plausibility demonstration compares the historical aggregate load of a Provider's customer base against its Contract Capacity.[100] The Joint Demand Response Parties continue to support their proposal for audits when further substantiation is needed, which they also refer to as a Plausibility Test.[101] The Plausibility Test is also supported by the Joint Proposal Parties and the Council.[102] In supporting the Plausibility Test, the Joint Demand Response Parties contend that the approach is fair, should be able to satisfy the Utilities' concern that the Supply Plan is accurate, and should discipline bidding behavior and supply plan submittals.[103]

CAISO, the Public Advocates Office and the Utilities support the use of historical data for estimating the Qualifying Capacity. PG&E revised its workshop proposal, recommending the Commission require a Provider to use an individual customer's maximum and average monthly demand based on the previous rolling 12 months during CAISO Availability Assessment Hours to develop a load drop profile, taking into consideration results from demand

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[99] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 11.

[100] OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 13.

[101] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 14.

[102] Joint Proposal Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 3 and Council Reply Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

[103] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 15.

response events or test performances from the past two years. PG&E proposes that the Provider will then estimate the resource's Qualifying Capacity based on these load reduction potentials, which is then reviewed by an Independent Monitor for reasonableness.[104] Both SCE and SDG&E base their proposals for estimating Qualifying Capacity on the Load Impact Protocols using *ex post* historical results.[105]

Our objective in the first step toward improving the accuracy of the Qualifying Capacity is to ground estimates of demand response capacity by referencing historical performance data as much as possible at every stage of the resource's development prior to the delivery or showing month. Hence, we align the Auction Mechanism with the resource adequacy proceeding by reinstating the requirement in D.14-06-050 that Qualifying Capacity shall incorporate historical performance data where possible. We also want to be able to easily implement an improved method to accurately estimate the Qualifying Capacity in time for a 2019 solicitation. As further described below, we adopt an estimation method for Qualifying Capacity that is based on historical performance data but unlike the Utilities' proposals is more easily implementable for use in a 2019 Auction Mechanism solicitation.

Beginning with the 2019 solicitation, Providers shall be required to provide estimates of capacity of a resource by referencing historical performance data at three stages of a resource's development prior to the delivery or showing month: 1) submission of a capacity bid into an Auction Mechanism solicitation; 2) filing of the year-ahead resource adequacy plan; and 3) submission of the monthly

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104 PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 10-11.

105 SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 13-15 and SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 13.

Supply Plan. Capacity estimates should be supplemented with disclosure of load aggregation data with references to historical performance data, such as past test events or market dispatches of similar resources. Where historical performance data is not available the Provider should reference suitable publicly available performance data that best represents the anticipated performance of the new resource. We provide further guidelines for estimating Qualifying Capacity in Appendix A of this decision.

Most parties support the use of an independent monitor to review Provider Supply Plans. However, there is insufficient data in the record regarding the cost of such a role. At this time, we will require the Utilities' Auction Mechanism procurement or contract manager to review the specified information submitted by Providers to support Qualifying Capacity estimates, along with bid submissions or with the supply plans, which are currently reviewed by the Utilities. Mirroring Rule 24/32, this role should be separated from Utility demand response program management staff to maintain independence and avoid any conflict of interest.

With respect to the other party proposals, we find the proposals from OhmConnect and Joint Proposal Parties' do not adequately address the findings of the Evaluation Report. We decline to adopt the audit process recommended by the Joint Proposal Parties in the Plausibility Test. This approach ignores the Evaluation Report finding that without an *ex ante* forecasting method, we cannot evaluate the accuracy of the capacity claimed on either the Supply Plan or the Demonstrated Capacity invoices. Furthermore, without any standards to determine what is plausible, the Plausibility Test creates potential subjectivity amongst the Utilities.

We also decline to adopt OhmConnect's proposal due to its lack of accuracy. SCE and PG&E highlight what they consider to be unreasonable assumptions implicit in the proposal. SCE asserts that OhmConnect's proposal assumes a customer can drop 100 percent of their load but SCE contends a more realistic load drop is no more than 36 percent.[106] PG&E echoes this sentiment, especially for residential and small and medium business customers.[107] Furthermore, OhmConnect proposes to count a resource's capacity based on a per customer load reduction versus a resource-level aggregated load drop. Any Qualifying Capacity method should be based on aggregated load drop, not the summation of individual customers' load reduction, which is consistent with the CAISO and the Commission's baseline method measurement of a resource's performance in terms of capacity delivered.

In comments to the proposed decision, PG&E requests a minimum of twenty days before Supply Plans are due to review the Qualifying Capacity estimates supporting data submitted by Providers.[108] The Joint Parties recommend allowing only ten days.[109] We agree that additional time may be needed by the Utilities for review and analysis in light of the new Qualifying Capacity supporting data submission requirements described in this decision. Accordingly, we require Auction Mechanism Sellers to submit their Qualifying Capacity estimates and supporting data 10 business days before the year-ahead filing and monthly Supply Plans are due for the Sellers. Energy Division is

[106] SCE Reply Comments on February 28, 2019 Ruling, March 29, 2019 at 8.

[107] PG&E Reply Comments on February 28, 2019 Ruling, March 29, 2019 at 10.

[108] PG&E Opening Comments to the Proposed Decision, June 20, 2019 at 2-3.

[109] Joint Parties Reply Comment to the Proposed Decision, June 25, 2019 at 4.

authorized to work with parties to develop a standardized reporting format for Sellers to submit Qualifying Capacity estimate supporting data.

In response to the proposed decision, PG&E recommends that in the event of a dispute between a Utility and the Seller regarding the Seller's Qualifying Capacity estimates on the supply plan, the Utility should be able to de-rate the Qualifying Capacity or accept the supply plan as submitted and require testing during the showing month.[110] The Joint Parties recommend clarifying the process to resolve disputes between the Utility and the Seller in Step 2.[111] We agree that additional discussion on the process to resolve disputes, including disagreements regarding Qualifying Capacity estimates, is necessary and, therefore, include the dispute resolution process as an issue to be addressed in Step 2.

Based on party comments on the proposed decision, we provide additional clarifications to the guidelines in Appendix A and summarize them here:

- the Sellers must include the breakdown of the "active & registered number of Service Accounts" within the total projected service account numbers in their Qualifying Capacity submissions to the Utilities.[112]
- the Qualifying Capacity estimates should be calculated during the Resource Adequacy Measurement Hours.[113]
- the Qualifying Capacity supporting data is to be submitted at the contract level at the time of submitting capacity bids into a solicitation and the year-ahead resource adequacy

[110] PG&E Opening Comments to the Proposed Decision, June 20, 2019 at 3.

[111] Joint Parties Reply Comments to the Proposed Decision, June 25, 2019 at 4.

[112] PG&E Opening Comments to the Proposed Decision, June 20, 2019, Attachment at 7 and SCE Opening Comments to the Proposed Decision, June 20, 2019 at 4.

[113] SCE Opening Comments to the Proposed Decision, June 20, 2019 at 4.

filing, and at the resource level for the month-ahead Supply Plans.

- the baseline utilized for estimation of Qualifying Capacity must be consistent at different stages (solicitation, year-ahead filing, and monthly supply plan.)

3.7.2. Imposing Penalties for Capacity Shortfalls

We turn to the issue of whether the Commission should adopt penalties for shortfalls in Qualifying Capacity and Demonstrated Capacity and what the penalty structure should be. As discussed below, we agree with the Evaluation Report and a majority of parties that because Resource Adequacy Availability Incentive Mechanism (RAAIM) penalties and replacement capacity requirements have not effectively incentivized performance in the Auction Mechanism, it is reasonable for the Commission to adopt an effective penalty structure for the Auction Mechanism. However, several parties, including the CAISO, recommend that there must be assurances that any penalty structure adopted would not result in undesired market behavior from the resources, including increases in bid pricing and under-performance of resources when dispatched. Thus, we take a cautious Step One approach.

For Step One, we adopt a penalty structure for a shortfall in Demonstrated Capacity for a delivery month in comparison to the Qualifying Capacity in the monthly resource adequacy plan for that month. While parties proposed penalty structures for shortfalls in Qualifying Capacity in the year-ahead resource adequacy plan (compared to the Contract Capacity) and shortfalls in Qualifying Capacity in the monthly resource adequacy supply plan (compared to the year-ahead plan), the Commission must be cautious in the number of changes to the Auction Mechanism it makes in a short time. Our objective in this first step is to improve accuracy and performance. But we must balance this objective with the time and effort it takes to make these improvements and the concerns regarding undesired market behavior.

As discussed in Section 3.2, the Evaluation Report recommends establishing penalties for non-performance when the Qualifying Capacity indicated on Supply Plans falls significantly below contracted capacity and when Demonstrated Capacity falls significantly below the Qualifying Capacity for the delivery month. Citing D.16-09-056, in which the Commission required Auction mechanism resources to be subject to the RAAIM, the Evaluation Report concluded that the RAAIM penalties and replacement capacity requirements under the Commission's resource adequacy program have not effectively incentivized performance.[114] Noting that many resources are smaller than the 1 MW threshold required to apply RAAIM, the Evaluation Report highlighted concerns by the Utilities and the Public Advocates Office that RAAIM penalties do not mitigate risks to the Utilities.[115] The Evaluation Report recommends establishing penalties for non-performance when: 1) Qualifying Capacity indicated on Supply Plans falls significantly below contracted capacity; and 2) Demonstrated Capacity falls significantly below the Qualifying Capacity for the delivery month.[116]

In preparation for the February Workshop, four parties developed proposals for Penalties: SCE, Joint Demand Response Parties, OhmConnect, and Olivine. [117]

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[114] Evaluation Report at 109.

[115] *Id.* at 109-100.

[116] *Id*. at 110-111.

[117] Some proposals also recommended an incentive structure, but we focus on penalties only at this time.

- SCE's proposal recommends incentivizing Sellers to notify the relevant Utility as soon as possible if the contracted MWs will be unavailable through increasing financial consequences the later the Seller notifies the Utility of a lower MW quantify. SCE contends this should encourage Sellers to be more realistic in the MWs contracted in the solicitation and reported on supply plans and result in improved reliability.[118]
- The Joint Demand Response Parties recommend the Utilities use a subjective factor to weight the selection of bids such that good performers receive a favorable weighting versus poor performers or bad actors. While supporting the imposition of reasonable penalties for failure to perform when dispatched or failure to provide the contracted capacity, the Joint Demand Response Parties caution against imposing penalties when there is no harm to the Utility.[119]
- OhmConnect proposes three options: 1) when the Supply Plan capacity falls below the Contract Capacity, the Seller forfeits the contract revenue associated with the deficient quantity; 2) when Demonstrated Capacity falls below Supply Plan capacity, Demonstrated Capacity in excess of Supply Plan is rewarded but where Demonstrated Capacity is less than Supply Plan capacity, penalties are incurred; or 3) when Demonstrated Capacity falls below Supply Plan capacity, the Seller would be penalized for Demonstrated Capacity substantially below Supply Plan Capacity.[120]
- Olivine recommends the Commission not introduce penalties or incentives to Supply Plan shortfalls against the contract and consider a discount (or de-rate) on underperformance of Demonstrated Capacity against the Supply Plan. Olivine bases its proposal on the assumption

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118 February 28, 2019 Ruling, Attachment 3 at 4.

119 *Id*. at 10.

120 *Id*. at 12-14.

