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

JOINT INFORMAL COMMENTS OF SCE AND PG&E ON THE DRAM INTERIM EVALUATION REPORT

Dated: **August 15, 2018**

Southern California Edison Company (SCE) and Pacific Gas and Electric Company (PG&E) respectfully submit informal and joint comments on the California Public Utilities Commission (CPUC) Energy Division's (ED) Evaluation of the Demand Response Auction Mechanism (DRAM) Interim Report, served on July 24, 2018 ("the Interim Report").[1] These informal comments are being submitted in response to ED Staff's request, on August 6, 2018, that informal comments be submitted to the A.17-01-012 et al. service list by August 15, 2018. SCE and PG&E respectfully request the Commission to allow parties the opportunity to formally comment on the Final Evaluation Report in its entirety, including matters covered in the Interim Report, when the full analysis is completed.

SCE and PG&E appreciate the ED Staff's significant efforts in analyzing the initial DRAM pilots and presenting the Interim Report. As there are many information asymmetries between the investor-owned utilities (or IOUs, consisting of San Diego Gas & Electric Company (SDG&E), SCE, and PG&E), their contracted DRAM Sellers, bidders in the DRAM pilot RFOs, and non-market participants, the ED Staff's analysis provides valuable insights into understanding whether the DRAM pilots are serving the purpose set forth in Decision (D.) 14-12-024, which authorized the 2016 DRAM and 2017 DRAM pilots, and the goals for demand

[1] The ED originally released this interim report on July 23, 2018, to the A.17-01-012 et al. service lists. However, due to errors discovered with this version, the ED asked parties to delete the report on July 24, 2018. The ED re-issued the corrected report later that day on July 24, 2018. The following day, the ED sent an email acknowledging that the title page of the re-issued report incorrectly stated that it was the "Confidential Version", but the report itself was the public/redacted version. To avoid confusion, PG&E and SCE refer to the title page of the originally submitted report to make it clear that these comments are, in fact, based on the public version of the report, while referencing the date of the re-issued report.

response (DR) stated in D.16-09-056. This analysis further aids in understanding if the DRAM pilots are providing value, whether the pilots should be transitioned to a permanent mechanism and if so, how the DRAM can be improved to best serve the interests of IOU customers.

SCE and PG&E's comments on the Interim Report address the following criteria (which may be revised when the final evaluation report is issued):

Criterion 1 – Were new, viable, third-party providers engaged?
Criterion 2 – Were new customers engaged?
Criterion 3 – Were auction bid prices competitive?
Criterion 5 – Did DRPs meet their contractual obligations?

SCE and PG&E understand that the analysis of the two remaining criteria 4 & 6 will not be available until the final evaluation report is issued:

Criterion 4 – Were offer prices competitive in the wholesale market?
Criterion 6 – Were resources reliable when dispatched?

While the analysis in the Interim Report is generally in line with the evaluation plan that parties commented on in March 2017, it would be premature to use the analysis in its current state to draw conclusions about the success of DRAM. First and foremost, SCE and PG&E are concerned that the partial analysis of Criteria 1, 2, 3, and 5 is insufficient to support a final determination on another DRAM pilot in 2020,[2] or a transition to a permanent mechanism. In particular, the Interim Report notes that Criterion 1 cannot be fully addressed without considering viability,[3] for which the Energy Division relies on two proximate indicators: market concentration and contract reassignments and terminations.[4] SCE and PG&E, instead, suggest that an assessment of viability requires the analysis of Criterion 6, which has yet to be completed. Beyond this, SCE and PG&E believe additional information should be assessed and factored into the evaluation of these criteria, including:

- The ED should conduct an additional survey to assess progress made following the ED's survey to bidders and DRAM Sellers, which was conducted in early 2017, because more recent experience is imperative to properly informing a decision to transition to a permanent mechanism.[5]
- The IOUs and the Independent Evaluator should be surveyed, and feedback considered in the report, to allow for a more balanced analysis.[6]

[2] On August 6, 2018 ALJ Hymes issued a Ruling requesting comment on the issue of whether to conduct a fifth year of the DRAM pilot. Comments to that Ruling are due August 17, 2018.
[3] Interim Report, p. 24.
[4] Interim Report, p. 27.
[5] The Energy Division may also consider allowing the Independent Evaluator for DRAM to perform the survey with bidders on the solicitation process.
[6] Interim Report, p. 13, states that one of the objectives for this study was to "undertake a balanced analysis based on input from the range of market, utility, and regulatory actors." It is PG&E's and SCE's understanding that the Independent Evaluator was not consulted in the writing of the Interim Report.

