PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

Pacific Gas & Electric Company
ELC (Corp ID 39)
Status of Advice Letter 6955E
As of July 11, 2023

Subject: PG&E's 2024 Demand Response Auction Mechanism Purchase Agreements

Division Assigned: Energy

Date Filed: 06-01-2023

Date to Calendar: 06-09-2023

Authorizing Documents: D2301006

Authorizing Documents: D1912040

Disposition:	**Accepted**
Effective Date:	**06-01-2023**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

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AL Certificate Contact Information:

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PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

Advice Letter Number
Name of Filer
CPUC Corporate ID number of Filer
Subject of Filing
Date Filed
Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
Effective Date of Filing
Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Energy Division staff based on the information contained in the Energy Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Energy Division's Tariff Unit by e-mail to
edtariffunit@cpuc.ca.gov

Pacific Gas and Electric Company

Sidney Bob Dietz II
Director
Regulatory Relations

Pacific Gas and Electric Company
300 Lakeside Drive
Oakland, CA 94612

June 1, 2023

Advice 6955-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: **PG&E's 2024 Demand Response Auction Mechanism Purchase Agreements**

I. Purpose

In compliance with Decision ("D.") 23-01-006 and D.19-12-040, Pacific Gas and Electric Company ("PG&E") hereby submits this advice letter the California Public Utilities Commission (the "Commission") seeking approval of four Demand Response Auction Mechanism ("DRAM") Purchase Agreements ("Purchase Agreements") executed between PG&E and three winning participants, resulting from PG&E's 2024 DRAM Request for Offers ("2024 DRAM RFO").

II. Background

On September 25, 2013, the Commission issued an Order Instituting Rulemaking ("OIR") 13-09-011 "To Enhance the Role of Demand Response (DR) in Meeting the State's Resource Planning Needs and Operational Requirements." The Commission reviewed a Resource Adequacy ("RA") Capacity Payment Mechanism for DR and Participation of Retail DR in the California Independent System Operator ("CAISO") wholesale market. On December 4, 2014, the Commission issued D.14-12-024, "Resolving Several Phase Two Issues and Addressing the Motion for Adoption of Settlement Agreement on Phase Three Issues" (later revised to be the Joint Proposal of the Joint Sponsoring Parties). In this Decision, Southern California Edison Company ("SCE"), PG&E, and San Diego Gas & Electric Company ("SDG&E") (together, "investor-owned utilities", or the "IOUs") were ordered to submit an advice letter for the DRAM pilot, together with a standard contract. The DRAM pilot was intended to test: a) the feasibility of procuring DR Supply Resources for RA with third party direct participation in the CAISO markets through an auction mechanism; and b) the ability of winning Bidders to integrate their DR Resources directly into the CAISO market.

D.14-12-024 required the IOUs to design and implement DRAM for 2016 ("2016 DRAM") and 2017 ("2017 DRAM"). An "open to the public" working group collaborated on the DRAM pilot design and developed standard contract language under the active and on-going supervision of the Commission staff.

Concurrently with the IOUs' implementation of their 2017 DRAM, the Commission addressed the need for an additional, post-2017 DRAM solicitation via the process used to review and approve the IOUs' 2017 demand response programs and budgets. D.16-06-029 approved the IOUs proposed 2017 programs and budgets, with modifications, and directed the IOUs to continue DRAM with an auction in 2017 for deliveries in 2018 and 2019 ("2018-2019 DRAM"). The DRAM working group met and discussed modifications to the third DRAM pilot that expand on the experience of the first two DRAM pilots and met Commission requirements as ordered in D.16-06-029.[1] SCE submitted an advice letter on behalf of the IOUs on September 1, 2016,[2] with the proposal resulting from the working group, including the associated auction design and pro forma contract. The Commission approved this advice letter, with modifications, in Resolution E-4817.[3] The IOUs launched the 2018-2019 DRAM RFO on or about March 10, 2017 and submitted advice letters for approval of the executed standard form DRAM resource Purchase Agreements to the Commission on June 30, 2017. The Commission approved the advice letters by disposition letter on August 14, 2017.

On April 27, 2017, in response to Petitions for Modifications ("PFM") filed by Comverge, Inc., CPower, EnerNOC, Inc., and EnergyHub (collectively, the "Joint DR Parties") and OhmConnect, the Commission determined that business opportunities for DRPs could be limited under the corresponding $27 million budget approved for the 2018-2019 DRAM RFO.[4] On October 26, 2017, the Commission issued D.17-10-017, and directed the IOUs to conduct an additional DRAM pilot solicitation in 2018 for 2019 capacity ("2019 DRAM"), and ordered the IOUs to use the final approved 2018-2019 DRAM guidelines for the additional 2019 DRAM, except that the contract term shall be limited to one year and additional guidelines were required.[5] The IOUs launched the 2019 DRAM RFO on or about January 25, 2018, and submitted the advice letter with the executed standard form DRAM resource Purchase Agreements for approval to the Commission on May 1, 2018.

The Commission approved the advice letters on September 12, 2018, by a disposition letter.

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[1] The DRAM working group's activities were conducted at the express direction and under the continuing supervision of the Commission. The DRAM working group included the IOUs, Ratepayer Advocates (Public Advocates Office ("PAO", formerly "ORA" for the Office of Ratepayer Advocates) and The Utility Reform Network ("TURN")), DR providers, Energy Division ("ED") Staff, and other interested stakeholders.

[2] PG&E Advice 4900-E, SCE Advice 3466-E, and SDG&E Advice 2949-E (collectively, "PG&E Advice 4900-E, et al").

[3] Resolution E-4817 also ordered a supplemental advice letter to be submitted demonstrating compliance with the Resolution, which was submitted on February 2, 2017. Two other supplementals were submitted on PG&E Advice 4900-E, et al. See PG&E Advice 5109-E for additional details.

[4] Petition of the Joint DR Parties for Modification of D.16-06-029 was filed February 3, 2017, in R.13-09-011. Petition for Modification of OhmConnect of D.16-09-056 was filed December 30, 2016, in R.13-09-011.

[5] See PG&E Advice 5284-E for additional details.

Concurrently with the DRAM pilots, the IOUs filed their applications for the demand response programs, pilots and budgets for program years 2018-2022 on or about January 17, 2017. D 17-12-003 adopted the demand response budgets for each of the three utilities to conduct demand response programs, pilots, and associated activities for program years 2018 through 2022. The Commission also determined in D.17-12-003 that the proceeding should remain open to consider a number of specific issues, including DRAM.

On May 22, 2018, the assigned Commissioner issued an Assigned Commissioner's Amended Scoping Memo and Ruling, ("Amended Scoping Memo") amending the scope of the proceeding to include the consideration of the DRAM pilot evaluation and extending the statutory deadline for the proceeding to July 17, 2019. The Administrative Law Judge (the "ALJ") held a status conference on June 18, 2018, to further describe the matter and allow for questions. This was followed by a workshop on July 26, 2018, to present the preliminary results of the Auction Pilot evaluation and discuss next steps, given the evaluation delay. On August 6, 2018, the ALJ issued a ruling requesting parties to respond to questions regarding next steps for the Auction Pilot. Responses were filed on August 17, 2018, and reply comments were filed on August 24, 2018.

On November 29, 2018, the Commission approved D.18-11-029, which addressed the question of continuing the DRAM pilot beyond 2019, among other issues. D.18-11-029 described the history of the DRAM pilot auctions for 2016, 2017, 2018 and 2019, and emphasized the importance of the ED's evaluation and recommendations for those pilots.[6] D.18-11-029 mentions that with the results of the ED evaluation expected in a few weeks, "[t]he Commission should wait for the results and recommendations, then hold workshops based on the recommendations, develop a record, and issue a proposed decision that is based on the results, recommendations, and record."[7]

The ED's evaluation of the DRAM pilots was issued on January 4, 2019, with subsequent revisions issued on January 7, 2019. On January 4, 2019, the ALJ issued a ruling allowing parties to file comments to propose improvements to the DRAM program and set a schedule for a workshop to discuss the proposed improvements and the ED's evaluation. Comments were submitted by parties in response to the ALJ's ruling. The workshop convened on February 12, 2019, at the Commission's San Francisco offices.

On February 28, 2019, the ALJ issued a ruling requesting parties to answer questions from the February 12 workshop, "February 28th Ruling Directing Responses to Questions Resulting from the February 11-12, 2019, Demand Response Auction Mechanism Workshop and Comments on Proposals to Improve the Mechanism." On March 29, 2019,

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[6] "We conclude that continuing the [DRAM] Auction Pilot or adopting a permanent auction mechanism should only be considered with complete results of the pilot valuation and recommendations from the Energy Division for future auction mechanisms." D.18-11-029, p. 78.) The Commission stated "[W]e also must ensure that if another auction is authorized, it is done prudently (i.e., with complete results of the evaluation.)" (*Id.* p. 80.)

[7] *Id.* p.81.

parties submitted their responses to the February 28 ALJ ruling, and reply comments were filed April 10, 2019.

The Commission issued D.19-07-009 on July 12, 2019, authorizing a two-step process with an auction to take place in 2019 for resource deliveries between June 2020 and December 2020 ("2020 DRAM"), as well as annual auctions for resource deliveries in 2021, 2022, and 2023. The Commission ordered the IOUs to implement eight improvements for the 2020 DRAM,[8] and it authorized a working group to be convened to discuss open issues, including Refinements to Appendix A and B Guidelines on qualifying capacity and demonstrated capacity, respectively. The advice letter was subsequently approved via a disposition letter issued on September 26, 2019, and the IOUs launched the 2020 DRAM RFO on October 11, 2019.

On December 23, 2019, the Commission issued D.19-12-040, which adopted certain recommendations to improve reliability and performance from a stakeholder working group report as well as other revised recommendations to the report. These refinements apply to 2021 through 2023 DRAM deliveries and addressed the remaining technical requirements and policies. In addition, in D.19-12-040 the Commission also authorized an annual schedule for refinements of the DRAM program. As required by ordering paragraph ("OP") 29, the ED led a workshop on January 21, 2020, to discuss refinements for the 2021 DRAM, and the IOUs submitted advice letter ("Advice") 5746-E et al on January 31, 2020, to incorporate contract improvements and update the RFO guidelines.[9] The Commission approved Advice 5746-E on May 11, 2020, and the IOUs launched the 2021 DRAM RFO on May 22, 2020.

Subsequently, the ED hosted DRAM Working Group ("WG") meetings on June 30, 2020, July 15, 2020, and August 3, 2020, to discuss potential refinements to the 2022 DRAM RFO, to be conducted in early 2021. Parties submitted their final WG proposals to the ED by August 24, 2020. ED compiled the proposals into a DRAM WG Report and distributed the report on September 1, 2020, for the IOUs to submit in a joint advice letter, along with proposed modifications for the 2022 DRAM RFO.

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[8] The improvements include: providing accurate qualifying capacity ("QC") estimates, imposing a penalty structure for shortfalls in demonstrated capacity ("DC"), calculating DC on invoices, establishing invoice deadlines, replacement of the residential set-aside with a 10 percent set aside limited to new market entrants, elimination of the use of the August price cap, exclusion of the Reliability Demand Response Resources ("RDRR") in DRAM, and publication of auction mechanism contract summaries. D.19-07-009, OP 6. SCE submitted the advice letter addressing the associated contract improvements and RFO guidelines on behalf of the IOUs on August 12, 2019, under SCE Advice 4054-E, PG&E Advice 5615-E, and SDG&E Advice 3418-E ("Advice 5615-E et al"). The IOUs submitted a supplement to this advice letter on September 17, 2019, addressing parties' responses to the advice letter and providing edits where reasonable ("Advice 5615-E-A et al").

[9] SDG&E Advice 3503-E, PG&E Advice 5746-E, SCE Advice 4152-E ("Advice 5746-E et al").

In compliance with OP 29 of D.19-12-040, the IOUs submitted joint advice letters (Advice 5950-E et al) on September 15, 2020, along with the DRAM WG Report. The IOUs submitted a joint supplemental advice letter on October 19, 2020, with additional technical corrections or clarifications.[10] The Commission issued Resolution E-5110 on December 18, 2020, approving the joint IOU advice letters with modifications and ordering modifications to the DRAM pro forma and related documents. The IOUs submitted Advice 6064-E et al[11] on January 19, 2021, and the Commission approved the advice letters on February 9, 2021, via disposition letter. The IOUs launched the 2022 DRAM RFO on February 23, 2021.

There were no workshops held during the summer of 2021. Instead, the IOUs met on August 27, 2021 to discuss the procedure and substance of a Tier 2 advice letter. On September 15, 2021, as directed by D.19-12-040, OP 29, Advice 6328 was submitted with no modifications to the existing DRAM contract and related documents. The Commission approved Advice 6328-et al via a disposition letter on December 20, 2021, and the IOUs launched the 2023 DRAM RFO on February 1, 2022.

Per D.19-17-009 OP 16, the IOUs were authorized to contract with a consultant to evaluate the continuation of the DRAM and assist the ED in monitoring DRAM. The findings and recommendations from the DRAM Evaluation Report was issued on June 24, 2022, and subsequently presented in a virtual workshop[12]. On July 5, 2022, a Scoping Memo and Ruling was issued, detailing a phased schedule, with Phase I focusing on a 2024 DRAM Pilot and Phase II addressing the future of DRAM. The Commission issued a Final Decision D.23-01-006 on January 13, 2023 ordering the 2024 DRAM Pilot year with no modifications to the existing DRAM contract and related documents. The 2024 DRAM RFO was launched on February 13, 2023.

The 2024 DRAM is a competitive solicitation for monthly system, local, and flexible RA associated with a DR product located in the IOU's service area. Sellers will bid aggregated DR directly into the CAISO day-ahead energy wholesale markets and meet the CAISO Must-Offer Obligation ("MOO") requirements for the DR product during the contracted delivery months. Similar to the prior DRAM pilots, the IOUs will only represent the RA attributes of demand response and will have no claim on revenues the Sellers may receive from the CAISO.

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[10] PG&E Advice 5950-E-A, SCE Advice 4293-E-A, and SDG&E Advice 3608-E-A.

[11] PG&E Advice 6064-E, SCE Advice 4395-E, and SDG&E Advice 3674-E.

[12] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-response/demand-response-workshops/dram-2022-evaluation/dram-evaluation-workshop---2022-07-07.pdf

III. 2024 DRAM Summary

A. Auction Process

1. Auction Overview

RFO schedule and email notifications. PG&E launched the 2024 DRAM RFO on February 13, 2023, pursuant to D.23-01-006, D.19-07-009, as modified by D.19-09-041, and D.19-12-040. PG&E announced the RFO launch via email to more than 2,400 registrants that had registered with PG&E to receive PG&E's RFO- or DRAM-related notifications.

Table 1: 2024 DRAM RFO Timeline

Date/Time	Event
February 13, 2023	PG&E issued the RFO.
February 21, 2023 10:00 A.M.	IOUs jointly held a joint Bidders' Webinar regarding the 2024 DRAM RFO.
March 7, 2023 1:00 P.M.	Offers due to the Power Advocate online platform.
March 14, 2023	PG&E notified Bidders with a request to "cure" certain non-conforming Offers.
March 22, 2023	Bidder cure period ended.
April 26, 2023	PG&E notified Bidders of selection.
April 28, 2023	Deadline for selected Bidders to return signed acceptance letters.
May 3, 2023	Deadline for selected Bidders to submit a signed Purchase Agreement to PG&E.
June 1, 2023	PG&E submittal of executed standard form Purchase Agreements for Commission approval.

RFO website. PG&E created a website dedicated to PG&E's 2024 DRAM RFO (www.pge.com/dram), where the following information was posted:

(1) a history of the DRAM program and relevant Commission decisions and advice letters;
(2) the solicitation documents, including the 2024 DRAM RFO Protocol ("Protocol"), Purchase Agreement, Excel offer form, and qualifying capacity ("QC") assessment Excel template;
(3) CAISO bidding information, including how to obtain customer information under Electric Rule 24;
(4) a packet of information about scheduling coordinator ("SC") services and estimated costs obtained from a SC Request for Information ("RFI") that the IOUs held in 2015, and which was subsequently updated;

(5) a link to register for PG&E's 2024 DRAM RFO email notifications; and
(6) other relevant information, such as DRAM set-aside information, past DRAM RFO websites, PG&E SubLAP information, CAISO local capacity requirements process, and a "Frequently Asked Questions" section.

Webinars. A joint-IOU Bidders' Conference was held to describe the 2024 DRAM RFO solicitation on February 21, 2023. This Webinar included the following topics:

(1) introduction and overview;
(2) bid valuation and selection;
(3) DRAM RFO bid materials;
(4) QC template and offer forms;
(5) walk-through of each of the IOU's Offer Forms; and
(6) closing remarks.

RFO mailbox. PG&E created a mailbox dedicated to the DRAM RFO (DRAMRFO@pge.com). PG&E received no questions through this mailbox prior to the offer due date.

Altogether, the IOUs did not receive DRAM questions from the Webinar or through the DRAM RFO mailboxes.

2. Offer Overview

In response to the 2024 DRAM RFO, PG&E received 42 offers totaling 73.05 megawatts ("MW") of DR system capacity for August 2024. The total estimated number of participating service accounts is approximately 83,789. Of these, approximately 38,359 are estimated to be new service accounts that had not participated in a prior DRAM resource. Confidential Appendix A to this advice letter details all 2024 DRAM offers received ("2024 DRAM Offers Received and Shortlisted").

3. Offer Evaluation

Identify Non-conforming Offers. PG&E screened all offers against the following eligibility requirements: minimum monthly quantity of 100 kilowatts ("kW") for Proxy Demand Resource, a required offer for August 2024, and a maximum of twenty (20) offers per participant.

Quantitative Evaluation. Conforming offers were ranked based on their Net Market Value ("NMV") per Unit ("$/kW-year"), from highest to lowest. The NMV per Unit is determined by:

Net Market Value = RA Benefits – Offer Costs
RA Benefits = Sum of (Offered Volume$_P$ x Product Value$_P$) where *P* is each Product
Offer Costs = Sum of (Offered Volume$_P$ x Offered Pricing$_P$) where *P* is each Product

Net Market Value per Unit in $/kW-year = Net Market Value in dollars divided by Total Offered Monthly Volume in kilowatts and multiplied by 12 for the number of months in the contract term.

Qualitative Evaluation.
PG&E utilized the following approved qualitative assessment criteria from D.19-12-040 to adjust an Offer's cost to reflect additional value or additional risk associated with the Offer:

Positive factors (decrease costs by):

- 1 percent for Bidders who are small businesses, as registered with the California Department of General Services or the U.S. Small Business Association.
- 5 percent for Bidders who delivered Demonstrated Capacity invoices totaling more than 95 percent of its total Contracted Capacity in all of its contract months in its most recent Auction Mechanism contract.

Negative factors (increase costs by):

- 3 percent for Bidders who declined an Auction Mechanism contract when extended a shortlist offer.
- 10 percent for Bidders who willfully terminated or defaulted on an Auction Mechanism contract, since 2019.
- 5 percent for Bidders who delivered Demonstrated Capacity invoices to the Utility totaling less than 75 percent of the total contracted capacity for all contracted months since January 1, 2019.

4. Qualifying Capacity Assessment

In compliance with D.19-07-009, Bidders were required to submit estimates of QC for each offer submitted into the DRAM solicitation. These estimates were required to be based on historical information, where available, and otherwise, publicly available performance data that best represents the anticipated performance of the resource. A Bidder's failure to provide this information would disqualify the Bidder's offer for failure to comply with D.19-07-009. PG&E was required to have staff that is firewalled from PG&E's DR programs and operations team perform the review of the Bidder's QC estimates, given the confidential and proprietary nature of the information contained within the Bidders' QC estimates.

Pursuant to D.19-12-040, PG&E was authorized to implement project viability criteria to evaluate whether the offer provides reasonable assurances that it is capable of delivering the associated capacity. PG&E was permitted to reject bids it does not deem plausible or move the bid downward in ranking based on the qualitative viability score assigned to the bid. PG&E is required to consult with the Commission's Energy Division and seek approval for instances when bids are being rejected under this criterion.

Confidential Appendix B to this advice letter details the valuation of offers. ("Valuation Process Summary").

5. Offer Selection

PG&E selected DRAM Offers according to the following method:

a) PG&E ranked Offers by NMV, adjusted for qualitative criteria and the results of PG&E's assessment of the QC estimate provided by the bidder.
b) PG&E selected Offers up to the $6 million budget, which includes administrative costs.
c) PG&E was not obligated to select an Offer[13] if:
   i. The Offer's price was above the long-term avoided cost of generation.[14]
   ii. One or more of the monthly capacity prices of the Offer were outliers.
   iii. The offer is not viable, based on assessment of the QC estimate provided by the bidder
d) At least 10 percent of the August MW procured must be set aside for new market entrants, unless no new entrant offers were received.

6. Net LRAC

As instructed by Resolution E-5110 OP 4, PG&E was to include an analysis of the Net Long Run Avoided Cost of Generation ("Net LRAC") to test a cost-effectiveness methodology on a "what if basis" for shortlisted offers and disclose the results in the confidential portion of the Advice Letter with Executed Contracts. The Net LRAC methodology is used as a floor for screening an offer based on its normalized (per unit capacity) NMV during the DRAM solicitation process. The Net LRAC (a per unit capacity quantity) would be calculated by deducting the LRAC (also a per unit capacity quantity) from the short-term IOU specific RA benefit of a unit of capacity.

IV. 2024 DRAM Results

PG&E executed contracts for approximately 45.25 MW of August 2024 System capacity, of which 35 MW is for a non-residential product and 10.25 MW is for a residential product.

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[13] IOUs are to make such exceptions in consultation with the Procurement Review Group (PRG) and with approval of Energy Division.

[14] As Bidders may submit an offer for all 12 months of 2024 or any subset of months, with only a minimum requirement to offer capacity in the month of August, PG&E has implemented a weighting methodology to prorate the long-run avoided cost of generation (LRAC) for any bids that offer a subset of the available term. PG&E weighed the months offered by the respective short-run Resource Adequacy (RA) value used for assessing the RA benefits.

A list of the Sellers who executed 2024 DRAM Purchase Agreements with PG&E is provided in Table 2, below, with contract summaries required by D.19-07-009.

Table 2: 2024 DRAM Sellers

Seller Name	Product Type	Customer Class	Contracted Capacity in August 2024	Contract Term
Leapfrog Power, Inc.	System	Non-Residential	7 MW	January to December
Resi Station, LLC	System	Non-Residential	9 MW	January to December
Resi Station, LLC	System	Residential	10.25 MW	January to December
Voltus, Inc.	System	Non-Residential	19 MW	January to December

The offer selection process and more information on the selected offers' attributes are found in Confidential Appendix B ("Valuation Process Summary"). For more information on the 2024 DRAM results, including benchmarks required by Resolution E-4728, please see Confidential Appendix C ("2024 DRAM Evaluation Metrics"). PG&E notes that such benchmarks to the IOUs' current DR portfolio include program incentives, administration, and systems expenses.[15]

V. Request for Commission Approval

PG&E requests that the Commission approve the 2024 DRAM Purchase Agreements through a disposition letter issued by the Director of ED within thirty (30) days of the date of this Advice Letter, with the disposition letter finding that:

1. Each of the submitted 2024 DRAM Purchase Agreements is approved in its entirety, including payments to be made by PG&E pursuant to each Purchase Agreement, subject to the Commission's review of PG&E's administration of the Purchase Agreement;
2. The competitive solicitation and offer selection process for the 2024 DRAM RFO was consistent with PG&E's 2024 DRAM Program Solicitation Protocol, and that the price of delivered RA is reasonable and prudent; and
3. PG&E's ability to reject offers based on PG&E's assessment of the QC estimate provided by the Bidder is approved.

[15] Per Resolution E-4728 and guidance provided by the ED on May 19, 2016, PG&E provides the cost component of the Program Administration Cost ("PAC") test of the DR Cost Effectiveness Protocols for the Base Interruptible Program, the Capacity Bidding Program, and SmartAC.

Confidential Attachments:

Confidential Appendix A: 2024 DRAM Offers Received and Shortlisted

Confidential Appendix B: Valuation Process Summary
Confidential Appendix C: 2024 DRAM Evaluation Metrics

Confidential Appendix D: Independent Evaluator Report (Redacted version included with public submittal)

Confidential Appendix F: Executed 2024 DRAM Purchase Agreements

Protests

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than June 21, 2023, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to PG&E via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

Sidney Bob Dietz II
Director, Regulatory Relations
c/o Megan Lawson
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name and e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

Pursuant to General Order ("GO") 96-B, Rule 5.1, this advice letter is submitted with a Tier 1 designation. PG&E requests that this Tier 1 advice submittal become effective upon date of submittal, which is June 1, 2023.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list A.17-01-012 et al. Address changes to the GO 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov.

Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: http://www.pge.com/tariffs/.

/S/

Sidney Bob Dietz II
Director, Regulatory Relations
CPUC Communications

Attachments

cc: Aloke Gupta – Energy Division
Eleanor Adachi - Energy Division
Andrew Magie – Energy Division
Service List for A.17-01-012 et al

Limited Access to Confidential Material:

The portions of this advice letter marked Confidential Protected Material are submitted under the confidentiality protection of Section 454.5(g) of the Public Utilities Code and General Order 66-D. This material is protected from public disclosure because it consists of, among other items, the Purchase Agreements themselves and price information of the proposed 2024 DRAM Purchase Agreements, and competitive solicitation information, which are protected pursuant to D.06-06-066 and D.08-04-023.

Attachments Publicly Submitted with the Advice Letter:

Redacted Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.
Appendix E: PG&E's Pro Forma 2024 DRAM Purchase Agreement
Appendix G: Confidentiality Declaration and Matrix

Attachments Submitted on a Confidential Basis with the Advice Letter:

Confidential Appendix A: 2024 DRAM Offers Received and Shortlisted
Confidential Appendix B: Valuation Process Summary
Confidential Appendix C: 2024 DRAM Evaluation Metrics
Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.
Confidential Appendix F: Executed 2024 DRAM Purchase Agreements

California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39 E)

Utility type:
- [x] ELC
- [ ] GAS
- [ ] WATER
- [ ] PLC
- [ ] HEAT

Contact Person: Kimberly Loo
Phone #: (415)973-4587
E-mail: PGETariffs@pge.com
E-mail Disposition Notice to: KELM@pge.com

EXPLANATION OF UTILITY TYPE
ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6955-E

Tier Designation: 1

Subject of AL: PG&E's 2024 Demand Response Auction Mechanism Purchase Agreements

Keywords (choose from CPUC listing): Compliance, Agreements

AL Type: [ ] Monthly [ ] Quarterly [ ] Annual [x] One-Time [ ] Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:
D.23-01-006 and D.19-12-040

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? [x] Yes [ ] No

If yes, specification of confidential information: See Appendix G
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information: Sebastien Csapo, sebastien.csapo@pge.com

Resolution required? [ ] Yes [x] No

Requested effective date: 6/1/23

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed[1]: N/A

Pending advice letters that revise the same tariff sheets: N/A

[1]Discuss in AL if more space is needed.

Clear Form

Protests and correspondence regarding this AL are to be sent via email and are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

California Public Utilities Commission Energy Division Tariff Unit Email: EDTariffUnit@cpuc.ca.gov	Contact Name: Sidney Bob Dietz II, c/o Megan Lawson Title: Director, Regulatory Relations Utility/Entity Name: Pacific Gas and Electric Company Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email: PGETariffs@pge.com
	Contact Name: Title: Utility/Entity Name: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:

CPUC
Energy Division Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Clear Form

Confidential Appendix A

2024 DRAM Offers Received and Shortlisted

Confidential Appendix B

Valuation Process Summary

Confidential Appendix C

2024 DRAM Evaluation Metrics

Redacted Appendix D

Independent Evaluator Report of Merrimack Energy Group, Inc.

PACIFIC GAS & ELECTRIC COMPANY

5/15/2023

2024 Demand Response Auction Mechanism (DRAM 9) Request for Offers

Independent Evaluator Report

Prepared By

MERRIMACK
ENERGY GROUP, INC.

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1 INTRODUCTION

1.1 OVERVIEW & BACKGROUND

On February 13, 2023, Pacific Gas & Electric Company ("PG&E" or "Company") issued its 2024 Demand Response Auction Mechanism Request for Offers ("RFO") Solicitation Protocol ("2024 DRAM RFO" or "DRAM 9 RFO").[1] The 2024 DRAM RFO is being issued as an extension of the DRAM Pilot program. The intent of the 2024 DRAM RFO is to solicit offers from participants in the RFO ("Participants" or "Bidders") to provide resource adequacy ("RA") capacity ("Product") to the three Investor- Owned Utilities ("IOUs") under a standard form, non-negotiable Purchase Agreement ("PA"). Through the 2024 DRAM RFO process, PG&E is seeking to procure System[2], Local[3] and Flexible RA[4] capacity products. The Solicitation Protocol describes the process by which PG&E seeks, evaluates, and accepts Offers from successful Participants ("Sellers") who will bid Proxy Demand Resources ("PDR") into the California Independent System Operator ("CAISO") wholesale market.

All Capacity Products must be bid as a PDR and meet the must-offer-obligations set forth in the CAISO Tariff section 40.6 based on their respective resource classification (e.g., PDR).

The 2024 DRAM RFO is governed by CPUC Decisions D.23-01-006 and D.19-07-009 as modified by D.19-09-041 and D.19-12-040 as well as Resolution E-5110 (December 17, 2020), which approved the 2023 DRAM RFO. CPUC Decision 19-07-009 authorized a four-year extension of the DRAM pilot with deliveries in 2020 – 2023. Decision 19-07-009 also adopted several enhancements to the DRAM design to improve the reliability and performance of DRAM resources and ordered a new evaluation of the redesigned pilots by an independent consultant. Decision D.23-01-006 issued on January 12, 2023 authorized a one-year extension of the DRAM Pilot with deliveries in 2024. The Decision did not adopt any changes to the DRAM Pilot design or evaluation criteria. The DRAM budget caps remained the same from the previous DRAM solicitation at $6 million for PG&E, $6 million for SCE, and $2 million for SDG&E.

[1] Southern California Edison Company ("SCE") and San Diego Gas & Electric Company ("SDG&E") also issued their 2024 DRAM RFO's on the same day as planned.
[2] System Capacity Products are resources not located in a specific local area.
[3] Local Capacity Product must be specific to one of the seven Local Capacity Areas ("LCAs") in PG&E's service territory, and all customers must be located in the LCA for which they are providing Local Capacity.
[4] Flexible Capacity Product may be Category 1 (base ramping), Category 2 (peak ramping), or Category 3 (super-peak ramping), and must meet the qualifications set forth in the CAISO's most recent tariff.

Under D.19-07-009 as modified, the IOUs are also not obligated to select offers that exceed the long-term avoided cost of generation, offers that are not viable based on an assessment of the qualifying capacity (QC) estimate provided by the bidder, or offers that have outliers for one or more of the monthly capacity prices.

The DRAM RFO solicitations are a pay-as-bid solicitation in which the utilities seek to acquire monthly demand response (DR) system capacity, local capacity and flexible capacity as applicable, which contributes to the utilities resource adequacy obligations in the various solicitations. Participants will bid aggregated demand response directly into the CAISO energy market and any resulting revenues or liabilities shall solely be that of the Participant. The utilities acquire the capacity and receive resource adequacy credits for it but have no claim on revenues the winning bidders may receive from the energy markets. Capacity offered may vary by month and may be offered during one or more months from January 2024 to December 2024 but must include delivery during the month of August 2024.

Participants must comply with the eligibility requirements listed in PG&E's Solicitation Protocol. Participants not complying with these requirements could be deemed ineligible and their offers may not be considered.