> that a verifiable method for determining Qualifying Capacity will be introduced and increases in tests and dispatches will be required. Olivine cautions against penalties for contract shortfalls due to a concern of double penalties and the potential incentive for the Seller to increase supply plan quantities hoping to resolve the shortfall in time for delivery.[121]

With these proposals in mind, the February 28, 2019 Ruling asked parties whether the Commission should adopt penalties for shortfalls in both Qualifying Capacity and Demonstrated Capacity, when penalties should be assessed and under what conditions, and whether penalties should be based on costs incurred by the Utility or the price of the contract.

The Joint Proposal Parties, building on the proposal above by the Joint Demand Response Parties, propose that performance below 60 percent be penalized. Highlighting that the Auction Mechanism is still in a pilot stage, the Joint Proposal Parties assert that penalties should not be punitive as it would discourage market participation and reduce customer benefits to participate.[122] CESA and the Council support a penalty structure similar to the Capacity Bidding Program, stating that it would not require much work to implement and it also represents a structure that is not punitive.[123]

The Public Advocates Office supports the SCE proposal introduced earlier, stating that it encourages Sellers to be realistic while accommodating the variability of customer responses.[124] SCE also continues to support its prior

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[121] *Id*. at 18.

[122] Joint Proposal Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 6.

[123] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 14 and Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 17.

[124] Public Advocates Office Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 12.

proposal and contends this will address reliability concerns earlier in the process.[125] Agreeing that early notification of expected shortfalls is crucial, PG&E offers an interim penalty structure using a formula based on whether the shortfall is between the contracted capacity and the year-ahead Supply Plan or between the month-ahead supply plan Qualifying Capacity and the year ahead Supply Plan Qualifying Capacity.[126]

Keeping in mind that our objectives are to improve accuracy and performance, deter undesired market behavior, and implement a structure for a 2019 solicitation, we proceed with a hybrid approach and adopt an interim payment/penalty structure for Step One. Noting that our previous adoption of an improved method for estimating Qualifying Capacity should improve the accuracy of Qualifying Capacity, at this time we focus solely on adopting a penalty structure for shortfalls in Demonstrated Capacity (for a delivery month in comparison to the Qualifying Capacity on the monthly resource adequacy Supply Plan for that month). We consider it a hybrid approach because the interim payment/penalty structure begins with a structure parties are familiar with, the structure used in the Capacity Bidding Program, and modifies it to take into consideration findings of the Evaluation Report and concerns of parties.

As shown in Table 5 below, we adopt four bands of resource performance with consequences becoming more severe as the delivered or Demonstrated Capacity level falls into lower performance bands. To deter undesired market behavior while ensuring ratepayer funds are protected, we do not adopt punitive penalties in Step One. However, we note that punitive penalties shall be considered in the future, if performance does not improve.

[125] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 17.

[126] PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 12-13.

In response to the proposed decision, PG&E, the Public Advocates Office, the Joint Parties and SCE recommend changes to the Demonstrated Capacity penalty bands.[127] SCE, PG&E and the Public Advocates Office recommend eliminating the 90-100 percent tolerance band and requiring that all payments be based on Demonstrated Capacity, not Qualifying Capacity.[128] The Joint Parties agree that payments below 90 percent should be based on Demonstrated Capacity but contend the Commission should keep the tolerance band as is.[129]

As shown in Table 5 below, this decision adopts a tolerance band and a formula for the de-rated band (50-70 percent) based on Demonstrated Capacity delivered in the showing month, rather than the Qualifying Capacity, but with a de-rate factor of 75 percent. These bands balance the Commission's need to ensure performance and deter unwanted market behavior with a Commission intention of fairness.

Table 5

Price De-Ration and Payment Forfeiture for Demonstrated Capacity Shortfalls

Band	**Range of Demonstrated Capacity (% of QC)**	**Payment**
Tolerance	>90% to 100%	Capacity Price ($/kW)*QC (kW)
Pro-rated	>70% to 90%	Capacity Price ($/kW)*DC (kW)
De-rated	50% to 70%	Capacity Price ($/kW)* DC (kW)*75%

127 PG&E Opening Comments to the Proposed Decision, June 20, 2019 at 7; Public Advocates Office Opening Comments to the Proposed Decision, June 20, 2019 at 7; SCE Reply Comments to the Proposed Decision, June 25, 2019 at 4.

128 Joint Parties Reply Comments to the Proposed Decision, June 25, 2019 at 3.

129 *Id.*

Forfeiture	<50%	$0
QC: Resource's Qualifying Capacity on the monthly supply plan for the invoiced month DC: Resource's Demonstrated Capacity for the invoiced month Capacity Price: Resource's contract purchase price for capacity for the invoiced month		

Where multiple resource IDs within an Auction Mechanism contract are dispatched concurrently in a particular delivery month, the aggregate performance of the concurrently dispatched resource IDs may be utilized for the purpose of Demonstrated Capacity invoicing and compared with the sum of Qualifying Capacity on the monthly Supply Plan of those resource IDs. For Local resource adequacy, we clarify that the aggregation of concurrently dispatched resource IDs is only allowed for resources within the same SubLAP.[130]

We decline to adopt incentives for over-performance. As cautioned by the CAISO, resources should perform according to CAISO market instructions and not below or above. The CAISO highlighted that, as a balancing area authority, the CAISO must continually balance supply and demand. CAISO maintains that it must issue re-dispatch instructions to balance the systems if resources do not perform according to their dispatch instructions and re-dispatch can be costly. The CAISO asserts that the Commission should incentivize Auction Mechanism resources to perform as accurately as possible.[131]

With respect to the definition of an Auction Mechanism contract default, in the case of Demonstrated Capacity shortfall, we clarify that the Utility may (but is not required to) put a Seller's contract in default when, for two sequential months with dispatch based invoices (after excluding any intervening months

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[130] *See* PG&E Opening Comment to Proposed Decision, June 20, 2019, Attachment at 9.

[131] CAISO Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 2.

with invoices based on Must Offer Obligation), the Seller has invoiced aggregated Demonstrated Capacity that is 50 percent or less than the aggregated Qualifying Capacity applicable to the showing month.

OhmConnect contends that under the current Auction Mechanism pro forma contract, the type of underperformance that could cause a Utility to consider the contract in default is not explicitly defined.[132] Underperformance can include shortfalls in either Qualifying Capacity in the monthly Supply Plans or shortfalls in Demonstrated Capacity on invoices. OhmConnect asserts that if the Commission does not revise the definition of default, the standard for default could vary across the Utilities.[133] PG&E recommends default be defined as any time the Provider has Demonstrated Capacity less than 90 percent of the Qualifying Capacity or submitted a Supply Plan less than 60 percent of the Contracted Capacity, for more than two months.[134] SDG&E supports triggering default any time a Provider has failed to meet milestones, or anytime the Provider's performance is lower than 85 percent of contract capacity, for more than two months.[135] OhmConnect supports the following language:

> In cases where Supply Plan Capacity is less than 50 percent of Contract Capacity for two consecutive months, the Utility is permitted (but not obligated) to put the Seller's contract in default, provided the deficiency is not demonstrably the result

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[132] OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 14.

[133] *Ibid*.

[134] PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 15.

[135] SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5.

of the actions or inactions of the either the Utility or the CAISO.[136]

The record is limited regarding the issue of contract default and we intend to further develop the record to ensure clarity for future Auction Mechanism solicitations. However, given the Commission's objective for transparent processes, we find that we should clarify the definition of default on an interim basis at this time to ensure Providers participating in the 2019 solicitation have a clear understanding of what constitutes a default. We find portions of proposals from PG&E and OhmConnect to be reasonable and adopt a hybrid. Accordingly, beginning with the 2019 solicitation, Utilities are permitted (but not obligated to) put a Provider's contract in default when, for two sequential months (after excluding any intervening months with invoices based on Must Offer Obligation), the Provider has invoiced aggregated Demonstrated Capacity that is 50 percent or less than the aggregated Qualifying Capacity applicable to the showing month, provided the deficiency is not demonstrably the result of the actions or inactions of either the Utility or the CAISO.

At this time, we decline to adopt a default condition tied to Qualifying Capacity andnote that the Capacity Bidding Program tariff does not contain a default provision for failures to perform relative to the capacity nominations.

3.7.3. Calculating Demonstrated Capacity on Invoices

Now that we have established a penalty structure for Demonstrated Capacity, we must ensure that the monthly invoices are appropriately calculating Demonstrated Capacity. As discussed below, we revise the requirements such that beginning with deliveries in 2020, for each resource ID,

136 February 28, 2019 Ruling, Attachment 3 at 12.

Demonstrated Capacity invoices must be based on either market dispatches or capacity test events in 50 percent of the contracted months, with one month being August.

The Auction Mechanism pro forma contract currently allows Sellers to use one of three options for establishing the Demonstrated Capacity on monthly invoices: 1) CAISO market dispatch; 2) an out-of-market test, or 3) the Must-Offer-Obligation bid amount. The Evaluation Report indicated a mixed but improving record regarding a Provider's ability to align Supply Plan and Demonstrated Capacity amounts with contracted capacity.[137] Because there is no standard available to evaluate the accuracy of the Demonstrated Capacity invoices based on the Must-Offer-Obligation option,[138] the Evaluation Report discovered that the current frequent use of the Must-Offer-Obligation option leads to three concerns: 1) Must-Offer-Obligation bids are not required to be economical, which allows resources to bid at high prices and avoid being dispatched by the market; 2) if Must-Offer-Obligation bids are used to demonstrate capacity during most of the year, Providers' capacity would be verifiable on an *ex post* basis as little as two times a year; and 3) when contracted capacity is used as Qualifying Capacity on Supply Plans and Must-Offer-Obligation bids are used for Demonstrated Capacity on invoices, neither *ex ante* nor *ex post* capacity is verifiable.[139]

Because the majority of the invoices submitted by Providers were based on the Must-Offer-Obligation option, the Evaluation Report asserts that the CAISO and Utilities have no visibility into the actual capacity for a significant portion of

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[137] Evaluation Report at 10.

[138] *Id*. at 65.

[139] *Id*. at 107-108.

the Auction Mechanism portfolio.[140] In preparation for the February Workshops, SCE, Olivine, and OhmConnect developed proposals for improving this visibility. SCE proposes the Commission require invoicing based on dispatch or test results with increased testing occurring every two months.[141] OhmConnect recommends invoicing portfolio performance, by sub LAP, based on the weighted performance during a CAISO test or dispatch of each user that was in a resource registration during the month and where the weighting is based on the number of days the resource was active in the CAISO registration system.[142] Olivine proposes to only allow the use of Must-Offer-Obligation for Demonstrated Capacity invoices in the absence of a test or dispatch.[143]

The February 28, 2019 Ruling asked parties to explain the approach the Commission should adopt with respect to the calculation of Demonstrated Capacity performance. The Council and OhmConnect maintain that the Commission should not adopt one approach to Demonstrated Capacity invoicing, and the Joint Proposal Parties similarly request flexibility in the use of baselines. The Utilities do not suggest that the Commission adopt one approach but rather refine the current three approaches of testing, dispatch or Must-Offer-Obligation. The Utilities propose to limit the use of Must-Offer-Obligation and recommend increased testing, up to every other month. SCE asserts increased testing will provide more transparency to actual load drop capabilities.[144] The Public Advocates Office supports increased testing

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[140] *Id*. at 108.

[141] February 28, 2019 Ruling, Attachment 4 at 3.

[142] *Id.* at 8.

[143] *Id*. at 18.