- The analysis should include available information through the summer of the 2018 DR season, including the test and dispatch data required from the 2018-2019 DRAM Sellers under Section 3.3(b) of the DRAM contracts.
- The ED should consider a broader assessment of DRP viability that does not rely solely on the must-offer obligation (MOO) requirements.

In these comments, SCE and PG&E will provide general feedback applicable to multiple criteria, as well as specific feedback on the individual criteria.

General Feedback

The Interim Report relied on a number of surveys to understand the reasons DRAM Sellers had difficulties in meeting their contract obligations in the 2016 and the 2017 DRAM. These surveys, however, were particularly focused on the DRP perspective, and largely argue that IOU and CAISO integration challenges were the primary reasons for underperformance and nonperformance on DRAM contracts. SCE and PG&E do not dispute the general assertion that there were challenges, but believe a more balanced analysis should also include the IOU and the CAISO perspectives on these issues.

IOU challenges were described in the report as being largely attributable to customer fatigue with the Customer Information Service Request form for Demand Response Providers (CISR-DRP).[7] Shortly after the third party DRPs participating in the 2016 DRAM criticized the CISR-DRP form as being cumbersome and leading to customer fatigue, the Commission found that "direct participation is an evolving process that can be improved," and ordered the IOUs to develop a "click-through" electronic signature process that starts and ends on a third-party DRP's website and provides customer authentication and authorization for the utility to release the customer's data to a third party DRP.[8] Since then, the IOUs have submitted a series of advice letters seeking Commission approval to develop and improve upon the click-through processes. The IOUs released click-through in the first quarter of 2018, and have seen an uptick in the volume of authorizations. While SCE and PG&E concur that click-through is expected to improve the authorization process and customer experience for DRAM Sellers, the ED should consider conducting another survey post-click-through to determine if this is accurate, or if other integration or non-integration challenges remain.

SCE and PG&E worked with a wide range of DRPs with differing experience levels with IOU systems and, more generally speaking, varying levels of technical experience, resources, and preparedness. Several DRPs in PG&E's territory struggled to register for the data sharing processes utilized by over 100 third parties and did not effectively utilize the support provided to them. As a result, the Interim Report cites: "Another company noted that PG&E frequently changed customer Service Agreement Identification (SAID) numbers, and that each time this occurred the DRP was required to process a new CISR form with the affected customer.[9] PG&E

[7] Interim Report, p. 38.
[8] D.16-06-008, pp. 11-14; Finding of Fact (FoF) 5, 6, 7, and 27; Conclusions of Law (CoL) 2 and 3; and Ordering Paragraph (OP) 1.
[9] Interim Report, p. 40.

believes the DRP misunderstood PG&E's processes. PG&E clarifies that a new CISR-DRP is required if the customer moves to a new location, but not if the customer has an unrelated SAID change, such as a new rate schedule or new meter, which retains data access under the original authorization. Page 38 of the Interim Report further states that "companies indicated that they lost customers during enrollment due to…challenges stemming from IOU systems being down or non-functional." SCE believes this is in part due to improper screen scraping by third parties of its systems that caused some functionality to be down for a period of time.

PG&E and SCE agree with the 2016 and 2017 DRAM Sellers that market integration with the CAISO systems is challenging and costly. It makes economic sense that certain costs of integration are fixed and others are variable, and that there will be a learning process for bidders to fully understand such costs and properly factor in an expected margin for unanticipated challenges that all CAISO market participants face. It also makes sense that certain smaller contracts may not be economic and that some DRAM Sellers may decide to reassign or default on contracts. Another possibility is that these costs may not be economic, or cost competitive, for certain DRPs, impacting their decision to bid in future auctions.