The following eligibility requirements are listed in PG&E's 2024 DRAM RFO Solicitation Protocol:

- In order to participate in the CAISO market, each CAISO resource must be: (1) at least 100 kW per PDR; (2) composed of retail customers within PG&E's service territory; and (3) within the same CAISO Sub Load Aggregation Point (SubLap), as that term is defined in the CAISO Tariff;
- At a minimum, each bidder's offer must include Product for August 2024;
- A single offer may consist of multiple PDRs;
- Each Bidder's offer may contain a portfolio of Product types. For example, one bidder's offer may comprise 5 MW of System Capacity as well as 2 MW of Flexible Capacity (Flexible Category 3) with System Capacity, using a unique customer set for each of these Products;
- A maximum of 20 offers may be accepted per bidder. All offers should be provided on a single Offer Form spreadsheet;
- The monthly Offer maximum is 10 MW per Offer;
- If PG&E selects multiple offers from a bidder, PG&E may stipulate the order in which the offers must be accepted by the bidder, based on PG&E's offer ranking methodology. For example, if a bidder's offer #1 has a greater Net

Market Value per unit to PG&E than the bidder's offer #2, PG&E may stipulate that the bidder cannot contract for offer #2 unless it also contracts for offer #1;

- PG&E will presume all bidder's offers are independent of each other. If this is not the case, it must be explained in the Offer Form;
- Offers may be for Residential Customer or Non-Residential Customer Products and must be identified as such in the Offer Form. A Residential Product is that which is defined in the CPUC Resolution E-4728 as: "a minimum of 90% of customers on residential tariffs and no more than 10 percent of customers on small commercial tariffs";
- Bidders must self-identify qualifications as a New Market Entrant in the Offer Form utilizing the CPUC-approved definition: a new market entrant is defined 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 Demand Response Auction Mechanism or other resource adequacy contracts. PG&E may request additional information for verification purposes;
- PG&E's acceptance of offers will be subject to the CPUC budget limitations and CPUC-approved offer selection criteria;
- PG&E's acceptance of Offers is subject to the CPUC requirement that at least 10% of all MW procured come from New Market Entrant bids, unless this is impossible due to bids received, the CPUC-approved budget, or other offer or price constraints approved in D.19-07-009 and D.19-12-040;
- The Delivery Period for this RFO's Products will be no earlier than January 1, 2024 and no later than December 31, 2024;
- Each bidder must submit its offer via the Attachment A, Offer Form, providing a Monthly Quantity (Capacity kW) and Contract Price ($/kW-month) for each applicable Showing Month (January 2024 – December 2024). If the bidder does not wish to offer Product during a particular month, excluding August 2024, it should include a zero for that month in their Offer Form;
- If a Seller does not have a credit rating by S&P or Moody's, or its credit rating is below BBB- from S&P and Baa3 from Moody's if rated by both S&P and Moody's, Seller shall provide and maintain collateral with PG&E per the terms of the PA;
- The PA is a non-negotiable form agreement.

Participants must submit Offers to sell Product to PG&E using the 2024 DRAM Agreement. The DRAM Agreement is a standard form, non-negotiable purchase agreement and is available on PG&E's DRAM RFO Website. Accordingly, all purchases will be made according to the terms and conditions set forth in the PA.

The RFO documents and information available to Participants include: (1) 2024 DRAM RFO Protocol; (2) Attachment A - Offer Form; (3) Attachment C - DRAM Standard Purchase Agreement; (4) Attachment B – Corporate Structure and Financials; and (5) Attachment D – Qualifying Capacity Assessment Template. In addition, PG&E's DRAM webpage includes other information to assist Participants. This information is identified later in this report.

The RFO Protocol also outlines the evaluation criteria to be applied to evaluate and select the shortlisted offers from those submitted. The RFO Protocol states that PG&E will evaluate and rank conforming offers using quantitative and qualitative criteria outlined in the RFO Protocol.

PG&E will perform a quantitative evaluation of each conforming offer and rank those offers based on each offer's Net Market Value ("NMV") per unit – from highest to lowest – in dollars per kilowatt-year ($/kW-year). The NMV in $/kW-year is calculated using total NMV in discounted dollars for the numerator, and total offered monthly volume in kilowatts (discounted) for the denominator to derive volume weighted average NMV in $/kW-year, which is then multiplied by 12 months to calculate a yearly value. The result of the quantitative analysis is a merit-order ranking of all complete and conforming offers.

Net Market Value[5] is defined as Benefits minus Costs. PG&E will calculate an offer's benefits using its forecast Resource Adequacy (RA) price for each type of Product in the offer (e.g., System Capacity, Local Capacity and/or Flexible Capacity). An offer's cost will be determined by multiplying (a) the offer's volume per Product per month by (b) the offer's price per Product per month, then summing all of these monthly values together.

For the 2024 DRAM RFO, PG&E will apply to each offer's cost, as appropriate, an adjustment based on the joint IOU DRAM qualitative assessment scoring matrix. An offer's cost in the NMV calculations will be adjusted with the following formula:

Adjusted Cost for each offer = Cost for each offer multiplied by the Qualitative Factor Adjustment for each offer, where

Qualitative Factor Adjustment for each offer = 1 + sum of (score for each offer multiplied by the weight).

Table 1 below lists the qualitative factors and weights applied by PG&E in this solicitation.

[5] Monthly benefits and costs are discounted using PG&E's after-tax weighted average cost of capital.

Table 1: Qualitative Evaluation Criteria

		Score	Score	Weight	Weighted Score
	Answer	**Yes**	**No**		**(Score x weight)**
Small Business					
Is the Bidder a certified small business	Yes/No	1	0	-1%	
Prior Experience					
Has the Bidder declined an Auction Mechanism contract when extended a shortlist offer?	Yes/No	1	0	3%	
Has the Bidder willfully terminated or defaulted on an Auction Mechanism contract, since 2019?	Yes/No	1	0	10%	
Has the Bidder delivered Demonstrated Capacity invoices to the Utility totaling less than 75 percent of the total contracted capacity for all contracted months since January 1, 2019?	Yes/No	1	0	5%	
Has the Bidder delivered Demonstrated Capacity invoices totaling more than 95 percent of its total Contracted Capacity in all of its contract months in its most recent Auction Mechanism contract?	Yes/No	1	0	-5%	

As an example of how the qualitative criteria will be applied, a bidder who violates the second and third prior experience criteria will have an evaluation score for rank order purposes that is based on total cost of the offer times 1.15. The higher cost is used in conjunction with the benefits associated with the offer to derive the NMV in NPV $/kW-year quantitative value.

In order to comply with D.19-07-009, bidders are required to submit estimates of qualifying capacity (QC) for each offer submitted into the DRAM solicitation using a CPUC-approved template. These estimates shall be based on historical

information, where available, and otherwise, publicly available performance data that best represents the anticipated performance of the resource. A bidder's failure to provide this information would not comply with D.19-07-009, which would disqualify the bidder's offer. Firewalled staff at PG&E is required to review the bidder's QC estimates and may not share such information with PG&E staff that manage PG&E's demand response programs.

Beginning with the 2021 DRAM, PG&E was authorized (along with the other IOUs) to implement project viability criteria to either disqualify an implausible bid or apply additional qualitative criteria based on a PG&E-determined offer viability score. PG&E shall consult with the Commission's Energy Division and seek approval for instances when bids are being rejected under this criterion.

To assist bidders to fully understand the requirements for the QC Assessment, PG&E included as Section V of its 2024 DRAM RFO Protocol document three pages of information as guidance for Bidders to complete Attachment D. Appendix A to this report replicates Section V of the Solicitation Protocol given the importance of the quality of guidance provided by PG&E to assist bidders from a transparency perspective.

DRAM offers will be evaluated and selected according to the following method:

1. Offers shall be ranked by Net Market Value (NMV) per unit, which is an assessment based on the RA benefits minus the offer costs, adjusted for qualitative criteria, and the results of the utility's assessment of the QC estimates provided by the bidder;
2. PG&E shall select offers up to their authorized budget, net of administrative cost;
3. PG&E may elect to not select an offer if:
    a. The offer's price is above the long-run avoided cost of generation[6];
    b. One or more of the monthly capacity prices of the offer are outliers;
    c. The Offer is not viable, based on assessment of the QC estimate provided by the Bidder.
4. At least ten percent (10%) of August MW procurement must be set aside for New Market Entrant, if applicable.

[6] As Bidders may submit an offer for all 12 months of 2023 or any subset of months, with only a minimum requirement to offer capacity in the month of August, PG&E and the other utilities have implemented a weighted methodology to prorate the long-run avoided cost of generation (LRAC) for any bids that offer a subset of the available term. PG&E weighs the months offered by the respective short-run Resource Adequacy (RA) value used for assessing the RA benefits for each applicable month.

The IOUs shall make such exceptions in consultation with the Procurement Review Group ("PRG") and with the approval of the Energy Division ("ED").

In addition, Resolution E-5110 Ordering Paragraph (OP) 4 requires the utilities to include an analysis of the Net Long Run Avoided Cost of Generation (Net LRAC)[7] to test a cost-effectiveness methodology on a "what if basis" for shortlisted offers and disclose the results in a confidential portion of the Advice Letter with Executed Contracts as instructed in Resolution E-5110. The Net LRAC methodology does not change the bid evaluation process described above. It will only be used as a tool to test a cost-effectiveness methodology for DRAM resources. The Net LRAC methodology is used as a floor for screening an offer based on its normalized (per unit capacity) Net Market Value (NMV) during the DRAM solicitation process. The Net LRAC (a per unit capacity quantity) would be calculated by deducting the LRAC (also a per unit capacity quantity) from the short-term IOU specific RA benefit of a unit of capacity.

Pursuant to regulatory requirements of the CPUC, PG&E retained Merrimack Energy Group, Inc. ("Merrimack Energy") as the Independent Evaluator ("IE") for this market solicitation.[8]

1.2 CUMULATIVE DRAM PROCEDURAL HISTORY & REGULATORY REQUIREMENTS

On September 19, 2013, the CPUC issued an Order Instituting Rulemaking (OIR) in Decision (D.) 13-09-011 to enhance the role of Demand Response (DR) in meeting the state's resource planning needs and operational requirements. In this rulemaking proceeding, CPUC Staff proposed that a Demand Response Auction Mechanism (DRAM)[9] be used to obtain a new resource comprising Demand Response resources which would be aggregated as PDRs or RDRRs by third parties in order to participate directly in the CAISO Day-Ahead or Real-Time Energy Markets[10]. Once selected in the DRAM, these third-party aggregators would be paid by the DRAM IOU buyers for the Resource Adequacy (RA) attributes of their DRs with capacity payments bid into the DRAM. CAISO energy settlements would be retained by the third parties as a part of their compensation stream.

[7] Net LRAC is essentially Net Benefits minus the associated LRAC values. The Net LRAC (a per unit capacity amount) would be calculated by deducting the LRAC (also a per unit capacity amount) from the short-term IOU specific RA benefit of a unit of capacity.
[8] Merrimack Energy was retained by all three IOUs for this assignment. Merrimack Energy has also served as IE for the previous seven DRAM Pilot solicitations.
[9] The DRAM was formally introduced by the CPUC in D. 14-03-026 (March 27, 2014), as described further below.
[10] Bidding Demand Response into the CAISO market has been a CPUC objective since 2007. Finding of Fact 12, D. 14-12-024.

In D. 14-12-024 (December 4, 2014), the CPUC resolved various issues in the evolving phases of the rulemaking[11], modified an attached Settlement Agreement entered into by the majority of the parties and directed that the DRAM be instituted as a two-year pilot during 2015 ("2016 DRAM") and 2016 ("2017 DRAM")[12]. In D. 14-12-024, Ordering Paragraphs 5 and 6, the utilities were ordered to file an advice letter for the DRAM, together with a standard pro-forma contract and to work collaboratively with stakeholders in the DRAM pilot design working group.

1.2.1 2016 DRAM (DRAM 1 RFO)

In their Tier Three Advice Letter filed for the 2016 DRAM on April 20, 2015 ("April 20 Advice Letters")[13], Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E), and San Diego Gas & Electric Company (SDG&E) described the DRAM Pilot design as follows:

> "The DRAM will be a pay-as-bid auction of monthly system Resource Adequacy (RA) associated with a demand response product located in the IOU's service area that will offer the product directly into the CAISO day-ahead energy market. The IOUs will acquire the RA only and will have no claim on revenues the winning bidders may receive from the CAISO energy market." AL 3208-E, p. 3.

In Resolution E-4728 (July 27, 2015), the 2016 DRAM Pilot as proposed pursuant to D. 14-12-024 and the April 20, 2015 Advice Letters 3208-E, 4618-E and 2729-E, was approved with modifications. Resolution E-4728 resolved open issues arising from the April 20 Advice Letters as follows[14]:

- The DRAM would be a two-year pilot program that was designed to enable DR wholesale market participation by providing a competitive means to a capacity contract outside of any IOU DR program;

[11] The phases of the Rulemaking proceeding were the subject of a series of scoping memoranda and associated orders: October 24, 2013 Ruling and Scoping Memo; D. 14-01-004 (addressing Phase One issues); D. 14-05-025 (addressing Phase One issues and closing Phase One); D. 14-03-026 (addressing Phase Two issues and determining that demand response programs should be bifurcated beginning in 2017 into load modifying resources and supply side resources); and April 2, 2014 Ruling and Revised Scoping Memo (addressing the continuation of Phase Two and the Phase Three scope and schedule).

[12] D. 14-12-024 Findings of Fact 31-38; Conclusions of Law 14; Ordering Paragraphs 5-6, 10-13 (more general back up generation issues).

[13] AL 3208-E (Southern California Edison Company); AL 4618-E (Pacific Gas and Electric Company); AL 2729-E (San Diego Gas & Electric Company).

[14] The contents of the Tier 1 Advice Letter accompanying the executed DRAM contracts and a Supplemental Advice Letter filed 30 days after the Resolution were also set forth in Resolution E-4728, Ordering Paragraphs 16 and 22.

- The minimum target for the 2016 DRAM Pilot was 22 MWs across all three IOUs. No cap for DRAM procurement was detailed in D.14-12-024. AL 3208-E et al states that winning bids are limited by either the budget or the applicable Commission authorized maximum for Rule 24 registrations;
- The CPUC encouraged the IOUs to procure viable bids beyond the 22 MW minimum authorization, up to either the applicable Rule 24 registration limit or budget limitation[15];
- Bidders would have to demonstrate that they were not relying on fossil-fueled Back-up Generators (BUGs) for the performance of their PDRs;
- While fossil-fueled BUGs were not allowed in the DRAM program, storage was allowed and encouraged;
- The IOUs' request for a waiver of RA penalties for any failure of DRAM Sellers to deliver was granted for the limited purpose of the Pilot[16];
- DRAM contracts must adhere to RA criteria, as well as CAISO obligations and criteria;
- DRAM customers would not need to be known in advance of contract execution and certain provisions proposed to allow existing DR customers to migrate to DRAM were approved;
- Net Metering Customers would be allowed to participate in the DRAM program;
- A residential set-aside (without any cost cap[17]) was approved equal to 20% of the total MWs procured[18] for each IOU for residential customers (defined as aggregations of at least 90% residential customers). The purpose of the set-aside was to attract new market players to the DRAM and test the participation of residential aggregations in the DRAM mechanism. In other words, if the IOUs collectively procure 50 MWs worth of DRAM bids, then 10 MWs should be reserved for the residential set-aside;
- The IOUs were directed to each inform the CPUC's Energy Division immediately if there are bids that it wished to reject that are either clear outliers or where there was evidence of market manipulation, present those bids and explain the reasons for rejection in advance of actually rejecting the bids;
- AL 3208-E et al stated that cost-effectiveness evaluation did not apply to pilots. However, for purposes of fully analyzing the costs and benefits of the program, the IOUs were also required to file a benchmark capacity calculation using the relevant version of the cost effectiveness protocols approved by the Commission at the time of filing the signed DRAM pilot

[15] Resolution E-4728, Ordering Paragraph 14.
[16] Resolution E-4728, Ordering Paragraph 6.
[17] Resolution E-4728, Finding Paragraph 29.
[18] Resolution E-4728, Finding Paragraph, 30.

contracts. The IOUs were also required to file benchmark calculations of the capacity value of the IOUs comparable DR programs;

- In D.14-12-024, the DRAM working group was directed to develop transparent standard evaluation criteria. AL 3208-E et al proposed a quantitative criterion, which included bid price, weighted by month of delivery and scheduling coordinator costs, and a list of standard qualitative criteria which may be weighted, and therefore applied differently at each IOU's discretion;
- The IOUs were directed to develop a clear scoring matrix for each criterion, in a table format, with a numeric score to be assigned to each variable. This matrix must include all criteria that will be used in scoring DRAM bids, and must be made available to bidders, incorporated into bid documents and explained at DRAM Bidders conference(s);
- The DRAM Contract provision (§3.3) requiring Seller performance and other data requested by the CPUC was allowed as modified; the provision (§5.7) requiring financial information for possible balance sheet consolidation was approved as modified by mutual agreement; and the provision (§3.3(b)) requiring load impact analysis was ordered to be removed[19];
- Winning bids would be limited as a practical matter to either the budget authorized in D. 14-12-024 or the applicable Rule 24/32 maximum registrations;
- The request of the IOUs to select the next best DRAM bid if a short-listed bid discontinues participation in the DRAM auction was accepted;
- In addition to signed DRAM contracts, the IOUs were required to file all bids received for the DRAM pilot;
- The Resolution required that the IE Report include both (1) an assessment of the effectiveness of the set-aside in attracting aggregations of residential customers and (2) recommendations for how the set-aside can be improved to better attract residential aggregations in subsequent rounds of the DRAM;

The 2016 DRAM was launched on September 28, 2015, with a deadline for the submission of 2016 Offers of October 26, 2015. The 2016 DRAM covered the delivery period from June 1, 2016 through December 31, 2016. PG&E executed (12) 2016 DRAM PAs with six (6) counterparties for a total of 17.17 MW at a total cost of [redacted]. Residential accounts represented 23% of August capacity.

1.2.2 2017 DRAM (DRAM 2 RFO)

[19] Resolution E-4728, Finding Paragraph 7, Ordering Paragraph 5.

On October 9, 2015, SCE, on behalf of itself, PG&E and SDG&E, filed a Tier 3 Advice Letter (AL 3292-E for SCE; AL 4719-E for PG&E; and AL 2796-E for SDG&E) (the "2017 DRAM Advice Letter") with respect to the second year of the DRAM Pilot, together with proposed changes to the standard DRAM Resource Purchase Agreement. Subsequently on January 28, 2016, the CPUC issued Resolution E-4754, approving with modifications the second year of the DRAM Pilot Program ("2017 DRAM").

In compliance with OP 12 of Resolution E-4728, the 2017 DRAM Advice Letter focused on including Local RA and Flexible RA in the 2017 DRAM, aligning the DRAM pilot with the year-ahead RA process, incorporating changes to law or regulation that could impact the second year of the DRAM pilot, and addressing the inclusion of RDRRs.[20]

Resolution E-4754

On January 28, 2016, the Energy Division of the CPUC approved, with modifications, the 2017 DRAM Advice Letters for SCE, PG&E and SDG&E (AL 3292-E for SCE; AL 4719-E for PG&E; and AL 2796-E for SDG&E) and ordered the filing of supplemental Advice Letters within 30 days of the CPUC vote on Resolution E-4754. Among the findings and ordering paragraphs, Resolution E-4754 contained several principal orders:

- The IOUs' non-binding cost estimates of $6 million each for PG&E and SCE and $1.5 million for SDG&E, for a total of $13.5 million, were approved and their request to expend 2015-2016 bridge year funds in 2017 for purposes of funding the DRAM, was also approved;
- The minimum procurement targets of 10 MWs each for SCE and PG&E, and 2 MWs for SDG&E, were retained for the 2017 DRAM. As with the 2016 DRAM, the IOUs were encouraged to procure up to the 2017 budget limitation or the available authorized Rule 24 registrations, whichever comes first;[21]
- The CPUC required the IOUs to make all revisions and modifications to the pro forma contract as prescribed in this Resolution in a Supplemental Advice Letter. Revisions were required for the pro forma contract in Sections 7.2(b)(v), Section 3.3(c), Section 3.4(a), Section 3.5, and Section 1.5;

[20] Resolution E-4817, issued on January 20, 2017 identified the two primary differences between the DRAM I and DRAM II pilots as: (1) in DRAM II a Seller could elect to offer deliveries over 12 months, from January to December; (2) DRAM II allowed for local and flexible resource adequacy offers, in addition to system capacity.
[21] As a general ordering principle, the IOUs were instructed, "Unless explicitly modified or revised herein, the provisions, directions and rules that were adopted for the 2016 DRAM RFO shall apply for the 2017 DRAM RFO."

- Unless explicitly modified or revised herein, the provisions, directions, and rules that were adopted for the 2016 DRAM RFO shall apply for the 2017 DRAM RFO.

In accordance with Resolution E-4754, conforming Supplemental Advice Letters were filed on February 8, 2016 by the IOUs (Supplemental AL 3292-E-A for SCE; Supplemental AL 4719-E-A for PG&E; and Supplemental AL 2796-E-A for SDG&E).

The DRAM 2 solicitation was conducted over the period March through July of 2016. On October 3, 2016, the CPUC issued Resolution E-4803 which approved with modifications, the request of PG&E for approval of 14 contracts with five counterparties resulting from the 2017 DRAM as submitted in PG&E's Advice Letter 4880-E. The Resolution also required PG&E to procure additional resources from the 2017 DRAM solicitation up to either the approved amount of Rule 24/32 registrations or the approved budget cap of $6 million. PG&E ultimately executed twenty-seven contracts with six counterparties for a total of 56.4 MW at a cost of [redacted]. For the DRAM 2 process, residential accounts represented 21% of total August volumes.

1.2.3 2018-2019 DRAM (DRAM 3 RFO)

On June 9, 2016 in Decision D.16-06-029, the Commission stated that it anticipated issuing a decision in this proceeding that will provide guidance to the utilities for their demand response program year 2018 and beyond applications. The Commission stated that it cannot determine whether a DRAM will be adopted by the Commission for 2018 and beyond. However, given the apparent success of the 2016 auction process and the anticipated potential for the 2017 auction process, the Commission found that it was reasonable and prudent to continue, at the very least, the current form of the DRAM as a pilot (pages 43-44). The utilities were authorized a budget of $27 million, double the current budget, for the continuation of this pilot in the following breakdown for the utilities: $3 million for SDG&E and $12 each for PG&E and SCE for the 2018-2019 DRAM solicitation. In response to comments by ORA and the utilities, the Commission stated that it agreed that with the third auction pilot, it was important for the utilities to be prudent and sensible in selecting and approving bids. Utilities were instructed to ensure that the bids fit portfolio needs and offer the best value to the ratepayers.

The Decision also required the three utilities to file, no later than September 1, 2016, a tier three advice letter requesting adoption of a proposal for a third demand response auction mechanism pilot. Advice Letter 4900-E, filed on September 1, 2016 suggested changes in the DRAM pilot program in the following areas:

- Modifications to product design;

- Demonstrated capacity and performance testing requirements, including stricter performance requirements;
- Potential legal and regulatory changes and their impacts
    - CAISO market changes associated with resource adequacy and must offer obligation requirements
    - Seller's provisions of information to buyers to support customer eligibility for other IOU programs;
- Solicitation protocols and valuation criteria
    - Refinements to qualitative criteria
    - Contract price averaging
    - Potential limitations on RDRR
    - Available Rule 24/32 registrations
- Contract terms and miscellaneous issues

Resolution E-4817

Resolution E-4817, issued on January 20, 2017 approved, with modifications, the IOU's proposals for the DRAM 2018-2019 pilot (DRAM 3 RFO) contained in Advice Letter 3466-E, including modifications associated with auction design, protocols, standard pro forma contract, evaluation criteria, and non-binding cost estimates. The Ordering paragraphs in the Resolution included the following provisions and requirements for the DRAM 3 RFO process:

- The IOUs shall ensure that the availability of customer registrations does not limit 2018-2019 DRAM pilot procurement;
- The IOUs will procure 2018-2019 DRAM resources up to an approved budget limit of $27 million across the three IOUs, including $3 million for SDG&E and $12 million each for SCE and PG&E, or to a point at which there was a clear price outlier in bids, whichever comes first. To reject a bid based on an assessment that it represented a price outlier, the IOUs would first discuss with the Energy Division, and Energy Division must agree, before rejecting the bid;
- The bid selection criteria should be fully transparent and available to all potential bidders at the time of the 2018-2019 DRAM RFO, including maintaining the qualitative criteria approved and providing information on how the IOUs will evaluate contract length;
- Authorized the IOUs to hold a secondary auction if either of the following conditions are met for their company: (1) if three or more sellers terminate at least one contract prior to the end of the stated contract length if, as a result of Commission or CAISO rule changes, their DR resources would no longer meet Commission or CAISO requirements without penalty; or, (2) if, following Commission or CAISO rule changes that create the same

conditions, Sellers terminate contracts representing a minimum of twenty five percent of the August 2018 or 2019 contracted capacity (MW);

- The Commission approved the IOUs proposal that Sellers be permitted to terminate their contracts or reduce contract capacity at no penalty if CAISO rule changes negatively impact their ability to deliver the capacity and energy as indicated, if notice is provided by August 1 of the year prior to the delivery year;
- Agreed with the IOUs regarding modifications to the qualitative criteria to reflect a downgrade in the score of bidders who have failed to deliver or perform in other DRAM RFOs, or demonstrated non-competitive behavior. The Commission agreed with the IOUs that prior experience with delivery shortfalls is an acceptable qualitative criterion. The Commission directed the IOUs to work with the Energy Division Staff and the IE to identify any bidders to which the non-competitive behavior criterion will be applied and to notify any bidders to whom it is found to apply of this finding at least one week in advance of the 2018 DRAM RFO.

The Resolution also identified the differences between DRAM 2 and DRAM 3.[22] "In DRAM 3, (1) Sellers were required to differentiate between a Proxy Demand Resource (PDR) and a Reliability Demand Response Resource (RDRR); (2) scheduling coordinator costs were now to be bid as part of the product capacity costs; (3) an option was available for Sellers to offer a Flexible Capacity Category 1 product; (4) a DRAM Seller may now elect to offer deliveries of a maximum of two years through December 2019; (5) utilities have enhanced testing requirements to a minimum of one each August (2018 and 2019), if Full Dispatch has not occurred; and (6) Sellers must show Demonstrated Capacity if a test or Full Dispatch occurs during a month.

The IOUs submitted modifications to DRAM contracts and related documents in compliance with Resolution E-4817 on February 2, 2017 via Supplemental Advice Letter 4900-E-A. On March 7, 2017, the CPUC issued a letter to the IOUs instructing them to launch the 2018-2019 DRAM RFO on March 10, 2017, as outlined in Resolution E-4817.

The DRAM 3 solicitation was conducted over the period March through July of 2017. PG&E executed contracts representing 79.5 MW for August 2018 capacity and 90 MW for August 2019 capacity for a total cost of [redacted]. For the

[22] Resolution E-4817 also identified the differences between the first DRAM pilot and and the second DRAM pilot (DRAM 1 and DRAM 2). These include: (1) in DRAM 2 a Seller could elect to offer deliveries over 12 months, from January to December as opposed to a partial year in DRAM 1; and (2) DRAM 2 allowed for local and flexible resource adequacy offers, in addition to system capacity.

DRAM 3 process, residential accounts represented 24.1% of total August volumes in 2018.

1.2.4 2019 DRAM (DRAM 4 RFO)

Decision 16-09-056

On October 5, 2016, in Decision Adopting Guidance for Future Demand Response Portfolios and Modifying Decision 14-12-024 (Decision 16-09-056) the Commission provided directives regarding Demand Response auctions, including the following:

- The Commission maintained the 20% set-aside for residential customers;
- The utilities are directed to offer annual auctions and must offer contracts to all complying bids up to the simple average August capacity bid price. The simple average bid price shall be calculated by:
    - Excluding the top 10% of August bids offered
    - Totaling all remaining August bid prices, and
    - Dividing by the number of bids

Decision D.17-10-017

In Decision 17-10-017, issued on November 1, 2017, the Commission ordered with respect to the DRAM auction process:

1. The utilities shall conduct an additional demand response auction in 2018 for deliveries in 2019 in accordance with the procurement budget, guidelines and all other parameters adopted herein;
2. The total budget authorized for a 2018 solicitation in the demand response auction mechanism pilot is $6 million each for SCE and PG&E and $1.5 million for SDG&E;
3. The utilities shall recover the costs of the additional 2018 demand response auction mechanism pilot solicitation using the same mechanism as that used for the auction approved in Decision 16-09-029;
4. The utilities shall utilize the final approved 2017 demand response auction mechanism guidelines for the additional demand response auction in 2018 for 2019 deliveries, except that contract terms shall be limited to one year of delivery for 2019;
5. The utilities shall offer contracts to all complying bids up to the simple average August capacity bidding price or the budget cap, whichever comes first;

6. The utilities shall work with the Energy Division staff to ensure they use capacity values in bid selection criteria that appropriately prioritize bids for local resource adequacy; and
7. The utilities shall launch the additional 2019 auction no later than February 1, 2018 and shall submit their advice letters for approval of the auction results no later than May 1, 2018.

The DRAM 4 solicitation was conducted over the period January through March of 2018. PG&E executed contracts representing 72.7 MW of capacity in August 2019 for a total cost of approximately [redacted]. For the DRAM 4 process, residential accounts represented 26.0% of total August capacity volumes in 2019.

1.2.5 2020 DRAM (DRAM 5 RFO)

In late 2016 in D.16-09-056, the Commission directed Energy Division Staff to "conduct an independent analysis of the 2015 DRAM and 2016 DRAM pilot auctions and the subsequent deliveries" and present its findings and recommendations on whether to proceed from a pilot to permanent implementation of the mechanism to the Commission. 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 in January and February of 2019 to discuss the evaluation and proposed improvements to the DRAM process. 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 comments on the Evaluation Report and party proposals discussed during the workshops. Parties filed responses to the ruling on March 29, 2019. Reply comments were filed on April 10, 2019.

Approximately fifteen organizations participated in the workshops. Participants discussed a number of issues related to the Auction Mechanism including the goals and objectives for the DRAM, Evaluation Report and working group proposals to ensure Qualifying Capacity, proposals to improve performance, and proposals for contract improvements as well as a timeframe for adopting the changes.

Decision 19-07-009

Decision 19-07-009 was issued on July 12, 2019 and required a number of revisions to the Demand Response Auction Mechanism solicitation process including the following:

- The Decision approved a four-year continuation of the Auction Mechanism to improve identified shortcomings;
- The Decision authorized 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. For PG&E an annual budget of $5.70 million was established;
- Established a schedule for the 2019 Solicitation with First Deliveries in 2020. Utilities required to launch Request for Offers for Deliveries beginning on June 1, 2020;
- Eliminated the August Bid Price Cap adopted in D.16-09-056;
- Replaced the 20 percent residential set-aside with a 10 percent set-aside for new market entrants;
- Adopted items that received the most support from parties as critical improvements including providing accurate Qualifying Capacity for Supply Plans, imposing a penalty structure for shortfalls in Qualifying Capacity and Demonstrated Capacity, calculating Demonstrated Capacity on invoices, and establishing invoice deadlines. Specific requirements listed in the Order include:
    - Beginning with the 2019 Demand Response Auction Mechanism solicitation, Demand Response Providers shall be required to provide estimates of Qualifying Capacity for a resource by referencing historical performance data. Estimates should 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;
    - 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;
    - Exclude Reliability Demand Response Resources (RDRR);
    - Publish Auction Mechanism contract summaries, consistent with D.06-06-066.