[144] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 18.

but proposes to eliminate Must-Offer-Obligation invoicing maintaining that Must-Offer-Obligation does not demonstrate whether capacity abilities are available or deliverable if called.[145]

In order to increase visibility into Demonstrated Capacity invoicing, ensure reliability of the Auction Mechanism resources, but provide flexibility to the Providers, we maintain the current three invoicing options but refine them. Accordingly, we require, for each resource ID, Demonstrated Capacity invoices based on market dispatches or capacity test events in 50 percent of the contracted months (rounded downward in case of a contract involving an odd number of months), with one of the months being August. We maintain the current practices that: 1) the dispatch must be during resource adequacy measurement hours,[146] 2) the number of consecutive months allowed with no dispatches is limited to five months, and 3) dispatch months may be different for different resources especially in the case of weather sensitive resources.[147]

We decline to adopt OhmConnect's proposal to invoice based on the individual customer performance during a dispatch or test event. As underscored by Public Advocates Office, capacity is contracted and performs at the aggregate resource level rather than individual customer level. We agree that what counts in a demand response event is what all the customers in a resource as a whole can provide during the event.[148]

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145 Public Advocates Office Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 13.

146 D.18-06-030 at Ordering Paragraphs 12 and 13.

147 (*See* OhmConnect Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 11.)

148 Public Advocates Office Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 6.

We maintain the current order of demonstrating capacity on invoices as follows: 1) If there is a full market one-hour dispatch of a resource in a month, the results must be used for demonstrated capacity; 2) If there is a two-hour test of a resources in a month, the results must be used for demonstrated capacity; and 3) Only if there is no dispatch or test of a resource in a month can the bidding detail for a resource under the Must-Offer-Obligation be used to demonstrate capacity.

In response to the proposed decision, PG&E commented that the dispatch requirement should align with the resource adequacy requirement of two consecutive hours.[149] SCE supports two consecutive hours of testing as a requirement but did not comment on the duration of the dispatch.[150] We agree that the dispatch requirement should align with the resource adequacy requirement. Accordingly, we add the requirement that the August dispatch must involve a full resource dispatch for at least two consecutive hours, with the invoiced capacity reflecting the average performance over the two hours. A combination of a market dispatch and a test may satisfy the two consecutive hour requirement if the CAISO market dispatch does not cover the two consecutive hours.

Appendix B of this decision provides a complete set of guidelines for Demonstrated Capacity Invoicing.

Included in the guidelines for Demonstrated Capacity Invoicing is a prohibition on service account movements, with exceptions. During the February Workshop, parties discussed a concern that service accounts, (*i.e.*, customer locations, moving between resources during a delivery month

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[149] PG&E Opening Comments to the Proposed Decision, June 20, 2019 at 5.

[150] SCE Opening Comments to the Proposed Decision, June 20, 2019 at 10.

could lead to double payments.) The February 28, 2019 Ruling asked parties to propose possible solutions to this concern.

The CAISO recognizes that there are times when this legitimately occurs: 1) the Provider must add or remove service accounts within a registration to accurately reflect that registration's participating end-use customers or 2) service accounts may move between registrations and/or resources within a month because a service account may move to a new load serving entity. The CAISO notes that this second example may become moot after the CAISO modifies its tariff to remove the current single load serving entity aggregation requirement.[151]

The Utilities propose amendments to the Auction Mechanism contract to restrict such service account movements within a delivery month to new service accounts and service accounts moving to a new load serving entity.[152] OhmConnect and the Joint Proposal Parties agree that service accounts should be prohibited from moving between resources, but contend that there should be exemptions in addition to the two recommended by SCE: 1) newly enrolled customers can be added to a resource; 2) a customer who exits the Auction Mechanism may be dropped from a resource; 3) if either 1) or 2) result in a trigger of the 10 MW telemetry requirement or the resource dropping below the minimum, a Provider should be able to divide or combine resources mid-month to meet CAISO requirements; and 4) a customer changes load serving entities, in

151 CAISO Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8-9.

152 SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 19 and Attachment A at Section 3.4. *See* also SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 17.

the event the CAISO has not removed the single load serving entity requirement.[153]

The Commission should restrict service account movements within a delivery month to ensure no double payments but allow exceptions. The Joint Proposal Parties' recommendations should adequately ensure that service account movement minimizes double counting of capacity, while providing reasonable flexibility to Providers. We adopt the prohibition of service account movement within a delivery month with the exemptions as proposed by the Joint Proposal Parties and require that the Seller avoid any potential double counting of customer performance associated with service account movement permitted by the exemptions when invoicing Demonstrated Capacity.

3.7.4. Establishing Invoice Deadlines

The final immediate critical improvement for Step One is to establish invoice deadlines; which should improve visibility into performance. The Evaluation Report indicates that the Utilities experienced delays in receiving Demonstrated Capacity invoices, with some delays as long as six months.[154] Concluding that this delay could be problematic in terms of the lack of visibility into delivery results on a timely basis, the Evaluation Report recommends revising the pro forma contract to define the deadline for the Seller to submit invoices.[155]

In preparation for the February Workshop, parties submitted proposals for invoice deadlines with the Utilities recommending a deadline of 60 days after the

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153 Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 5.

154 Evaluation Report at 116.

155 *Ibid.*

end of the showing month for Providers to submit the monthly invoice and both Joint Demand Response Parties and Olivine recommending a deadline of 30 days after the complete set of valid and relevant Revenue Quality Meter Data is delivered to the Provider by the Utility.

The February 28, 2019 Ruling asked parties to describe deadlines the Commission should require for invoices and any relevant exceptions. Both SCE and SDG&E suggest that the Seller should submit the monthly invoice within 60 days after the end of the showing month, unless the Revenue Quality Meter Data is not timely, complete or accurate.[156] SCE further proposes that if the Seller has not received 90 percent of the Revenue Quality Meter Data within 45 days after the end of the showing month, the Seller could request an extension to submit its monthly invoice 30 days after the data is made available.[157] The Joint Proposal Parties recommend a deadline of 30 days following receipt of valid and relevant Revenue Quality Meter Data. This proposal includes a recommendation that when Revenue Quality Meter Data is delayed beyond 60 days, the Seller would be permitted but not required to submit a partial invoice on those resources not impacted by missing or invalid data, with the balance of the invoice to be completed within 30 days of delivery of the remaining data and if an invoice is not provided under these conditions, the invoice is deemed $0 and 0 MW for the delivery month.[158]

As our goal is to improve visibility of performance and, therefore, reliability of the resources, we adopt the following timeline and related policies

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[156] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 20 and SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 18.

[157] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 20-21.

[158] Joint Proposal Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 10-11.

for invoices, which should improve visibility to the Utilities of Provider performance:

- Once Seller receives 95 percent of Revenue Quality Meter Data for a resource's dispatch event, the due date for Demonstrated Capacity invoice is no later than 30 days after receiving the meter data; and
- Demonstrated Capacity invoicing is at the resource level, or at the aggregated level to the extent permitted in the previous section.

In comments to the proposed decision, the Joint Parties recommend defining 95 percent of Revenue Quality Meter Data for a resource's dispatch event as 95 percent of the intervals of all events in a month for a given Auction Mechanism resource ID.[159] No party objected to this definition. We find this a reasonable definition and accept it.

3.8. Process and Schedule for Step Two

Below we describe the process and schedule for Step Two, which will begin with working group meetings and a filed report, followed by the filing of party comments, which will lead to a second decision no later than December 2019. An annual iterative all-stakeholder informal process will allow further refinement to the Auction Mechanism and, combined with Reporting, Monitoring, and Evaluation requirements adopted below, should lead to an Auction Mechanism that successfully meets the six criteria adopted in D.16-09-056.

Parties were asked what procedural steps the Commission should use to address the remaining non-urgent revisions needed to improve the Auction Mechanism. We note while the Utilities do not support moving forward with

[159] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 10.

Step Two until an evaluation of Step One has been completed by the Commission, SDG&E responds that if the Commission adopts an immediate Step Two, the Commission should use workshops and working groups to vet the remaining issues. [160] Other parties also recommend the options of working groups and/or workshops and comments.[161] Contending that parties have not had sufficient time to vet the working group proposals, the Council recommends working groups meet to narrow the number of proposals and develop and submit working group reports.[162] CESA and Joint Demand Response Parties anticipate no need for evidentiary hearing.[163]

We find it efficient to develop the record needed to address the remaining issues by using a series of working group meetings facilitated by the Energy Division, followed by the filing of a working group report, and then comments and replies on the reports. The Working Group is directed to file its report addressing the issues provided in Table 6. Given the limited time, the Working Group is directed not to stray from this list of issues.

Table 6 **Working Group Issues**
Replacement for August Bid Price
Minimum Dispatch Hours
RQMD Penalty/Contract Remedy
Contract Partitioning/Reassignment
Bid Fees

[160] SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

[161] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7, Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 9-10, and CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8.

[162] Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 9-10.

[163] CESA Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 8 and Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 7.

CAISO Registrations and Meter Reprogramming for Extension
Guidelines for Utility Audits and Withholding Invoice Payments
Cost Effectiveness
Dispute Resolution Process
Refinements to Appendix A and B Guidelines

The procedural schedule for the beginning of Step Two, as shown in Table 7 below, is adopted. The Director of the Energy Division is authorized to modify the working group meeting dates as needed to accommodate meeting logistics.

Table 7
Step Two Procedural Schedule

Activity	**Deadline**
Working Group Conference Call Conference Line: 866-832-3002 Passcode: 7708062# 10:00 am to 4:00 pm	July 15 and 16, 2019
Working Group Meeting	July 22 and 23, 2019
Working Group Meeting	July 29 and 30, 2019
Working Group Files Report	August 9, 2019
Comments on Working Group Report	August 23, 2019
Reply Comments on Working Group Report	August 30, 2019

In addition to the issues listed above, there are policy questions that the Commission must also address; parties are directed to respond to the questions in Appendix C of this decision. Parties shall file responses to the questions simultaneously with the comments on the working group report. This schedule will allow for a decision at the end of 2019 on necessary Auction Mechanism policy matters, leaving only technical refinements to the Auction Mechanism and the pro forma contract.

In the February 28, 2019 Ruling, parties were asked what procedural steps the Commission should use to address improvements for future years of the Auction Mechanism. OhmConnect and the Council suggest additional rulings and decisions. However, we anticipate all policy questions to be addressed by the end of 2019. Hence, we find it efficient to complete Step Two refinements using an informal process led by Energy Division. Energy Division, the Utilities, and other stakeholders should keep in mind that the purpose of these technical and contract refinements is to attain and maintain success of the six criteria, especially those related to performance and reliability, and strive for the goal of the Auction Mechanism.

Accordingly, beginning in late 2020, Energy Division will initiate a Staff-led refinement process; the procedural steps and schedule of the refinement process will be determined in Step Two. This process, combined with the reporting, monitoring and evaluation standards we adopt in Section 3.9 below, should enable the Commission to successfully meet the six criteria and the newly adopted goal.

In November 2021, the Utilities will file applications for their 2023-2027 demand response activities and budgets. The Commission will review the implemented refinements to the Auction Mechanism, along with the mechanism continuation evaluation, in that proceeding and determine whether the refinements and evaluation results are sufficient to permanently adopt the Auction Mechanism and expand its role.

3.9. Reporting, Monitoring, and Evaluating

The Evaluation Report highlights that the Auction Mechanism as a pilot had a permissive structure in terms of performance requirements and recommends that standards and expectations be raised going forward. One such area to strengthen the standards is in increased reporting, which should improve visibility into performance. Additionally, the Evaluation Report recommends the Commission authorize continued monitoring and evaluation of the Auction Mechanism, in light of the performance and reliability concerns and the various changes implemented, and further recommends the evaluation be conducted by an independent consultant.