The ability for DRPs to directly participate in the CAISO markets is exactly what the DRAM pilots were expected to test, and it is SCE and PG&E's hope that bidders, having had more experience with the CAISO markets, are factoring these challenges into their decision to participate in DRAM, and the associated costs into their bids. The IOUs allowed more leniency in contract performance in earlier years of the pilot due to CAISO integration challenges. While many of these early issues have been resolved, the IOUs and DRPs continue to work with the CAISO and CPUC in a variety of venues, including the Energy Storage Distributed Energy Resources (ESDER) stakeholder initiative and the Supply Side Working Group, to resolve remaining issues.[10] Now that the pilot and its participants have gained more experience with the CAISO integration, and related challenges are being resolved, a new survey would be helpful to assess this progress with existing and new DRAM Sellers participating in the 2018-2019 DRAM and the 2019 DRAM.

Further, the Interim Report assesses the "viability" of third parties based on demonstrating capacity, but the IOUs are learning that reliance on this measure is a shortcoming of the DRAM contract. For background, Section 1.6(a)(iii) of the DRAM contracts for the DRAM 1 and 2 Pilots allowed Sellers, in their sole discretion, to establish their demonstrated capacity through: 1) the Must Offer Obligation (MOO);[11] 2) a capacity test; or 3) dispatch results. For the DRAM 1 and 2 Pilots, all of the DRAM Seller invoices received by SCE and PG&E were based on the MOO. In the contract for the DRAM 3 Pilot, the demonstrated capacity requirements were more structured, requiring the results of a full dispatch or capacity test by the end of the first half of the

[10] Prior to the Supply Side Working Group, the Commission held several integration workshops, seeking IOU, DRP, and CAISO feedback on the status of integration activities. These workshops often highlighted a number of challenges experienced by both IOUs and DRPs, and provided the CAISO with an opportunity to discuss efforts to improve those processes. See also the IOUs' quarterly Rule 24 compliance reports, filed under the Application (A.)14-06-001 et al proceeding.

[11] The MOO is based on the average capacity amount the DRAM Seller bid into the CAISO during the availability assessment hours in the showing month.

year for DRAM Sellers providing capacity in each month of the year. Again, SCE and PG&E's DRAM Sellers only submitted MOO bids for the first five months of the year. As of this date, SCE and PG&E cannot yet determine whether the Sellers met their contractual obligations for June because not all invoices have been received.

While SCE and PG&E believe that many DRAM Sellers are able to bid capacity into the CAISO markets, information available today suggests that appropriate checks and balances do not exist to ensure DRAM Sellers can actually deliver on their full bids if called upon to do so. This contract issue stems from how net qualifying capacity (NQC) is determined for DRAM resources. For demand response resources generally, the NQC is determined through the use of load impact analysis. However, at the DRAM working group's request, the Commission permitted DRAM pilot resources to instead use the contract quantity as the NQC during the pilot period to encourage participation in market transformation.[12] This was a reasonable approach at the time, considering the lack of historical dispatch data and the pilot nature of the effort. However, this approach, coupled with the current DRAM *pro-forma* contract, creates a gap that Sellers may improperly use to claim larger MW quantities than their capacity test and/or dispatch performance would justify.

As of the date of these comments, SCE and PG&E have only seen invoices in which "demonstrated capacity" was set by Seller bids into the CAISO. Under these circumstances it is difficult for an IOU to determine, without undertaking an audit, whether or not a Seller's claim of "demonstrated capacity" represents a reliable RA resource. Further, the DRAM Pilots are currently exempt from the CAISO Resource Adequacy Availability Incentive Mechanism (RAAIM) penalties, which would have penalized Sellers for MOO shortfalls.