The DRAM 5 solicitation was conducted over the period October through December of 2019. PG&E executed contracts representing 99 MW of capacity for August 2020 for a total cost of approximately [redacted], not including admin costs. For the DRAM 5 process, new entrants provided 23 MW of total August capacity volumes in 2020.

1.2.6 2021 DRAM (DRAM 6 RFO)

As noted above, Commission Decision D.19-07-009 approved a four-year continuation of the Demand Response Auction Mechanism to improve performance and reliability of the associated demand response resources. The Decision also adopted a hybrid Two-Step Approach with initial critical improvements in Step One and future and continuous improvements in Step Two. Step One allowed for a 2019 solicitation with deliveries beginning on June 1, 2020 (i.e., DRAM 5). D.19-07-009 recognized the need to make further improvements in Step Two and established a schedule of working group meetings to address 10 issues. The Commission directed the working group to file a report no later than August 23, 2019 to recommend proposals resolving these 10 issues. Additionally, D.19-07-009 directed parties to file responses to questions regarding seven policy determinations for Step Two. Decision 19-12-040 (Decision Refining the Demand Response Auction Mechanism) issued on December 23, 2019 ordered the utilities to submit a Tier 2 Advice Letter with a standard contract and RFO Guidelines outlining the parameters of the 2021 DRAM pilot.

Decision 19-12-040

Decision D.19-12-040 required the following revisions to the 2021 DRAM RFO (DRAM 6):

- The utilities shall continue to use the short run avoided cost of capacity to calculate the benefits of a resource in the Demand Response Auction Mechanism;
- Beginning with the 2021 DRAM, Sellers shall deliver 30 megawatt hours for each megawatt of the average of the three highest qualifying capacity months on the month-ahead Supply Plans associated with a Demand Response Auction Mechanism contract;
- Beginning with the 2021 DRAM, the utilities shall perform evaluations of bids using the least-cost best-fit evaluation guidelines in addition to other guidance provided by this decision to evaluate the bids;
- The Director of the Energy Division is authorized to work with stakeholders to explore and develop tools to measure the cost-effectiveness of the DRAM resources as part of the Auction Mechanism refinement process approved in Decision 19-07-009;
- Beginning with the 2021 DRAM, the utilities are authorized to implement project viability criteria whereby they may reject bids they do not deem as plausible or move the bid downward in ranking based on the qualitative viability score assigned to the bid. The utilities shall consult with the Energy Division and seek approval for instances when bids are being rejected under the criteria;

- The Director of the Energy Division is authorized to work with stakeholders to explore and develop options for a penalty structure for Demonstrated Capacity in the DRAM;
- Beginning with the 2021 DRAM, the utilities shall use the qualitative criteria and cost adjustments as provided in Table 5 of this Decision;
- Beginning with the 2021 DRAM, the utilities are permitted to procure system, local, and flexible resource adequacy through the DRAM;
- Beginning with the 2021 DRAM, the Director of the Energy Division is authorized to develop a standard reporting template for use by DRAM demand response providers. The template should be available for use by Providers in the 2021 Auction Mechanism.

The DRAM 6 solicitation was conducted over the period from May through July, 2020. PG&E executed 7 contracts for 82.94 MW of RA capacity for August 2021 with six counterparties for a total cost of [redacted], not including administrative costs.

1.2.7 2022 DRAM (DRAM 7 RFO)

Resolution E-5110

Resolution E-5110 approved the 2022 DRAM RFO, which required the budgets previously authorized in D.19-07-009. The 2022 DRAM budgets for PG&E, SCE and SDG&E are $6 million, $6 million and $2 million respectively. This Resolution approved several proposals for technical improvements in the DRAM design, rejects or defers some of the refinement proposals, and clarifies certain contract implementation issues based on existing Commission decisions, including a significant correction by the Energy Division to the capacity invoice payment calculation in the 2022 DRAM pro forma. Some of the refinements to the DRAM authorized in the Resolution include:

- The IOUs shall use the updated Data Issue Reporting Template in the 2022 DRAM pro forma contracts;
- Approved the IOUs proposal to provide additional guidance to bidders to improve the clarity and consistency in the QC estimates and supporting data provided by the bidders and facilitates the IOU's assessment of the submitted QC estimates;
- The Resolution deferred consideration of the IOU proposed revision to the Demonstrated Capacity invoice payment/penalty structure at this time and direct the IOUs to remove the changes associated with this proposal from the DRAM pro forma;
- The Resolution stated that DRAM resources must be reliable at their contracted commitments throughout the delivery period and that if a Seller

relied on only high performing customers by moving them across Resource IDs, this would likely artificially inflate the portfolio's real performance capability. Therefore, the Resolution approved limiting customer movement across Resource IDs in different delivery months for customer movements within a delivery month;

- Directed the IOUs to modify the DRAM pro forma to clarify the Must Offer Obligations (MOO) requirements;
- The IOUs were directed to (1) submit a new Advice Letter to modify the 2022 DRAM RFO guidelines to note that IOUs will use the Net LRAC methodology as a tool to test (on a what-if basis) the cost effectiveness of DRAM resources shortlisted in the solicitation process, while maintaining the status quo evaluation process for selecting the actual winning bids and (2) disclose the test results in the confidential portion of the AL to be submitted seeking the CPUC approval of executed 2022 DRAM contracts.

1.2.8 2023 DRAM (DRAM 8 RFO)

There were no additional workshops held during the summer of 2021 after completion of the 2022 DRAM RFO. As directed by D.19-12-040, OP 29, PG&E submitted the Tier 2 Advice Letter 6328-E on September 15, 2021, which included the 2023 DRAM implementation proposal with no major modifications to the existing DRAM contract and related documents. On December 20, 2021, the CPUC approved Advice Letter 6328-E via a Disposition Letter.

1.2.9 2024 DRAM (DRAM 9 RFO)

The CPUC held a virtual workshop during the summer of 2022 to discuss the findings and recommendations from the DRAM Evaluation Report issued on June 24, 2022. On July 5, 2022, a Scoping Memo and Ruling was issued, detailing a phased schedule, with Phase I focusing on a 2024 DRAM Pilot and Phase II addressing the future of DRAM. The Commission issued a Final Decision D.23-01-006 on January 13, 2023 approving the 2024 DRAM Pilot with no modifications to the existing DRAM contract and related documents.

1.3 2024 DRAM SCHEDULE

In accordance with the applicable orders, resolutions and Advice Letters, each of the IOUs, including PG&E, adopted the following schedule listed in Table 2 below.

Table 2: 2024 DRAM Schedule

DRAM 9 RFO Event	Date
DRAM RFO Launch	February 13, 2023
DRAM RFO Bidders Webinar	February 21, 2023
Offer Due Date	March 7, 2023
PG&E Notifies Non-Conforming Bidders with Request to Cure	March 14, 2023
Bidder Cure Period Ends	March 22, 2023
Notice to Bidders of Selection; Send Final PA for execution	April 26, 2023
Deadline to Submit Signed Pas to PG&E	May 3, 2023
Advice Letter Submitted to CPUC with executed PAs	June 1, 2023

1.4 ISSUES ADDRESSED IN THIS REPORT

This report addresses Merrimack Energy's assessment and conclusions regarding the following issues identified in the Commission's CPUC Independent Evaluator Report Template:

1. Describe the role of the IE throughout the solicitation and negotiation process.

2. How did the IOU conduct outreach to bidders, and was the solicitation robust?

3. Describe PG&E's bid evaluation methodology. Evaluate the strengths and weaknesses of the methodology.

4. Evaluate the administration of the solicitation process including the fairness of the IOU's bidding and selection process (i.e., quantitative and qualitative methodology used to evaluate bids, consistency of evaluation methods with criteria specified in bid documents, etc.).

5. Describe any applicable project-specific negotiations. Highlight any areas of concern including unique terms and conditions.

6. If applicable, describe safeguards and methodologies employed by the IOU to compare affiliate bids or Utility-Owned Generation ("UOG")

ownership proposals. If a utility selected a bid from an affiliate or a bid that would result in utility asset ownership, explain and analyze whether the IOU's selection of such bid(s) was appropriate.

7. Based on the complete bid process, is (are) the IOU contract(s) the best overall offer(s) received by the IOU?

8. Is the contract a reasonable way of achieving the need identified in the RFO?

9. Based on your analysis of the RFO offers, the bid process, and the overall market, do the contracts merit Commission approval?

All these issues are addressed in this report, generally in the order included in the CPUC Independent Evaluator Report Template.

2. DESCRIPTION OF THE ROLE OF THE IE

In compliance with the above requirements, the California Investor-owned utilities ("IOU"), including PG&E, retained Merrimack Energy to serve as Independent Evaluator for PG&E's 2024 DRAM 9 RFO. Merrimack Energy was retained to provide an independent evaluation of the appropriateness of PG&E's proposal evaluation methodology and selection process for product offers and to provide PG&E, PG&E's Procurement Review Group ("PRG"), and the Energy Division with periodic presentations, findings and other reports as requested. The objective of the role of the IE is to ensure that the solicitation process is undertaken in a fair, consistent, unbiased and objective manner and that the best offers are selected and acquired consistent with the solicitation requirements.

This role generally involves an assessment of the solicitation documents, detailed review and assessment of the evaluation process, the results of the quantitative and qualitative (non-price) analysis, selection of the short list or preferred product options, and monitoring and assessment of contract negotiations or contract execution. For this solicitation, Merrimack Energy was retained from the beginning of the process through contract execution. Merrimack Energy participated in meetings of the DRAM RFO teams comprised of representatives of all three utilities prior to receipt of offers and coordinated with all three utilities separately after submission of offers.

2.1 REGULATORY REQUIREMENTS FOR THE IE

The requirements for participation by an Independent Evaluator ("IE") in utility solicitations are outlined in decisions D.04-12-048 (Findings of Fact 94-95, Ordering Paragraph 28), D.06-05-039 (Finding of Fact 20, Conclusion of Law 3, Ordering Paragraph 8) of the California Public Utilities Commission ("Commission" or "CPUC") and D.09-06-050.

The role of IEs in California IOU procurement processes has evolved over time. In Decision 04-12-048 (December 16, 2004), the CPUC required the use of an IE by IOUs in resource solicitations where there are affiliates, IOU-built or turnkey bidders. The CPUC generally endorsed the guidelines issued by the Federal Energy Regulatory Commission ("FERC") for independent evaluation where an affiliate of the purchaser is a bidder in a competitive solicitation, but stated that the role of the IE would not be to make binding decisions on behalf of the utilities or

administer the entire process.[23] Instead, the IE would be consulted by the IOU, along with the Procurement Review Group ("PRG") on the design, administration, and evaluation aspects of the Request for Proposals ("RFP"). The Decision identifies the technical expertise and experience of the IE with regard to industry contracts, quantitative evaluation methodologies, power market derivatives, and other aspects of power project development. From a process standpoint, the IOU could contract directly with the IE, in consultation with its PRG, but the IE would coordinate with the Energy Division.

In the Advice Letter filed by the three IOUs on April 20, 2015, the IOUs indicated they planned to engage an IE to evaluate and report on the solicitation, evaluation, and selection for the DRAM Solicitation. A single evaluator will be used if one is on all IOU approved IE lists, if available, and using an IE is approved by the Commission through a Resolution to this Advice letter. The IE can be present at meetings and conference calls between the IOUs and bidders and will have full access to the solicitation management system used in DRAM. The IE will review all answers to questions to and may periodically make presentations to the IOUs, the CPUC and stakeholder groups to ensure that the DRAM solicitation remains open, fair, and transparent. The IE will also check for consistency in each IOUs application of its protocols and evaluation processes across bidders in its auction. The IE will review all offers and share findings about how the DRAM process worked and what could be improved. The IE will submit a confidential report and a public report on the auction process to be submitted with the contracts for approval by the CPUC.

Resolution E-4728: Approval with Modifications to the Joint Utility Proposal for a Demand Response Auction Mechanism Pilot Pursuant to Ordering Paragraph 5 of Decision 14-12-024, issued by the CPUC on July 27, 2015 approved the IOUs request to employ an IE. In addition to the elements proposed in AL 3208-E et al, the IE's final report shall include:

- An assessment of the effectiveness of the IOUs' efforts in soliciting and attracting new DR participants, and recommendations for how to better attract new DR participants to the California market in subsequent rounds of the DRAM, and
- The effectiveness of the residential set-aside and recommendation for how to better attract residential customers to the California market in subsequent rounds of the DRAM.

Decision 19-07-009 (July 11, 2019) reiterated the role of the Independent Evaluator in the DRAM RFO solicitation process. The Decision stated (page 12) that an

[23] Decision 04-12-048 at 129-37. The FERC guidelines are set forth in Ameren Energy Generating Company, 108 FERC ¶ 61,081 (June 29, 2004).

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 solicitation has been completed and winning bids have been selected.

This report is being filed consistent with the above requirements and is consistent with the requirements outlined in the CPUC's Short Form IE Report Template.

2.2 DESCRIPTION OF IE OVERSIGHT ACTIVITIES

The IE was involved in a number of activities and completed several specific tasks in performing its oversight role in connection with development of the 2024 DRAM RFO process, including PG&E's evaluation methodology, and evaluation and selection process. The activities of the IE during the process are described below:

- Participated in utility DRAM team meetings prior to receipt of offers as well as conference calls in which the utilities discussed common issues;
- Reviewed and commented on the Draft 2024 DRAM RFO Protocol documents for PG&E;
- Participated in PRG meetings prior to and during the solicitation process for each utility, including the PRG meetings at which the IOU's provided their proposed shortlist selections;
- Reviewed and discussed the bid evaluation methodology with all three utilities;
- Participated in the Bidders Webinar and provided comments on the presentation;
- Reviewed and commented on the Company's responses to bidder's questions;
- Reviewed and summarized the offers received to ensure the Company and IE identified and assessed the same list of offers;
- Reviewed the conformance assessment undertaken by each IOU and participated in discussions with the Utilities regarding conformance issues;
- Participated in calls regarding the 2024 DRAM Solicitation process with PG&E's project team;
- Reviewed and assessed PG&E's quantitative and qualitative (i.e., project viability) evaluation of the offers received for purposes of selecting the offers that would be included in the final shortlist. Participated in several conference calls with PG&E's project team and project staff to discuss the status of the offers and development of the shortlist options;

- Prepared the IE report for inclusion with the utility Advice Letter filings seeking approval for the contracts executed;

In addition to the above activities, PG&E's Contract Work Authorization for the IE for this assignment includes the following tasks for the IE:

- Advise on the consistency of solicitation activities with the CPUC's procurement-related rules and procedures and PG&E's Commission-approved procurement authority;
- Assist in the development, design, and review of the solicitation. Submit any recommendations to PG&E and/or CPUC consistent with the objective of ensuring a competitive, open and transparent process, and to ensure that the overall scope of the solicitation is not unnecessarily broad or too narrow;
- Monitor all communications and/or negotiations between PG&E and counterparties, as required by the solicitation's objectives as outlined in the solicitation Protocol and approved by the CPUC;
- Provide recommendations and reports, if required by PG&E and/or the CPUC, concerning the definition of products sought and price and non-price evaluation criteria; so that all aspects of the products are clearly understood and all bidders may effectively respond to the solicitations, as applicable;
- Review the comprehensive quantitative and qualitative bid evaluation criteria and methodologies applied to the 2024 Demand Response Auction Mechanism RFO and assess whether these are applied to all bids in a fair and non-discriminatory manner;
- Monitor the solicitation, bilateral negotiation and/or contract amendment processes;
- Provide presentations to PG&E's management, the Procurement Review Group, and the Energy Division, if requested, regarding the Consultant's findings or status;
- Provide a final written assessment as to whether the solicitation, bilateral negotiation and contract amendment processes were open, transparent and fair.

This report provides an assessment and review of PG&E's 2024 DRAM RFO procurement process from development of the RFO through execution of the final contracts. The role of the IE is also discussed as it pertains to specific activities as identified in Section V of this report.

3. DESCRIPTION OF OUTREACH ACITVITIES AND ROBUSTNESS OF SOLICITATION

3.1 DESCRIPTION OF IOU OUTREACH TO POTENTIAL BIDDERS

For the 2024 DRAM RFO, the IOUs' outreach efforts targeted approximately 2,400 contacts from companies involved in DR and other programs for its distribution list.[24] This included companies who had participated in utility programs in California as well as companies involved in DR programs in other markets in the US and Canada. From recent DRAM RFOs, the utilities added other contacts to the original list, if appropriate.

The IOUs' outreach activities resulted in a limited response in terms of the number of participants and the quantity of the proposals received. As discussed later in the report, the response to the 2024 DRAM 9 RFO was not as robust as the response to previous DRAM solicitations since the first DRAM pilot, in terms of the number of bidders and the overall number of offers.

PG&E established a section on the Company website for distribution of information to prospective Offerors. The website contained all the pertinent solicitation documents including:

- CPUC Decisions related to the DRAM program;
- 2024 DRAM 9 Schedule;
- 2024 DRAM RFO Protocol and related documents;
- Attachment A Offer Form;
- Attachment B Corporate Structure and Financials;
- Attachment C 2024 DRAM Purchase Agreement;
- Attachment D Qualifying Capacity (QC) Assessment;
- 2024 DRAM RFO Bidders Webinar Presentation;
- Scheduling Coordinator Information;
- 2024 DRAM Frequently Asked Questions ("FAQs");
- PowerAdvocate Registration Information and Instructions;
- CAISO Bidding Information, including Electric Rule 24;
- PG&E's Rule 24 Website for Third-Party Demand Response Providers;
- DRAM Set-Asides;
- DRP Information Request Form;
- CISR – DRP Form;

[24] The list of potential candidates was based on a compilation of the lists for all three IOUs. PG&E's own list includes over 2,800 industry contacts.

- CISR – DRP Form Instructions;
- Steps Necessary to Receive Customer Data;
- Rule 24 Checklist;
- Map of PG&E's Electric System;
- 2016, 2017, 2018-2019, 2019, 2020, 2021, 2022, and 2023 DRAM RFO websites;
- PG&E SubLAP Map;
- CAISO Local Capacity Information;
- Contact information for PG&E's DRAM RFO email address and the IE contacts.

The website contained a significant amount of current and backup information on the DRAM program and related issues and was easily accessible to navigate and from which to download information.

3.2 IDENTIFY THE PRINCIPLES USED TO DETERMINE ADEQUATE ROBUSTNESS OF THE SOLICITATION

There are several principles generally applied to determine whether the robustness of the solicitation was adequate. These include:

- Did the amount of capacity bid for the product sought allow for a competitive process?
- Were offers submitted for all products requested?
- Was there a competitive number of Participants for all products?
- Did the utility adequately market the solicitation?

3.3 WAS THE SOLICITATION ADEQUATELY ROBUST?

PG&E received 42 original offers on March 7, 2023 from [redacted] different bidders, which served to result in an adequate but limited competitive process.[25] This compares to 47 offers from 5 bidders in the 2023 DRAM RFO and 51 offers from [redacted] Bidders for the 2022 DRAM RFO. There were no bidders in the 2024 DRAM RFO that were considered a new entrant. Of the bidders competing in the process, all [redacted] submitted non-residential offers. [redacted] bidders submitted residential offers in addition to non-residential offers and one bidder submitted only non-residential offers. All offers submitted were for a system capacity product. Overall, there was a total of 73.05 MW submitted for August, down from approximately 182.2 MW

[redacted]

submitted for August, 2023, [redacted].

The IE concludes that PG&E's outreach activities were reasonable but led to a limited market response based on the number of Participants and offers submitted. In addition, the number of bidders and offers continue to decline for the DRAM RFO solicitation process.

4 DESCRIPTION OF BID EVALUATION AND SELECTION METHODOLOGY

This section of the report provides an overall description of PG&E's evaluation methodology and criteria for evaluating and selecting DRAM resources. PG&E developed an internal evaluation methodology designed to assess DRAM offers to meet requirements for the 2024 DRAM RFO based on the set of constraints and eligibility criteria identified in the RFO Instructions and the requirements outlined in the CPUC Resolutions and Decisions as well as Energy Division guidance. As will be discussed in this section, the three California utilities, including PG&E, developed a consistent "value or net benefit oriented" quantitative evaluation methodology for the 2024 DRAM RFO.

PG&E's evaluation protocol for ranking Offers in the 2024 DRAM RFO is based on least cost, best fit evaluation criteria, including both quantitative and qualitative factors, which includes, but are not limited to: Net Market Value and Offer Viability criteria. PG&E's offer selection methodology in the 2024 DRAM RFO process will be limited by the following factors: (a) the CPUC-approved budget; (b) the long-run avoided capacity cost cap; (c) offer price outliers; (d) the amount of the new market entrant set-aside requirements; and (e) the viability of the offers, based on assessment of the QC estimates provided by the bidders. PG&E is also required to assess the qualifying capacity of offers in accordance with D.19-07-009, as modified by D.19-09-041 and apply that to the offer selection per D.19-09-040.

In addition, PG&E is required to include the Net Long Run Avoided Cost of Generation (LRAC) to test a cost effectiveness methodology on a "what if basis" for shortlisted DRAM resources and disclose the results in the confidential portion of the Advice Letter with Executed Contracts as instructed by Resolution E-5110 Ordering Paragraph (OP) 4.

In order to be considered for selection in this RFO, the Offer must (1) meet the eligibility criteria set forth in Section III of PG&E's RFO Solicitation Protocol. Conforming offers[26] will then go through the analysis described later in this section of the IE report to evaluate and rank the offers received. Offers will be shortlisted based upon the requirements identified in the DRAM Decisions, Resolutions, Advice Letters and Energy Division guidance unless offers are rejected based on its price being above the long run avoided cost of generation, one or more of the

[26] Based on the schedule, there is a 9-day cure period from March 14, 2023 to March 22, 2023 to cure offers.

monthly capacity prices are outliers or in cases where there is clear evidence of market manipulation.[27]

The following identifies the process for which offers will be assessed and evaluated leading up to selection of the final offers for contract award:

1. Once offers are submitted they will be reviewed by the Evaluation Team for an assessment of errors or omissions that the bidder will be required to cure and to determine whether offers meet the applicable eligibility requirements for consideration in the RFO;
2. An initial Net Market Value assessment will be undertaken for the offers submitted;
3. An initial shortlist will be developed to prioritize which offers should be assessed for offer viability. To the extent possible, PG&E may seek clarification from bidders when there are concerns that the QC estimation does not appear to be reasonable or generally where clarification would be helpful in making an offer selection;
4. The Net Market Value Assessment will be updated when cures are provided;
5. A separate team (EM&V) will provide the Offer Viability Score for each offer and bidder based on a -1 to +1 scale;
6. PG&E will develop a variation of shortlist scenarios considering Net Market Value, Budget, Price Outliers, the New-Entrant Set-Aside, and Offer Viability Score.

PG&E's solicitation is seeking to procure DR resources under the following identified constraints:

- Cost Cap - PG&E's acceptance of offers will be subject to the CPUC's authorized budget cap of $6.0 million for the 2024 DRAM RFO (including administration costs and incentives).[28] The administrative costs throughout the term of the contract will be estimated, such that the remaining will be available for procurement;
- Long-run Avoided Cost of Generation ("LRAC") – D.19-07-009 (page 45) states that the IOUs are not obligated to select an offer if the offer price is above the long-term avoided cost of generation, though the IOUs' ability to reject offers requires consultation with the Energy Division. The public 2024 avoided cost in E3's avoided cost model is $257.05/kW-year (included in E3's 2023 Avoided Cost Calculator in the DR Output tab cell J7). As bidders may submit an offer for all 12 months of 2024 or any subset of

[27] The IOUs shall make such exceptions to not select an offer in consultation with its Procurement Review Group and with approval of the Energy Division.
[28] Decision (D.) 23-01-006. Ordering Paragraph 1.

months, with only a minimum requirement to offer capacity in the month of August, PG&E will calculate the levelized cost of energy ("LCOE") for an offer based on the average cost for the offered months and compare against a weighted LRAC for the corresponding offer period to align the units to $/kW-offer period. The IOUs will weigh the months offered by the respective short-run RA value used for assessing the RA benefits. Specifically, a weighted LRAC will be calculated by taking the monthly short-run RA value of the offered period as a percent of the annual short-run RA value, multiplied by E3's estimated LRAC. Each offer's LCOE will be compared against the weighted LRAC and offers with an LCOE that exceeds the weighted LRAC may be rejected;

- Outliers – If one or more of the monthly capacity prices of the offer are considered outliers, PG&E may, but is not obligated to, exclude such offer. The elimination of outlier bids requires consultation with the PRG and approval from the Energy Division;
- New Market Entrant Set-Aside – At least 10% of the total capacity procured in the 2024 DRAM RFO must be attributed to new market entrants.[29] If PG&E does not receive sufficient offers to attain 10% new market entrant of the total DRAM capacity, PG&E will be required to procure the new market entrant offers it does receive, barring any monthly capacity price outliers within the Offer and up to the long-run avoided capacity cost, and utilize the remaining budget for non-new market entrant offers. The 10% shall be assessed based on the August MWs. Due to issues incurred in the 2022 DRAM [redacted] it was determined and confirmed by Energy Division that a subsidiary of a previous market entrant will not be considered a new market entrant.

PG&E evaluated conforming offers using the quantitative and qualitative criteria described below. PG&E performed a quantitative evaluation of each conforming offer and ranked those offers based on each offer's Net Market Value[30] (NMV) per unit – from highest to lowest – in dollars per kilowatt year ($/kW-year). The NMV in $/kW-year is calculated using total NMV dollars for the numerator (discounted), and total offered monthly volume in kilowatts for the denominator (discounted) to get volume weighted average NMV, which is then multiplied by 12 months to

[29] A new market entrant is defined 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.

[30] NMV = Benefits – Costs. Monthly discounting is applied to the costs and benefits using PG&E's after-tax weighted average cost of capital.

derive a yearly value. The result of the quantitative analysis is a merit-order ranking of all complete and conforming offers.[31]

PG&E calculated an offer's benefits using its forecasted Resource Adequacy (RA) market value for each type of product in the offer, e.g., System Capacity, Local Capacity and/or Flexible Capacity. An offer's cost will be determined by multiplying (a) the offer's volume per Product per month by (b) the offer's price per Product per month, then adding all of these monthly values together. July 1, 2023 will be the Present Value date to which PG&E will do the discounting.

For the 2024 DRAM RFO, PG&E will apply to each offer's cost, as appropriate, an adjustment based on the Qualitative Evaluation Scoring Matrix described in Table 1. The qualitative assessment scoring matrix will be used to calculate such adjustment. Therefore, the offer's cost will be adjusted upward or downward based on the application of the adjustment factors. Adjusted Cost = Cost multiplied by Qualitative Factor Adjustment, where Qualitative Factor Adjustment = 1 + sum of (score of each factor multiplied by weight).

Capacity Value for System capacity will be multiplied by 1.09[32] since every 1 kW of DR resources reduces RA requirements by 1.09 kW. All costs and benefits will be discounted using PG&Es after tax weighted average cost of capital. The result of the evaluation is a Net Present Value ("NPV") of the benefits minus costs for each offer. The NPV of the benefits minus the costs divided by the discounted monthly kW offered is then converted to a $/kW-year value for each offer. All offers are ranked based on NPV$/kW-year values, which serves as the basis for selection, taking into consideration any mutually exclusive offers, the 10% new entrant set-aside requirement, the total budget cap and the relationship between offer price and the long-term avoided cost of generation.

Resolution E-5110 OP4 instructed the IOUs to include modifications of its RFO language to note that (1) the Net Long Run Avoided Cost of Generation (Net LRAC)[33] would be used by IOUs to test cost-effectiveness on a "what if basis" for shortlisted DRAM resources in the solicitation process and (2) the IOUs would

[31] From a formulaic perspective, Net Market Value = Benefits – Costs where Benefits = Sum of (Offered Volume x Product Value x Discounting Factors) for each Product and Costs = Sum of (Offered Volume x Offered Pricing x Discounting Factors) for each Product.

[32] For DRAM 8 and DRAM 9, the PRM multiplier was changed to 1.09. D.21-06-029, Ordering Paragraph 12, mandated this change.

[33] At the DRAM Refinement Working Group Meeting of June 30, 2020 Energy Division staff stated that Bid evaluation could be improved by moving from a Price Cap based on LRAC to an NMV Cap based on Adjusted LRAC or Net LRAC. Adjusted or Net LRAC was defined as the cumulative near-term RA benefit of DRAM capacity offered minus LRAC.

disclose the results in the confidential portion of the Advice Letter to be submitted seeking the CPUC approval of executed 2023 DRAM contracts.

The Net LRAC methodology does not change the bid selection described above. It would only be used as a tool to test the cost-effectiveness of DRAM resources. For each shortlisted offer, PG&E indicated it will calculate a weighted average NMV ($/kW-year) using the offer's calculated NMV and dividing by it by the average of the offer volume (kW-year). Each offer's weighted average NMV ($/kW-year) will then be compared against the Net LRAC ($/kW-year). The Net LRAC would serve as a floor for screening an offer based on its normalized (per unit capacity) NMV to ensure selection of offers provides the most net benefit. It is calculated by deducting the weighted LRAC ($/kW-offer period) from the corresponding offer period short run RA value ($/kW-offer period).

Prior to issuance of the 2024 DRAM RFO, the IE reviewed PG&E's and the other utilities' evaluation methodology and participated in calls with PG&E's project team along with the teams of the other utilities to review and discuss the proposed methodology and ensure the methodology was reasonably consistent to facilitate participation by bidders.

Also, in order to comply with D.19-07-009, as modified by D.19-09-041, bidders were required to submit estimates of qualifying capacity (QC) for each offer submitted into the DRAM solicitation. These estimates shall be based on historical information, where available, and otherwise, publicly available performance data that best represents the anticipated performance of the resource. A bidder's failure to provide this information would result in non-compliance with D.19-07-009, which would disqualify the bidder's offer.

Beginning with the 2021 Demand Response Auction Mechanism as specified in D.19-12-040, PG&E was authorized to implement project viability criteria whereby bids may be rejected if not deemed as plausible or bids can be moved downward in ranking based on the qualitative viability score assigned to the bid. PG&E shall consult with the Commission's Energy Division and seek approval for instances when bids are being rejected under the criteria.

Firewalled staff at PG&E were required to review the bidder's QC estimates and may not share such information with PG&E staff that manages PG&E's demand response programs. As it did in the DRAM 7 process, PG&E stated it would evaluate the QC estimates for all shortlisted bids and provide a (+), or (-) rating to indicate whether the offer had a reasonable chance of providing the QC bid. While offer viability was not formally a bid selection criterion in initial DRAM years, it has been permitted since the 2021 DRAM. These ratings would be shared with

PG&E's DRAM RFO Steering Committee and the PRG, as well as the Energy Division.

For this RFO, bid evaluation would use similar offer viability criteria as the 2021 DRAM pursuant to OP 20 of D.19-12-040. PG&E continues to refine the QC process through its experiences with the monthly QC process. Some of these refinements were incorporated during the 2022 and 2023 DRAM RFOs and similarly for the 2024 DRAM RFO. A bidder will be assessed based on a consolidated overall weighted average Offer viability rating, which considers a bidder-specific historical performance and dispute score and an offer-specific viability score. PG&E's review of a bidder's historical performance had primarily focused on DRAM and PG&E's DR Program but was enhanced in the 2022 RFO to also include a focus on a bidder's compliance with the DRAM contract and dispute history, developing a stronger feedback loop between the QC estimate and contract compliance.