In the February 28, 2019 Ruling, parties were asked whether the Commission should require Providers to submit performance reports for the purpose of evaluation and providing a feedback loop. The Ruling also asked parties whether the Commission should create a monitoring and evaluation process for the Auction Mechanism.

We first address the issue of reporting. Only Joint Demand Response Parties and the Council oppose the submission of regular performance reporting. The Council asserts that collecting data from the Providers on a monthly basis would be unnecessary and impractical.[164] Joint Demand Response Parties contend that level of detailed investigation should not be a normal course of business.[165] Theoretically not opposing such a requirement, OhmConnect

[164] Council Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 21.

[165] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 23.

recommends confidentially sharing select data with Energy Division Staff, who can then anonymize and aggregate it into a public summary report.[166]

In order to increase visibility into performance and improve reliability of Auction Mechanism resources, the Commission should require quarterly performance reporting for all Auction Mechanism resources. We agree with PG&E that regular performance reports could offer evidence that resources are real, and are critical in establishing a feedback loop to determine whether resources are performing in the market.[167] While the Council and Joint Demand Response Parties argue that data can be subpoenaed from the CAISO, the Evaluation Report shows that exclusive reliance on CAISO data can be problematic and subject to delays.[168] In comments to the proposed decision, the Joint Parties argue that monthly performance reporting would be an unnecessary burden on Sellers when less frequent reporting would provide the same benefit.[169]

We agree that quarterly performance reporting can provide a similar benefit to monthly reporting and be less burdensome. Accordingly, we adopt a process similar to that recommended by OhmConnect whereby Providers shall provide Energy Division a quarterly report for all Auction Mechanism resources, due 30 days after the end of every third month or 30 days after receipt of 95 percent of the Revenue Quality Meter Data counting from the start of the contract. The report shall include, but is not limited to, bid and performance data for the showing month, resource characteristics and dispatch trigger, and

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[166] OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 22.

[167] PG&E Reply Comments on February 28, 2019 Ruling, April 10, 2019 at 13.

[168] Evaluation Report at 81-82.

[169] Joint Parties Opening Comments to the Proposed Decision, June 20, 2019 at 14.

other aggregation details. The Director of the Energy Division is authorized to work with parties to develop a standardized format for the quarterly reports. The independent consultant will anonymize and aggregate the quarterly reports into a public summary report, which will provide the feedback loop the Utilities and Public Advocates Office support.

We now turn to monitoring and evaluation. All parties support continued monitoring and evaluation, with some recommending the Commission employ the use of an independent monitor[170] or independent evaluator.[171] The Utilities recommend that monitoring and evaluation should be based on a review of a variety of reporting methods including monthly Supply Plans, modification results, monthly interruptible load program reports, and milestone reports.[172] While supporting monitoring and evaluation, OhmConnect recommends the Commission should ensure the process is transparent, fully independent, open to stakeholder input, and inclusive of metrics directly related to the adopted goal of the Auction Mechanism.[173] The Joint Demand Response Parties also support the development of guidelines and principles but suggest that major design and program changes be limited to every three years.[174]

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[170] SCE Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 24 and PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 18 and SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 20.

[171] Evaluation Report at 89 and Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 22.

[172] *See* PG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 15 and SDG&E Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 21.

[173] OhmConnect Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 22-23.

[174] Joint Demand Response Parties Opening Comments on February 28, 2019 Ruling, March 29, 2019 at 23.

Previously in this decision, we determined that the Auction Mechanism could not be adopted as a permanent mechanism until success in the six criteria are evident. Hence, it is prudent to establish a monitoring and evaluation process. We agree with OhmConnect and the Joint Demand Response Parties that principles of the monitoring and evaluation process should also be established. Similar to our principles of demand response, the monitoring and evaluation process should be transparent, fully independent, and open to stakeholder involvement and input. However, we have already established the framework for the standards for the evaluation: success of the six criteria.

Accordingly, we approve a monitoring and evaluation program of the continuation of the Auction Mechanism. The monitoring by Energy Division will include the previously adopted quarterly reports. The evaluation program will be timed so that the results will be used in the next demand response application review proceeding in 2021 and 2022. The Utilities shall immediately begin to work with the Energy Division to hire a consultant for the evaluation; the Energy Division is authorized to manage the selection of the consultant and the evaluation study. The evaluation shall include performance of delivery years 2018 through 2021, as well as the solicitation process for years 2019, 2020 and 2021. The Utilities and Providers are directed to cooperate with the consultant in terms of providing information and data. Furthermore, the consultant shall work with the Utility Auction Mechanism Contract Manager, and the Independent Evaluator to support the Energy Division as needed to monitor the Auction Mechanism and review quarterly performance reports. The consultant shall provide a preliminary evaluation report to the Energy Division no later than September 1, 2021. A final evaluation report shall be available to all parties no later than December 1, 2021 for review. We authorize a separate incremental budget of $2.8 million to perform the evaluation ($1.2 million each for PG&E and SCE, and $0.40 million for SDG&E).

4. Demand Response Baselines

This decision acknowledges the interaction between the wholesale baseline methods and the current demand response retail baseline and agrees that this interaction creates issues for calculating customer performance. Therefore, we confirm that the baseline methods adopted by the FERC for settlement purposes are also adopted for settlement purposes in the Auction Mechanism, except for the Meter Generator Output method. The Commission further determines that it should adopt a revised baseline for the Capacity Bidding Program; we find the 5-in-10 baseline with a 40 percent cap to be the most relevant for the Capacity Bidding Program, especially for the residential option. However, as we discuss below, costs and benefits are not clear. Hence, we delay implementation to the mid-cycle review in 2021, where we can complete the record. This decision also establishes a working group to discuss and recommend future options for retail demand response baseline methods. A working group report with recommendations shall be included in the Utilities' 2023-2028 demand response portfolio application. We discuss these directives in detail below.

4.1. Interaction of Retail Baselines and Wholesale Baselines

During a March 22, 2019 workshop, the Utilities gave a presentation on current Commission-approved retail baselines; CAISO wholesale baselines, including meter generator output; similarities and differences between wholesale and retail baselines; the interaction between wholesale and retail baselines; and the costs for expanding baseline options and funding options. In their presentation, the Utilities contend that the interaction between retail and wholesale baselines creates issues for calculating performance. The Utilities indicate difficulties in calculating performance based on individual customer performance versus aggregated performance and difficulties in calculating performance using a different wholesale baseline (*i.e.*, 5-in-10) versus retail baseline (*i.e.*, 10-in-10.) In comments to an April 8, 2019 Ruling, SDG&E adds that wholesale baselines are applied for energy measurement at a CAISO resource level, whereas the retail baseline is applied for both capacity and energy measurement.[175] The Commission acknowledges the interaction between the wholesale baseline methods and the current retail baseline and agrees that this interaction creates issues for calculating performance. Below, we address the changes needed to be made in either the Auction Mechanism or the retail demand response programs.

4.2. Baseline Changes Needed for Auction Mechanism

As previously described, the FERC recently approved four new baseline methods to be used for settlement purposes in the CAISO market, including the 5-in-10 method for residential end-users. The April 8, 2019 Ruling asked parties whether the Commission should grant or limit adoption of the FERC approved baseline methods for settlement purposes in the Auction Mechanism.

The Council contends that because the Auction Mechanism is a wholesale resource, it is unclear why any CAISO baseline options would be precluded from use for settlement purposes.[176] Both the Council and OhmConnect state that the Auction Mechanism pro forma allows Sellers to use any CAISO baseline; thus,

[175] SDG&E Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 2.

[176] Council Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 4-5.

the newly approved baseline methods are acceptable.[177] SCE concurs with this statement.[178] In reply, PG&E asserts that the Council and OhmConnect mischaracterize the Auction Mechanism exclusively as a wholesale mechanism and argues that the Auction Mechanism should be considered a wholesale and retail mechanism subject to both retail and wholesale rules. Hence, PG&E, maintains that the Commission has the jurisdiction to approve new baselines. With that in mind, PG&E, along with SCE, supports enabling Providers to elect wholesale baseline options based on the Provider's CAISO market integrated resource composition, especially since the Provider is ultimately responsible for undertaking the baseline performance calculation through its Scheduling Coordinator.[179]

The Auction Mechanism is a wholesale and retail mechanism and requires that any baselines used for settlement purposes should be approved by the Commission. Accordingly, we adopt the four baseline methods approved by the FERC for use in the Auction Mechanism: 1) a day matching customer load 10-in-10 baseline with a 20 percent cap; 2) a weather matching baseline with a 40 percent cap; 3) the use of control groups; and 4) a five-in-ten baseline for residential end-users, with a 40 percent cap. At this time, we decline to adopt or authorize the use of the Meter Generator Output as a baseline method in the Auction Mechanism. As noted by SDG&E, Council, and PG&E, this is not the appropriate proceeding, as certain issues would not apply solely to the current

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[177] *Id*. at 5 and OhmConnect Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 4.

[178] SCE Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 2-3.

[179] PG&E Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 2-3 and PG&E Reply Comments to April 8, 2019 Ruling, May 3, 2019 at 1-3.

models of demand response.[180] In comments to the proposed decision, CESA disagrees with this contention arguing that the Meter Generator Output baseline was adopted by the CAISO in the Energy Storage and Distributed Energy Resources Phase I initiative for the explicit purpose of measuring the performance of demand response resources with storage.[181] CESA's statement acknowledges that the Meter Generator Output baseline was adopted by the CAISO to measure performance of demand response resources with storage in a forum focused on distributed energy resources. Accordingly, the Meter Generator Output baseline should not be considered in a proceeding that solely addresses demand response.

Relatedly, OhmConnect supports allowing the use of different baseline methods for energy settlement at CAISO and Demonstrated Capacity invoicing at the Utility and recommends the Commission permit such usage.[182] We are concerned about the potential challenge in validating resource performance. The Commission will continue to study this issue but at this time, we require that the baseline method used by the Provider for energy settlement at CAISO be the same as the baseline method used by the Provider to invoice Demonstrated Capacity. The Commission will consider this issue in the proceeding for the next demand response activities and budget application.

4.3. Baseline Changes Needed for Retail Demand Response

[180] PG&E Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 3, SDG&E Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 3, and Council Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 5.

[181] CESA Opening Comments to the Proposed Decision, June 20, 2019 at 11.

[182] OhmConnect Opening Comments to April 8, 2019 Ruling, April 24, 2019 at 3.

The April 8, 2019 Ruling asked parties whether the current retail baseline for the Capacity Bidding Program should be revised, what the revisions would entail, and what implementation timeline should be adopted. The ruling also asked if there are other reasons the Commission should consider revising the current 10-in-10 baseline for retail demand response, what the revisions would look like and what implementation schedule the Commission should adopt.

We begin with a discussion of the baseline for the Capacity Bidding Program. The Utilities explained during the March 22, 2019 workshop that the relationship between the retail and wholesale baselines results in mismatches.[183] Multiple parties agree that the retail energy baseline informs the capacity payment in the Capacity Bidding Program creating a need to revise the current 10-in-10 baseline with a plus or minus 40 percent cap.[184] Specifically, the Council explains that Rate Schedule E-CBP indicates that the CBP baseline is used to calculate performance during dispatch, which in turn determines the monthly capacity payment or penalty for each aggregator.[185]

We agree that the baseline for the Capacity Bidding Program should be revised. D.17-12-003 previously recognized that new baselines are needed for the residential Capacity Bidding Program.[186] Furthermore SDG&E points out that research by the Baseline Analysis Working Group also indicated that the current retail Capacity Bidding Program baseline is not accurate for residential

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[183] April 8, 2019 Ruling, Attachment A at 18-24.