PG&E and SCE question whether current DRAM resources bid into the CAISO markets are truly viable resources and believe that current contract provisions are not sufficient to allow the IOUs to ensure that DRAM Sellers are capable of delivering their maximum contract quantities if fully dispatched on the same day at the same time. In short, the current DRAM pilots provide for limited performance guarantees, limited penalties, and limited enforcement of performance and capabilities. SCE and PG&E suggest a more thorough examination of and revision to the results of Criterion 1 and Criterion 5 are warranted.

Specific Feedback

Criterion 1 – Were new, viable, third-party providers engaged?

While SCE and PG&E agree that new third-party providers were engaged, the number of Offerors declined in each pilot year after the 2017 DRAM. In fact, residential markets are now dominated by one provider, despite the 20% residential set-aside. Gaining a view into whether market consolidation is occurring was a key reason for authorizing DRAM 4, and it is clear now

[12] The Commission permitted DRAM pilot participants to utilize contract quantity as the net qualifying capacity (NQC) and effective flexible capacity (EFC) for resource adequacy (RA) purposes in D. 16-06-045, OP 5a and pp. 38-39, which seemed appropriate for a pilot at that time, and reduced barriers to entry for new DRPs.

that market consolidation is occurring in the DRAM pilots.[13] Therefore, although new third-party providers were engaged in the DRAM, it remains to be seen how viable they are, and whether market consolidation will crowd out the entry of new third parties.

The Interim Report identifies DRP statements that the DRAM design should be based on a "market clearing price" auction as performed in the PJM market.[14] PG&E and SCE disagree that a "market clearing price" auction would be superior to the "price-as-bid" auction that is used today. In early DRAM workshops, DRPs suggested that the "price-as-bid" auction design led bidders to bid below their costs to win contracts. In a "market clearing price" auction, bidders would be paid the market clearing price of the highest bid awarded, which could be some amount above their bid. This would result in higher prices paid to Sellers, while also reducing the amount of MW that could be awarded on a given budget. "Market clearing price" auction designs are typically used in more competitive markets, particularly those with similar products being traded. In contrast, the DRAM pilot market is less mature and allows for a multitude of product combinations (based on various types of RA and local sub-area, residential/non-residential customer products, PDR/RDRR, etc.), which would not result in a single market clearing price, but rather one price for each combination of products. Further, "price-as-bid" auctions maximize ratepayer value by paying DRAM Sellers based on their individual costs, and nothing more. Instead of fundamental changes to the DRAM design, PG&E and SCE recommend improved performance requirements and penalties under the contract for non-performance.

Additional comments:

- The Interim Report was prepared without consulting the Independent Evaluator and does not consider the IOU experiences on viability, including analysis of numerous issues with the DRAM RFO solicitation process.[15]
- ED's analysis was based on the total number of awards; a MW-weighted figure would provide additional insights by taking into account different bid sizes.
- The market concentration of the top two market participants is over 75% of the August MW across the 2016 DRAM, 2017 DRAM, and 2018-2019 DRAM. A market consistently dominated by two players should not be considered competitive.[16]
- One DRP interviewed expressed an expectation for "collaboration" between IOUs and third parties. While there is some collaboration, including processes described in Rule 24, the DRAM specifically contracts for RA, and the contract design is specifically designed to reduce such collaboration by limiting information exchanged in the design and dispatch of the DRAM Seller's program. An IOU program, such as the Capacity Bidding Program (CBP), or a pilot, such as PG&E's Supply Side II DR Pilot, may be a better fit for such a DRP.[17]

Criterion 2 – Were new customers engaged?

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[13] D.17-10-017, Finding of Fact (FoF) 29. PG&E Advice 5284-E, Public Appendix D, p. 39.
[14] Interim report, p. 49.
[15] While many of these issues are confidential, PG&E highlights an issue with a disqualified shortlisted bidder in the 2018-2019 DRAM RFO described in PG&E Advice 5109-E, pp. 7-8.
[16] Interim Report, p. 28, Table 13.
[17] Interim Report, p. 40.