D.19-07-009 requires DRPs to provide estimates of qualifying capacity (QC) for each offer at the time of bidding by referencing historical performance data, consistent with the guidance provided in Appendix A of the decision. The DPRs are required to reference publicly available performance data that best represents the anticipated performance of the resource if historical performance data is not available.

The IOUs were required to assess each offer's QC estimate to determine the offer's viability by evaluating whether the offer provides reasonable assurances that it is capable of delivering the associated capacity. The assessment would be based on the following criteria, as outlined in Attachment 2 of D.19-12-040:

- Load reduction per customer based on customer and load type and dispatch method;
- Historical performance;
- Number of existing and forecasted customers.

Each IOU would utilize its own assessment but would broadly categorize offers based on whether or not the offer(s) appears to be reasonable. Such assessments would be made using the bidder's supporting documentation and historical performance, as outlined in Attachment 2 of D.19-12-040.

For project viability assessment, PG&E uses the following assessment scale:

- +1 – the offer appears to be reasonable and likely to be delivered based on historical performance and supporting documentation;
- 0 – the offer appears to be technically feasible, but is not well supported by historical performance and supporting documentation;

- -1 – the offer does not appear to be reasonable or likely to be delivered based on historical performance and supporting documentation.

PG&E noted that scores of +0.5 and -0.5 are also permitted.[34]

[redacted]

After submission of offers, the IE also summarized and ranked the offers received by each utility as a check relative to the summary prepared by the utility. The IE also reviewed PG&E's and other utilities' assessments of the offers received to ensure that the best offers were reasonably considered based on the constraints and requirements imposed. The IE used his own spreadsheet model as a check against the IOU's assessment.

4.1 FRAMEWORK AND PRINCIPLES FOR EVALUATNG PG&E'S BID EVALUATION METHODOLOGY

This section of the report addresses the principles and framework underlying Merrimack Energy's review of PG&E's methodology for the 2024 DRAM RFO offer evaluation and selection. Key areas of inquiry by the IE and the underlying principles used by the IE to evaluate the methodology and results include the following:

- Were the procurement targets, products solicited, principles and objectives clearly defined in the RFO documents?
- Is the bid evaluation and selection based on the criteria specified in the bid documents and Commission Decisions and Resolutions?
- Do the bid documents clearly define the type and characteristics of products desired and what information the bidder should provide to ensure that the utility can conduct its evaluation?
- Does the methodology identify how qualitative and quantitative measures were considered and were they consistent with an overall metric?

[34] In implementing the evaluation methodology for offers based on QC assessments, for offers with multiple resource types, PG&E calculated a weighted average based on the scores for each resource type. As a result, some offers had scores that deviated from the values highlighted above.

- Does the price evaluation methodology allow for consistent evaluation of offers of different sizes and in-service dates?

4.2 EVALUATION CRITERIA AND METHODOLOGY

PG&E's 2024 DRAM 9 RFO Solicitation Protocol adequately defines the products solicited (Section III in PG&E's 2024 DRAM RFO Solicitation Protocol), the basis for the solicitation, RFO goals for PG&E, eligibility requirements, the evaluation criteria, quantitative and qualitative evaluation factors, and the information required from the bidders. The 2024 DRAM RFO documents also provide the Offer Forms which the bidders must complete as part of their offer, including the Offer Form (Attachment A) and the Qualifying Capacity Assessment Template (Attachment D). As described in the 2024 DRAM RFO Solicitation Protocol, as a first step all incoming offers were initially assessed for conformance with the basic submittal and eligibility requirements identified in the 2024 DRAM RFO Solicitation Protocol. Subsequent to the conformance review and cure period, PG&E undertook a quantitative and qualitative assessment of the offers submitted. PG&E assessed the offers based on the benefit and cost relationship which reflects the relationship between the offer price submitted for each month relative to PG&E's projection of market RA value for each product to calculate the Net Market Value of each offer.

As is typical in procurement processes, the 2024 DRAM RFO documents do not provide the detailed inputs (i.e., RA prices projected for each month by product) that PG&E will use in the evaluation. However, the methodology was reviewed with the IE in advance of receipt of offers. Also, the methodology was described in detail during the Bidder's Webinar. The methodology was consistently and reasonably applied to all offers given the type of product sought.

As described above, based on the provisions of D.19-07-009, as modified by D.19-09-041 and D.19-12-040, bidders were required to submit estimates of qualifying capacity (QC) for each offer submitted into the 2024 DRAM solicitation using a CPUC-approved template. These estimates shall be based on historical information, where available, and otherwise, publicly available performance data that best represents the anticipated performance of the resource. A bidder's failure to provide this information would not comply with D.19-07-009, which would disqualify the bidder's offer.

Beginning with the 2021 DRAM as specified in D.19-12-040, PG&E was authorized to implement project viability criteria whereby offers may be rejected if not deemed as plausible or offers can be moved downward in ranking based on the

qualitative viability score assigned to the offer. PG&E was required to consult with the Commission's Energy Division and seek approval for instances when offers were rejected under this criterion.

In its 2024 DRAM RFO Protocol, PG&E provided detailed guidance associated with Attachment D – QC Assessment. This guidance was designed to assist Participants to complete Attachment D and also provided references to the 2024 DRAM Protocol requirements and Purchase Agreement provisions. The section from the 2024 DRAM Protocol (Section V) is included as Appendix A to this IE report.

In summary, the description and implementation of the evaluation methodology, criteria, and inputs meets the requirements of the CPUC Resolutions and Decisions and Energy Division guidance. While the Qualitative Evaluation Scoring Matrix for the 2024 DRAM RFO includes criteria to reflect bidder performance, the IE continues to believe that one issue to consider for future DRAM solicitations is whether the evaluation process should contain stricter thresholds or stricter qualitative criteria based on performance of bidders who were seeking or were awarded contracts and their experience performing under the contract during the DRAM pilot solicitation processes. In addition, as included in the Conclusions and Recommendations to this Report, the IE believes that the timeframe used in the Qualitative Evaluation Scoring Matrix should be updated for each subsequent solicitation to reflect recent bidder performance as opposed to penalizing a bidder for failure to perform during a much earlier DRAM year. For example, a bidder currently receives a 10% increase in its bid price for evaluation purposes if the bidder willfully terminated or defaulted on an Auction Mechanism contract since 2019. Unless this date is updated, the bidder will always be penalized for the initial failure. Perhaps applying a three-year rolling historical period will more effectively reflect a bidder's recent performance and incentive the bidder to perform so as to eliminate the adjustment to their bid price for evaluation and ranking purposes.

4.3 STRENGTHS AND WEAKNESSES OF PG&E'S EVALUATION METHODOLOGY FOR DRAM RFO

This section of the report provides an assessment of the strengths and weaknesses of PG&E's evaluation and selection methodology.

Our experience has indicated that utilities use a variety of methodologies and criteria to evaluate resources based on the specific products requested and other factors. For DRAM solicitations, it now appears that the regulators and utilities have generally agreed on a consistent quantitative evaluation

methodology, although differences may still exist with regard to the application of more subjective qualitative criteria. We will draw upon this experience to address PG&E's methodology relative to the product solicited.

The following are the strengths identified by the IE with regard to the evaluation methodology:

- The quantitative Net Market Value methodology is reasonably straightforward, is easy to implement, and can be reviewed and audited easily;
- This methodology is generally consistent with the traditional utility "least cost best fit" methodology wherein the utilities generally compare the value of an offer based on RA market projections relative to the offer cost. The Net Market Value methodology therefore accounts for both value (i.e., benefits) and costs in evaluating and ranking offers. Furthermore, this methodology is valuable for the 2024 DRAM RFO and future DRAM RFO's in which the utilities may be considering a range of RA products (i.e., system and local RA, flex options, etc.) and contract delivery options (i.e., summer only or full year offers). In particular, the methodology is capable of evaluating a range of products and offer types;
- The methodology is consistently applied for both residential and non-residential customers;
- Adjustments made to the LRAC price cap methodology generally allow for a reasonable and fair evaluation of offers of different terms based on the use of the utility's short-run RA curves to weight the annual LRAC value;
- Bidders seemed more responsive to the QC assessment requirements and cooperated with the utilities seeking clarification of data or requests for more information to properly assess the viability of each offer. PG&E undertook a detailed assessment of every offer submitted on a proposal viability basis to assess the qualitative value of each offer and bidder. This detailed assessment identified several interesting trends and was very thorough and detailed. The results of the quantitative evaluation of the offers submitted to PG&E illustrated that the Net LRAC methodology did not have a measurable impact as an alternative cost effectiveness criterion.

In the opinion of the IE, there are a few potential weaknesses with regard to the methodology that may be associated with the inclusion of additional constraints imposed on the evaluation methodology as well as the timing for determination of the LRAC values in a volatile market.

While two major weaknesses were identified by Merrimack Energy in its DRAM 4 reports (e.g., use of the average August capacity price cap and the 20% residential set-aside requirement) have been eliminated, a few other issues have

emerged as the offer structure has evolved. One issue that arose during the DRAM 5 solicitation was the application of the Long Run Avoided Cost (LRAC) relative to offer prices as a basis for eliminating high cost offers. This issue was exacerbated by the delivery term for the DRAM 5 process of seven months. The methodology applied for subsequent DRAM solicitations appears to have potentially addressed the issues which emerged during DRAM 5 about valuing offers with different delivery terms relative to the LRAC.

However, an issue emerged during the DRAM 8 process that may warrant a change in the application of the LRAC. The public 2023 avoided capacity cost in E3's Avoided Cost Model was $95.34/kW-year, a significant decline from the 2022 avoided capacity cost of $156.30/kW-year calculated for the public 2022 avoided capacity cost and a decline which is inconsistent with recent inflationary pressures. [redacted]. Further exacerbating this situation is that the current LRAC value used for the 2024 DRAM RFO is now $257.05/kW-year. The volatility has been significant from one year to the next. Given the potential volatility of the LRAC perhaps a three-year rolling average for the LRAC or a replacement of the LRAC by another short-term benchmark that more effectively reflects the short-term nature of the program on a more real-time basis would be preferrable.

Another issue which emerged in recent DRAM RFOs was the issue of the New Entrant set-aside option and the failure of the DRAM 6, DRAM 7, DRAM 8 and now the DRAM 9 processes to illicit any offers from New Entrants. It is unclear if the lack of new entrants is due to the DRAM process itself or the overall market. For example, if new entrants are participating in other utility demand response programs but have decided not to participate in DRAM, what are the reasons for such decisions? The IE believes that a "lessons learned" assessment of the DRAM process should evaluate why new entrants are not gravitating to the DRAM process given the favorable new entrant requirements.

Additionally, there are no consistent criteria upon which the project viability assessment based on QC information is currently defined by all utilities. At this time, it is generally up to each utility to determine how they choose to apply project viability assessments. While the DRAM process is still a pilot program, we expect there will be "lessons learned" based on the approaches taken by each utility to assess project viability. The performance of the bidders to deliver the product amounts each bidder claims possible will become more obvious as actual experience with the ability of the bidders to perform is known. Actual experience with the QC assessment information and bidder performance will begin to emerge as more contracts are executed and performed.

For PG&E, [redacted].

In conclusion, the IE is of the opinion that the general quantitative methodology used by PG&E (and the other IOUs) for evaluating DRAM RFO offers is generally reasonable for this type of product, with the exception of reconsideration of the LRAC as a benchmark. The methodology overall provides a systematic way of evaluating and ranking a range of offers and products considered with the objective of meeting the spending targets to develop a final short list based on the constraints identified and offers submitted. Furthermore, this methodology offers a solid base in cases where the DRAM solicitation requirements may become more complex. In addition, the qualitative factors applied to bid pricing seem to provide an incentive for bidders to perform and not submit frivolous offers. However, the application of project viability assessments is still a work in progress and the lessons learned from this RFO, future DRAM RFOs, and bidder performance will be important to guide how best to implement project viability criteria into the DRAM solicitation process. Since the QC assessments are generally subjective at this point in the process, perhaps one option would be to include some of the factors applied in the QC assessments as qualitative evaluation criteria that affect bid pricing in a more objective and transparent manner.

5 ADMINISTRATION OF THE DRAM SOLICITATION PROCESS

In performing its oversight role, the IE participated in and undertook a number of activities in connection with the 2024 DRAM 9 solicitation including providing comments on PG&E's RFO documents, participating in conference calls with the IOU's project teams prior to receipt of offers, discussing the bid evaluation methodology and selection process, discussing the rationale for any constraints or objectives underlying the evaluation and selection, discussing with each utility its proposed approach for evaluating the QC assessments, organizing and summarizing the offers received, reviewing and commenting on the evaluation and selection process and criteria and results at each step of the evaluation and selection process, and participating in meetings with the Energy Division and PRG. The key project activities are listed in this section of the report in conjunction with the activities of the IE.

5.1 PROJECT TEAM MEETINGS

In previous DRAM solicitations there were generally a few meetings of all three utilities to discuss common issues. The number of common meetings has been declining given the level of experience of the utilities regarding the DRAM process. For the DRAM 9 process, since there were no substantive changes made to the program compared to DRAM 8 the only common communications was associated with responses to questions and preparation for the Bidders Webinar.

5.2 LAUNCH OF THE DRAM 9 RFO

On February 13, 2023 PG&E issued a notification to market participants announcing the issuance of the 2024 Demand Response Auction Mechanism Request for Offers. The notification informed market participants that PG&E had an authorized budget cap of $6 million to procure system, local and flexible capacity products from demand response aggregators who would bid Proxy Demand Resources (PDR) into the CAISO wholesale market from January 2024 through December 2024. Ten percent of the capacity is targeted for new market entrants. At a minimum, DRAM Offers must include capacity for August 2024. Offers were due on March 7, 2023.

The 2024 DRAM RFO was issued on February 13, 2023 as planned. The 2024 DRAM RFO Instructions, Offer Form, and related documents were posted to PG&E's 2024 DRAM RFO website at that time. The documents included on PG&E's 2024 DRAM RFO website were identified previously in this report.

5.3 PRE-BID (BIDDERS) WEBINAR

The IOUs held a Bidders Webinar on February 21, 2023 for interested Participants to provide an overall perspective on the solicitation process, including the products sought, eligibility requirements, offer evaluation and selection methodology and process, quantitative and qualitative evaluation requirements, the DRAM RFO schedule, and Purchase Agreement revisions and highlights. In addition, the utilities provided a description of the Offer Forms used by each utility as well as the QC Template. Each of the utilities also conducted a walk-through of their specific offer forms and submission requirements. Participants/Bidders had the opportunity to ask any follow-up questions, and the IOUs, including PG&E, posted the responses shortly after the Pre-Bid Web Conference. The IE had the opportunity to review the Bidders Webinar presentation prior to completion.

Agenda items addressed at the Pre-Bid Web Conference included:

- Introduction
- DRAM RFO Pilot Overview
- Bid Valuation and Selection Process
- DRAM Request for Offers Bid Materials
- QC Template and Offer Forms
- Walk-Through of IOU DRAM Offer Forms for each Utility
- Closing Remarks

The Bidder's Webinar presentation also included the website addresses for the 2024 DRAM 9 RFO for all three utilities. All three utilities posted the presentation on its website for the 2024 DRAM 9 RFO.

Approximately twenty-nine (29) Participants attended the Pre-Bid Web Conference, including twelve (12) non-IOU or CPUC representatives. Representative of the IE team were present at the Pre-Bid Web Conference.

5.4 QUESTIONS AND ANSWERS

There were no questions submitted to the utilities for the 2024 DRAM 9 RFO process.

5.5 LIST OF NEW MARKET ENTRANTS

To assess whether a Seller was a New Market Entrant and would be able to qualify for the 10% new entrant set-aside,[35] the IOUs compiled a list of Non-New Market Entrants for the 2024 DRAM 9 solicitation, including a list of DRAM Sellers based on public information filed with the CPUC in the advice letters seeking approval for the previous DRAM contracts. The IOUs also agreed that if a Bidder self-reports as a New Market Entrant the IOUs would verify that the Bidder: (1) was not awarded a DRAM contract across any of the IOUs in the three years prior to a solicitation; and (2) are not registered as a DRP with the CPUC. There were no new entrants that submitted offers into the 2024 DRAM 9 RFO.

5.6 RECEIPT OF OFFERS

Offers were received as scheduled on March 7, 2023. For PG&E, offers were submitted to the PowerAdvocate Platform established for this event. The IE had access to the PowerAdvocate Platform and could download and review the offers submitted. A total of [redacted] Bidders submitted offers. In all, 42 offers were submitted to PG&E, the fewest number of offers since the initial DRAM RFO.[36] The 42 offers included a total of 73.05 MWs in August 2024. As noted, no new entrants submitted offers to PG&E's 2024 DRAM 9 RFO despite the 10% new entrant set-aside. [redacted] Table 3 includes a list of bidders, number of unique offers submitted by each bidder, and total August mega-watts.

Table 3: Summary of Unique Offers Received

Bidder	Number of Offers	Total August MW
[redacted]		

[35] Per D.19-07-009 (page 44), a New Market Entrant is defined 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 Demand Response Auction Mechanism or other resource adequacy contracts.

[36] Forty-nine offers from [redacted] Bidders were submitted to PG&E's 2016 DRAM RFO. In the 2017 DRAM RFO, PG&E received 95 offers from [redacted] bidders. For the 2018-2019 DRAM RFO, PG&E received 83 offers from [redacted] bidders. PG&E received 81 offers from [redacted] bidders in response to the 2019 DRAM RFO. For the 2020 DRAM RFO, PG&E received 96 offers from [redacted] bidders. In the 2021 DRAM, PG&E received 60 offers from [redacted] bidders and in the 2022 DRAM RFO, PG&E received 51 offers from [redacted] bidders. For the 2023 DRAM RFO, PG&E received 47 offers from [redacted] bidders.

[redacted]		
Total	42	73.05

All offers submitted were for system capacity. [redacted] Bidders: [redacted] submitted residential and non-residential offers for System Capacity. [redacted]

In summary, eligible Bidders submitted offers that included a total of 73.05 MW for August 2024, a substantial reduction compared to 182.2 MW for August 2023 from the DRAM 8 solicitation process. As a result, while the number of participants and offers has continuously declined, the August MWs offered dropped significantly compared to recent DRAM RFO's.

The IE downloaded the offers and reviewed the offers along with PG&E's project team. The IE prepared its own summary and evaluation of the offers received including information regarding the offer quantities and pricing for each product. The IE used this information combined with PG&E's input assumptions and RA curves to also check the evaluation results and ranking of offers compiled by PG&E for selection purposes using a model developed by the IE.

Appendix A provides the IE's list of the offers received, including the Participant, estimated number of registrations, monthly capacity and pricing offered, and total costs for each offer.

5.7 CONFORMANCE OF OFFERS/CURE PERIOD

The 2024 DRAM 9 RFO schedule allowed approximately 7 days from submission of offers on March 7, 2022 to identify and notify bidders of any conformance issues on March 14, 2023 and to allow bidders to cure any non-conformance issues associated with their offers by the cure deadline of March 22, 2022.

With regard to conformance issues, PG&E issued follow-up questions to all bidders after the initial review. Questions involved clarification of the QC assessment data and Offer Form information. All bidders made an aggressive attempt to be in conformance by responding to PG&E's questions and clarification requests in an expeditious manner. As a result of the requests for conformance on the part of the bidders, all offers were deemed eligible for evaluation.

5.8 OFFER RANKING AND SELECTION

After the conformance stage, PG&E proceeded to undertake its review and assessment of offers from both a quantitative and offer viability perspective. From a quantitative perspective, PG&E compiled the offers received and rank ordered the offers based on Net Market Value (Benefits minus Costs), including the qualitative evaluation scores.[37] At the same time, a separate group within PG&E was responsible for evaluating the offers relative to the QC assessment criteria developed by PG&E as part of its internal protocol. Each component of the evaluation process is described below.

5.9 QUALIFYING CAPACITY (QC) ASSESSMENT

For the QC assessment, Bidders are required to submit Qualifying Capacity (QC) estimates for each offer. Failure to do so would disqualify the offer. Bidders submitted information about the customer composition and expected QC available for each offer, based on historical information, where available, and otherwise, publicly available performance data. PG&E then evaluated the QC estimates for all shortlisted offers to determine the viability of each offer by evaluating whether the offer provided a reasonable assurance that it is capable of delivering the associated capacity. The assessment will be based on the following criteria as outlined in Attachment 2 of D.19-12-040:

- Load reduction per customer, based on customer and load type, dispatch method, and historical performance;
- Current and historic capacity provided to PG&E;
- Number of existing and forecasted customers[38]

PG&E's approach essentially involved creating a QC Assessment score for each offer by bidder from -1 to 0 to +1. A score of -1 is provided to an offer that does not appear to be reasonable or likely to be delivered. A score of 0 is provided to an offer that appears to be technically feasible, but is not well supported. A score

[37] For the evaluation and ranking of offers, [redacted], had a qualitative adjusted to their cost based on the application of the qualitative criteria [redacted]

[38] For evaluation purposes, PG&E expanded the metrics it would consider in its evaluation along with positive and negative factors associated with each metric. Metrics considered included: total capacity offered, ratio of active and registered service accounts to total service accounts, project percentage of load impact or reduction, projected per-customer load impact, historical performance, and customer class considerations.

of +1 is provided to an offer that appears to be reasonable and likely to be delivered.

PG&E relied upon historical performance data and the reasonableness of per-customer reduction estimates based on data provided by the bidders to develop a score for each bidder. PG&E also incorporated the additional data requested as described below in the final QC Assessment scores.

Table 4 provides a summary of the offer viability scores evaluated and assessed by PG&E's QC assessment team to score each of the bidders overall.

Table 4: Summary of Project Viability Scores by Bidder

Bidder	Overall Viability Rating	Historical Performance Score	Viability Score (WAVG)
[redacted]			

[redacted]

The quantitative evaluation and selection methodology consisted of the following steps:

1. Calculate the total bid cost for each offer for each month as the product of the monthly capacity offered times the monthly offer price;[39]
2. Calculate the total RA value of the offer for each month as the product of the monthly capacity offered times PG&E's forecast of the RA value for each month based on the product submitted by the Respondent;
3. Multiply the total RA value by 1.09 for System RA;
4. Calculate the Net Present Value of the cost and benefit streams based on PG&E's discount rate of 6.78%;
5. Apply any qualitative adjustment to the cost at this point in the evaluation;[40]
6. Calculate the difference between the benefits and costs for each offer;

[39] The bid cost includes Scheduling Coordinator costs.

[redacted]

7. Divide the difference between the benefits and costs by the discounted sum of the monthly kW submitted for each offer;
8. Multiply this value times 12 to derive a PV$/kW-year metric;
9. Rank order the offers from highest to lowest value (PV$/kW-year) for all eligible offers;
10. Compare the Levelized Cost of each offer with the Long Run Avoided Cost of Generation to determine if the offer price exceeds Long Run Avoided Cost. PG&E will calculate the levelized cost of energy (LCOE) based on the average cost for the offered months and compare that against a weighted LRAC for the corresponding offer period to align the units to $/kW-offer period. A weighted LRAC will be calculated by taking the monthly short-run RA value of the offered period as a percent of the annual short-run RA value, multiplied by E3's 2024 LRAC. Each offer's LCOE will be compared against the weighted LRAC;
11. Keep going through NMV ranking until no more offers satisfy all the criteria (i.e., at or below total budget authorization, not above the long-term avoided cost of generation, meets 10% new entrant set-aside);[41]
12. Reflect the results of the QC assessments for each offer and bidder in making a determination to reject bids that do not seem plausible or move bids downward in ranking based on the qualitative viability score assigned to the bid.

PG&E's evaluation process consisted of quantitative ranking of offers based on NMV in rank order as well as adjustment in the selection based on project viability assessment scores combined with assessment of the QC evaluation to derive a viability rating for each offer and bidder.

Presentations on the evaluation results were initially reviewed with PG&E's Evaluation team and then reviewed and approved by the Steering Committee before the presentation to the PRG.

5.10 EVALUATION AND SELECTION

Similar to the 2023 DRAM RFO, one of the challenging decisions for PG&E was how to combine the quantitative evaluation (including adjustments for qualitative factors) with the results of the offer viability assessment based on QC evaluation to inform decisions on offer selection. There were several factors that would have an impact on portfolio development and selection for PG&E including:

- PG&E received a limited number of offers and August MW overall;

[41] As discussed, there were no eligible new entrants for this solicitation.

[redacted]

5.11 STEERING COMMITTEE MEETING

In preparation for the meeting with the Steering Committee, PG&E's Evaluation Team prepared [redacted] portfolios which included the required ranking of offers in rank order based on the Net Market Value methodology described above, up to the budget cap of approximately [redacted] (not including administrative costs). [redacted]

PG&E's evaluation team and the IE met ahead of the Steering Committee meeting to discuss the portfolios considered and the basis for the proposed selection. PG&E provided detailed evaluation results regarding the project viability criteria for each bidder and offer including compelling evidence to support its portfolio development options. The IE noted that its quantitative evaluation results were consistent with PG&E's results [redacted] To distinguish the [redacted] shortlist or portfolio alternatives, PG&E prepared a Pros and Cons assessment of each alternative as provided in Table 5.

Table 5: Pros and Cons of Each Shortlist Option Considered

[redacted]

At the Steering Committee meeting of March 27, 2023, the evaluation team discussed the bid selection criteria, offer viability assessment and evaluation process, an overview of the offers received,

After discussion and evaluation, the Steering Committee approved

5.12 PG&E PRG MEETING – 2024 DRAM RFO FINAL SELECTION

PG&E presented its final evaluation results, scenarios, and proposed shortlist selection to the PRG on April 5, 2023. PG&E presented an overview of the 2024 DRAM 9 RFO schedule, a review of the offer selection criteria, a description of the offer viability assessment criteria used by PG&E, an historical overview of the number of bidders from previous DRAM solicitations, an overview of offers submitted MW offered for this solicitation relative to previous DRAM solicitations, offer prices and relative costs of offers with regard to the LRAC. PG&E summarized the number of offers and prices submitted by month and bidder for DRAM 9. In addition, PG&E provided a summary of the Viability Assessment and resulting scores for each Bidder in DRAM 9 along with a comparison of the viability score and the NMV of the offers submitted by each bidder.

PG&E also discussed its quantitative and qualitative criteria and described in general its offer viability assessment. PG&E noted that it ranked offers by Net Market Value per unit (RA benefits minus offer costs), adjusted for qualitative criteria (if applicable). PG&E noted that it planned to select offers up to the budget cap of $6.0 million, including administrative costs. PG&E noted that it may elect to not select an offer if (a) the price is above the long-run avoided cost of generation ("LRAC"); (b) one or more of the monthly capacity prices are outliers; or (c) the offer is not viable based on assessment of the QC estimates provided by the bidder.

PG&E presented the results [redacted]

[redacted]

[redacted]

Table 8: PG&E Preferred Shortlist Selection

Rank	Bidder	Offer #	Product Type	Residential or Non-Res	August Capacity (MW)	Total Notional Cost ($1000)	NMV ($/kW-contract term)	Selected [42]
[redacted]								

[42] Offers with a "yes" were selected while offers with 'no" were not selected for the shortlist.

[redacted]

[redacted]

[redacted] The offers selected are summarized with the following statistics:

- [redacted] MW of Demand Response RA in August, 2024;
- Total cost of approximately [redacted] (excluding administrative costs);
- [redacted]

Merrimack Energy as the IE was also asked to provide its perspective on the Shortlists and final selection. Merrimack Energy provided overall comments on the 2024 DRAM 9 solicitation process followed by comments on PG&E's selection process.

With regard to comments on the 2024 DRAM 9 solicitation process, Merrimack Energy provided comments on the offers submitted, and on the evaluation and selection process:

- Merrimack Energy noted that the number of bidders has declined [redacted]
- [redacted]
- [redacted]
- There were no new entrants in the 2024 DRAM 9 RFO.

In terms of the evaluation and selection process, Merrimack Energy noted:

- [redacted]

[redacted]

5.13 CONTRACT REVISIONS FOR DRAM 9

There were no modifications to the existing DRAM contract included in the 2024 DRAM 9 RFO.

5.14 CONTRACT EXECUTION

The final steps in the 2024 DRAM 9 RFO process involved shortlist notification through contract execution. In the April 26, 2023 letter sent to bidders who were awarded contracts, PG&E informed the counterparties which offers were selected. PG&E also notified the bidder that an officer of the bidder was required to execute a copy of the notification letter and return the executed signature to PG&E by April 28, 2023, indicating whether they accepted the shortlist offer. As PG&E noted to the bidder, by returning the letter to PG&E the bidder was agreeing that it would not commit or offer, into any other solicitation or to any other party, any of the Products from the DRAM Resources that is the subject of the Offers listed in the notification letter and in Table 1 of the notification letter and in the Purchase Agreement. PG&E also informed bidders with offers selected that an executed version of Purchase Agreements was due on May 3, 2023. PG&E also identified the amount of Performance Assurance due and informed bidders that Performance Assurance was due 10 business days after the Execution Date of the PA.

[redacted]

The participants provided executed copies of the contracts back to PG&E by the deadline date.

As a result, PG&E ended up executing four (4) contracts with three (3) counterparties for 45.25 MW of 2024 August capacity at a total cost of [redacted] million, comprising [redacted] offers.

Appendix B contains applicable information for each contract executed that supports the summary information for the MWs executed provided above.

6 FAIRNESS OF OFFER EVALUATION & SELECTION PROCESS

6.1 PRINCIPLES AND GUIDELINES USED TO DETERMINE FAIRNESS

In evaluating PG&E's performance in implementing the 2024 DRAM 9 RFO, Merrimack Energy has applied a number of principles and factors, which incorporate those suggested by the Commission's Energy Division as well as additional principles that Merrimack Energy has used in its oversight of other competitive bidding processes. These include:

- Were bidder questions answered fairly and consistently and the answers made available to all?
- Did the bid evaluation team maintain consistent scoring and evaluation among and across projects, including different products, offer metrics and price structures?
- Did the evaluation methodology result in a fair and equitable evaluation and selection process?
- Was the evaluation and selection process consistent with the requirements outlined in the CPUC Resolutions and Decisions and Energy Division guidance with regard to the DRAM RFO process?
- Were the requirements listed in the DRAM Solicitation RFO documents applied in the same manner to all proposals?
- Was there evidence of any undue bias regarding the evaluation and selection of different offers that cannot be reasonably explained?
- Were the offers given equal credibility in the economic evaluation?
- Did PG&E ask for "clarifications" that provided the bidder an advantage over others?
- Were all cost factors treated in an equitable and consistent manner?
- Did PG&E consistently apply the requirements, procedures and criteria of the evaluation process as identified in the RFO documents to different bids and types of projects?

- Was the evaluation and selection process based on complete information about each proposal and a thorough investigation by PG&E's project team?