[184] PG&E Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4, SDG&E Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4, SCE Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4, and the Council Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 5.

[185] Council Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 5.

[186] *Id*. at 4.

customers. For example, the Council contends that the 10-in-10 baseline does not effectively measure performance of customers with variable loads or weather sensitive customers.[187]

SDG&E cautions that a new baseline should be done with consideration of the current wholesale baselines. The Council recommend adoption of the 5-in-10 baseline as a replacement for the 10-in-10 baseline as the single most effective solution if a single revised baseline is adopted for Capacity Bidding Program.[188] PG&E supports adopting the 5-in-10 baseline in addition to the current 10-in-10 baseline option for the Capacity Bidding Program.[189] As we previously stated, the FERC recently approved use of the 5-in-10 baseline with a 40 percent cap, for settlement purposes for residential customers. Supporting the 5-in-10 baseline, SCE states that the similarity to the 10-in-10 baseline may result in lower implementation costs. SCE agrees with the Council that implementation of the 5-in-10 baseline could allow customers with less consistent daily peak loads to participate.[190] While we agree that the 5-in-10 baseline should result in lower implementation costs, we have insufficient information on the record regarding costs to adopt the 5-in-10 baseline.

Parties were asked to comment on a timeline for developing and approving revisions to the current Capacity Bidding Program baseline. SDG&E highlights that in D.17-12-003, the Commission directed it and SCE to pilot a Capacity Bidding Program residential option beginning with the mid-cycle

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[187] Council Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4.

[188] Council Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 6.

[189] PG&E Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4-5 and PG&E Reply Comments on April 8, 2019 Ruling, May 3, 2019 at 4.

[190] SCE Reply Comments on April 8, 2019 Ruling, May 3, 2019 at 3 and Council Opening Comments on April 8, 2019 Ruling, April 24, 2019 at 4.

review. SDG&E suggests the Commission review the 5-in-10 baseline simultaneous with the review of the Capacity Bidding Program residential option. We find this timeline to be reasonable. The Utilities are directed to include a proposal in their 2020 mid-cycle advice letter filing for implementing the 5-in-10 baseline for residential customers; the proposal shall include estimated costs, statistics about the accuracy of the aggregate and individual baseline, and a timeline. If implementation costs are less than the benefits of the improved baseline, staff will recommend adoption in its resolution.

We turn to additional reasons for revising the current 10-in-10 baseline. All parties are supportive of considering additional baseline options. However, PG&E recommends a prudent approach, cautioning that it is unrealistic to implement all baseline options that the CAISO has approved because what works in the wholesale market may not work in the retail world.[191] SDG&E and SCE recommend establishing working groups or holding workshops to identify policy implications, operational challenges, and additional budget requirements.[192] We find this to be a prudent approach.

Accordingly, we establish the Demand Response Retail Baseline Working Group to be facilitated by the Energy Division. The working group shall begin to meet within 90 days after the issuance of this decision. Over the course of the subsequent 18 months, the group shall develop proposals to address the issues listed in Table 9 below. The Baseline Working Group shall develop a report that the Utilities shall include in testimony for their 2023-2027 demand response budget and activities application to be filed in November 2021. To ensure a

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191 *See* PG&E Opening Comments to April 8, 2019 Ruling, April 15, 2019 at 5.

192 SDG&E Opening Comments to April 8, 2019 Ruling, April 15, 2019 at 4 and SCE Opening Comments to April 8, 2019 Ruling, April 15, 2019 at 6.

timely effort, the report shall be served to all parties (using the service list for this proceeding) no later than April 1, 2021.

Table 9 **Demand Response Retail Baseline Working Group Issues to Address**
1. Assess if adjustment cap of + or – 40 percent is still suitable for retail 10-in-10 when the day of adjustment for wholesale is + or – 20 percent.
2. Consider whether the customer or the Utility/Aggregator should select the retail baseline and determine the pros and cons of each.
3. Consider flexibility in changing retail baselines.
4. Consider whether the wholesale and retail baseline should be aligned, or if they can be different.
5. Consider the pros and cons of an aggregate versus individual baseline.

5. Battery Storage Eligibility for Auto Demand Response Control Incentives

Based on a report and recommendations from the Utilities, we decline to revise the design of Auto Demand Response. We also maintain the current policy that battery storage controls are not eligible for auto demand response control incentives.

On March 7, 2019, the Utilities filed both a status report and a proposal to address the six issues, as required by D.18-11-029. In the report, the Utilities state that presentations were made by the Utilities, CESA, and Itron during the January 10, 2019 teleconference and the January 31, 2019 workshop.

The Utilities provided a presentation on the SGIP during the January 10, 2019 teleconference. The presentation discussed the goals, incentives, operations, and requirements of the program and the relationship with demand response. During the teleconference, several battery integrators noted that they manage batteries from their cloud, making specific or add-on Auto Demand Response controls or communications unnecessary.[193] The battery integrators also stated that they are primarily interested in value or service stacking to achieve a better cost-benefit ratio.[194]

During its workshop presentation, CESA explained that it supports Control Incentives for battery storage controls stating that smaller battery systems not controlled through the cloud may need the incentives to add or install controls.[195] PG&E argues that smaller systems tend to rely on cloud-based controls because it is more effective to control small battery systems through aggregation rather than individually.[196] CESA also contends that older SGIP systems could benefit from Control Incentives. The March 7, 2019 report indicates that CESA did not provide data to support its two contentions. The report points out that other battery integrators present at the workshop "do not want to commit capacity specifically for demand response or allow someone else to control the battery for what they see as low compensation by the demand response program and the Control Incentive."[197]

During the workshop, the Utilities provided an overview of Auto Demand Response. In their presentation, the Utilities jointly expressed general support for the current Control Incentive. The Utilities also expressed opposition to offering a Control Incentive for battery storage controls.

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193 Joint Investor-Owned Utility Update on Progress of Strategy Proposal for Battery Storage Participation in Auto Demand Response, March 7, 2019 at 5-6.

194 *Id*. at 6.

195 *Ibid*.

196 *Id*. at 7.

197 *Ibid*.

Itron presented battery energy storage demand response observations from the 2017 Advanced Energy Storage Impact Evaluation, a high-level overview of the SGIP study, and details of the impact evaluation.

The Utilities' proposed resolutions to the six issues are presented as follows:[198]

1) Should the Commission authorize the Utilities to continue to provide auto demand response control incentives (Control Incentives) for battery storage controls to nonresidential customers? The Utilities state that they support not offering Control Incentives. The Utilities contend that, based upon discussions from the teleconference and workshop, stakeholders stated a preference to changing rate structures and demand response program designs rather than changing the current Guidelines. According to the Utilities' report, "through the stakeholder process, it was determined that most batteries are equipped with controls, either by the manufacturer, or installer, which allows the battery to be controlled (by-third-parties or customers) automatically for load management purposes by third-parties or customers."

2) Should the Commission allow residential customers to receive a Control Incentive for battery storage controls? The Utilities support not offering Auto-demand response incentives for energy storage controls. Again, the Utilities state that stakeholders prefer changing rate structures and demand response program designs rather than changing the Guidelines for battery energy storage controls. The Utilities claim that "most batteries are equipped with controls, either by the manufacturer, or installer, which allows the battery to

[198] *Id*. at 8-10.

be controlled (by third-parties or customers) automatically for load management purposes by third-parties or customers."[199]

3) Should the Commission limit the Control Incentives for battery storage to hardware and software costs, as currently provided by PG&E? The Utilities support prohibiting Control Incentives for battery energy storage, based upon discussions from the workshop.

4) Should the Commission adopt the same incentive structure developed in the annual Guidelines update process established in Ordering Paragraph No. 8 of D.18-11-029 or should the Commission adopt a separate Control Incentive structure for battery storage controls? The Utilities support prohibiting Control Incentives for battery energy storage; therefore, no incentive structure is proposed.

5) If the Commission adopts a separate Control Incentive structure for battery storage controls, what should that structure entail? The Utilities support prohibiting Control Incentives for battery energy storage at this time; therefore, there are no recommendations of a separate control incentive structure for battery storage controls. The Utilities do not provide any further support for this position.

6) What precautions should the Commission adopt to ensure ratepayers are not paying more than one incentive for the same control? The Utilities support prohibiting Control Incentives for battery energy storage and express concern that adopting Auto Demand Response guidelines for battery controls could result in double payments. The Utilities explain that "it is difficult to isolate the incremental or Auto Demand Response-only portion of the costs of the battery controls which is needed to ensure ratepayers are only paying for the

[199] *Id*. at 8-10.

incremental costs of the controls and that ratepayers are not paying for the same thing twice."[200]

No party commented on the report or the recommendations.

As previously stated, in D.18-11-029, the Commission determined that it should consider establishing policies for battery storage in Auto Demand Response but directed that until the Commission adopts guidance on battery storage policy issues, the Utilities shall not provide Control Incentives for battery storage controls.[201] The Utilities state that stakeholders prefer changing rate structures and demand response program designs rather than changing the Guidelines for battery energy storage controls. No party objected to this statement. The Utilities also state that most batteries can already be controlled automatically for load management purposes by third-parties or customers. No party objected to this statement. Given the limited record we have on this subject, we find it reasonable to maintain the status quo for Auto Demand Response and Control Incentives.

The Utilities also contend that it is difficult to isolate the Auto Demand Response-only portion of the costs of the battery controls. No party objected to this statement. We agree that the Commission needs to have the ability to separately account for these costs to ensure ratepayers are only paying for the incremental costs of the controls and that ratepayers are not paying for the same thing twice. Accordingly, we decline to revise our current policy that battery storage is not eligible for Control Incentives.

6. Comments on Proposed Decision

200 *Id*. at 10.

201 Except in the case where such applications had previously been received.

The proposed decision of Administrative Law Judge Hymes in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on June 20, 2019 by the CAISO, CESA, CLECA, Joint Parties (CPower, the Council, OhmConnect, Enel X North America, Leapfrog Power, Inc.), Olivine, PG&E, Public Advocates Office, SCE, and SDG&E. Reply comments were filed on June 25, 2019 by CLECA, Joint Parties, PG&E, Public Advocates Office, and SCE. Revisions and corrections have been made throughout this decision in response to the comments. We address one specific comment below.

The proposed decision included the option for a Provider to submit a partial invoice if 95 percent of Revenue Quality Meter Data was not available. In comments on the Proposed Decision, the Joint Parties expressed a preference for invoicing based on timely provided Revenue Quality Meter Data and concerns about the partial invoice option.[202] If partial invoice option is to be allowed, the Joint Parties proposed invoicing thirty days after settling with the CAISO using a Commission approved Validation, Editing and Estimation methods. Joint Parties proposed submitting adjusted invoices at a later time if the final Revenue Quality Meter Data is found to be higher than the estimated data.[203] PG&E raises many questions about the process for partial invoices.[204] PG&E opposes using a Validation, Editing, and Estimation method because of concerns that the providers could "game" the estimation process to invoice at a higher amount.[205]

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[202] Joint Parties Comments at 10-11.

[203] Joint Parties Comments at 10-11.

[204] PG&E Comments at 10-11.

[205] PG&E Reply at 4.

At this time, we remove the option to submit partial invoices because the Joint Parties prefer invoicing using timely provided Revenue Quality Meter Data.[206] The issue of penalties for failure to deliver Revenue Quality Meter Data is one of the topic that may be discussed during the working groups (Table 6), and the partial invoicing option can be explored as part of this topic.