While the threshold for Criterion 2 is simply to evaluate whether new customers were engaged, SCE and PG&E caution that the year-over-year analysis used in many of the other conclusions in this section of the Interim Report is mostly a function of which DRPs won awards in a particular year, along with other factors that changed with each RFO. Engagement of new customers was not related to any of the factors chosen in the qualitative or quantitative bid evaluation process. In addition, many of the metrics rely on individual customer counts, but a more nuanced analysis would also analyze the MW-weighted average impacts and would include comparisons to similar IOU programs, both of which may lead to more insightful findings.

The Interim Report states that "The DRAM pilots clearly engaged many thousands of new, primarily residential customers in DR."[18] It is unclear how many new customers were acquired through the practice of screen scraping,[19] but SCE is concerned that screen scraping is discussed neutrally in the Interim Report as a "technique for obtaining access to customer data."[20] SCE has identified several negative impacts to its systems and operations through the use of screen scraping, including one instance when screen scraping activities caused some SCE.com functionalities to come to a halt for nearly two weeks, resulting in customer complaints to the Energy Division. In addition, screen scraping is a violation of SCE's user terms and conditions for its sce.com website and of SCE's Commission-approved Rule 25.[21] Screen scraping also can permit third parties to scrape and store information they were not authorized to access. As a "covered entity" under Rule 25, DRPs that access customer data from SCE must obtain customer authorization and provide customer notice that they are accessing the customer's data.[22] SCE provides appropriate avenues for entities to access customer data, including Green Button Connect Share My Data, and is improving access through implementation of the Click-Through system. If DRPs use screen scraping to access data instead of the appropriate avenues, SCE might not be able to determine what information was "scraped" from its system, whether the entity has customer authorization to access that data, and whether the Rule 25 transparency requirements have been fulfilled.[23]

Lastly, the Interim Report states that "the Commission could explore policy mechanisms to allow better targeting and [sic] of high energy-usage customers and their enrollment in the DRAM program. One idea suggested to accomplish this was authorizing the IOUs to make available to DRPs aggregated and anonymized customer usage data, perhaps aggregated by zip code or census tract."[24] This information is already available. For PG&E, public data is available on its

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[18] Interim Report, p. 55.
[19] Interim Report states, "Screen scraping refers to computer software that uses 'bots' to simulate humans for gathering web-based content. In the context of customer energy data access, screen-scraping involves a customer sharing their utility login and password with a DRP, and then, the DRP logging into the customer's utility account to gather customer's data such as rate information, program enrollment, and meter interval data". Interim Report, p. 71.
[20] Interim Report, p. 71.
[21] SCE's Rule 25, Section 1.a, Definition of "covered entity."
[22] SCE Electric Rule 25, Section 2.a, "Transparency."
[23] PG&E does not join in these assertions in this paragraph, because it has no independent knowledge of the facts that support SCE's assertion.
[24] Interim Report, p. 55.

website for third parties to download.[25] Similar information is available on SCE's website.[26] Additional requirements are not necessary, and the conclusions in this section should be revised.

Criterion 3 – Were bid (auction, capacity) prices competitive?

While much of this section is confidential and redacted, SCE and PG&E note that defining DRAM auction bid prices as "competitive," based on a comparison of Seller offers with the long-term avoided cost of generation, provides little value on its own and should not be the sole determinant for the results of this criterion.[27] The Commission relies on public cost effectiveness analysis and associated thresholds "to ensure that ratepayers' money is allocated to the programs that yield positive returns."[28] The DRAM pilot is currently exempt from such requirements, and bid prices are being used as a temporary proxy for a cost-effectiveness calculation. In the absence of a full cost effectiveness analysis, the Energy Division should evaluate the competitiveness of prices in a more holistic manner, including the relative value of DRAM prices to traditional RA resources and IOU programs, as well as the all-in cost of DRAM Pilot, which should consider the auction capacity prices, the contract administrative costs, and the systems costs, all of which are necessary to support DRAM today and should be considered in the context of the Commission's decision to hold another pilot in 2020 and transition to a permanent mechanism.