Merrimack Energy has the following observations about the process based on our role as IE:

- Overall, the IE viewed the offer evaluation and ranking process used by PG&E as being reasonable, consistent, and fair to all participants and consistent with the pre-specified evaluation protocols and criteria identified in PG&E's 2024 DRAM 9 RFO Solicitation Protocol documents. PG&E followed the process and methodology it had identified, including the guidance provided by CPUC Decisions;

- PG&E's evaluation and selection process was based on a combination of quantitative criteria, qualitative factor adjustments, and implementation of project viability criteria to reject bids, revise ranking of offers and select offers out of rank order. [redacted]

- PG&E's evaluation and selection process resulted in PG&E meeting its targets subject to the budget amounts identified in the Commission Decisions which apply to the 2024 DRAM 9 RFO. [redacted] PG&E's evaluation and selection process resulted in the following outcomes:
  - PG&E contracted for 42.25 MW of RA capacity for August, 2024
  - PG&E's expenditures of [redacted] million plus administrative costs, which results in PG&E spending less than its budget cap;

- There were no new entrants who submitted offer into the 2024 DRAM solicitation;

- Based on our assessment of the evaluation process relative to the above criteria, it is the IE's opinion that all participants had access to the same amount and quality of information at the same time via PG&E's website. PG&E maintained a website dedicated to the solicitation and posted all documents and Questions and Answers on the website. PG&E also utilized the PowerAdvocate Platform for bidders to submit their offers. The IE also observed no difference in the treatment of participants regarding clarification questions for participants, correspondence and

communications with participants, and follow-up contacts. PG&E (in conjunction with the other IOUs) also conducted a Pre-Bid Web Conference call which allowed all potential bidders to ask clarifying questions about the DRAM RFO and related requirements;

- The outreach activities of the IOUs were broad and far reaching. There was no lack of effort in targeting potential DRAM suppliers. Despite the outreach efforts, the number of bidders and offers submitted continues to decline;

- PG&E did not accept any offers that were priced above the LRAC;

- There were [redacted] of the offers submitted that had positive Net Market Value. [redacted] which may illustrate that the Net LRAC methodology served its purpose as a cost effectiveness metric;

- The PRG was actively involved in the DRAM 9 RFO process via PG&E's presentation on Final Offer Selection on April 5, 2023. PG&E's PRG presentation included a discussion of DRAM 9 offer selection criteria requirements, offer viability assessment, overview of the DRAM market, a summary of the offers received, description of [redacted] potential shortlists, a recommended shortlist and basis for selection, the RFO schedule, and back-up information;

- PG&E's Protocol Document and other information provided was transparent regarding the application of QC Assessment information.

Our assessment is that PG&E's evaluation of the offers and its decisions on offer ranking and selection were fair, reasonable and consistent with recent DRAM RFO procurement selection.

7 CONTRACT NEGOTIATION PROCESS

The 2024 DRAM 9 RFO Pro Forma Purchase Agreement ("2024 DRAM PA") is a standard contract which incorporates elements of the Edison Electric Institute ("EEI") Master Power Purchase and Sale Agreement between the Parties used in RA contracts, and elements of existing DR contracts. Since the DRAM PA was intended to be executed without negotiations or changes, participants were not allowed to provide a redline mark-up.

8 SAFEGUARDS AND METHODOLOGIES EMPLOYED

Sections VII, Confidentiality and Section XII, Bidder's Representations and Warranties in PG&E's 2024 DRAM RFO Solicitation Protocol address safeguards in the process. Section VII Confidentiality addresses the treatment of confidential information. Section VII states that no Bidder shall collaborate on or discuss with any other Bidder or potential Bidder offer strategies, the substance of any Offer(s), including without limitation the price or any other terms or conditions of any Offer(s), or whether PG&E has selected Offers or not.

Section XII Bidder's Representations and Warranties addresses Bidder acknowledgement of the conditions of the RFO. Bidder acknowledges that it has read, understands and agrees to be bound by all terms, conditions and other provisions of the Solicitation Protocol. Also, another provision in this section is that Bidder acknowledges that it has not engaged, and covenants that it will not engage, in any communications with any other actual or potential Bidder in the RFO concerning this solicitation, price terms in Bidder's Offer, or related matters and has not engaged in collusion or other unlawful or unfair business practices in connection with the RFO.

No affiliate proposals were submitted.

9 RECOMMENDATIONS FOR CONTRACT APPROVAL

The CPUC IE Report Template requires that the IE address the question, "Based on your analysis of the proposals received and available, the bid process, and the overall market does the contract merit Commission approval? Explain." The resulting contracts from this solicitation include four (4) Purchase Agreements with three Demand Response Providers. The agreements resulted from a competitive solicitation process that generated a reasonable but limited level of competition for Demand Response RA products subject to the requirements and constraints for this solicitation. As discussed in the previous sections, the solicitation was conducted consistent with the utility's protocols and was required to meet the provisions identified in the CPUC Decisions and Resolutions.

Since the contracts were essentially standard contracts, there was no formal contract negotiation process with any participant. Instead, the process of completing and executing contracts generally involved clean-up items such as the name of the counterparty, contact information, verification of pricing, contract volumes and delivery periods, and agreement on the level of credit required.

Overall, the four contracts[43] executed were reasonably selected [redacted]

[43] There were three bidders and four contracts. PG&E executed two contracts with Resi Station; one for Non-Residential offers and one for Residential offers.

10 CONCLUSIONS & RECOMMENDATIONS

10.1 CONCLUSIONS & OBSERVATIONS

The results of PG&E's 2024 DRAM 9 RFO Solicitation process for DR products are generally consistent with policy objectives. The response of the market was not robust in terms of the number of offers and bidders compared to previous DRAM solicitations. In addition, the number of August MWs submitted decreased from 182.2 MW in DRAM 8 to 73.05 MW in DRAM 9. For the third solicitation in a row, there were no new entrants to DRAM 9, even with the significant incentives provided. Furthermore, [redacted] Bidders from DRAM 8 did not participate in DRAM 9 resulting in only [redacted] total Bidders and 42 total offers.

One of the challenging decisions for PG&E and the other utilities was how to combine the quantitative evaluation (including adjustments for non-quantitative factors) with the results of the offer viability assessment based on QC evaluation to inform decisions on offer selection. PG&E developed a detailed QC assessment evaluation methodology and combined quantitative and project viability criteria in its selection process consistent with Commission Order 20 from D.19-12-040. [redacted]

In terms of meeting the bid selection criteria, PG&E executed contracts that resulted in spending levels below the budget cap including administrative costs. [redacted], which resulted in PG&E procuring only 45.25 MW for August 2024 at a total cost of [redacted] for all [redacted] MWs procured for 2024.

In terms of pricing, [redacted] of the forty-two offers submitted had positive NMV values. The remaining offers had negative NMV values, meaning that costs exceeded the benefits, including qualitative adjustments. The pricing for [redacted] of the forty-two offers exceeded the LRAC for this solicitation.

All offers submitted were for system capacity. In addition, the vast majority of the offers were for an annual strip. [redacted] bidders submitted offers with residential customers.

As we have noted in this report, it appears that the quantitative methodology used by the utilities seems to be reasonable at this point. However, the application of project viability assessments by the utilities and the methodology for including project viability assessments as selection criteria should be reviewed based on the actual experience of bidders from the DRAM 5 through 9 processes based on their 2020, 2021, 2022, and 2023 performance as input into application of project viability assessments for future DRAM solicitations.

For the reasons stated herein, Merrimack Energy concludes that the short-listing decisions by PG&E in the 2024 DRAM 9 RFO pilot were generally reasonable and based on the requirements and quantitative and qualitative evaluation criteria set forth in the RFO documents. As noted, [redacted] PG&E followed its established protocols and methodology in evaluating and selecting offers for the DRAM 9 RFO. [redacted] PG&E [redacted] executed four contracts for 45.25 MW in August 2024 which [redacted] The IE believes the Purchase Agreements are reasonable and should be approved.

10.2 RECOMMENDATIONS

Based on our involvement throughout the process, the IE has the following recommendation for PG&E for undertaking future similar solicitations. Some of these recommendations have also been included in previous IE reports on the DRAM process for each utility:

- There currently are not consistent criteria upon which the project viability assessment based on QC information is defined. At this time, it is generally up to each utility to determine how they choose to apply project viability assessments. While the DRAM process is still a pilot program, we expect there will be "lessons learned" based on the approaches taken by each utility to assess project viability. The performance of the bidders to deliver the product amounts each bidder claims possible will become more obvious as actual experience with the

ability of the bidders to perform is known. The IE recommends that the Energy Division provide clear guidance as to how past performance and QC assessments should be incorporated into the evaluation process in future DRAM solicitations based on review of recent performance. It is important to develop a clear methodology and criteria regarding how the QC assessments will be used to ensure that a well-defined and objective scoring system is applied to all offers. This is important to maintain consistency and transparency in the process to ensure bidders are encouraged to respond;

- The qualitative criterion applies a 5% Cost-adder if a bidder responds "Yes" to the question "Has bidder delivered Demonstrated Capacity invoices to Utility totaling less than 75% of the total contracted capacity for all contracted months since January 1, 2019" and a 10% Cost-Adder if the bidder responds "Yes" to the question "Has the Bidder willfully terminated or defaulted on an Auction Mechanism contract, since 2019?" The IE feels that the timeframe used in the Qualitative Evaluation Scoring Matrix should be updated for each subsequent solicitation to reflect recent bidder performance as opposed to penalizing a bidder for failure to perform during a much earlier DRAM year. For example, a bidder currently receives a 10% increase in its bid price for evaluation purposes if the bidder willfully terminated or defaulted on an Auction Mechanism contract since 2019. Unless this date is updated, the bidder will always be penalized for the initial failure. Perhaps applying a three-year rolling historical period will more effectively reflect a bidder's recent performance and incentivize the bidder to perform so as to eliminate the adjustment to their bid price for evaluation and ranking purposes.

- Interest and participation in the DRAM solicitation process continues to wane based on fewer bidders participating.[44] As we recommended in previous IE DRAM reports, the utilities and Energy Division should undertake a review and assessment of the factors leading to the decline in interest in the DRAM solicitation process on the part of participants. Before proceeding with any future DRAM solicitations, the IE suggests that either the Energy Division, IE or other entity conduct a survey of all the market participants that have participated in past DRAM auctions to assess the reasons for not competing in recent solicitations. The IE conducted a survey of all DRAM participants after the DRAM 1 RFO

[44] It would be worthwhile to assess why interest in DRAM appears to be declining. In particular, the IE questions whether the complexities in the evaluation and selection process, inconsistencies in the application of qualitative or project viability assessments, contract provisions, or other factors not related to the DRAM process are driving the reduction in bidders and offers submitted.

solicitation and received important and informative feedback from Participants. We would recommend that a follow-up survey of all bidders who have participated in the nine DRAM solicitations should be conducted to assess the reasons why so many of the participants have dropped out of the DRAM RFO process or reduced their level of involvement. It would be helpful to understand reasons for not participating and other barriers to entry that may affect participation in this solicitation;

- The IE is of the opinion that with the exception of the issues noted by the IE in this report, the general quantitative NMV methodology used by PG&E (and the other IOUs) for evaluating DRAM RFO offers is generally reasonable for this type of product. The methodology provides a systematic way of evaluating and ranking a range of offers and products considered with the objective of meeting the spending targets to develop a final short list based on the constraints identified and offers submitted. Furthermore, this methodology offers a solid base in cases where the DRAM solicitation requirements may become more complex. In addition, the qualitative factors applied to bid pricing seem to provide an incentive for bidders to perform and not submit frivolous offers. However, the application of project viability assessments is still a work in progress and the lessons learned from this RFO, future DRAM RFOs, and bidder performance will be important to guide how best to implement project viability criteria into the DRAM solicitation process. The importance of qualitative criteria will diminish if the number of offers continues to decline and the utility has to procure nearly all offers submitted to reach the budget cap. Since the QC assessments are generally subjective at this point in the process, perhaps one option would be to include some of the factors applied in the QC assessments as qualitative evaluation criteria that affect bid pricing in a more objective and transparent manner;

- One of the major points of contention in the DRAM 5 solicitation was the LRAC calculation methodology and its application. The IE believes that the approach utilized in the DRAM 6 solicitation and subsequently in DRAM 7 was more appropriate and generally didn't disqualify offers. It was a straight-forward calculation and better aligned the Long-run Avoided Cost (LRAC) value from E3's ACC Calculator with the IOU's short-run RA value by weighting the LRAC value for each month of the delivery term. While the IE believes that this approach makes sense, the IE questions that the actual LRAC value used is the most appropriate value to create a relative cost cap or constraint, as the LRAC reflects a

long-term metric, while the DRAM offers are for only one year. In DRAM 8, there was a significant decrease in the LRAC threshold utilized compared to the DRAM 7 process. In DRAM 7, the 2020 ACC LRAC value of $156.00/kW-year in 2021 decreased to $95.34/kW-year for the year 2023 from the 2021 ACC file. [redacted] The decline in the LRAC is not consistent with the recent inflationary pressures and market capacity pricing. The most recent LRAC value used for the 2024 DRAM RFO is up considerably to $257.05/kW-year. While the cost of short-term capacity in peak months has significantly increased as of recent, Merrimack Energy questions whether this value accurately reflects actual market pricing. Given that historically the LRAC values utilized in past DRAM solicitations haven't actually reflected market prices in those years, Merrimack Energy recommends further analysis of the calculation methodology of the LRAC and its implementation. Based on the actual and potential volatility of the LRAC perhaps a three-year rolling average for the LRAC or a replacement of the LRAC by another short-term benchmark that more effectively reflects the short-term nature of the program on a more real-time basis would be preferrable. After further analysis, it appeared that heavily shaped offers oftentimes end up higher than the LRAC. The current LRAC is calculated simply based on the RA cost curve; however, it is not weighted according to the volume shape. If the LRAC is adjusted to be weighted by the volume shape, it could more appropriately forecast the cost to procure the same shaped volume;

- The IE and the IOU's calculated the Net LRAC and four separate iterations of the NMV to compare to the Net LRAC as a cost-effectiveness test. The Net LRAC comparison did not impact the selection results, though [redacted] total offers were above the Net LRAC. The [redacted] offers were the lowest in the stack by NMV. While the Net LRAC may be a reasonable mechanism to create an NMV floor, the IE believes that in order to maintain transparency for bidders and to not over-complicate the evaluation process, there should only be one effective cost-cap or cost-effectiveness calculation utilized. If the Net LRAC calculation is to be utilized in future DRAM solicitations as a cost-effectiveness measure, the IE feels that the NMV calculations compared to the Net LRAC should closely align with the standard NMV calculation and should therefore utilize discounted costs and quantities;

Appendix A

QC Assessment Guidance for Attachment D

All capitalized terms not defined herein shall have the meaning set forth in the DRAM RFO Protocols and Purchase Agreement.

1. Bidder must provide all applicable information requested in the form per Offer, in accordance with D.19-07-009, as modified by D.19-09-041, and D.19-12-040.
   - At minimum, one row shall be filled out for each product type. For instance, all System Capacity - Residential Customer Product Offers may be combined for the purposes of the QC Assessment, but may not be combined with all System Capacity - Non-residential Customer Product Offers. Note that a Non-residential Customer Product offer may include residential customers.
   - Bidders may also elect to provide their QC Assessment estimates for the same product type per Offer, and/or by Offer customer class or technology segment.
   - Additional rows may be added to this template, but columns and formulas should not be modified.
   - Values should reflect the estimated QC for the month with the greatest megawatts (MWs).
   - Bidder must provide all applicable information requested in the form per Offer, in accordance with D.19-07-009, as modified by D.19-09-041, and D.19-12-040.

2. PG&E may reach out to a Bidder to ask clarifying questions.

3. Customer Class:
   <u>Definition:</u> Based on the Customer Class Indicator provided by PG&E in the Rule 24 data set.

4. Load Types(s) and Dispatch Method:
   - List all applicable options that expect to be utilized to support the Seller's DR response, and if "other" is selected, provide a description in the corresponding Optional Notes column.

5. Registered and Forecasted Service Accounts
   <u>Definitions:</u>

- Registered Service Accounts refers to PG&E service agreements that have been registered in the CAISO Demand Response Registration System (DRRS) as of the due date of your applicable QC assessment with an active status.
- Forecasted Service Accounts refers to any service agreements that have not yet been registered in the CAISO DRRS or are not active, but the Bidder expects to need to register in order to meet the Estimated QC.
- Total Projected Service Accounts should be calculated as a sum of the Registered Service Accounts and Forecasted Service Accounts.

PG&E Guidance:

If the Bidder lists a significant ratio of Forecasted Service Accounts, PG&E requests that Bidder utilize the notes field to indicate:

- the percentage of total estimated QC (in MW) attributed to the Active and Registered Service Accounts, and
- the percentage of total estimated QC (in MW) that have been enrolled in the Seller's DR program. Include the capacity associated to customers that are firmly committed to provide DR capacity, but may not yet be registered or active in the CAISO DRRS.

6. Projected Load

Definitions:

- Estimates of the projected aggregated load of Active and Registered Service Accounts and Forecasted Service Accounts during the Availability Assessment Hours (AAH) for the applicable Month with the highest MWs.
- If storage based, provide the projected aggregated capacity.
- Total Projected Load should be calculated as a sum of the Projected Load of Registered Customers and Projected Load of Forecasted Customers.

PG&E Guidance:

- If the bid includes Registered Customers, this forecasted load be calculated based on each customer's average historical customer meter data during the AAH in the associated month in prior year(s), adjusted for more recent shifts in load.
- Provide any descriptions of the calculation methodology used to support the projected aggregated load forecast.

7. Per-customer Impact
   Definitions:
   - Weighted average load impact or reduction with respect to the Projected Aggregated Load during the RA measurement hours and the CAISO AAH and relative to a baseline.
   - If storage based, provide the projected percentage of capacity delivered.

   PG&E Guidance:

   - If this value differs significantly from the supporting historical data, then the Bidder explain why it expects the load reduction to change.
   - If the baseline method is expected to be changing from that used for historical performance, please include this here.

8. Total Projected Load Impact (kW)
   Definitions:

   Should be calculated as follows for each customer type:

$$(\#Registered\ Service\ Accounts * Projected\ Load\ of\ Registered\ Customers\ (kW)) + (\#Forecasted\ Service\ Accounts * Per - customer\ impactof\ Forecasted\ SAs\ (kW))$$

9. Historical Performance
   Where historical data is not available, the Bidder 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 (see definitions and PG&E guidance above):
   - Customer class (or percentage mix): Residential, Non-residential;
   - Load type (nature of load being aggregated): such as, whole house, air conditioning load, storage, building load, pumps, electric vehicles, or other;
   - Customer size (Non-residential only); large, medium, small;
   - Dispatch method: automated via cloud control, or other (describe);
   - Number of service accounts;
   - Load impact.

   PG&E Guidance:

- Feel free to use multiple rows or a separate tab to provide historical event data for each event if summarizing the results into one row is not helpful (i.e., to demonstrate improving performance over time) and provide any explanations or calculations on how the historical performance was assessed;
- If the historical performance does not support the estimated Qualifying Capacity, please provide an explanation demonstrating why the estimated Qualifying Capacity is reasonable and likely to be delivered.

10. Estimated Qualifying Capacity (MW)
    Definitions: Should be calculated as follows:

$$(Total\ Load\ Impact\ (kW) from\ Residential\ Customers + Total\ Load\ Impact\ (kW) from\ NonResidential\ Customers) \div 1000$$

Appendix E

PG&E's Pro Forma 2024 DRAM Purchase Agreement

2024 DRAM RFO PRO FORMA

DEMAND RESPONSE AUCTION MECHANISM RESOURCE PURCHASE AGREEMENT

between

[NAME OF SELLER]

and

PACIFIC GAS AND ELECTRIC COMPANY

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DEMAND RESPONSE RESOURCE PURCHASE AGREEMENT
BY AND BETWEEN
[NAME OF SELLER]
AND
PACIFIC GAS AND ELECTRIC COMPANY

PREAMBLE

This Demand Response Resource Purchase Agreement, together with its exhibits (the "Agreement") is entered into by and between PACIFIC GAS AND ELECTRIC COMPANY, a California corporation ("Buyer"), and *[Aggregator or Demand Response Provider]*, a *[Seller's business registration]* ("Seller"), as of the latest signature date hereof ("Execution Date"). Buyer and Seller are referred to herein individually as a "Party" and collectively as "Parties." Unless the context otherwise specifies or requires, capitalized terms in this Agreement have the meanings set forth in Exhibit A.

AGREEMENT

In consideration of the agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows.

ARTICLE 1. TRANSACTION

1.1. Purchase and Sale of the Product

(a) During the Delivery Period, Seller shall sell and deliver, and Buyer shall purchase and receive, the Product as indicated in Table 1.1(b) in the amount of the Monthly Contracted Quantity, as indicated in Exhibit B, subject to and in accordance with the terms and conditions of this Agreement. The Product shall be a Proxy Demand Resource (PDR) consisting entirely of DRAM Resource Customers registered by the Seller (or its DRP).

(b) The Product is:

TABLE 1.1(b)		
Product Selected	**Type of Product**	**Local Capacity Area (as applicable)**
☐	Product A: System Capacity	Not applicable
☐	Product B1: Local Capacity with System Capacity	Greater Bay
☐	Product B2: Local Capacity with System Capacity	Humboldt
☐	Product B3: Local Capacity with System Capacity	North Coast/North Bay
☐	Product B4: Local Capacity with System Capacity	Sierra
☐	Product B5: Local Capacity with System Capacity	Stockton
☐	Product B6: Local Capacity with System Capacity	Fresno
☐	Product B7: Local Capacity with System Capacity	Kern
☐	Product C1-0: Flexible Capacity (Flexible Category 1) with System Capacity	Not applicable

TABLE 1.1(b)		
Product Selected	**Type of Product**	**Local Capacity Area (as applicable)**
☐	Product C2-0: Flexible Capacity (Flexible Category 2) with System Capacity	Not applicable
☐	Product C3-0: Flexible Capacity (Flexible Category 3) with System Capacity	Not applicable
☐	Product D1-1: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Greater Bay
☐	Product D1-2: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Humboldt
☐	Product D1-3: Flexible Capacity (Flexible Category 1) with Local and System Capacity	North Coast/North Bay
☐	Product D1-4: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Sierra
☐	Product D1-5: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Stockton
☐	Product D1-6: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Fresno
☐	Product D1-7: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Kern
☐	Product D2-1: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Greater Bay
☐	Product D2-2: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Humboldt
☐	Product D2-3: Flexible Capacity (Flexible Category 2) with Local and System Capacity	North Coast/North Bay
☐	Product D2-4: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Sierra
☐	Product D2-5: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Stockton
☐	Product D2-6: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Fresno
☐	Product D2-7: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Kern
☐	Product D3-1: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Greater Bay
☐	Product D3-2: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Humboldt

TABLE 1.1(b)		
Product Selected	**Type of Product**	**Local Capacity Area (as applicable)**
☐	Product D3-3: Flexible Capacity (Flexible Category 3) with Local and System Capacity	North Coast/North Bay
☐	Product D3-4: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Sierra
☐	Product D3-5: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Stockton
☐	Product D3-6: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Fresno
☐	Product D3-7: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Kern

(c) Seller to indicate whether the Product is:

____ a Residential Customer Product; or

____ not a Residential Customer Product

{Seller to choose only one option which applies to all Product for this Agreement}

(d) If Seller has chosen to deliver Product that is not Residential Customer Product, its DRAM Resource may nevertheless include Residential Customers and Small Commercial Customers.

1.2. Term

The "Term" of this Agreement shall commence upon the Execution Date and shall continue until the expiration of the Delivery Period, subject to the survival provisions of Section 9.6.

1.3. Delivery Period

The "Delivery Period" shall commence on the later of (a) the first day of the first month that begins after seventy-five (75) calendar days following CPUC Approval, and (b) *[Date]*, and shall continue in full force and effect until *[Date] {The Date should be the last calendar day of the last Showing Month}*, unless terminated earlier in accordance with the terms and conditions of this Agreement. Notwithstanding anything to the contrary contained in this Agreement, the Delivery Period will not commence until CPUC Approval is obtained or waived by Buyer in its sole discretion.

{Dates will be based on Seller's bid that was selected by Buyer in the RFO. Currently that would be no earlier than January 2024 and no later than December 2024.}

1.4. Seller's Designation of the DRAM Resource

(a) On or before the date that is seventy-five (75) calendar days prior to the first Showing Month, and on a monthly basis thereafter no less than seventy-five (75) calendar days prior to the applicable Showing Month if any of the information below changes, Seller shall:

(i) Provide to Buyer the Resource ID(s) for each PDR providing the Product pursuant to this Agreement.

(ii) Confirm in writing to Buyer that each PDR identified by Seller pursuant to Section 1.4(a)(i) is comprised solely of Bundled Service Customers, comprised solely of Unbundled Service Customers, or comprised of a mixture of Bundled and Unbundled Service Customers.

(b) Seller shall sell and deliver System Capacity, Local Capacity, and/or Flexible Capacity from PDRs, as designated in Section 1.1(b).

(c) The Parties shall cooperate to implement the requirements of Rule 24 to enroll Resource Customers in order for Seller to designate the PDR(s) pursuant to Section 1.4(a)(i).

(d) Seller shall not use, or allow any other party to use, any Resource ID that is part of the DRAM Resource to provide any services or product under any other contract

1.5. Monthly Contracted Quantity and Corresponding Contract Price

(a) The Monthly Contracted Quantity and Contract Price for the type of Product indicated in Table 1.1(b) for each applicable Showing Month during the Delivery Period is set forth in Exhibit B.

(b) In the event that Seller is not able to register the DRAM Resource for part or all of a Monthly Contracted Quantity for a Showing Month due solely to (i) the actions or inactions of Buyer or the CAISO, or (ii) insufficient Rule 24 registrations under CPUC Resolution E-4837 and CPUC Resolution E-4983, then Seller may, in its sole discretion, by providing Notice to Buyer on or before the date that is sixty (60) calendar days prior to the Showing Month for which Seller is unable to register the DRAM Resource, reduce the Monthly Contracted Quantity for the unregistered capacity by type of Product for such Showing Month; provided, Seller shall demonstrate to Buyer's reasonable satisfaction that Seller made commercially reasonable efforts to register the DRAM Resource corresponding to such reduced Monthly Contracted Quantity for the unregistered capacity by type of Product in the applicable Showing Month.

(c) In the event that material changes to definition of Resource Adequacy, including but not limited to changes in the Resource Adequacy Availability Assessment Hours, are adopted during the Term of this Agreement, then Seller may, in its sole discretion, by providing Notice to Buyer on or before August 31, 2023, either (i) reduce the Monthly Contracted Quantity for the following year or (ii) terminate this Agreement.

(d) Seller's exercise of its rights under Sections 1.5(b) or (c) will not be deemed to be a failure of Seller's obligation to sell or deliver the Product or a failure of Buyer's obligation to purchase or receive the Product, and will not be or cause an Event of

Default by either Party. Neither Party shall have any further obligation or liability to the other and no Settlement Amount with respect to this Agreement will be due or owing by either Party upon termination of this Agreement due solely to Seller's exercise of its rights under Section 1.5(c).

1.6. Demonstrated Capacity

(a) Each invoice submitted by Seller to Buyer pursuant to Section 4.2 shall include a statement, in a form substantially similar to Exhibit C, of the amount of the Qualifying Capacity for each type of Product for such Showing Month that Seller was capable of delivering ("Demonstrated Capacity"), utilizing the results from one of the following methods, as provided below (subject to the additional restrictions set forth in Section 1.6(b)):

(i) The results of a DC Dispatch of the applicable PDR in the DRAM Resource during such Showing Month. The Demonstrated Capacity for System and Local Capacity will equal maximum hourly load reduction of such DC Dispatch as calculated using the Capacity Baseline; provided that, for the Showing Month of August, the Demonstrated Capacity for System and Local Capacity will equal the average hourly load reduction of such DC Dispatch as calculated using the Capacity Baseline. The Demonstrated Capacity for Flexible Capacity will equal the average hourly load reduction of such DC Dispatch as calculated using the Capacity Baseline. Demonstrated Capacity based on a DC Dispatch must align with the Clock Hours on which the applicable CAISO dispatch instructions are based; provided that, for any Real-Time Market award for which the CAISO dispatch instructions do not start or end on a Clock Hour, Demonstrated Capacity shall align with the same interval associated with the applicable CAISO dispatch instructions. If the CAISO issues a dispatch instruction for less than one hundred percent (100%) of the Qualifying Capacity of the applicable PDR in the DRAM Resource (a "Partial DC Dispatch"), then Seller may elect to submit the results of such Partial DC Dispatch during such Showing Month for its Demonstrated Capacity showing. Upon such election, the load reduction resulting from such Partial DC Dispatch shall be compared to the Qualifying Capacity of the entire PDR for purposes of deriving the DC-QC Ratio of the DRAM Resource in accordance with Section 4.1.

(ii) The results of a DC Test in the event that (A) there is no DC Dispatch of the PDR in the DRAM Resource for one hundred percent (100%) of the Qualifying Capacity of the applicable Showing Month, and (B) Seller does not submit the results of a Partial DC Dispatch during the Showing Month as contemplated under 1.6(a)(i) above. The Demonstrated Capacity for System and Local Capacity will equal the maximum hourly load reduction during any hour of such DC Test as calculated using the Capacity Baseline; provided that, for the Showing Month of August the Demonstrated Capacity for System and Local Capacity will equal the average hourly load reduction during any two (2) consecutive hours as calculated using the Capacity Baseline. The Demonstrated Capacity for Flexible Capacity will equal the average hourly load reduction during any hour of such DC Test as calculated using the Capacity Baseline; provided that, for the Showing Month of August the Demonstrated Capacity for Flexible Capacity will equal the average hourly load reduction during any two (2) consecutive hours as calculated using the Capacity Baseline.

(iii) In the event that (A) there is no DC Dispatch of the PDR in the DRAM Resource during the Showing Month for one hundred percent (100%) of the Qualifying Capacity of the applicable Showing Month, (B) Seller does not submit the results of a Partial DC Dispatch as contemplated under 1.6(a)(i) above, and (C) there is no DC Test of the PDR in the DRAM Resource during the Showing Month as contemplated under 1.6(a)(ii) above, the Demonstrated Capacity will equal the average amount of capacity for such PDR in the DRAM Resource that the Seller bid into the applicable CAISO Markets solely during the Availability Assessment Hours of the Showing Month in compliance with the CAISO Must-Offer Obligation.

(b) Seller's use of the methods described in Sections 1.6(a)(i)-(iii) is subject to the following additional restrictions:

(i) Demonstrated Capacity for each PDR in the DRAM Resource must be calculated under Section 1.6(a)(i) or 1.6(a)(ii) for the August Showing Month of each year and for at least fifty percent (50%) of all contracted Showing Months during the Delivery Period (rounded downward if the Delivery Period is an odd number of Showing Months). For example, if the Delivery Period consists of seven (7) Showing Months, then a DC Test or DC Dispatch shall be required for at least three (3) of such Showing Months, including the Showing Month of August.

(ii) Demonstrated Capacity for any PDR in the DRAM Resource shall not be calculated under Section 1.6(a)(iii) for more than five (5) consecutive Showing Months during the Delivery Period (prorated, if the Delivery Period is less than twelve (12) Showing Months, to a number equal to half of the Showing Months in the Delivery Period minus one: e.g., two consecutive Showing Months for a six-month Delivery Period).

(iii) Demonstrated Capacity for each PDR in the DRAM Resource shall be calculated under Section 1.6(a)(i) or 1.6(a)(ii) for any Showing Month for which a QC De-Rate Notice was issued without a corresponding agreed reduction in Supply Plan quantities, as further provided in Section 3.1(b).

(c) The same Capacity Baseline must be used (i) to estimate Qualifying Capacity for Seller's month-ahead submissions pursuant to Section 3.1(a) for a Showing Month; (ii) to calculate Demonstrated Capacity for the applicable Showing Month; and (iii) for energy settlement at the CAISO for the applicable Showing Month.

(d) Solely for purposes of establishing the Demonstrated Capacity pursuant to Section 1.6(a), Seller shall use data available through Buyer's Customer Data Access Systems that has been designated by Buyer as final Revenue Quality Meter Data and such data shall be considered final by the Parties as of the date Seller submits its invoice for the applicable Showing Month to Buyer.