7. Assignment of Proceeding

Martha Guzman Aceves is the assigned Commissioner and Kelly A. Hymes is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. The Evaluation Report indicates that the Auction Mechanism engaged new customers in demand response.
2. The Evaluation Report indicates that the Auction Mechanism has engaged new Providers to bid into the Auction Mechanism.
3. The Evaluation Report indicates that the Auction Mechanism bidders offered competitive capacity prices.
4. One of the biggest challenges the Auction Mechanism faced was integration into the CAISO market.
5. While the Auction Mechanism engaged new Providers, concerns and challenges occurred and, in some cases, led to market concentration.
6. Energy bid prices offered by Auction Mechanism Providers were not competitive in the wholesale market.
7. The Evaluation Report indicates that Providers were improving their performance in aggregating and providing the required capacity but encountered Utility and CAISO system integration challenges.

[206] Joint Parties Comments at 10-11.

8. The lack of an *ex ante* forecasting method to estimate the contract capacity or Supply Plan capacity resulted in the absence of a standard to evaluate the accuracy of the capacity claimed on the Supply Plan or the Demonstrated Capacity invoices.

9. The Evaluation Report concludes that comparisons of Supply Plan or Demonstrated Capacity versus the contract capacity can only be regarded as inconclusive.

10. The Evaluation Report indicates that some Providers delivered reliable performance while others did not.

11. The Auction Mechanism succeeded in engaging new Providers and customers, thus enhancing the role of demand response in meeting the state's resource planning needs and operational requirements.

12. The Evaluation Report indicates that the poor performance of some Providers is not systemic.

13. The Auction Mechanism met three of the six criteria for success.

14. The Auction Mechanism is a work in progress that may require iterations of improvements.

15. Almost all parties support the Two-Step Approach to improving the Auction Mechanism, to a degree.

16. It is reasonable to test targeted corrections and contract amends to address the more critical changes to ensure reliability of the Auction Mechanism and improve performance inadequacies.

17. A start and stop approach to the Auction Mechanism does not present a solid regulatory foundation for the demand response industry to flourish.

18. Corrections can be made to allow the Auction Mechanism to successfully meet the remaining three criteria and move on to permanency.

19. It is reasonable to maintain the current level of funding for Auction Mechanism solicitations.

20. The second auction approved in D.17-10-017 is a special case.

21. Using the values recommended by CLECA for pro-rating the contract for the seven-month 2020 deliveries better reflect the higher capacity value of the summer months relative to the first four winter months of the year.

22. Using the pro-rating approach recommended by CLECA should ensure that the appropriate amount of capacity will be available when it is needed the most.

23. The proposed schedule for the 2019 solicitations in Table 3 allows adequate time to process the advice letters, which will seek approval of revised pro forma contracts and request for offer protocols implementing changes adopted herein.

24. Due to the 2019 solicitation timeline, the procurement of capacity by the Utilities will occur after the year-ahead resource adequacy filings for 2020.

25. Appropriate due process for approval of the executed contracts can occur during the review and approval of the solicitation structure, evaluation criteria, and pro forma contract.

26. The participation of the Independent Evaluator and Energy Division in the Procurement Review Group provides additional oversight of the solicitation.

27. The schedule in Table 3 balances appropriate regulatory oversight with urgency.

28. The improvements contained in the advice letters are crucial improvements and the Commission should ensure that they have been adhered to properly through the advice letter process.

29. The expedited timelines recommended by the Council, Joint Demand Response Parties and OhmConnect for a 2019 Demand Response Auction Mechanism solicitation are not realistic.

30. Prior to this decision, the Commission has not formally adopted a goal for the Auction Mechanism.

31. Parties agree that the goal of the Auction Mechanism should be to meet changing grid needs or benefit the grid.

32. Responses suggest that the Commission may not need to establish a completely new goal for the Auction Mechanism but rather build upon the previously adopted goal for demand response.

33. The goal for the Auction Mechanism should align with past Commission policy statements regarding increasing the role of third-party providers.

34. Parties generally agree that the Commission should focus on changes in the Auction Mechanism to improve performance and reliability.

35. It is reasonable to adopt the proposed critical improvements that received the most support from parties.

36. The Evaluation Report found that the residential set-aside caused the Utilities to skip over lower-cost non-residential bids and procure higher-cost residential aggregations to fill the 20 percent set-aside.

37. Most parties support the elimination of the residential set-aside.

38. The residential set-aside results in more costs than benefits.

39. The Evaluation Report and the Independent Evaluator found that the Auction Mechanism market was becoming concentrated.

40. Limiting market share could have unintended consequences including inefficiencies, increased prices and reduced competition.

41. There is party support for a 10 percent set-aside limited to new market entrants.

42. A 10 percent set-aside for new market entrants could help the Auction Mechanism achieve the goal of spurring innovation and growth of a competitive third-party market and decrease market concentration.

43. Participation in another demand response program does not require the Provider to be capable of participating in the CAISO market.

44. Defining a new market entrant as a Provider who has not integrated any demand response resources into the CAISO market during the three years prior to a new Auction Mechanism solicitation involving any form of market-integrated demand response including but not limited to the Auction Mechanism or other resource adequacy contracts, will provide additional flexibility to attract new Providers.

45. The Evaluation Report indicated that the August bid price cap had several negative consequences including limiting competition and, perhaps, encouraging bidders to offer flat pricing throughout the year as opposed to pricing based on market value.

46. All parties agree that the August bid price cap should be eliminated.

47. Parties agree that further discussion of the Net Market Value cap or another replacement for the August bid price cap is warranted.

48. Reliability Demand Response Resources are not designed to be used on a regular basis to address grid reliability needs.

49. The Evaluation Report highlighted that the small quantity of Reliability Demand Response Resources bid and contracted through the Auction Mechanism led to the exclusion of Reliability Demand Response Resources from the analysis of the Auction Mechanism.

50. The infrequency of Reliability Demand Response Resources use could lead to difficulties with ensuring accountability.

51. Reliability resources are not as flexible and useful to the CAISO.

52. Publication of Auction Mechanism contract summaries could improve transparency.

53. The Commission's objective for Step One of the Two-Step Approach is to improve visibility and increase transparency.

54. Our objective for the first step toward improving the accuracy of Qualifying Capacity is to ground estimates of demand response capacity by referencing historical performance data as much as possible at every state of a resource's development prior to the delivery or showing month.

55. Reinstating the requirement that Qualifying Capacity shall incorporate historical performance data aligns the Auction mechanism with the resource adequacy proceeding.

56. Most parties support the use of an independent monitor to review Provider Supply Plans.

57. There is insufficient data in the record regarding the cost of the independent monitor.

58. The Utilities' Auction Mechanism contract manager currently reviews the Providers' Supply Plans.

59. Qualifying Capacity Proposals from OhmConnect and Joint Proposal Parties do not adequately address the findings of the Evaluation Report.

60. The Joint Proposal Parties' proposal ignores the finding that without an ex ante forecasting method, we cannot evaluate the accuracy of the capacity claimed on the Supply Plans or the Demonstrated Capacity invoices.

61. The Plausibility Test does not propose any standards for what is plausible, which creates potential subjectivity.

62. The CAISO and the Commission's baseline method measurement of a resource's performance, in terms of capacity delivered, is based on resource level aggregated load drop, not the summation of individual customers' load reduction.

63. Qualifying Capacity estimation methods should be based on resource level aggregated load drop.

64. Additional time may be needed by the Utilities for review and analysis in light of the new Qualifying Capacity data submission requirements described in this decision.

65. The Evaluation Report concludes that the Resource Adequacy Availability Incentive Mechanism penalties and replacement capacity requirements under the Commission's Resource Adequacy program have not effectively incentivized performance.

66. Objectives for Step One also include deterring undesired market behavior, as well as improving accuracy and performance and implementation for a 2019 solicitation.

67. The adoption of an improved method for estimating Qualifying Capacity should improve the accuracy of Qualifying Capacity.

68. Parties are familiar with the penalty structure used in Capacity Bidding Program.

69. Adopting punitive penalties could lead to undesired market behavior.

70. The bands developed for imposing penalties for capacity shortfalls balance the Commission's need to ensure performance and deter unwanted market behavior with a Commission intention of fairness.

71. Resources should perform according to CAISO market instructions and not below or above.

72. The CAISO must continually balance supply and demand.

73. The current pro forma language regarding contract default due to underperformance is unclear.

74. The Capacity Bidding Program tariff does not contain a default provision for failures to perform relative to capacity nominations.

75. The Evaluation Report indicates a mixed but improving record regarding a Provider's ability to align Supply Plan and Demonstrated Capacity amounts with contracted capacity.

76. There is no standard available to evaluate the accuracy of the Demonstrated Capacity invoices based on the Must-Offer-Obligation.

77. The frequent use of the Must-Offer-Obligation option allows resources to bid at high prices and not dispatched; results in capacity verifiable on an *ex post* basis as little as two times a year; and, in combination with contracted capacity used as Qualifying Capacity on Supply Plans, results in neither *ex ante* nor *ex post* capacity being verifiable.

78. The majority of the invoices submitted by Providers were based on the Must-Offer-Obligation option.

79. Current Demonstrated Capacity invoicing has led to no visibility into the actual capacity for a significant portion of the Auction Mechanism portfolio.

80. Refining the current three invoicing options should increase visibility into Demonstrated Capacity invoicing, improve reliability of the resources, while providing flexibility to the Providers.

81. Demand Response Capacity is contracted and assessed at the aggregate resource level not the individual customer level.

82. What counts in a demand response event is what all the customers in a resource as a whole can provide during the event.

83. The dispatch requirement should align with the resource adequacy requirement.

84. There are times when service accounts that move between resources during a delivery month could lead to double payments.

85. Prohibiting service account movements within a delivery month should prevent double payments.

86. There are times when moving service accounts between resources during a delivery month occurs legitimately.

87. The Joint Proposal Parties' recommendations for exemptions to the restriction of service account movements should limit the amount of double payments while providing reasonable flexibility to Providers.

88. The Evaluation Report indicates that the Utilities experienced delays in receiving Demonstrated Capacity invoices, with some delays reaching six months.

89. Adopting Demonstrated Capacity invoice deadlines should improve Utility visibility of Provider performance and reliability.

90. It is efficient to develop the record needed to address the remaining issues by using a series of working group meetings, followed by a working group report, and comments.

91. The schedule in Table 7 will allow for a decision at the end of 2019 on necessary policy matters regarding improvements to the Auction Mechanism.

92. We find it efficient to complete Step Two refinements using an informal process led by Energy Division.

93. The purpose of the refinements is to attain and, then, maintain success of the six Auction Mechanism criteria (especially those related to performance and reliability) and to strive for the goal of the Auction Mechanism.

94. The informal process, combined with the reporting, monitoring, and evaluation standards, should enable the Auction Mechanism to successfully meet the six criteria and the newly adopted goal.

95. The Auction Mechanism, as a pilot, had a permissive structure in terms of performance requirements.

96. The Evaluation Report recommends increasing performance standards.

97. Increased reporting should improve visibility into performance.

98. Quarterly performance reports could offer evidence that resources are real.

99. Quarterly performance reports could be used as a feedback loop to determine whether resources are performing in the market.

100. Quarterly performance reporting can provide a similar benefit to monthly report and be less burdensome.

101. Exclusive reliance on CAISO data can be problematic and subject to delays.

102. All parties support continued monitoring and evaluation of the Auction Mechanism.

103. It is prudent to establish a monitoring and evaluation process since we determined that the Auction Mechanism cannot be adopted as a permanent mechanism until success of the six criteria are evident.