Based on the information available today, the Interim Report highlights that pricing over time has decreased as evidenced by increasing MWs procured to meet the budget target; however, this should also be balanced against actual performance of the DRAM resources. While the offer pricing has become generally more competitive with each successive Pilot, it is still unknown whether the Sellers can fully deliver the products at the contracted prices. The cheapest projects may not always be the most successful in implementation. Bidders have publicly stated in DRAM workshops and within the Interim Report that they used priced-to-win strategies, instead of reflecting the true cost of their offers, so there may be limited conclusions that can be drawn from falling bid prices, especially during the early years of the pilot when there are limited repercussions to non-performance.

Criterion 5 – Did DRPs aggregate the capacity they contracted (did they meet their contractual obligations?)

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[25] See PG&E Energy Data Request Program, which publishes public data sets. PG&E provides non-confidential, aggregated usage data that are available to the public and updated on a quarterly basis. These public datasets consist of monthly consumption aggregated by ZIP code and by customer segment: Residential, Commercial, Industrial and Agricultural. The public datasets must meet the standards for aggregating and anonymizing customer data pursuant to CPUC Decision 14-05-016, as follows: a minimum of 100 Residential customers; a minimum of 15 Non-Residential customers, with no single Non-Residential customer in each sector accounting for more than 15% of the total consumption. If the aggregation standard is not met, the consumption will be combined with a neighboring ZIP code until the aggregation requirements are met. https://pge-energydatarequest.com/

[26] https://www.sce.com/wps/portal/home/regulatory/energy%20data%20-%20reports%20and%20compliances/

[27] Interim Report, p. 15, "Staff decided to focus on the single most important metric for each criterion for the purpose of determining if the DRAM pilot was "successful." While other factors were considered, ED chose to focus on the long-term avoided cost of generation.

[28] D.17-12-003, p. 120.

The Interim Report's measure of success for Criterion 5 is to compare the demonstrated capacity as invoiced to the monthly contracted quantity. As stated in the general feedback section above, the use of MOO, with the use of contracted capacity equaling NQC, is insufficient for measuring demonstrated capacity. Because there are limited verification processes, penalties, and enforcement to tie the demonstrated capacity numbers to actual performance capabilities, relying on demonstrated capacity alone for analysis of Criterion 5 is unlikely to produce an accurate measure of the DRAM Sellers' performance and capabilities. SCE and PG&E believe the Commission would be remiss to form conclusions on Criterion 5 without acknowledging that a more meaningful measure of success depends on the results of the Criterion 6 analysis.

Additional comments:

- The Interim Report describes certain DRAM Seller contract obligations, DRAM Seller RA obligations, and IOU DRAM contract obligations. However, there is a misstatement in the responsibilities listed for IOUs. The Interim Report says that the IOUs are obligated to validate customer eligibility upon receipt of CISR-DRP forms from sellers,[29] but this is not the case. The receipt of a valid CISR-DRP form is a customer authorization for the IOU to release its personal energy-related information, as described in Electric Rule 24 Section D.1.a., to a non-utility DRP. It also permits the non-utility DRP to request that the IOU shorten the interval length of the customer's electric meter(s), under certain conditions, and to remove the customer from affected critical peak pricing programs.[30] The receipt of this customer authorization form does not require the IOU to validate the customer's eligibility to participate in the DRAM Seller's resource.
- The Interim Report provides figures representing the aggregate performance of DRAM Sellers, excluding non-performing DRPs, as compared between the contracted capacity and the supply plan, and between the contracted capacity and the demonstrated capacity. Such figures appear to be inconsistent between the text of that section and the same figures in Table 32.[31] The Energy Division should correct those inconsistencies.
- The Interim Report states that the Energy Division may evaluate the "MOO obligation to bid the contracted DRAM resource into CAISO markets during certain minimum number of hours."[32] SCE and PG&E support such analysis.

[29] Interim Report, p. 66.
[30] See PG&E and SCE Electric Rule 24, Section D.1.
[31] Interim Report, p. 69.
[32] Interim Report, p. 83.