(e) If Seller has not received all Revenue Quality Meter Data for any Resource ID within fifteen (15) calendar days after the end of any Showing Month, Seller shall provide Notice to Buyer of the Resource IDs (and customer service accounts with missing Revenue Quality Meter Data within each such Resource ID), and the dispatch days and hours during such Showing Month, for which Revenue Quality Meter Data has not been

received. Seller and Buyer shall comply with the communication protocols set forth in Exhibit D with respect to data issues.

(f) If the DRAM Resource is composed of more than one PDR, then:

(i) Seller shall establish the portion of the Demonstrated Capacity for each such PDR by using the methods described in Sections 1.6(a)(i) through (iii), in which case the Demonstrated Capacity will equal the sum of the individual PDRs' Demonstrated Capacities.

(ii) The Showing Months in which DC Dispatches or DC Tests are conducted may be different for each such PDR except for the Showing Month of August, in which a DC Dispatch or DC Test is required for every PDR in the DRAM Resource pursuant to Section 1.6(b)(i).

(iii) In the event that multiple Resource IDs are dispatched concurrently in a Showing Month, Seller may aggregate the performance of the concurrently dispatched Resource IDs for the purpose of Demonstrated Capacity invoicing and compare the sum of such aggregated performance against the sum of the Qualifying Capacity of those Resource IDs as listed on the applicable Supply Plan. For Local Capacity products, the aggregation of concurrently dispatched Resource IDs shall be limited to resources within the same SubLAP.

(g) With respect to any DRAM Resource Customer service account that was moved in a Showing Month pursuant to Section 3.4(d), Seller shall include the performance of such DRAM Resource Customer service account only in one PDR for purposes of the calculation of Demonstrated Capacity for such Showing Month.

(h) If the type of Product Seller delivers under this Agreement is a Residential Customer Product, Seller's invoice shall indicate the number of Residential Customer SAID agreements and the number of Small Commercial SAID accounts in each PDR for such type of Product.

(i) In addition to the requirements in Section 1.6(a), if Seller is electing Demonstrated Capacity for Local Capacity, then, as part of Seller's Demonstrated Capacity for Local Capacity, Seller's invoice shall indicate the number of SAID agreements in the applicable LCA that are associated with the Local Capacity as indicated in Table 1.1(b) and Exhibit C.

(k) If Buyer is unable to validate, or disputes, any amount shown in Seller's invoice and Notice of Demonstrated Capacity, then Buyer shall issue a Notice to that effect to Seller in accordance with Section 1.6(k)(i) below. Pursuant to Section 1.6(k)(ii), Seller shall be required to provide additional documentation from Seller or Seller's SC in the form or format requested by Buyer that establishes to Buyer's reasonable satisfaction that the Demonstrated Capacity of each Product type from a PDR is as stated by Seller in its invoice for the applicable Showing Month.

(i) Buyer shall issue such Notice on or before the later of: (A) the twentieth (20th) calendar day of the month and (B) the tenth (10th) calendar day after receipt of Seller's invoice and Demonstrated Capacity; provided that, if such day is not a Business Day, then on the next Business Day.

(ii) No later than ten (10) Business Days after receipt of Buyer's Notice, Seller shall provide the additional documentation to Buyer. If Seller fails to provide the additional documentation within such ten (10) Business Day deadline, then Buyer shall either (A) pay the subject invoice or (B) initiate an audit of Seller's or Seller's SC records by issuing a Notice ("Audit Notice") to Seller, in each case no later than fifteen (15) Business Days after the expiration of such ten (10) Business Day deadline.

(iii) No later than fifteen (15) Business Days after receiving the additional documentation from Seller, Buyer shall either: (A) pay the subject invoice or (B) initiate an audit of Seller or Seller's SC records by issuing an Audit Notice to Seller if the additional documentation is unsatisfactory to Buyer in its reasonable discretion.

(l) With respect to an Audit Notice issued under Section 1.6(k)(ii) or (iii), no later than five (5) Business Days after Seller's receipt of an Audit Notice, Seller shall allow, or cause its SC to allow, Buyer or its designated independent third-party auditor to have access to the records and data, which must be in the form or format requested by Buyer under Section 1.6(k) above, necessary to conduct such audit; provided, such audit will be limited solely to verification of the data upon which Seller based its claim of the amount of the Demonstrated Capacity. If the type of Product designated in Section 1.1(b) is a Residential Customer Product, then, in addition to the documentation specified above, Buyer may, in its Audit Notice, require Seller or Seller's SC to provide additional documentation in the form or format requested by Buyer, that establishes to Buyer's reasonable satisfaction that the type of Product is Residential Customer Product as stated by Seller in its invoice for the applicable Showing Month. Buyer's costs, including the costs for any third-party auditor, incurred in connection with conducting such audit are the sole responsibility of Buyer. Buyer shall make a reasonable effort to conclude its audit within sixty (60) calendar days after receiving all records and data that Buyer deems necessary to complete or resolve the disputed invoice. If the audit does not result in the resolution of the disputed invoice, then either Party may initiate the Dispute Resolution process pursuant to Article 10.

1.7. Minimum Energy Dispatch Requirements

(a) Seller shall comply with the energy dispatch requirements set forth on Exhibit E, "Minimum Energy Dispatch Requirements".

(b) Concurrently with the submission of its final invoice under this Agreement pursuant to Section 4.2(a), (or earlier, if Seller has received sufficient Revenue Quality Meter Data), Seller shall submit to Buyer documentation showing CAISO settlements for the delivery of the Required Energy Quantity, as calculated in accordance with Exhibit E and Section 1.7(c) below. Seller may omit price and revenue data from the documentation submitted under this Section 1.7(b).

(c) If Seller fails to meet any of the requirements of Sections 1.7(a) and (b) above, Seller shall pay to Buyer an "Undelivered Energy Penalty" equal to:

$$\$10{,}000/\text{MW} \times \text{AQC} \times (1 - \text{DEQ}/\text{REQ})$$

Where:

AQC = the average Qualifying Capacity (in MW) for each of the three highest Showing Months on the month-ahead Supply Plans delivered hereunder

DEQ = the cumulative energy delivered by the applicable aggregate resources during the contracted Showing Months and during the Availability Assessment Hours

REQ = 30 MWh × AQC

(d) The Undelivered Energy Penalty may be netted by Buyer against amounts that would otherwise be due to Seller under this Agreement. Seller's payment of the Undelivered Energy Penalty shall be secured by the Performance Assurance as specified in Article 5.

ARTICLE 2. CPUC APPROVAL

2.1. Obtaining CPUC Approval

Within thirty (30) calendar days after the Execution Date, Buyer shall file with the Commission the appropriate request for CPUC Approval. Seller shall use commercially reasonable efforts to support Buyer in preparing for and obtaining CPUC Approval. Buyer has no obligation to seek rehearing or to appeal a Commission decision which fails to approve this Agreement or which contains findings required for CPUC Approval with conditions or modifications unacceptable to either Party.

2.2. CPUC Approval Termination Right

(a) Either Party has the right to terminate this Agreement upon Notice, which will be effective five (5) Business Days after such Notice is given, if (i) CPUC Approval has not been obtained or waived by Buyer in its sole discretion within sixty (60) calendar days after Buyer files its request for CPUC Approval and (ii) such Notice of termination is given on or before the ninetieth (90th) day after Buyer files the request for CPUC Approval.

(b) Failure to obtain CPUC Approval in accordance with this Article 2 will not be deemed to be a failure of Seller to sell or deliver the Product or a failure of Buyer to purchase or receive the Product, and will not be or cause an Event of Default by either Party. No Settlement Amount with respect to this Agreement will be due or owing by either Party, and neither Party shall have any obligation or liability to the other, upon termination of this Agreement due solely to failure to obtain CPUC Approval.

ARTICLE 3. SELLER OBLIGATIONS

3.1. Delivery of Product

(a) No later than the deadlines set forth in subsections (i) and (ii) below, Seller shall submit, or cause Seller's SC(s) to submit:

(i) No later than ten (10) Business Days prior to Buyer's Compliance Showing deadlines each year or Showing Month (as applicable), Notice to Buyer which

shall include Seller's Supply Plan for such year or Showing Month (as applicable) in (A) a form substantially similar to Exhibit F, or (B) a form as communicated in writing by Buyer to Seller no later than fifteen (15) Business Days prior to Buyer's Compliance Showing deadlines for such year or Showing Month (as applicable). Such Supply Plan shall include the Qualifying Capacity for each PDR identified by Seller pursuant to Section 1.4(a)(i), the sum of which shall not exceed the Monthly Contracted Quantity.

(ii) No later than ten (10) Business Days prior to the deadline for Seller's Supply Plan submission in subsection (i) immediately above, the additional information required by the implementation guidelines set forth in D.19-07-009, Appendix A, as modified by D.19-09-041 and D.19-12-040, and set forth with more specificity in Exhibit G (the "QC Implementation Guidelines"), including the Qualifying Capacity for each PDR identified by Seller pursuant to Section 1.4(a)(i), presented in the standardized reporting format developed by the CPUC pursuant to Ordering Paragraph 8 of D.19-07-009. If the information provided pursuant to Exhibit G supports an estimated Qualifying Capacity greater than the amount of Qualifying Capacity Seller will identify for such PDR on the Supply Plan pursuant to Section 3.1(a)(i), Seller shall also provide such Supply Plan amount for such PDR. If Buyer has any questions or concerns about the information provided by Seller pursuant to this Section 3.1(a)(ii), Buyer shall, to the extent reasonably practicable, request clarification from Seller and take into consideration any clarification or additional information timely provided by Seller.

(b) No later than eight (8) Business Days prior to Buyer's Compliance Showing deadlines each year or Showing Month (as applicable), Buyer shall issue a Notice to Seller in the event Buyer intends to include in Buyer's applicable compliance filings any amount less than the quantities in Seller's Supply Plan submitted to Buyer ("QC De-Rate Notice"). The QC De-Rate Notice will include the amount of the de-rate to such quantities and will identify the shortcomings or deficiencies in the information provided by Seller pursuant to Section 3.1(a)(ii). If Buyer issues a QC De-Rate Notice, then Seller shall provide Notice to Buyer, no later than five (5) Business Days after receipt of such QC De-Rate Notice, that Seller will either:

(i) reduce the quantities in its Supply Plan for the applicable Showing Month to conform to the quantities shown in the QC De-Rate Notice (or such other amount as may be agreed in writing by Buyer and Seller); or

(ii) perform a DC Dispatch or DC Test during the applicable Showing Month.

In all cases, if the Parties do not agree upon the reduction in Seller's Supply Plan quantities under subsection 3.1(b)(i) above, then a DC Dispatch or DC Test shall be required for each and every Showing Month for which Buyer has issued a QC De-Rate Notice.

(c) Seller shall, on a timely basis, submit, or cause its SC to submit, a Supply Plan to CAISO in accordance with the CAISO Tariff. The quantities in the Supply Plan that is submitted to the Buyer under Section 3.1(a)(i) shall exactly match what is submitted by the Seller or its SC to the CAISO due on the earliest monthly applicable Buyer's Compliance Showing deadlines with CAISO and CPUC.

3.2. Resource Adequacy Benefits

Seller grants, pledges, assigns, and otherwise commits to Buyer the Qualifying Capacity for each PDR specified in the Supply Plan and all Resource Adequacy Benefits of the Product as associated with the DRAM Resource to enable Buyer to meet its RAR, Local RAR and/or Flexible RAR, as applicable. The Parties shall take all commercially reasonable actions, and execute all documents or instruments necessary, to effect the use of the Product for Buyer's sole benefit.

3.3. Provision of Information

(a) Within a reasonable period of time, or such time prescribed by the CPUC, Seller shall provide to the CPUC (i) all periodic reports required by the CPUC and (ii) all other information requested by the CPUC relating to Seller's obligations and performance pursuant to this Agreement and the DRAM to which this Agreement relates. In responding to any information request from the CPUC, the Seller may designate information for confidential treatment consistent with CAISO and/or Commission rule, tariff or decision. Any such confidential information provided by Seller to the CPUC shall be held in confidence by the CPUC and excluded from public inspection or disclosure, unless inspection or disclosure is otherwise required by Applicable Laws.

(b) Seller shall achieve, or shall cause its designated SC to achieve, each Milestone set forth in Exhibit H (each, a "Milestone") on or before the applicable deadline for achievement. Seller shall provide to Buyer:

(i) No later than the tenth (10th) calendar day of each month before the commencement of the Delivery Period, or within five (5) days after Buyer's request, a progress report in the form developed by the Commission's Energy Division pursuant to D.19-12-040, OP 28, as the same may be modified from time to time (or, if such form has not yet been finalized, substantially in the form set forth in Exhibit H) ("Progress Report"), describing Seller's progress, including projected time to completion of remaining Milestones.

(ii) On or before the applicable deadline to achieve each Milestone, documentation evidencing that the Milestone has been achieved.

(iii) Within five (5) Business Days after Buyer's request, any additional evidence reasonably requested by Buyer that the Milestone has been achieved.

3.4. Seller's Obligations

(a) Seller shall, and shall cause each of the PDRs in the DRAM Resource and corresponding DRPs and SCs to, comply with all applicable CAISO Tariff provisions, CPUC Decisions and all other Applicable Laws, including the Bidding of the DRAM Resource into the applicable CAISO Markets in compliance with the Must-Offer Obligation during the Availability Assessment Hours as required by the CAISO Tariff.

(b) Seller shall or shall cause Seller's DRP to execute Buyer's Demand Response Provider Service Agreement in accordance with Rule 24.

(c) Seller shall not include any Customer premises or resource in a PDR in the DRAM Resource that is concurrently enrolled in or otherwise concurrently committed to any other demand response program offered, maintained, or funded by Buyer (e.g., without limitation, behind-the-meter storage products in the Energy Storage RFO), or that is registered with CAISO as a part of any other demand response resource or Distributed Energy Resource Aggregation, other than as provided under this Agreement.

(d) Seller shall not change or modify the customer composition of the DRAM Resource, including without limitation moving a DRAM Resource Customer service account in or out of any PDR of the DRAM Resource, at any time during the Delivery Period except under the following circumstances:

(i) Seller may add a newly recruited service account to a PDR in the DRAM Resource if that service account is not part of a PDR that is already included in a Supply Plan submitted by Seller to Buyer or any other LSE for the same Showing Month.

(ii) Seller may remove a service account from a PDR in the DRAM Resource.

(iii) If as a result of the changes in Sections 3.4(d)(i) and 3.4(d)(ii) a PDR in the DRAM Resource becomes large enough to trigger the CAISO's above 10 MW telemetry requirement, Seller may split the affected PDR into two or more smaller resources as necessary to comply with CAISO requirements.

(iv) If as a result of the changes in Sections 3.4(d)(i) and 3.4(d)(ii) a PDR in the DRAM Resource becomes small enough to drop below the 100 kW minimum PDR size requirement, Seller may combine the affected PDR with other resources as necessary to comply with CAISO requirements.

(v) If a service account has moved to a new LSE (e.g., to or from a community choice aggregator), and if the CAISO Tariff requires PDRs to consist of service accounts that are customers of the same LSE, then Seller may add or remove the affected service accounts as necessary to comply with CAISO requirements.

(vi) Seller may add or remove service accounts at the beginning of a Showing Month (but not during a Showing Month):

(A) to rebalance a PDR to account for changed customer capabilities due to new enabling technologies or load characteristics;

(B) to rebalance a PDR to account for some customers having varying load curtailment capabilities in different months; or

(C) if this Agreement provides for the delivery of different Monthly Contracted Quantities during different Showing Months and if such movement is necessary for Seller to meet its obligations hereunder.

3.5. Indemnities for Failure to Perform.

Seller agrees to indemnify, defend and hold harmless Buyer from any costs, penalties, fines or charges assessed against Buyer by the CPUC, CAISO, FERC, or any other Governmental Body

with jurisdiction over Buyer, resulting from Seller's failure to do, or cause to be done, any of the following:

(a) Provide all of the Monthly Contracted Quantity in any Showing Month, except to the extent (i) such failure is solely the result of a failure by Buyer to perform any of its obligations pursuant to Section 6.2, or (ii) Seller reduces the Monthly Contracted Quantity in accordance with Section 1.5(b) or (c);

(b) Submit timely and accurate Supply Plans that identify Buyer's right to the Monthly Contracted Quantity for each Showing Month;

(c) Comply with the requirements in Section 3.2 to enable Buyer to meet its RAR;

(d) Meet CPUC Resource Adequacy requirements per the CPUC RA Filing Guide; or

(e) Comply with the CAISO Tariff.

With respect to the foregoing, the Parties shall use commercially reasonable efforts to minimize any such costs, penalties, fines and charges; provided, in no event will Buyer be required to use or change its utilization of its owned or controlled assets or market positions to minimize these costs, penalties, fines and charges. If Seller fails to pay the foregoing penalties, fines, charges, or costs, or fails to reimburse Buyer for those penalties, fines, charges, or costs, then Buyer may offset those penalties, fines, charges or costs against any amounts it may owe to Seller under this Agreement.

Notwithstanding Seller's obligations in Section 3.5(a), Seller is not required to indemnify or reimburse Buyer for any costs allocated to Buyer by the CAISO for any capacity procured by CAISO pursuant to the Capacity Procurement Mechanism with respect to any Shortfall Capacity.

ARTICLE 4. PAYMENT AND BILLING

4.1. Delivered Capacity Payment

Buyer shall make a monthly payment to Seller, after the applicable Showing Month, ("Delivered Capacity Payment") equal to the product of (A × B × C) for each Resource ID in the DRAM Resource.

$$\text{Delivered Capacity Payment} = [A \times B \times C]$$

Where:

A = The Contract Price for the applicable Showing Month, including SC costs.

B = The value from the chart below corresponding to the applicable ratio of Demonstrated Capacity for the applicable Resource ID (or, group of Resource IDs dispatched concurrently in accordance with Section 1.6(f)(iii)) as a percentage of the Qualifying Capacity for such Resource ID (or concurrently dispatched Resource IDs) ("DC-QC Ratio"):

Delivered Capacity (DC) Payment Values		
Band	**DC-QC Ratio**	**Value for B**
Tolerance	> 90.00%	Qualifying Capacity (kW)
Pro-rated	> 70.00% to 90.00%	Demonstrated Capacity (kW)
De-rated	50.00% to 70.00%	Demonstrated Capacity (kW) × 75%
Forfeiture	< 50.00%	0

C = 1.0 if Seller has chosen (i) not to deliver Residential Customer Product in Section 1.1(c) or (ii) to deliver Residential Customer Product in Section 1.1(c) and the Product delivered meets the definition of Residential Customer Product, or 0.90 if the Product delivered does not meet the definition of Residential Customer Product.

4.2. Invoice and Payment Process

(a) Within thirty (30) calendar days after Seller has received Revenue Quality Meter Data for at least ninety-five percent (95%) of all intervals required for settlement of the DRAM Resource for the applicable Showing Month, Seller will render to Buyer an invoice for the Demonstrated Capacity and associated payment amount due, if any, with respect to such Showing Month. Seller's failure to render any invoice on or before the deadline set forth herein shall be deemed to be a submission by the Seller of a DC Dispatch-based invoice with Demonstrated Capacity at an amount below fifty percent (50%) of the Qualifying Capacity for the applicable Showing Month (i.e., within the "forfeiture" payment band in the chart in Section 4.1).

(b) Buyer will pay Seller all undisputed invoice amounts on or before the later of (i) the twentieth (20th) day of each month (or, if such day is not a Business Day, then on the next Business Day), or (ii) the tenth (10th) Business Day after receipt of Seller's invoice and Demonstrated Capacity.

(c) Each Party will make payments by electronic funds transfer, or by other mutually agreeable method(s), to the account designated by the other Party. Any amounts not paid by the due date will be deemed delinquent and will accrue interest at the Cash Interest Rate, such interest to be calculated from and including the due date to but excluding the date the delinquent amount is paid in full.

(d) Buyer may offset against any future payments by any amount(s) that were previously overpaid.

(e) Either Party may, in good faith, dispute the correctness of any invoice, bill, charge, or any adjustment to an invoice, rendered under this Agreement, or adjust any invoice for any arithmetic or computational error within twelve (12) months of the date the invoice, bill, charge, or adjustment to an invoice, was rendered. Disputes are subject to the provisions of Article 10 below. In the event an invoice or portion thereof, or any other claim or adjustment arising hereunder, is disputed, payment of the undisputed portion of the invoice shall be required to be made when due, with Notice of the objection given to the

other Party. Any invoice dispute or invoice adjustment shall be in writing and shall state the basis for the dispute or adjustment. Payment of the disputed amount shall not be required until the dispute is resolved. Upon resolution of the dispute, any required payment shall be made within ten (10) Business Days of such resolution.

(f) Buyer may deduct any amounts that would otherwise be due to Seller under this Agreement from any amounts owing and unpaid by Seller to Buyer under this Agreement.

4.3. Allocation of Other CAISO Payments and Costs

As between Buyer and Seller, Seller shall retain any revenues Seller or Seller's SC may receive from and pay all costs, penalties, charges charged to Seller or Seller's SC by the CAISO or any other third party in connection with the DRAM Resource, except as expressly provided otherwise in this Agreement.

ARTICLE 5. CREDIT AND COLLATERAL

5.1. Seller's Credit and Collateral Requirements

(a) If, at any time during the Term Seller does not have a Credit Rating, or if its Credit Rating is below BBB- from S&P or Baa3 from Moody's, if rated by both S&P and Moody's or below BBB- from S&P or Baa3 from Moody's, if rated by either S&P or Moody's, but not both, Seller shall provide and maintain collateral with Buyer in an amount equal to the sum of the following: (i) twenty percent (20%) of the sum of the estimated Delivered Capacity Payments for all of the remaining months of the Delivery Period including the current month, with such estimated Delivered Capacity Payments being based on the applicable Monthly Quantity values times the applicable Contract Price, plus (ii) twenty percent (20%) of the estimated Undelivered Energy Penalty based on the associated Monthly Contracted Quantity (collectively, "Performance Assurance").

(b) If Seller's Credit Rating is at or above BBB- from S&P and Baa3 from Moody's, if rated by both S&P and Moody's, or at or above BBB- from S&P or Baa3 from Moody's, if rated by either S&P or Moody's, but not both, Seller shall have no obligation to provide Performance Assurance to Buyer, and Sections 5.2 through 5.5 will not be applicable.

(c) If required pursuant to Section 5.1(a), as of the Execution Date Seller shall post the Performance Assurance with Buyer within ten (10) Business Days of the Execution Date. If required pursuant to Section 5.1(a) at any other time during the Term, Seller shall post the Performance Assurance with Buyer within five (5) Business Days of the date of the event that triggered Seller's posting requirement under Section 5.1(a).

5.2. Grant of Security Interest/Remedies

(a) To secure its obligations under this Agreement, and until released as provided herein, Seller hereby grants to Buyer a present and continuing security interest in, and lien on (and right of setoff against), and collateral assignment of, the Performance Assurance and all cash collateral and cash equivalent collateral and any and all proceeds resulting therefrom or the liquidation thereof, whether now or hereafter held by, on behalf of, or for the benefit of, such Buyer, and each Party agrees to take such action as the other Party reasonably requires in order to perfect Buyer's first-priority security interest in, and lien

on (and right of setoff against), such Performance Assurance and collateral and any and all proceeds resulting therefrom or from the liquidation thereof. Upon or any time after the occurrence or deemed occurrence and during the continuation of an Event of Default or an Early Termination Date, Buyer, if it is the Non-Defaulting Party, may do any one or more of the following: (i) exercise any of the rights and remedies of a Buyer with respect to all Performance Assurance, including any such rights and remedies under law then in effect; (ii) exercise its rights of setoff against any and all property of the Defaulting Party in the possession of the Non-Defaulting Party or its agent; (iii) draw on any outstanding Letter of Credit issued for its benefit; and (iv) liquidate all Performance Assurance then held by or for the benefit of Buyer free from any claim or right of any nature whatsoever of the Defaulting Party, including any equity or right of purchase or redemption by the Defaulting Party. In such an event Buyer shall apply the proceeds of the collateral realized upon the exercise of any such rights or remedies to reduce Seller's obligations under the Agreement (Seller remaining liable for any amounts owing to Buyer after such application), subject to Buyer's obligation to return any surplus proceeds remaining after such obligations are satisfied in full.

5.3. Reduction and Substitution of Performance Assurance

(a) If the amount of Performance Assurance held by Buyer exceeds the amount required pursuant to Section 5.1, on any Business Day, Seller may give Notice to Buyer requesting a reduction in the amount of Performance Assurance previously provided by Seller for the benefit of Buyer, provided that, (i) after giving effect to the requested reduction in Performance Assurance, no Event of Default or Potential Event of Default with respect to Seller has occurred and is continuing, (ii) no Early Termination Date has occurred or been designated as a result of an Event of Default with respect to Seller for which there exist any unsatisfied payment obligations, and (iii) no amounts are owing and unpaid from Seller to Buyer hereunder including without limitation any Undelivered Energy Penalty. A permitted reduction in Performance Assurance may be effected by the Transfer of Cash to Seller or the reduction of the amount of an outstanding Letter of Credit previously issued for the benefit of Buyer. Buyer shall effect any permitted reduction in Performance Assurance in accordance with the form of the Performance Assurance that has been provided. In all cases, the cost and expense of reducing Performance Assurance (including, but not limited to, the reasonable costs, expenses, and attorneys' fees of Buyer) shall be borne by Seller. Unless otherwise agreed in writing by the Parties, if Seller's reduction demand is made on or before the Notification Time on a Business Day, then Buyer shall have five (5) Business Days to effect a permitted reduction in Performance Assurance, and if Seller's reduction demand is made after the Notification Time on a Business Day, then Buyer shall have six (6) Business Days to effect a permitted reduction in Performance Assurance, in each case, if such reduction is to be effected by the return of Cash to Seller. If a permitted reduction in Performance Assurance is to be effected by a reduction in the amount of an outstanding Letter of Credit previously issued for the benefit of Buyer, Buyer shall promptly take such action as is reasonably necessary to effectuate such reduction.

(b) Except when an Event of Default or Potential Event of Default with respect to Seller shall have occurred and be continuing or an Early Termination Date has occurred or been designated as a result of an Event of Default with respect to Seller for which there exist any unsatisfied payment obligations, Seller may substitute Performance Assurance for other existing Performance Assurance of equal value upon five (5) Business Days' Notice (provided such Notice is made on or before the Notification Time, otherwise the

notification period shall be six (6) Business Days) to Buyer. Upon the Transfer to Buyer of the substitute Performance Assurance, Buyer shall Transfer the relevant replaced Performance Assurance to Seller within five (5) Business Days. Notwithstanding anything herein to the contrary, no such substitution shall be permitted unless (i) the substitute Performance Assurance is Transferred simultaneously or has been Transferred to Buyer prior to the release of the Performance Assurance to be returned to Seller and the security interest in, and general first lien upon, such substituted Performance Assurance granted pursuant hereto in favor of Buyer shall have been perfected as required by applicable law and shall constitute a first priority perfected security interest therein and general first lien thereon, and (ii) after giving effect to such substitution, the substitute Performance Assurance shall equal the amount of Performance Assurance being replaced. Each substitution of Performance Assurance shall constitute a representation and warranty by Seller that the substituted Performance Assurance shall be subject to and governed by the terms and conditions of this Article 5, including without limitation the security interest in, general first lien on and right of offset against, such substituted Performance Assurance granted pursuant hereto in favor of Buyer pursuant to this Article 5.

(c) The Transfer of any Performance Assurance by Buyer in accordance with this Section 5.3 shall be deemed a release by Buyer of its security interest, general first lien and right of offset granted pursuant to this Article 5 hereof only with respect to such returned Performance Assurance. In connection with each Transfer of any Performance Assurance pursuant to this Article 5, Seller will, upon request of Buyer, execute a receipt showing the Performance Assurance Transferred to it.

5.4. Administration of Performance Assurance

(a) Cash. Performance Assurance provided in the form of Cash to Buyer shall be subject to the following provisions:

(i) Notwithstanding the provisions of applicable law, if no Event of Default has occurred and is continuing with respect to Buyer and no Early Termination Date has occurred or been designated as a result of an Event of Default with respect to Buyer for which there exist any unsatisfied payment obligations, then Buyer shall have the right to sell, pledge, rehypothecate, assign, invest, use, commingle or otherwise use in its business any Cash that it holds as Performance Assurance hereunder, free from any claim or right of any nature whatsoever of Seller, including any equity or right of redemption by Seller.

(ii) So long as no Event of Default or Potential Event of Default with respect to Seller has occurred and is continuing, and no Early Termination Date has occurred or been designated as the result of an Event of Default with respect to Seller, and no amounts are owing and unpaid from Seller to Buyer hereunder, and to the extent that an obligation to Transfer Performance Assurance would not be created or increased by the Transfer, in the event that Buyer is holding Cash, Buyer will Transfer (or caused to be Transferred) to Seller, in lieu of any interest or other amounts paid or deemed to have been paid with respect to such Cash (all of which may be retained by Buyer), the Interest Amount when Buyer returns the Cash to Seller following the termination or expiration of this Agreement, as applicable and in conformity with Section 9.6. On or after the occurrence of a Potential Event of Default or an Event of Default with respect to Seller or an

Early Termination Date as a result of an Event of Default with respect to Seller, Buyer shall retain any such Interest Amount as additional Performance Assurance hereunder until the obligations of Seller under the Agreement have been satisfied in the case of an Early Termination Date or for so long as such Event of Default is continuing in the case of an Event of Default.

(b) Letters of Credit. Performance Assurance provided in the form of a Letter of Credit shall be subject to the following provisions:

(i) Each Letter of Credit shall be maintained for the benefit of Buyer. Seller shall (A) renew or cause the renewal of each outstanding Letter of Credit on a timely basis as provided in the relevant Letter of Credit, (B) if the bank or financial institution that issued an outstanding Letter of Credit has indicated its intent not to renew such Letter of Credit, provide either a substitute Letter of Credit or Cash, in each case at least thirty (30) calendar days prior to the expiration of the outstanding Letter of Credit, and (C) if a bank or financial institution issuing a Letter of Credit shall fail to honor Buyer's properly documented request to draw on an outstanding Letter of Credit, provide for the benefit of Buyer either a substitute Letter of Credit that is issued by a bank or financial institution acceptable to Buyer or Cash, in each case within one (1) Business Day after such refusal.

(ii) As one method of providing Performance Assurance, Seller may increase the amount of an outstanding Letter of Credit or establish one or more additional Letters of Credit.

(iii) Upon the occurrence of a Letter of Credit Default, Seller agrees to Transfer to Buyer either a substitute Letter of Credit or Cash, in each case on or before the first (1st) Business Day after the occurrence thereof (or the fifth (5th) Business Day after the occurrence thereof if only clause (i) under the definition of Letter of Credit Default applies).

(iv) Upon or at any time after the occurrence and continuation of an Event of Default or Letter of Credit Default with respect to Seller, or if an Early Termination Date has occurred or been designated as a result of an Event of Default with respect to Seller for which there exist any unsatisfied payment obligations, then Buyer may draw on the entire, undrawn portion of any outstanding Letter of Credit upon submission to the bank or financial institution issuing such Letter of Credit of one or more certificates specifying that such Event of Default, Letter of Credit Default or Early Termination Date has occurred and is continuing. Cash proceeds received from drawing upon the Letter of Credit shall be deemed Performance Assurance as security for Seller's obligations to Buyer and Buyer shall have the rights and remedies set forth in Section 5.5 with respect to such Cash proceeds. Notwithstanding Buyer's receipt of Cash proceeds of a drawing under the Letter of Credit, Seller shall remain liable (A) for any failure to Transfer sufficient Performance Assurance and (B) for any amounts owing to Buyer and remaining unpaid after the application of the amounts so drawn by Buyer.