104. A monitoring and evaluation process should be transparent, fully independent and open to stakeholder involvement and input.

105. The framework for the evaluation standards has been established: the six criteria.

106. The interaction between the wholesale baseline methods and the current demand response retail baseline creates issues for calculating customer performance.

107. The Auction Mechanism is a wholesale and retail mechanism.

108. This is not the appropriate proceeding to consider the use of the Meter Generator Output as a baseline method, as certain issues would not apply solely to the current models of demand response.

109. The baseline for the Capacity Bidding Program should be revised.

110. D.17-12-003 previously recognized that new baselines are needed for the residential Capacity Bidding Program.

111. Research by the Baseline Analysis Working Group indicated that the current retail Capacity Bidding Program baseline is not accurate for residential customers.

112. The 5-in-10 baseline should result in lower implementation costs.

113. We have insufficient information regarding costs to adopt the 5-in-10 baseline.

114. In D.17-12-003, the Commission directed SDG&E and SCE to pilot a Capacity Bidding Program residential option, beginning with the demand response portfolio mid-cycle review.

115. Reviewing the 5-in-10 baseline simultaneous with the review of the Capacity Bidding Program residential option is a reasonable timeline.

116. All parties are supportive of considering additional baseline options.

117. Establishing working groups or holding workshops to identify policy implications, operational challenges, and additional budget requirements is a prudent approach.

118. In D.18-11-029, the Commission determined that it should consider establishing policies for battery storage in Auto Demand Response.

119. The Commission directed that until it adopts guidance on battery storage policy issues, the Utilities shall not provide Control Incentives for battery storage controls.

120. The Utilities state that stakeholders prefer changing rate structures and demand response program designs rather than changing the Guidelines for battery energy storage controls.

121. No party disagreed that stakeholders prefer changing rate structures and demand response program designs rather than changing the Guidelines for battery energy storage controls.

122. The Utilities state that most batteries can already be controlled automatically for load management purposes by third-parties or customers.

123. No party disagreed that most batteries can already be controlled automatically for load management purposes by third-parties or customers.

124. The Utilities contend that it is difficult to isolate the Auto Demand Response-only portion of the costs of the battery controls.

125. No party disagreed that it is difficult to isolate the Auto Demand Response-only portion of the costs of the battery controls.

126. The Commission needs to have the ability to separately account for battery control costs to ensure ratepayers are only paying for the incremental costs of the controls and not paying twice for the same item.

Conclusions of Law

1. The Commission should approve a limited continuation of the Auction Mechanism but with crucial improvements to ensure reliability and improve performance.

2. The Commission should not adopt the Auction Mechanism as a permanent function of the demand response portfolio at this time.

3. The Commission should not expand the role of the Auction Mechanism until improvements are evident and it has been deemed successful in the areas of performance and reliability.

4. The Commission should maintain the funding levels for annual Auction Mechanism solicitation budgets.

5. The Commission should not increase the Auction Mechanism solicitation budgets significantly until performance and reliability have improved.

6. The Commission should adopt the schedule in Table 3 for a 2019 Auction Mechanism solicitation.

7. The Commission should only allow for System and Flexible resource adequacy procurement in the 2019 Auction Mechanism solicitation but allow for System, Local and Flexible in post-2019 solicitations.

8. The Commission should not bypass advice letter approval of the critical improvements to the Auction Mechanism adopted herein.

9. The Commission should adopt critical improvements that lead to accurate Qualifying Capacity and Demonstrated Capacity.

10. The Commission should eliminate the 20 percent residential set-aside.

11. The Commission should allow market forces to lead the way to a competitive Auction Mechanism.

12. The Commission should eliminate the August bid price cap and continue to study replacements for the cap.

13. The Commission should limit the role of Reliability Demand Response Resources and exclude it from the Auction Mechanism.

14. The Commission should require the Utilities to publish Auction Mechanism contract summaries.

15. The Commission should reinstate the requirement that Qualifying Capacity shall incorporate historical performance data where possible.

16. The Commission should adopt a Qualifying Capacity estimation method that is based on historical data and implementable in a 2019 Auction Mechanism solicitation.

17. The Commission should not adopt the Qualifying Capacity proposals from OhmConnect and the Joint Proposal Parties.

18. The Commission should adopt a penalty structure that focuses on shortfalls in Demonstrated Capacity and can be implemented for a 2019 solicitation.

19. The Commission should not adopt punitive penalties at this time.

20. The Commission should incentivize Auction Mechanism resources to perform as accurately as possible.

21. The Commission should not adopt incentives for over-performance in the Auction Mechanism.

22. The Commission should revise the definition of an Auction Mechanism contract default due to underperformance for the 2019 solicitation.

23. The Commission should refine the current three Demonstrated Capacity invoicing options as indicated in Appendix B of this decision.

24. The Commission should restrict service account movements within a delivery month to ensure minimize double counting of customer performance.

25. The Commission should adopt Demonstrated Capacity invoicing deadlines.

26. The Commission should require quarterly performance reporting for all Auction Mechanism resources.

27. The Commission should establish a monitoring and evaluation process for the Auction Mechanism.

28. The Commission has jurisdiction regarding the approval of baselines for settlement purposes for the Auction Mechanism.

29. At this time, the Commission should not adopt or authorize the use of the Meter Generator Output as a baseline method in the Auction Mechanism.

30. The Commission should review the 5-in-10 baseline for residential customers simultaneous with the review of the Capacity Bidding Program residential option in the mid-cycle review.

31. The Commission should establish a working group process to develop proposals to address retail baseline issues.

32. The Commission should retain the current Auto Demand Response and Control Incentives Guidelines.

33. The Commission should not revise its policy that battery storage is not eligible for Control Incentives.

O R D E R

IT IS ORDERED that:

1. A Two-Step Approach to improving the Demand Response Auction Mechanism (Auction Mechanism) is adopted as follows: Step One is the adoption of critical improvements as delineated in Ordering Paragraphs (OPs) 6

through 11, which allows for a 2019 solicitation of the Auction Mechanism. Step Two is an iterative approach to continuous improvements of the Auction Mechanism that begins with a series of working group meetings leading to a second decision, as described in OP 12, and evolves into an informal refinement process led by the Commission's Energy Division to be developed further in the Step Two decision.

2. The following annual budgets for Demand Response Auction Mechanism solicitations are authorized: in year 2019 - $5.70 million to Pacific Gas and Electric Company (PG&E), $5.16 million to Southern California Edison Company (SCE) and $1.92 million to San Diego Gas & Electric Company (SDG&E); in years 2020, 2021 and 2022 -- $6 million each annually to PG&E and SCE and $2 million to SDG&E. PG&E, SCE, and SDG&E shall procure system and flexible resource adequacy only during the 2019 solicitation (for 2020 deliveries) but may procure system, flexible and local resource adequacy for the other authorized solicitations.

3. The authorized costs in Ordering Paragraph 2 above shall be recovered through the following methods: Pacific Gas and Electric Company: track costs associated with the Demand Response Auction Mechanism (Auction Mechanism) in a subaccount in the Demand Response Expenditure Balancing Account; San Diego Gas & Electric Company: track costs associated with the Auction Mechanism in its Advanced Metering and Demand Response Memorandum Account; and Southern California Edison Company: track all Auction Mechanism related costs in its Base Revenue Requirement Balancing Account.

4. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) shall implement the

2019 Demand Response Auction Mechanism (Auction Mechanism) solicitation using the following schedule:

Schedule for 2019 Auction Mechanism Solicitation with 2020 Deliveries	
Activity	**Date**
Utilities Submit Tier Two Advice Letters with Contract Improvements and Request for Offer Guidelines	August 12, 2019
Commission Approves Advice Letters	September 11, 2019
Utilities Launch Request for Offers for Deliveries Beginning 2020	October 11, 2019
Utilities Submit Tier One Advice Letters with Executed Contracts	January 10, 2020
First Supply Plans Submitted	April 1, 2020
Deliveries Begin	June 1, 2020

5. The following goal for the Demand Response Auction Mechanism is adopted: *To help California meet its environmental objectives, cost-effectively meet the needs of the grid, and enable customers to meet their energy needs at a reduced cost while spurring innovation and growth of a competitive third-party market.*

6. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) shall implement the following improvements to the Demand Response Auction Mechanism (Auction Mechanism) for Step One: a) Providing Accurate Qualifying Capacity estimates as further explained in Ordering Paragraph 7; b) Imposing a penalty structure for shortfalls in Demonstrated Capacity as further explained in Ordering Paragraph 10; c) Calculating Demonstrated Capacity on invoices as further explained in Ordering Paragraph 11; d) Establishing invoice deadlines as further explained in Ordering Paragraph 12; e) Replacement of the residential set-aside with a 10 percent set-aside limited to new market entrants; f) elimination of the use of the

August bid price cap; g) Exclusion of the Reliability Demand Response Resources in the Auction Mechanism; and h) Publication of Auction Mechanism contract summaries to include the name of the counterparties, product type, customer class, contracted capacity and contract term.

7. Beginning with the 2019 Demand Response Auction Mechanism solicitation, Demand Response Providers (Providers) shall be required to provide estimates of Qualifying Capacity for a resource by referencing historical performance data. Providers shall provide this estimation at three stages: a) Submission of a capacity bid into the Auction Mechanism solicitation; b) Submission of the year-ahead resource adequacy plan; and c) Submission of the monthly Supply Plan. Estimates shall be consistent with the guidance provided in Appendix A of this decision. If historical performance data is not available, the Provider shall reference publicly available performance data that best represents the anticipated performance of the resource, while complying with the guidance provided in Appendix A.

8. The Director of the Energy Division is authorized to work with parties to develop a standardized reporting format for Auction Mechanism Providers to submit the estimates of Qualifying Capacity, as required by Ordering Paragraph 7.

9. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) shall require their Demand Response Auction Mechanism (Auction Mechanism) Contract Managers to review Qualifying Capacity estimates, as established in Ordering Paragraph 7, along with the Providers' Auction Mechanism Supply Plans. The role of the Contract Manager is separated from the Utilities' demand response management staff.

10. The following payment structure is adopted for the 2019 Auction Mechanism solicitations and may be revised in the future, including the addition of stricter penalties:

Price De-Ration and Payment Forfeiture for Demonstrated Capacity Shortfalls		
Band	**Range of Demonstrated Capacity (% of QC)**	**Payment**
Tolerance	>90% to 100%	Capacity Price ($/kW)*QC (kW)
Pro-rated	>70% to 90%	Capacity Price ($/kW)*DC (kW)
De-rated	50% to 70%	Capacity Price ($/kW)*DC (kW)*75%
Forfeiture	<50%	$0
QC: Resource's Qualifying Capacity on the monthly supply plan for the invoiced month DC: Resource's Demonstrated Capacity for the invoiced month Capacity Price: Resource's contract purchase price for capacity for the invoiced month		

11. Beginning with the 2019 Demand Response Auction Mechanism solicitation, Demand Response Providers shall establish Demonstrated Capacity on monthly invoices by following the guidelines in Appendix B of this decision.

12. Demand Response Sellers in the Demand Response Auction Mechanism shall submit Demonstrated Capacity invoices using the following timeline and policies: a) Once a Seller receives 95 percent of Revenue Quality Meter Data for a resource's dispatch event, the due date for the Demonstrated Capacity invoice is no later than 30 days after receiving the data; and b) Demonstrated Capacity invoicing is at the resource level.