(v) In all cases, the costs and expenses of establishing, renewing, substituting, canceling, and increasing the amount of a Letter of Credit shall be borne by Seller.

(c) Care of Performance Assurance. Except as otherwise provided in Section 5.4(a)(i) and beyond the exercise of reasonable care in the custody thereof, Buyer shall have no duty as to any Performance Assurance in its possession or control or any income thereon or as to the preservation of rights against prior parties or any other rights pertaining thereto. Buyer shall be deemed to have exercised reasonable care in the custody and preservation of the Performance Assurance in its possession if the Performance Assurance is accorded treatment substantially equal to that which it accords its own property, and shall not be liable or responsible for any loss or damage to any of the Performance Assurance, or for any diminution in the value thereof, except to the extent such loss or damage is the result of Buyer's willful misconduct or gross negligence. Buyer shall at all times retain possession or control of any Performance Assurance Transferred to it.

5.5. Exercise of Rights against Performance Assurance

(a) If an Event of Default with respect to Seller has occurred and is continuing or an Early Termination Date has occurred or been designated as a result of an Event of Default with respect to Seller, Buyer may exercise any one or more of the rights and remedies provided under this Agreement, or as otherwise available under Applicable Law. Without limiting the foregoing, if at any time an Event of Default with respect to Seller has occurred and is continuing, or an Early Termination Date occurs or is deemed to occur as a result of an Event of Default with respect to Seller, then Buyer may, in its sole discretion, exercise any one or more of the following rights and remedies:

(i) All rights and remedies available to a Buyer under the Uniform Commercial Code and any other applicable jurisdiction and other Applicable Laws with respect to the Performance Assurance held by or for the benefit of Buyer;

(ii) The right to set off any Performance Assurance held by or for the benefit of Buyer against and in satisfaction of any amount payable by Seller in respect of any of its obligations; and

(iii) The right to draw on any outstanding Letter of Credit issued for its benefit.

(b) Buyer shall be under no obligation to prioritize the order with respect to which it exercises any one or more rights and remedies available hereunder. Seller shall in all events remain liable to Buyer for any amount payable by Seller in respect of any of its obligations remaining unpaid after any such liquidation, application and set off.

5.6. Financial Information

If requested by a Party, the other Party shall deliver, if available, (a) within one hundred twenty (120) calendar days following the end of each fiscal year, a copy of the annual report containing audited consolidated financial statements (income statement, balance sheet, statement of cash flows and statement of retained earnings and all accompanying notes) for such fiscal year setting forth in each case in comparative form the figures for the previous year for the Party, as the case may be, and (b) within sixty (60) calendar days after the end of each of its first three fiscal quarters of each fiscal year, a copy of a quarterly report containing unaudited consolidated

financial statements for such fiscal quarter and the portion of the fiscal year through the end of such quarter, setting forth in each case in comparative form the figures for the previous year, and if the Party files reports with the Securities and Exchange Commission, certified in accordance with all applicable laws and regulations, including without limitation all applicable Securities and Exchange Commission rules and regulations. If the Party does not file reports with the Securities and Exchange Commission, the reports must be certified by a Chief Financial Officer, Treasurer or any Assistant Treasurer as being fairly stated in all material respects (subject to normal year end audit adjustments); provided, for the purposes of this Section 5.6, if a Party's financial statements are publicly available electronically on the Securities and Exchange Commission's website, then this requirement shall be deemed satisfied. In all cases the statements shall be for the most recent accounting period and shall be prepared in accordance with generally accepted accounting principles; provided, should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as the relevant entity diligently pursues the preparation, certification and delivery of the statements.

5.7. Access to Financial Information

{This provision does not apply if the Delivery Period is for two years or less.}

The Parties agree that Securities and Exchange Commission rules for reporting power purchase agreements may require Buyer to collect and possibly consolidate financial information. If such reporting is required for this Agreement, Buyer is obligated to obtain information from Seller to determine whether or not consolidation is required. If Buyer determines that consolidation is required, Buyer shall require the following during every calendar quarter for the Term of the Agreement:

(a) Complete financial statements and notes to financial statements, which may include accruals and prior month estimates with true-ups to actual activity;

(b) Financial schedules underlying the financial statements, all within fifteen (15) days of the end of each quarter; and

(c) Access to records and personnel, so that Buyer's independent auditor can conduct financial audits (in accordance with generally accepted auditing standards) and internal control audits (in accordance with Section 404 of the Sarbanes-Oxley Act of 2002).

Any information provided to Buyer pursuant to this Section 5.7 shall be treated confidentially and only disclosed on an aggregate basis with other similar entities for which Buyer has contracts. The information will only be used for financial statement purposes and shall not be otherwise shared with internal or external parties.

5.8. Uniform Commercial Code Waiver

This Agreement sets forth the entirety of the agreement of the Parties regarding credit, collateral, financial assurances and adequate assurances. Except as expressly set forth in this Agreement, including, those provisions set forth in Article 5 and Article 9, neither Party:

(a) has or will have any obligation to post margin, provide Letters of Credit, pay deposits, make any other prepayments or provide any other financial assurances, in any form whatsoever, or

(b) will have reasonable grounds for insecurity with respect to the creditworthiness of a Party that is complying with the relevant provisions of Article 5 and Article 9; and all implied rights relating to financial assurances arising from Section 2-609 of the Uniform Commercial Code or case law applying similar doctrines, are hereby waived.

ARTICLE 6. SPECIAL TERMS AND CONDITIONS

6.1. Limitation of Liability

Buyer has no obligations to any person or entity that is, or may participate as, a DRAM Resource Customer, DRP (if Seller is not a DRP), or Seller's SC and Seller shall indemnify Buyer against any claim made by any such DRAM Customer, the DRP (if Seller is not a DRP), or Seller's SC with respect to its participation in or with the PDR or DRAM Resource, as applicable.

6.2. Buyer Provision of Information

Buyer shall provide to Seller, to the extent available and permitted by Applicable Law, including Rule 24, provide specific information consistent with the Customer Information Service Request Form for Demand Response Providers (CISR-DRP) adopted by the CPUC in D.13-12-029 and Resolution E-4630 including, but not limited to, usage, and/or meter data of a Customer, if Seller provides to Buyer written authorization from such Customer to release such information. Such written authorization must be provided in a form reasonably acceptable to Buyer. Buyer shall be liable for penalties or charges incurred by Seller from either the CAISO or the CPUC resulting solely from Buyer's failure to provide timely, accurate data to Seller in accordance with this Section 6.2.

6.3. Changes in Applicable Laws

(a) If a change in Applicable Laws renders this Agreement or any material terms herein incapable of being performed or administered, then either Party, on Notice, may request the other Party to enter into good faith negotiations to make the minimum changes to this Agreement necessary to make this Agreement capable of being performed or administered, while attempting to preserve to the maximum extent possible the benefits, burdens and obligations set forth in this Agreement as of the Execution Date. The Parties acknowledge that such changes may require the approval of the CPUC before becoming effective.

(b) If the Parties have been unable to reach agreement within thirty (30) calendar days after receipt of such Notice, then either Party may terminate this Agreement by providing Notice. A Party's exercise of its rights under this Section 6.3 will not be deemed to be a failure of Seller to sell or deliver the Product or a failure of Buyer to purchase or receive the Product, and will not be or cause an Event of Default by either Party. Neither Party shall have any further obligation or liability to the other and no Settlement Amount with respect to this Agreement will be due or owing by either Party upon termination of this Agreement due solely to a Party's exercise of its right pursuant to this Section 6.3.

6.4. DBE Reporting

No later than twenty (20) calendar days after each semi-annual period ending on June 30th or December 31st during the Term, Seller shall provide to Buyer a report listing all Diverse Business Enterprises that supplied goods or services to Seller during such period, including any

certifications or other documentation of such Diverse Business Enterprises' status as such and the amount paid to each Diverse Business Enterprise during such period.

(a) Buyer has the right to disclose to the CPUC all such information provided by Seller pursuant to this Section 6.4.

(b) Seller shall make reasonable efforts to accommodate requests by the CPUC (or by Buyer in response to a request by the CPUC) to audit Seller in order to verify data provided by Seller pursuant to this Section 6.4.

6.5. Governmental Charges

Seller shall pay on request and indemnify Buyer against any taxes (including without limitation, any applicable transfer taxes and stamp, registration or other documentary taxes), assessments, or charges that may become payable by reason of the security interests, general first lien and right of offset granted under this Agreement or the execution, delivery, performance or enforcement of this Agreement, as well as any penalties with respect thereto.

6.6. Customers in Buyer Automated Demand Response Program

Seller agrees to and acknowledges the following with respect to Buyer's non-Residential Customers which are included in Seller's DRAM Resource and have received ADR incentives or rebates to install demand response capable control technologies:

(a) Customers in Seller's DRAM Resource are eligible for ADR incentives or rebates, subject to the requirements of this Agreement, Commission requirements, and Applicable Laws. The Customer remains responsible for fulfilling its obligations under Buyer's ADR program rules during the time period such ADR Customer is in Seller's DRAM Resource.

(b) Seller shall be responsible for (i) notification to ADR Customers in its DRAM Resource of each Bid awarded by the CAISO ("Award") for a PDR, and (ii) operation of the ADR Customers' ADR control technology in response to an Award. During the time period that an ADR Customer is enrolled in a DRAM Resource, Buyer (or its agent) will not send notifications to such ADR Customer of Awards and will not operate ADR Customers' ADR control technology.

(c) If Seller or its DRP enrolls a Customer who has received ADR incentives or rebates in Seller's DRAM Resource, Seller shall provide Buyer (or its agent) with Notice within five (5) Business Days of such enrollment of the ADR Customer's enrollment along with the ADR Customer's name, service account address, SAID, location, the ADR agreement, and confirmation that the ADR Customer has unenrolled from all or any of Buyer's event-based demand response programs (other than ADR) prior to enrolling in Seller's DRAM Resource. Seller shall provide Buyer (or its agent) with Notice within fifteen (15) calendar days after such Customer leaves Seller's DRAM Resource.

(d) Customers who have received ADR incentives within the past year who enroll in a DRAM Resource will be required to demonstrate performance through the DRAM Resource to qualify for additional ADR incentive payments as indicated in the statewide ADR Guidelines.

(e) Buyer (or its agent) may communicate (i) with Seller's Customers who have received ADR incentives or rebates about the requirements for the Customer to participate in a demand response program, and (ii) with Seller's Customers with respect to anything involving their ADR incentive or rebate eligibility.

(f) Seller shall provide to Buyer (or its agent) all information necessary for Buyer to administer the Customers' ADR incentives or rebates, including, but not limited to: (i) the information described in Section 6.6(c), (ii) the days in each Showing Month of Dispatch of the applicable PDR in the DRAM Resource, (iii) all hours in such Showing Month, corresponding to the days in subsection (ii), when Seller dispatched or called on the ADR Customer to respond to an Award, and (iv) information on ADR Customers that Seller did not dispatch or call on to respond to an Award for such Showing Month. The Customer's participation in the Seller's DRAM Resource as described in this Section 6.6(f) will be used in conjunction with the ADR Customer's participation in Buyer's demand response programs, to calculate the Customer's actual performance and subsequent incentive payments.

(g) If Seller does not provide all the information Buyer needs to administer the ADR incentives for the Customer, the ADR Customer will be in non-compliance with the requirements of the ADR program.

(h) Following the termination or expiration of this Agreement, Buyer (or its agent) may notify the Customers in Seller's DRAM Resource that have received ADR incentives or rebates of their commitment to participate in a demand response program for a total of three years.

ARTICLE 7. REPRESENTATIONS, WARRANTIES AND COVENANTS

7.1. Representations and Warranties of Both Parties

On the Execution Date, each Party represents and warrants to the other Party that:

(a) It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) Except for CPUC Approval in the case of Buyer, it has or will timely acquire all regulatory authorizations necessary for it to legally perform its obligations under this Agreement;

(c) The execution, delivery and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;

(d) This Agreement constitutes its legally valid and binding obligation, enforceable against it in accordance with its terms;

(e) It is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or become Bankrupt;

(f) There is not pending or, to its knowledge, threatened against it, any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement;

(g) It (i) is acting for its own account, (ii) has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, (iii) is not relying upon the advice or recommendations of the other Party in so doing, and (iv) is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions, and risks of this Agreement; and

(h) It has entered into this Agreement in connection with the conduct of its business and it has the capability or ability to make available or take delivery of, as applicable, the Product under this Agreement in accordance with the terms of this Agreement.

7.2. Additional Seller Representations, Warranties and Covenants

(a) On the Execution Date, Seller represents and warrants to Buyer that Seller has not used, granted, pledged, assigned, or otherwise committed any of the Monthly Quantity to meet the RAR, Local RAR and/or Flexible RAR, as applicable, or confer Resource Adequacy Benefits upon, any entity other than Buyer during the Delivery Period.

(b) Seller covenants that throughout the Delivery Period:

(i) Seller will deliver the Product to Buyer free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person.

(ii) Seller has been authorized by each Customer, to act as an aggregator on behalf of such Customer to participate as a PDR in the DRAM Resource, if Seller is not also a Customer.

(iii) The DRP has been authorized by each Customer to act on behalf of such Customer to participate as a PDR for the DRAM Resource, if Seller is not the DRP.

(iv) Seller will not use, grant, pledge, assign, or otherwise commit any Monthly Contracted Quantity to meet the RAR, Local RAR, and/or Flexible RAR, as applicable, or confer Resource Adequacy Benefits of the Product upon, any entity other than Buyer during the Delivery Period.

(v) During each month of the Delivery Period, if any participating Customers in the DRAM Resource have a Prohibited Resource, Seller shall ensure that such Prohibited Resource is not used to reduce load during a Dispatch by any PDR providing Product to Buyer during such month, as follows:

(A) For all Residential Customers, Seller shall include a provision in its contract forbidding the use of Prohibited Resources to reduce load during a Dispatch by any PDR providing Product to Buyer. Any Customer that does not accept the prohibition will not be eligible to participate in the Seller's DRAM Resource.

(B) Seller shall require from each of its non-Residential Customers an attestation form attesting to one of the following conditions:

(1) the Customer does not have a Prohibited Resource on site;

(2) the Customer has a Prohibited Resource on site and will not use the resource to reduce load during a Dispatch by any PDR providing Product to Buyer; or

(3) the Customer has a Prohibited Resource on site and may have to use the resource during Demand Response events for operational, health or safety reasons. The total nameplate capacity in kW of the Customer's resource(s) will be used as the Default Adjustment Value (DAV) to adjust the Demand Response incentives / charge for the Customer's account.

For condition 1 above, the Customer's attestation must include the service account number. For conditions 2 and 3 above, each attestation must provide the service account number, the number of unit(s) of Prohibited Resources on site, and the nameplate capacity of the Prohibited Resource (or, if the Customer has multiple Prohibited Resources, the sum of the nameplate capacity values from all Prohibited Resources on site) (the "Default Adjustment Value"). For condition (3), this Default Adjustment Value will be subtracted from the Potential Load Reduction or Nominated Capacity. Customers must agree to a default adjustment in which the amount of Product such Customer can provide is reduced by the Default Adjustment Value, regardless of whether the Prohibited Resource was actually used. Customers with multiple service accounts enrolled through Seller may submit one attestation form per attestation scenario.

(C) Seller shall collect and store all such Customer attestations and make them available upon request, to a Verification Administrator or the CPUC. Seller shall also collect and store supporting documentation, such as nameplate capacities for each resource under each attestation scenario, and make them available upon request to Buyer, the Verification Administrator or the CPUC.

(D) For non-Residential Customers, the attestation shall occur at the time of enrollment and may be provided with a wet signature, a click, or an electronic signature. Any non-Residential Customer that does not complete this component of the enrollment process will not be eligible to participate in Seller's DRAM Resource. Consistent with CPUC Resolution E-4906, the Seller's contractual agreement is contingent upon compliance with both the prohibition and the submission of the Customers' attestations, which are subject to verification.

(E) Seller shall include provisions in its contracts that Customers are subject to random annual audits (1) requiring compliance with verification requests and facility access for site visits as deemed necessary by the Verification Administrator; (2) requiring the Customer to provide the Verification Administrator with written operating manifest(s), date and time stamped photo(s) of the Prohibited Resource unit(s), load

curtailment plan(s), single line diagram(s) permit copy(ies), or other information or documentation about their onsite Prohibited Resources; and (3) allowing the Buyer or its contractor(s) to install monitoring equipment at the Sites for the purposes of verification of attestations.

(F) Seller shall include additional and separate provisions near the beginning of its contracts with Customers explaining and implementing these restrictions specifying that Customer compliance will be subject to verification, indicating the consequences for noncompliance with the provision. All contracts with non-Residential Customers shall indicate that the non-compliance consequences will be as set forth in this section. If the instance of non-compliance involves clerical or administrative errors, such as an inaccurate listing of a Customer name or the nameplate value of a Prohibited Resource in an attestation, or a failure to include a Customer's Prohibited Resource on an attestation, provided in all cases that such Prohibited Resource is not used in violation of the terms of this Agreement (collectively, "Type One Non-Compliance"), Seller shall specify that Customers will have sixty (60) calendar days from receipt of notice to cure such Type-One Non-Compliance. If the instance of non-compliance involves either (1) the Customer does not attest to the use of any Prohibited Resource but is using a Prohibited Resource to reduce load during a demand response event; or (2), a Customer submits an invalid nameplate capacity value for the Prohibited Resource(s) that is lower than the actual capacity value on the nameplate (collectively "Type Two Non-Compliance"), then Customer will be removed from Seller's DRAM Resource as follows. If there is an instance of (x) an uncured Type One Non-Compliance, or (y) a Type Two Non-Compliance, the consequences will be removal from Seller's DRAM Resource and ineligibility to enroll in any DRAM Seller's Resource or Buyer's demand response program subject to the prohibited resource requirement in D.16-09-056 for twelve calendar months from the removal date (for a single instance of noncompliance), or three years from the removal date (for two or more instances of noncompliance).

(G) Seller shall provide such documentation as may be reasonably necessary for Buyer to verify the accuracy of the attestations referenced in subsections B(1)–(3) above and Seller's compliance with and enforcement of this Section 7.2(b)(v). For all non-Residential Customers, (1) Sellers will provide the Default Adjustment Values (DAVs) monthly (with Demonstrated Capacity information); and, (2) Sellers will ensure that CAISO wholesale market bids reflect portfolio amounts prior to de-rating. Seller shall comply with any Prohibited Resource audit verification plan that is developed in accordance with D. 16-09-056 and approved by the CPUC.

(H) On an annual basis, Seller shall provide to Buyer the language on the prohibition included in its respective Residential Customer contracts. Seller will develop metrics, targets and record keeping systems to assess the effectiveness of its Customer outreach and notification efforts required under this Section 7.2(b)(v), and will provide such materials to

the Buyer, the CPUC, and the Verification Administrator upon the request of Buyer or the CPUC.

(I) Seller shall include provisions in its contracts with non-Residential Customers permitting updates to their attestations to (1) add, remove or modify an on-site Prohibited Resource; (2) change the status or use of a Prohibited Resource to reduce load during any Dispatch; or (3) change the Default Adjustment Value, but only if, in each case, the change is supported by documentation that confirms the operational change and can be verified by a Verification Administrator.

(J) Verification methods for Customers under the condition noted in Section 7.2(b)(v)(I)(3) above shall be based on documentation of nameplate capacity, instead of load curtailment plans.

(K) If further documentation in the form of load curtailment plans are required, Seller shall comply with the Verification Administrator's requests for supporting materials.

(L) The Buyer has been directed by the CPUC to require a standardized non-disclosure agreement (NDA) that the Verification Administrator executes with the Buyer. This NDA pertains to all sellers and their customers from whom they collect market-sensitive, proprietary data. Verification information obtained from sellers and their customers is only to be submitted to and collected by the Verification Administrator consistent with CPUC Resolution E-4906. Under the terms of this NDA, third party customers' market-sensitive, proprietary information shall not to be shared with the Buyer, will be kept under seal, and shall be made available to the Commission upon request. Per Ordering Paragraph 14 of CPUC Resolution E-4906, all aggregators must store Customer attestations and make them available to the CPUC upon request. The Seller shall store non-Residential Customer attestations and make them available to the Buyer or Commission upon request.

ARTICLE 8. NOTICES

8.1. Notices

Notices, requests, statements or payments from one Party to the other Party shall be made to the addresses and persons specified in Section 8.2. All Notices, requests, statements or payments from one Party to the other Party shall be made in writing and may be delivered by hand delivery, first class United States mail, overnight courier service, e-mail or facsimile. Notice from one Party to the other Party by e-mail or facsimile (where confirmation of successful transmission is received) shall be deemed to have been received on the day on which it was transmitted (unless transmitted after 5:00 p.m. at the place of receipt or on a day that is not a Business Day, in which case it shall be deemed received on the next Business Day). Notice from one Party to the other Party by hand delivery or overnight delivery shall be deemed to have been received when delivered. A Party may change its contact information by providing Notice of the same in accordance herewith.

8.2. Contact Information

For Buyer:

Billing Representative
[Name]
Phone:
Facsimile:
Email:

Contract Representative
[Name]
Phone:
Facsimile:
Email:

Supply Plan Contact
[Name]
Phone:
Facsimile:
Email:

Settlements
[Name]
Phone:
Facsimile:
Email:

Other Buyer Contact Information

Wire Transfer
BNK:
ABA:
ACCT:

Credit and Collections
Attn: Credit and Emerging Risk
Phone:
Facsimile:
Email: PGERiskCredit@pge.com

Notices of Event of Default or Potential Event of Default to:
[Name]
Phone:
Facsimile:
Email:

For Seller:

Billing Representative
[Name]
Phone:
Facsimile:
Email:

Contract Representative
[Name]
Phone:
Facsimile:
Email:

Supply Plan Contact
[Name]
Phone:
Facsimile:
Email:

Other Seller Contact Information

ACH	Credit and Collections
BNK:	Attn:
ABA:	Phone:
ACCT:	Facsimile:
	Email:

Notices of Event of Default or Potential Event of Default to:
[Name]
Phone:
Facsimile:
Email:

The Parties acknowledge and agree that those persons set forth in this Section 8.2 are designated by each Party as their respective authorized representatives to act on their behalf for the purposes described therein.

ARTICLE 9. EVENTS OF DEFAULT; TERMINATION

9.1. Events of Default

An "Event of Default" shall mean, with respect to a Party ("Defaulting Party"), the occurrence of any of the following:

(a) With respect to either Party:

(i) The failure to make, when due, any payment required to be made to the other Party pursuant to this Agreement, if such failure is not remedied within three (3) Business Days after written Notice of such failure is given by the Non-Defaulting Party;

(ii) Any representation or warranty made by such Party herein is false or misleading in any material respect when made or when deemed made or repeated if the representation or warranty is continuing in nature;

(iii) The failure to perform any material covenant, obligation, term or condition of this Agreement (except to the extent constituting a separate Event of Default), where such breach is not remedied within five (5) Business Days of Notice of such breach by the Non-Defaulting Party.

(iv) Such Party becomes Bankrupt; or

(v) A Merger Event occurs with respect to such Party.

(b) With respect to Seller:

(i) The failure of Seller to satisfy the collateral requirements set forth in Article 5;

(ii) During the Term, Seller makes any material misrepresentation or omission in any report required to be made or furnished by Seller, the Seller's DRP or the Seller's SC pursuant to this Agreement;

(iii) During the Delivery Period, Seller sells, assigns, or otherwise transfers, or commits to sell, assign, or otherwise transfer, the Product, or any portion thereof, to any party other than Buyer without Buyer's written consent; or

(iv) During the Term, the occurrence and continuation of a default, event of default or other similar condition or event (however described) in respect of Seller under one or more agreements or instruments relating to indebtedness for borrowed money (whether present or future, contingent or otherwise), which results in such indebtedness for borrowed money (whether present or future, contingent or otherwise) becoming, or becoming capable at such time of being declared, immediately due and payable under such agreements or instruments, before it would otherwise have been due and payable, or a default by Seller in making one or more payments on the due date thereof in an aggregate amount of not less than *[To be determined by Buyer]* under such agreements or instruments (after giving effect to any applicable notice requirement or grace period).

(v) During the Term, Seller fails to comply with the requirements of Section 7.2(b)(v), where such breach is not remedied within thirty (30) calendar days of Notice of such breach by Buyer.

(vi) The aggregate Demonstrated Capacity for all Resource IDs in the DRAM Resource is less than fifty percent (50%) of the aggregate Qualifying Capacity for all Resource IDs in the DRAM Resource in any two (2) sequential Showing Months for which Demonstrated Capacity was calculated with reference to the results of a DC Dispatch pursuant to Section 1.6(a)(i) or a DC Test pursuant to Section 1.6(a)(ii) (excluding any intervening months with invoices based on Must-Offer Obligation bids pursuant to Section 1.6(a)(iii)).

(vii) Seller fails to achieve a Milestone by the applicable deadline for such Milestone as set forth in Section 3.3(b), and such failure is not remedied within five (5) Business Days after Notice from Buyer.

9.2. Early Termination

If an Event of Default shall have occurred, the Party taking the default (the "Non-Defaulting Party") has the right:

(a) To designate by Notice, which will be effective five (5) Business Days after the Notice is given, a day, no later than twenty (20) calendar days after the Notice is effective, for the early termination of this Agreement (an "Early Termination Date");

(b) Withhold any payments due to the Defaulting Party under this Agreement;

(c) Suspend performance of this Agreement, but excluding Seller's obligation to post and maintain Performance Assurance in accordance with Article 5; and

(d) To pursue all remedies available at law or in equity against the Defaulting Party (including monetary damages), except to the extent that such remedies are limited by the terms of this Agreement.

9.3. Termination Payment

(a) As soon as practicable after an Early Termination Date is declared, the Non-Defaulting Party shall provide Notice to the Defaulting Party of the amount of the Termination Payment. The Notice must include a written statement setting forth, in reasonable detail, the calculation of such Termination Payment including the Settlement Amount, together with appropriate supporting documentation.

(b) If the Termination Payment is positive, the Defaulting Party shall pay such amount to the Non-Defaulting Party within two (2) Business Days after the Notice is provided. If the Termination Payment is negative (i.e., the Non-Defaulting Party owes the Defaulting Party more than the Defaulting Party owes the Non-Defaulting Party), then the Settlement Amount shall be zero dollars ($0), and the Non-Defaulting Party shall only pay to the Defaulting Party, within thirty (30) calendar days after the Notice is provided, any amounts owed by the Non-Defaulting Party to the Defaulting Party determined as of the Early Termination Date.

(c) If a Party disputes the other Party's calculation of the Termination Payment, in whole or in part, the disputing Party shall, within two (2) Business Days of receipt of the Party's calculation of the Termination Payment, provide to the other Party a detailed written explanation of the basis for such dispute. Any disputes as to the calculation of the Termination Payment which the Parties are unable to resolve may be submitted to dispute resolution as provided in Article 10.

9.4. Reserved

9.5. Suspension of Performance

Notwithstanding any other provision of this Agreement, if (a) an Event of Default or (b) a Potential Event of Default shall have occurred and be continuing, the Non-Defaulting Party, upon Notice to the Defaulting Party, shall have the right (i) to suspend performance under this Agreement and (ii) to the extent an Event of Default shall have occurred and be continuing to exercise any remedy available at law or in equity.

9.6. Rights and Obligations Surviving Termination or Expiration

The rights and obligations that are intended to survive a termination or expiration of this Agreement are all of those rights and obligations that this Agreement expressly provides survive any such termination or expiration and those that arise from a Party's covenants, agreements, representations, and warranties applicable to, or to be performed, at or during any time before or as a result of the termination or expiration of this Agreement, including:

(a) A Party's obligation to provide information, including but not limited to Sections 3.3, 5.7, 6.2 and 6.4;

(b) A Party's obligations with respect to invoices and payments pursuant to this Agreement;

(c) The obligation of Seller to maintain Performance Assurance as set forth in Section 5.1;

(d) The obligation of Buyer to return any Performance Assurance under Section 5.3;

(e) The right to pursue remedies as set forth in Sections 9.2(d) and Article 10;

(f) The obligations with respect to a Termination Payment as set forth in Section 9.3;

(g) The dispute resolution provisions of Article 10;

(h) The indemnity obligations expressly set forth in this Agreement;

(i) The limitation of liabilities as set forth in Sections 3.5, 6.1 and Article 12;

(j) The obligation of confidentiality as set forth in Article 13; and

(k) A Party's obligation to comply with all applicable federal, state and local laws and rules, including without limitation, laws and rules protecting the confidentiality and privacy of Customer and Personal Confidential Information, such as the California Consumer Privacy Act of 2018, as set forth in Section 13.1(b) of this Agreement.

ARTICLE 10. DISPUTE RESOLUTION

10.1. Dispute Resolution

Mindful of the high costs of litigation, not only in dollars but time and energy as well, the Parties intend to and do hereby establish a final and binding out-of-court dispute resolution procedure to be followed in the event any controversy should arise out of or concerning the performance of the Agreement. Accordingly, it is agreed as follows:

(a) Negotiation

(i) Except for disputes arising with respect to a Termination Payment, the Parties will attempt in good faith to resolve any controversy or claim arising out of or relating to this Agreement by prompt negotiations between each Party's Contract Representative, as identified in Section 8.2, or such other person designated in writing as a representative of the Party ("Manager"). Either Manager may request a meeting (in person or telephonically) to initiate negotiations to be held within ten (10) Business Days of the other Party's receipt of such request, at a mutually agreed time and place. If the matter is not resolved within fifteen (15) Business Days of their first meeting ("Initial Negotiation End Date"), the Managers shall refer the matter to the designated senior officers of their respective companies, who shall have authority to settle the dispute ("Executive(s)"). Within five (5) Business Days of the Initial Negotiation End Date ("Referral Date"), each Party shall provide one another written notice confirming the referral and identifying the name and title of the Executive who will represent the Party.

(ii) Within five (5) Business Days of the Referral Date the Executives shall establish a mutually acceptable location and date, which date shall not be greater than thirty (30) calendar days from the Referral Date, to meet. After the initial meeting date, the Executives shall meet as often as they reasonably deem necessary to exchange the relevant information and to attempt to resolve the dispute.

(iii) All communication and writing exchanged between the Parties in connection with these negotiations shall be confidential and shall not be used or referred to in any subsequent binding adjudicatory process between the Parties.

(iv) If the matter is not resolved within forty-five (45) calendar days of the Referral Date, or if the Party receiving the written request to meet, pursuant to the first paragraph of this Section 10.1(a), refuses or will not meet within ten (10) Business Days, either Party may initiate mediation of the controversy or claim according to the terms of the following Section 10.3.

(v) If a dispute exists with respect to the Termination Payment, and such dispute cannot be resolved by good faith negotiation of the Parties within ten (10) Business Days of the Non-Defaulting Party's receipt of the detailed basis for the explanation of the dispute then either Party may refer the matter directly to Arbitration, as set forth in Section 10.4 below.