13. The Commission's Energy Division is authorized to facilitate a series of working group meetings to address the following issues: 1) Replacement for August Bid Price Cap; 2) Minimum Dispatch Hours; 3) Revenue Quality Meter

Data Penalty and Contract Remedy; 4) Contract Partitioning and Reassignment; 5) Bid Fees; 6) CAISO Registration and Meter Reprogramming; 7) Guidelines for Utility Audits and Withholding Payments ; 8) Cost Effectiveness; 9) Dispute Resolution Process; and 10) Refinements to Appendix A and B Guidelines. The working group shall file a report on its proposals to address these ten issues. We adopt the procedural schedule for the working group as shown in the following table. The Director of the Energy Division is authorized to modify the working group dates as needed to accommodate meeting logistics.

Activity	Deadline
Working Group Conference Call Phone: 866-832-3002 Passcode: 7708052# Time: 10:00 am to 4:00 pm	July 15 and 16, 2019
Working Group Meeting	July 22 and 23, 2019
Working Group Meeting	July 29 and 30, 2019
Working Group Files Report	August 9, 2019
Comments on Working Group Report	August 23, 2019
Reply Comments on Working Group Report	August 30, 2019

14. Parties shall respond to the questions in Appendix C of this decision. The responses shall be filed no later than August 23, 2019, along with comments to the Working Group Report, as directed in Ordering Paragraph 12. Reply comments shall be filed no later than August 30, 2019, along with reply comments to the Working Group Report, as directed in Ordering Paragraph 12.

15. Demand Response Auction Mechanism Sellers shall provide the Commission's Energy Division a quarterly performance report for all Demand Response Auction Mechanism resources. The quarterly performance report shall include, but not be limited to, bid and performance data for the showing month,

resource characteristics and dispatch trigger, and other aggregation details. The report shall be due 30 days after the end of the quarter or 30 days after receipt of 95 percent of the Revenue Quality Meter Data for the quarter. The independent consultant will anonymize and aggregate the quarterly reports into a public Demand Response Auction Mechanism Performance Summary. Energy Division is authorized to work with parties to develop a standardized format for the Seller's monthly report.

16. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) are authorized to contract with a consultant to evaluate the continuation of the Demand Response Auction Mechanism (Auction Mechanism) and assist the Commission's Energy Division in monitoring the Auction Mechanism. The Energy Division is authorized to manage the selection of the consultant and the evaluation study. The Energy Division is delegated the authority to make the final selection of the consultant. The evaluation shall include performance of delivery years 2018 through 2021, and the solicitation process for years 2019, 2020 and 2021. The Utilities and Demand Response Auction Mechanism Sellers and Providers are directed to cooperate with the consultant in terms of providing information and date. The consultant shall work with the Utility Auction Mechanism Contract Manager, and the Independent Evaluator to assist the Energy Division, as needed, to monitor the Auction Mechanism and review monthly reports. The consultant shall provide a preliminary evaluation report to the Energy Division no later than September 1, 2021. A final evaluation report shall be made available to all parties no later than December 1, 2021 for review. We authorize a separate incremental budget of $2.8 million to perform the evaluation with $1.2

million each for Pacific Gas and Electric Company and Southern California Edison Company and $0.40 million for San Diego Gas & Electric Company.

17. We adopt, for retail settlement purposes in the Demand Response Auction Mechanism, the four baseline methods approved by the Federal Energy Regulatory Commission: 1) a day matching customer load 10-in-10 baseline with a 20 percent cap; 2) a weather matching baseline with a 40 percent cap; 3) the use of control groups; and 4) a five-in-ten baseline for residential customers, with a 40 percent cap.

18. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) shall include a proposal in their 2020 demand response portfolio mid-cycle advice letter filing, for implementing the 5-in-10 baseline for residential customers, with a 40 percent cap. The proposal shall include estimated costs, statistics about the accuracy of the aggregate and individual baseline, an assessment of the benefits for using the baseline, and a timeline. Following a qualitative assessment, if the implementation costs are less than the benefits of the improved baseline, Energy Division is authorized to recommend adoption in the resolution addressing the mid-cycle review.

19. The Demand Response Retail Baseline Working Group is established, with facilitation by the Commission's Energy Division. The working group shall begin to meet within 90 days after the issuance of this decision. The working group shall develop proposals to address five baseline issues. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (the Utilities) shall include the report in testimony for their 2023-2027 demand response budget and activities application to be filed in

November 2021. The Working group shall address the five baseline issues in the table below:

Demand Response Retail Baseline Working Group Issues to Address
1. Assess if adjustment cap of + or – 40 percent is still suitable for retail 10-in-10 when the day of adjustment for wholesale is + or – 20 percent.
2. Consider whether the customer or the Utility/Aggregator should select the retail baseline and determine the pros and cons of each.
3. Consider flexibility in changing retail baselines.
4. Consider whether the wholesale and retail baseline should be aligned, or can they be different.
5. Consider the pros and cons of an aggregate versus individual baseline.

20. The assigned Commissioner and the Administrative Law Judge are delegated to the authority to revise the schedules adopted in this decision in order to ensure the efficient outcome of this proceeding.

21. Application 17-01-012 *et al.* remains open.

This order is effective today.

Dated July 11, 2019, at San Francisco, California.

MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
GENEVIEVE SHIROMA
Commissioners

President Michael Picker and Commissioner Liane M. Randolph, being necessarily absent, did not participate.

APPENDIX A

APPENDIX A

Implementation Guidelines for Qualifying Capacity

A. Sellers should provide the following details to the Utility for demand response resources being offered, with the auction capacity bid submission no later than 15 calendar days before the year-ahead filings and monthly Supply Plans are due for the Seller:
   1. Customer class (or percent of mix): Residential, Non-residential
   2. Nature of load being aggregated: such as, whole house, Air Conditioning load, storage, building load, pumps, Electric Vehicles, or other (describe)
   3. Dispatch method: automated via cloud control, or other (describe)
   4. Projected number of Service Accounts
   5. Projected aggregated load (if storage based, projected aggregated capacity)
   6. Projected percentage of load impact or reduction (if storage based, projected percentage of capacity delivered)
   7. Supporting historical performance data for A.6 (from a prior test or market dispatch for a demand response resource with similar characteristics as A.1, A.2, and A.3). Where historical data is not available, the Provider should reference suitable publicly available performance data that best represents the anticipated performance of the resource. Along with the supporting performance data, the following details for the resource associated with the supporting performance data should be provided to establish similar characteristics:
      a. Customer class (or percentage mix): Residential, Non-residential
      b. Nature of load being aggregated: such as, whole house, Air Conditioning load, storage, building load, pumps, Electric Vehicles, or other (describe)
      c. Dispatch method: automated via cloud control, or other (describe)

   d. Number of Service Accounts
   e. Aggregated load (if storage based, aggregated capacity)
   f. Percentage of load impact or reduction delivered (if storage based, percentage of capacity delivered.)
8. Estimated Qualifying Capacity = A.5 x A.6

B. Qualifying Capacity estimates should be provided for the resource adequacy measurement hours and are expected to align with the CAISO Availability Assessment Hours.
C. The same baseline must be used for estimation of Qualifying Capacity at different stages of the contract.
D. To the extent the projected percentage load impact for capacity delivered in A.6 deviates from the supporting data in A.7, the Provider should provide supplemental information to explain the reasonableness of the resulting "Estimated Qualifying Capacity" provided in A.8.
E. To the extent the contract/ resource consists of heterogenous combination of load types (in terms of A.1 through A.3 characteristics), the Provider could subdivide the contract/resource and provide the above information for each component and apply a weighted average to estimate Qualifying Capacity in A.8.
F. For auction bid submissions and the year-ahead resource adequacy filing, it is sufficient to provide the above information for the month with the highest megawatts. For monthly resource adequacy Supply Plan submissions, the above information should correspond to the actual delivery month.
G. At the auction bid submissions and the year-ahead resource adequacy filing, it is sufficient to provide the above information at the contract level. For monthly resource adequacy Supply Plan submissions, the above information must be provided at the resource level.

(END OF APPENDIX A)

APPENDIX B

APPENDIX B

Implementation Guidelines for Demonstrated Capacity Invoicing

1. Demonstrated Capacity invoice for an Auction Mechanism resource for at least 50 percent of the contracted months (rounded downward in case of a contract involving an odd number of months) during the contract term must be based on a capacity test or market dispatch. Consistent with current practice,
    a. the dispatch must be during resource adequacy measurement hours, which are expected to align with the CAISO Availability Assessment Hours,
    b. one of the dispatch months must be August,
    c. the number of consecutive months allowed with no dispatches is limited to 5 months (in a 12-month contract), and
    d. the dispatch months are permitted to be different for different resources (specifically, different resource IDs)
2. There is no change in required duration of test (2 hours) or market (a full hour) dispatch, except the August dispatch must involve a full resource dispatch for at least two consecutive hours, with the invoiced capacity reflecting the average performance over the two hours. (A combination of a market dispatch and a test could be used to satisfy the two consecutive hour requirement if the CAISO market dispatch does not cover the two consecutive hours.)
3. The current order of Demonstrated Capacity on invoices is maintained as follows: 1) If there is a full market one-hour dispatch of a resource in a month, the results must be used for demonstrated capacity; 2) If there is a two-hour test of a resources in a month, the results must be used for demonstrated capacity; and 3) Only if there is no dispatch or test of a resource in a month can the bidding detail for a resource under the Must-Offer-Obligation be used to demonstrate capacity.
4. Customer location movement between resources within a month is prohibited, except under the following circumstances:
    a. Newly enrolled customers can be added to a resource.

b. A customer who exits the Auction Mechanism may be dropped from a resource.
c. If the above changes make a resource trigger the 10 MW telemetry requirement, or have it drop below the minimum Proxy Demand Response size of 100 kw resources, resources may be split or combined mid-month to continue to meet CAISO market requirements.
d. A customer changes its load serving entity, in the event the CAISO has not removed the single load serving entity per resource requirement by 2020.

5. Seller must avoid any potential double counting of customer performance associated with service account movement permitted by the exemptions when invoicing Demonstrated Capacity.
6. The baseline method used for energy settlement at the CAISO must be the same as the baseline method used to invoice Demonstrated Capacity.
7. The baseline method used to invoice Demonstrated Capacity must be the same as the baseline method used for estimating the Qualifying Capacity on the supply plan applicable to the invoiced month.
8. Failure to invoice Demonstrated Capacity if the Utility has provided the 95 percent Revenue Quality Meter Data for a showing month will be treated as the Provider having submitted a dispatch-based invoice with Demonstrated Capacity that is 50 percent less than the Qualifying Capacity applicable to the showing month.

(END OF APPENDIX B)

APPENDIX C

APPENDIX C

Policy Questions for Step Two

1. Should the Commission require the Auction Mechanism resources to be cost-effective? If yes, what process should the Commission use to develop such protocols
2. Should the Commission allow or require Qualitative Criteria in the Auction Mechanism solicitation? If yes, what process should the Commission use to develop the criteria?
3. What process should the Commission use to address CAISO markets and resource adequacy related issues?
4. Should the Commission shift the focus of the Auction Mechanism procurement from System resource adequacy to local and flexible capacity? If yes, what process should the Commission use to make this shift?
5. What improvements could be made to streamline communication between Utilities and Providers regarding missing data, data quality concerns and gaps in data?
6. Should the Commission condition payment of invoices on registration with the Commission?
7. This decision adopts an informal, staff-led refinement process as part of the Two-Step Approach in Ordering Paragraph 1. What process steps and schedule should the Commission use to develop and adopt further refinements to the Auction Mechanism?

(END OF APPENDIX C)