(b) Mediation

If the dispute (other than a dispute regarding the Termination Payment) cannot be resolved by negotiation as set forth in Section 10(a) above, then either Party may initiate mediation, the first-step of a two-step dispute resolution process, which JAMS, Inc., or its successor entity, a judicial arbitration and mediation service ("JAMS"). As the first step, the Parties agree to mediate any controversy before a commercial mediator from the JAMS panel, pursuant to JAMS's then-applicable commercial mediation rules, in San Francisco, California. Either Party may initiate such a mediation by serving a written demand for mediation. The mediator shall not have the authority to require, and neither Party may be compelled to engage in, any form of discovery prior to or in connection with the mediation. If within sixty (60) days after service of a written demand for mediation, or as extended by mutual agreement of the Parties, the mediation does not result in resolution of the dispute, then the Parties shall resolve such controversy through Arbitration by one retired judge or justice from the JAMS panel, which Arbitration shall take place in San Francisco, California, and which the arbitrator shall administer by and in accordance with JAMS's Commercial Arbitration Rules ("Arbitration"). If the Parties cannot mutually agree on the arbitrator who will adjudicate the dispute, then JAMS shall provide the Parties with an arbitrator pursuant to its then-applicable Commercial Arbitration Rules. The period commencing from the date of the written demand for mediation until the appointment of a mediator shall be included within the sixty (60) day mediation period. Any mediator(s) and arbitrator(s) shall have no affiliation with, financial or other interest in, or prior employment with either Party and shall be knowledgeable in the field of the dispute. Either Party may initiate Arbitration by filing with the JAMS a notice of intent to arbitrate within sixty (60) days of service of the written demand for mediation.

(c) Arbitration

(i) At the request of a Party, the arbitrator shall have the discretion to order depositions of witnesses to the extent the arbitrator deems such discovery relevant and appropriate. Depositions shall be limited to a maximum of three (3) per Party and shall be held within thirty (30) days of the making of a request. Additional depositions may be scheduled only with the permission of the arbitrator, and for good cause shown. Each deposition shall be limited to a

maximum of six (6) hours duration unless otherwise permitted by the arbitrator for good cause shown. All objections are reserved for the Arbitration hearing except for objections based on privilege and proprietary and confidential information. The arbitrator shall also have discretion to order the Parties to exchange relevant documents. The arbitrator shall also have discretion to order the Parties to answer interrogatories, upon good cause shown.

(ii) The arbitrator, once chosen, shall consider any transaction tapes or any other evidence which the arbitrator deems necessary, as presented by each Party. In deciding the award, the provisions of this Agreement will be binding on the arbitrator. The arbitrator will deliver his or her decision in writing within 30 days after the conclusion of the Arbitration hearing. The arbitrator shall specify the basis for his or her decision, the basis for the damages award and a breakdown of the damages awarded, and the basis of any other remedy. Except as provided in the Federal Arbitration Act, the decision of the arbitrator will be binding on and non-appealable by the Parties. Each Party agrees that any arbitration award against it may be enforced in any court of competent jurisdiction and that any Party may authorize any such court to enter judgment on the arbitrator's decision.

(iii) The arbitrator shall have no authority to award punitive or exemplary damages or any other damages other than direct and actual damages.

(iv) Any expenses incurred in connection with hiring the arbitrators and performing the Arbitration shall be shared and paid equally between the Parties. Each Party shall bear and pay its own expenses incurred by each in connection with the Arbitration, unless otherwise included in a solution chosen by the Arbitration panel. In the event either Party must file a court action to enforce an arbitration award under this Article, the prevailing Party shall be entitled to recover its court costs and reasonable attorney fees.

(v) In the event the Parties choose to litigate any matter hereunder, the Parties hereby waive the right to jury trial.

(vi) Except as may be required by Applicable Law, the existence, contents or results of any Arbitration hereunder may not be disclosed by a Party or the arbitrator without the prior written consent of both Parties.

10.2. Provisional Relief

The Parties acknowledge and agree that irreparable damage would occur if certain provisions of this Agreement are not performed in accordance with the terms of this Agreement, that money damages would not be a sufficient remedy for any breach of these provisions of this Agreement, and that the Parties shall be entitled, without the requirement of posting a bond or other security, to seek a preliminary injunction, temporary restraining order, or other provisional relief as a remedy for a breach of Article 13 in any court of competent jurisdiction, notwithstanding the obligation to submit all other Disputes (including all claims for monetary damages under this Agreement) to arbitration pursuant to this Article 10. The Parties further acknowledge and agree that the results of the arbitration may be rendered ineffectual without the provisional relief.

Such a request for provisional relief does not waive a Party's right to seek other remedies for the breach of the provisions specified above in accordance with Article 10, notwithstanding any prohibition against claim-splitting or other similar doctrine. The other remedies that may be sought include specific performance and injunctive or other equitable relief, plus any other remedy specified in this Agreement for the breach of the provision, or if the Agreement does not specify a remedy for the breach, all other remedies available at law or equity to the Parties for the breach.

ARTICLE 11. INDEMNIFICATION

11.1. Seller's Indemnification Obligations

(a) In addition to any other indemnification obligations Seller may have elsewhere in this Agreement, which are hereby incorporated in this Section 11.1, Seller releases, and shall indemnify, defend and hold harmless Buyer, and Buyer's directors, officers, employees, agents, assigns, and successors in interest, from and against any and all loss, liability, damage, claim, cost, charge, demand, penalty, fine or expense of any kind or nature (including any direct, damage, claim, cost, charge, demand, or expense, and attorneys' fees (including cost of in-house counsel) and other costs of litigation, arbitration or mediation, and in the case of third-party claims only, indirect or consequential loss or damage of such third-party), arising out of or in connection with:

(i) any breach made by Seller of its representations, warranties and covenants in Article 7;

(ii) Seller's failure to fulfill its obligations regarding Resource Adequacy Benefits as set forth in Article 3;

(iii) any violation of Applicable Law or the CAISO Tariff arising out of or in connection with Seller's performance of, or failure to perform this Agreement;

(iv) injury or death to persons, including Buyer employees, and physical damage to property, including Buyer property, where the damage arises out of, is related to, or is in connection with, Seller's obligations or performance under this Agreement.

This indemnity applies notwithstanding Buyer's active or passive negligence; *provided*, Buyer will not be indemnified for its loss, liability, damage, claim, cost, charge, demand or expense to the extent caused by its gross negligence or willful misconduct.

11.2. Indemnification Claims

All claims for indemnification by Buyer will be asserted and resolved as follows:

If a claim or demand for which Buyer may claim indemnity is asserted against or sought to be collected from Seller by a third party, Buyer shall as promptly as practicable give Notice to Seller; provided, failure to provide this Notice will relieve Seller only to the extent that the failure actually prejudices Seller.

(a) Seller will have the right to control the defense and settlement of any claims in a manner not adverse to Buyer but cannot admit any liability or enter into any settlement without Buyer's approval.

(b) Buyer may employ counsel at its own expense with respect to any claims or demands asserted or sought to be collected against it; provided, if counsel is employed due to a conflict of interest or because Seller does not assume control of the defense, Seller will bear the expense of this counsel.

ARTICLE 12. LIMITATION OF REMEDIES, LIABILITY, AND DAMAGES

EXCEPT AS SET FORTH HEREIN WITH RESPECT TO THE PRODUCT, THERE ARE NO WARRANTIES BY EITHER PARTY UNDER THIS AGREEMENT, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF.

FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES WILL BE THE SOLE AND EXCLUSIVE REMEDY, THE OBLIGOR'S LIABILITY WILL BE LIMITED AS SET FORTH IN SUCH PROVISION AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED, UNLESS THE PROVISION IN QUESTION PROVIDES THAT THE EXPRESS REMEDIES ARE IN ADDITION TO OTHER REMEDIES THAT MAY BE AVAILABLE.

SUBJECT TO SECTION 9.3, IF NO REMEDY OR MEASURE OF DAMAGES IS EXPRESSLY PROVIDED HEREIN, THE OBLIGOR'S LIABILITY WILL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL DAMAGES WILL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED.

UNLESS EXPRESSLY PROVIDED IN THIS AGREEMENT, INCLUDING WITHOUT LIMITATION THE PROVISIONS OF ARTICLE 11 (INDEMNIFICATION), NEITHER PARTY WILL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE.

IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE.

TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID HEREUNDER ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OR OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT AND THE DAMAGES CALCULATED HEREUNDER CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS.

NOTHING IN THIS ARTICLE PREVENTS, OR IS INTENDED TO PREVENT, BUYER FROM PROCEEDING AGAINST OR EXERCISING ITS RIGHTS WITH RESPECT TO ANY PERFORMANCE ASSURANCE.

ARTICLE 13. CONFIDENTIALITY

13.1. Confidentiality and Privacy Obligations

(a) Neither Party shall disclose the terms or conditions of this Agreement to a third party (other than the Party's or the Party's Affiliates' officers, directors, employees, lenders, counsel, accountants, advisors, or Rating Agencies, who have a need to know such information and have agreed to keep such terms confidential) except (i) in order to comply with any Applicable Law, summons, subpoena, exchange rule, or accounting disclosure rule or standard, or to make any showing required by any applicable Governmental Body other than as set forth in Sections 13.1(a)(v) and (vi); (ii) to the extent necessary for the enforcement of this Agreement; (iii) as may be obtained from a non-confidential source that disclosed such information in a manner that did not violate its obligations to the non-disclosing Party in making such disclosure; (iv) to the extent such information is or becomes generally available to the public prior to such disclosure by a Party; (v) when required to be released in connection with any regulatory proceeding (provided that the releasing Party makes reasonable efforts to obtain confidential treatment of the information being released); (vi) with respect to Buyer, as may be furnished to its duly authorized Governmental Bodies, including without limitation the Commission and all divisions thereof, to Buyer's Procurement Review Group, a group of participants including members of the Commission and other governmental agencies and consumer groups established by the Commission in Commission decisions 02-08-071 and 03-06-071, and to Buyer's Cost Allocation Mechanism Group established by the CPUC in D.07-12-052, or (vii) Seller may disclose the transfer of the Monthly Quantity under this Agreement to its SC in order for such SC to timely submit accurate Supply Plans. The existence of this Agreement is not subject to this confidentiality obligation; provided, neither Party shall make any public announcement relating to this Agreement unless required pursuant to subsection (i) or (v) of the foregoing sentence of this Section 13(a).

(b) During the Term of this Agreement, both Parties shall comply with all applicable federal, state and local laws protecting the confidentiality and privacy of the Customer and Personal Confidential Information, including without limitation, the California Consumer Privacy Act of 2018, California Civil Code 1798.100 et seq. In addition, Seller shall cause each of the PDRs in the DRAM Resource and corresponding DRPs and SCs to comply with all applicable federal, state, and local laws set forth in the prior sentence.

13.2. Obligation to Notify

In connection with discovery requests or orders pertaining to confidential information in connection with this Agreement as referenced in Section 13.1(a)(i) ("Disclosure Order") each Party shall, to the extent practicable, use reasonable efforts to:

(a) Notify the other Party before disclosing the Confidential Information; and

(b) Prevent or limit such disclosure.

After using such reasonable efforts, the Disclosing Party will not be:

(c) Prohibited from complying with a Disclosure Order; or

(d) Liable to the other Party for monetary or other damages incurred in connection with the disclosure of the Confidential Information.

13.3. Remedies; Survival

The Parties shall be entitled to all remedies available at law or in equity to enforce, or seek relief in connection with, these confidentiality and privacy obligations. With respect to information provided in connection with this Agreement, these obligations shall survive for a period of three (3) years following the expiration or termination of this Agreement.

ARTICLE 14. FORCE MAJEURE

To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Agreement and such Party (the "Claiming Party") gives notice and details of the Force Majeure to the other Party as soon as practicable, then, unless the terms of the Product specify otherwise, the Claiming Party shall be excused from the performance of its obligations with respect to this Agreement (other than the obligation to make payments then due or becoming due with respect to performance prior to the Force Majeure). The Claiming Party shall remedy the Force Majeure with all reasonable dispatch. The non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

ARTICLE 15. MISCELLANEOUS

15.1. General

(a) This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties and shall not be construed against one Party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof.

(b) The term "including," when used in this Agreement, shall be by way of example only and shall not be considered in any way to be in limitation.

(c) The headings used herein are for convenience and reference purposes only.

(d) Each Party agrees that it will not assert, or defend itself, on the basis that any applicable tariff is inconsistent with this Agreement.

(e) Words having well-known technical or industry meanings have these meanings unless otherwise specifically defined in this Agreement.

(f) Whenever this Agreement specifically refers to any Applicable Law, tariff, government department or agency, or Rating Agency, the Parties hereby agree that the reference also refers to any successor to such law, tariff or organization.

(g) Nothing in this Agreement relieves either Party from, or modifies, any obligation or requirement that exists in any Applicable Law, tariff, rule, or regulation.

(h) The Parties acknowledge and agree that this Agreement and the transactions contemplated by this Agreement constitute a "forward contract" within the meaning of

the Bankruptcy Code and that Buyer and Seller are each "forward contract merchants" within the meaning of the Bankruptcy Code.

15.2. Governing Law and Venue

THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAWS. EACH PARTY WAIVES ITS RESPECTIVE RIGHT TO ANY JURY TRIAL WITH RESPECT TO ANY DISPUTE ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT.

15.3. Amendment

This Agreement can only be amended by a writing signed by both Parties.

15.4. Assignment

(a) Neither Party shall assign this Agreement or its rights hereunder, as the case may be, without the prior written consent of the other Party, which consent may not be unreasonably withheld; provided, either Party may, without the consent of the other Party (and without relieving itself from liability hereunder), (a) transfer, sell, pledge, encumber or assign this Agreement or the accounts, revenues or proceeds hereof or thereof, as the case may be, in connection with any financing or other financial arrangements to any person or entity whose creditworthiness is equal to or higher than that of such Party, (b) transfer or assign this Agreement to an Affiliate of such Party which Affiliate's creditworthiness is equal to or higher than that of such Party, or (c) transfer or assign this Agreement to any person or entity succeeding to all or substantially all of the assets of such Party and whose creditworthiness is equal to or higher than that of such Party; provided, in each such case, any such assignee shall agree in writing to be bound by the terms and conditions hereof and so long as the transferring Party delivers such tax and enforceability assurance as the non-transferring Party may reasonably request.

(b) If Seller seeks to assign this Agreement or its rights hereunder and Buyer's consent is required under Section 15.4(a) or pursuant to CPUC rules on reassignment described in Decision 19-12-040 or other applicable rules or laws, then no later than thirty (30) calendar days in advance of the proposed assignment, Seller shall issue Notices to the Commission's Energy Division and to Buyer informing each of Seller's intent to assign, and shall inform prospective Demand Response Providers by emailing all regulatory affairs or contract managers for all registered Demand Response Providers. Seller shall issue a Notice to Buyer of its selected assignee and shall provide concurrently with such Notice: (i) draft modifications to this Agreement to accommodate such assignment; (ii) evidence that the proposed assignee and the DRAM Resource is in compliance with the Milestones; and (iii) the additional information required by the QC Implementation Guidelines, as to the selected assignee. Buyer shall advise Seller of its approval or disapproval of such assignment, in its reasonable discretion, within fifteen (15) Business Days after receipt of all such information. Such assignment, if approved by Buyer, shall not become effective until CPUC Approval has been obtained with respect to the revised Agreement. Buyer shall request CPUC Approval of any revised Agreement via a Tier 1 Advice Letter.

15.5. Successors and Assigns

This Agreement shall be binding upon and inure to the benefit of, the Parties and their respective successors and assigns. This Agreement is not intended to confer any rights or remedies upon any other persons other than the Parties.

15.6. Waiver

None of the provisions of this Agreement shall be considered waived by either Party unless the Party against whom such waiver is claimed gives the waiver in writing. The failure of either Party to insist in any one instance upon strict performance of any the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishments of such rights for the future but the same shall continue and remain in full force and effect. Waiver by either Party of any default of the other Party shall not be deemed a waiver of any other default.

15.7. No Agency

Except as otherwise provided explicitly herein, in performing their respective obligations under this Agreement, neither Party is acting, or is authorized to act, as the other Party's agent.

15.8. No Third-Party Beneficiaries

This Agreement shall not impart any rights enforceable by any third party (other than a permitted successor or assignee bound by this Agreement).

15.9. Entire Agreement

This Agreement, when fully executed, constitutes the entire agreement by and between the Parties as to the subject matter hereof, and supersedes all prior understandings, agreements or representations by or between the Parties, written or oral, to the extent they have related in any way to the subject matter hereof. Each Party represents that, in entering into this Agreement, it has not relied upon any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement.

15.10. Severability

If any term, section, provision or other part of this Agreement, or the application of any term, section, provision or other part of this Agreement, is held to be invalid, illegal or void by a court or regulatory agency of proper jurisdiction, all other terms, sections, provisions or other parts of this Agreement shall not be affected thereby but shall remain in force and effect unless a court or regulatory agency holds that the provisions are not separable from all other provisions of this Agreement.

15.11. Multiple Originals

This Agreement may be executed in multiple counterparts, each of which shall be deemed an original. Any signature page of this Agreement may be detached from any counterpart of this Agreement without impairing the legal effect of any of the signatures thereon, and may be attached to another counterpart of this Agreement identical in form hereto by having attached to it one or more signature pages.

15.12. Mobile Sierra

Notwithstanding any provision of this Agreement, neither Party shall seek, nor shall they support any third party seeking, to prospectively or retroactively revise the rates, terms or conditions of service of this Agreement through application or complaint to the FERC pursuant to the provisions of the Federal Power Act, absent prior written agreement of the Parties. Further, absent the prior written agreement in writing by both Parties, the standard of review for changes to the rates, terms or conditions of service of this Agreement proposed by a Party, a non-Party, or the FERC acting sua sponte shall be the "public interest" standard of review set forth in United States Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956).

15.13. Performance Under this Agreement

Each Party and its representatives shall maintain records and supporting documentation relating to this Agreement, and the performance of the Parties hereunder in accordance with, and for the applicable time periods required by, all Applicable Laws.

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IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed as of the Execution Date.

PACIFIC GAS AND ELECTRIC COMPANY, a California corporation	[***SELLER***]
Signature: _____	Signature: _____
Name: _____	Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

EXHIBIT A

DEFINITIONS

As used in this Agreement, the following terms shall have the meanings set forth below:

"ADR Guidelines" means the guidelines for Buyer's Automated Demand Response Program implemented pursuant to Decisions 12-04-045, 14-05-025, and 18-11-029, as modified or updated from time to time, including the updates to the guidelines that are submitted in the Tier Two advice letter process on September 1 of each year in compliance with Ordering Paragraph 8 of Decision 18-11-029.

"Affiliate" means with respect to a Party, any entity which directly or indirectly controls, is controlled by, or is under a common control with that Party For purposes of this definition, "control" (including, with correlative meaning, the terms "controlling", "controlled by" and "under common control with"), shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies through the ownership of voting securities, by agreement or otherwise.

"Agreement" has the meaning in the Preamble.

"Applicable Laws" means all constitutions, treaties, laws, ordinances, rules, regulations, interpretations, permits, judgments, decrees, injunctions, writs and orders of any Governmental Body that apply to either or both of the Parties, the DRP, the PDR or the terms of this Agreement.

"Arbitration" has the meaning set forth in Section 10.1(b).

"Audit Notice" has the meaning set forth in Section 1.6(k).

"Automated Demand Response" or "ADR" is Buyer's demand response program offering Customers an incentive to install automated communication equipment and associated software that enhances their ability to reduce load during Buyer's demand response program events. For purposes ADR, Seller's participation in the CAISO Markets pursuant to this Agreement is a Buyer demand response program, pursuant to the September 24, 2015 disposition letter from Commission staff. The CPUC approved the ADR programs by Decision 12-04-045 and Decision 14-05-025.

"Automated Demand Response Customer" or "ADR Customer" is a non-Residential Customer that has installed the ADR equipment under Buyer's ADR and received, at minimum, approval from Buyer that it has been approved for its first (60%) incentive payment.

"Availability Assessment Hours" or "AAH" has the meaning set forth in the CAISO Tariff.

"Average Qualifying Capacity" or "AQC" has the meaning set forth in Section 1.7 and Exhibit E.

"Award" has the meaning set forth in Section 6.6(b).

"Bankrupt" means with respect to any entity, such entity (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they fall due.

"Bankruptcy Code" means the United States Bankruptcy Code (11 U.S.C. §101 et seq.), as amended, and any successor statute.

"Bid" shall have the meaning in the CAISO Tariff.

"Bundled Service Customer" means a customer of Buyer as a utility distribution company who takes bundled services from Buyer as a utility distribution company including having all its power requirements purchased by Buyer.

"Business Day" means a day that is not a Saturday, Sunday, a Federal Reserve Bank holiday, or the Friday immediately following the U.S. Thanksgiving holiday. A Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business. The relevant Party, in each instance unless otherwise specified, shall be the Party from whom the notice, payment or delivery is being sent and by whom the notice or payment or delivery is to be received.

"Buyer" has the meaning set forth in the preamble.

"CAISO" means the California Independent System Operator Corporation or any successor entity performing the same functions.

"CAISO Markets" has the meaning set forth in the CAISO Tariff.

"CAISO Tariff" means the most current tariff and protocol provisions, including any current CAISO-published "Operating Procedures" and "Business Practice Manuals," as amended or supplemented from time to time, of the CAISO.

"Capacity Baseline" means a CAISO baseline as applicable to the PDR(s) in the DRAM Resource, as specified in the CAISO Tariff and approved by the CPUC for retail settlement purposes in the DRAM, and as limited by the following: (i) a day matching customer load ten-in-ten baseline with a twenty percent (20%) cap; (ii) a weather matching baseline with a forty percent (40%) cap; (iii) the use of control groups; and (iv) a five-in-ten baseline for residential customers, with a forty percent (40%) cap, as utilized for the calculation of Qualifying Capacity and Demonstrated Capacity, and for CAISO settlements, in accordance with Section 1.6 of this Agreement.

"Capacity Procurement Mechanism" has the meaning set forth in the CAISO Tariff.

"Cash" means U.S. Dollars held by or on behalf of Buyer as Performance Assurance hereunder.

"Cash Interest Rate" means the Federal Funds Effective Rate - the rate per annum equal to that day opposite the "Monthly" caption "Federal Funds Rate (Effective)" as reset on a monthly basis based on set forth in the latest month for which such rate is available)weekly statistical release designated as reported in Federal Reserve Bank Publication H.15-(519,), or its successor publication, published by the Board of Governors of the Federal Reserve System.

"Claiming Party" has the meaning set forth in Article 14.

"Clock Hour" means a sixty (60) minute interval that starts at 00:00 and ends at 00:59 (e.g., starting at 16:00 and ending at 16:59).

"Commission" or "CPUC" means the California Public Utilities Commission, and all divisions thereof, or any successor thereto.

"Compliance Showing(s)" means the RAR compliance or advisory showings (or similar or successor showings), that an LSE is required to make to the CPUC (and, to the extent authorized by the CPUC, to the CAISO) pursuant to the CPUC Decisions, to the CAISO pursuant to the CAISO Tariff, or to any Governmental Body having jurisdiction.

"Contract Price" means the price for each type of Product as specified in Exhibit B for each Showing Month.

"CPM Capacity" has the meaning set forth in the CAISO Tariff.

"CPUC Approval" means a decision of the CPUC that (i) is final and no longer subject to appeal, which approves the Agreement in full and in the form presented on terms and conditions acceptable to both Parties, including without limitation terms and conditions related to cost recovery and cost allocation of amounts paid to Seller under the Agreement; (ii) does not contain conditions or modifications unacceptable to both Parties; and (iii) finds that any procurement pursuant to this Agreement satisfies the requirement to procure preferred resources under Commission Decision 13-02-015.

"CPUC Decisions" means Commission Decisions 04-01-050, 04-10-035, 05-10-042, 06-04-040, 06-06-031, 06-06-064, 06-07-031, 07-06-029, 08-06-031, 09-06-028, 09-12-053, 10-06-036, 10-12-038, 11-06-022, 11-10-003, 12-06-025, 13-02-006, 13-04-013, 13-06-024, 14-03-026, 14-06-050, 14-12-024, 15-02-007, 15-06-063, 19-07-009, 19-06-026, 19-12-040 and any other existing or subsequent decisions, resolutions, or rulings related to Resource Adequacy, including, without limitation, the CPUC RA Filing Guide, in each case as may be amended from time to time by the CPUC.

"CPUC RA Filing Guide" is the applicable annual document issued by the Commission which sets forth the guidelines, requirements and instructions for LSE's to demonstrate compliance with the Commission's Resource Adequacy program.

"Credit Rating" means, with respect to any entity, the rating then assigned to such entity's unsecured, senior long-term debt obligations (not supported by third party credit enhancements) or if such entity does not have a rating for its senior unsecured long-term debt, then the rating then assigned to such entity as an issuer rating by the Ratings Agencies.

"Customer" means a person or entity that is either a: (i) Bundled Service Customer; (ii) community choice aggregation customer or direct access customer who would otherwise be eligible to be a Bundled Service Customer; or (iii) Unbundled Service Customer.

"Customer and Personal Confidential Information" means (i) personal information as defined in California Civil Code section 1798.140(o); (ii) Customer specific information as defined in CPUC rules and decisions which does not meet the CPUC's aggregation standards in CPUC D.14-05-016 for non-Residential Customers of at least fifteen (15) Customers with no Customer comprising fifteen percent (15%) or more of the data and for Residential Customers of at least one hundred (100) Customers per zip code (CPUC aggregation standards), (iii) all written materials marked "Confidential", "Proprietary" or with words of similar import provided to the receiving Party; and (iv) any calculations and the results of such calculations involving the Customer and Personal Confidential Information disclosed by the disclosing Party that does not meet the CPUC's aggregation standards. The Customer and Personal Confidential Information includes portions of documents, records and other material forms or representations which the receiving Party may create, including but not limited to handwritten notes or summaries, that contain or are derived from such Customer and Personal Confidential Information.

"Customer Data Access Systems" has the meaning described in CPUC Decision 13-09-025.

"Day-Ahead Market" has the meaning set forth in the CAISO Tariff.

"Day-Ahead Schedule" has the meaning set forth in the CAISO Tariff.

"DC Dispatch" means the Dispatch(es) of a PDR in the DRAM Resource in the CAISO Markets, in accordance with the CAISO Tariff, for a duration of at least either (i) for a Day-Ahead Market award or a Real-Time Market Award for which the CAISO dispatch instructions are based on Clock Hours, or one (1) Clock Hour for all other Showing Months except the Showing Month of August, or two (2) consecutive Clock Hours for the Showing Month of August (for the Showing Month of August, the requirement of two (2) consecutive Clock Hours may be satisfied by a combination of a DC Dispatch and a DC Test); or (ii) for a Real-Time Market Award for which the CAISO dispatch instructions do not start or end on a Clock Hour, one (1) contiguous sixty (60) minute interval for a Real-Time Market award within the Availability Assessment Hours for all Showing Months except the Showing Month of August, or one (1) contiguous one hundred twenty (120) minute interval within the Availability Assessment Hours for the Showing Month of August.

"DC-QC Ratio" has the meaning set forth in Section 4.1.

"DC Test" means the capacity test(s) of a PDR in the DRAM Resource for one hundred percent (100%) of such PDR's Qualifying Capacity for the applicable Showing Month (where such Qualifying Capacity has been submitted in Seller's Supply Plan for that Showing Month) for a duration of at least (i) one (1) Clock Hour within the Availability Assessment Hours for all Showing Months except the Showing Month of August or (ii) for a duration of at least two (2) consecutive Clock Hours within the Availability Assessment Hours for the Showing Month of August, conducted by the Seller's SC during the applicable Showing Month, in accordance with the CAISO Tariff and D.14-06-050, Appendix B, that is used to demonstrate capacity.

"Default Adjustment Value" has the meaning set forth in Section 7.2(b)(v)(B), CPUC Resolution E-4838, and CPUC Resolution E-4906.

"Defaulting Party" has the meaning set forth in Section 9.1.

"Delivered Capacity Payment" has the meaning described in and is calculated pursuant to Section 4.1.

"Delivered Energy Quantity" or "DEQ" has the meaning set forth in Section 1.7 and Exhibit E.

"Delivery Period" has the meaning set forth in Section 1.3.

"Demand Response Provider" or "DRP" has the meaning in the CAISO Tariff.

"Demonstrated Capacity" has the meaning set forth in Section 1.6(a).

"Dispatch" means the act of reducing all or a portion of the electrical consumption of the PDR pursuant to a Dispatch Instruction.

"Dispatch Instruction" has the meaning in the CAISO Tariff.

"Dispute" means any and all disputes, claims or controversies arising out of, relating to, concerning or pertaining to the terms of this Agreement, or to either Party's performance or failure of performance under this Agreement.

"Distributed Energy Resource Aggregation" has the meaning in the CAISO Tariff.

"Diverse Business Enterprises" or "DBE" means Women, Minority, Disabled Veteran (WMDV) and Lesbian, Gay, Bisexual and Transgender (LGBT) Business Enterprises as defined in CPUC General Order 156.

"DRAM" means the Demand Response Auction Mechanism, which is a procurement mechanism during 2024 for the Product as described in CPUC D.14-12-024, D.17-10-017, D.19-07-009, D.19-12-040, and D.23-01-006.

"DRAM Resource" means the sum of the PDR(s) that Seller identifies pursuant to Section 1.4 that will provide Product to Buyer.

"DRAM Resource Customer" is a Bundled Service Customer or Unbundled Service Customer account at the Service Account Identification level that is included in the DRAM Resource.

"Early Termination Date" has the meaning set forth in Section 9.2(a).

"EFC" shall mean Effective Flexible Capacity as defined in the CAISO Tariff.

"Event of Default" has the meaning set forth in Section 9.1.

"Execution Date" has the meaning set forth in the preamble.

"Executive(s)" has the meaning set forth in Section 10.1(b).

"FERC" means the Federal Energy Regulatory Commission, or any division thereof.

"Flexible Capacity" means any and all flexible Resource Adequacy attributes associated with the PDR(s) designated by Seller pursuant to Section 1.4, as such attributes may be identified from time to time by the CPUC, CAISO, or other Governmental Body having jurisdiction, that can be counted toward Flexible RAR, and which may be (i) exclusive of Local Capacity and (ii) be in Flexible Category 1 (base flexibility), 2 (peak flexibility) or 3 (super-peak flexibility) as described in the CAISO Tariff.

"Flexible RAR" means the flexible Resource Adequacy requirements established for LSEs by the CPUC pursuant to the CPUC Decisions, or by any other Governmental Body having jurisdiction.

"Force Majeure" means an event or circumstance which prevents one Party from performing its obligations under this Agreement, which event or circumstance was not anticipated as of the Execution Date, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Force Majeure shall not be based on (i) the loss of Buyer's markets; (ii) Buyer's inability economically to use or resell the Product purchased hereunder; (iii) the loss or failure of Seller's supply; (iv) Seller's ability to sell the Product at a greater price; (v) a failure of performance of any other entity that is not a Party, except to the extent that such failure was caused by an event that would otherwise qualify as a Force Majeure event; or (vi) breakage or malfunction of equipment, except to the extent that such failure was caused by an event that would otherwise qualify as a Force Majeure event.

"GAAP" means United States generally accepted accounting principles as in effect from time to time, consistently applied.

"Governmental Body" means any federal, state, local, municipal or other government; any governmental, regulatory or administrative agency, commission or other authority lawfully exercising or entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power; and any court or governmental tribunal.

"Initial Negotiation End Date" has the meaning set forth in Section 10.1(a).

"Interest Amount" means with respect to a Party and an Interest Period, the sum of the daily interest amounts for all calendar days in such Interest Period; each daily interest amount to be determined by such Party as follows: (i) the amount of Cash held by such Party on that day; multiplied by (ii) the Cash Interest Rate for that day, divided by (iii) 360.

"Interest Period" means the period from (and including) the last Business Day on which an Interest Amount was Transferred by a Party (or if no Interest Amount has yet been Transferred by such Party, the Business Day on which Cash was Transferred to such Party) to (but excluding) the Business Day on which the current Interest Amount is to be Transferred.

"JAMS" has the meaning set forth in Article 10.1(b).

"LCA Customers" means a Customer that either (i) directly takes or receives electricity services from Buyer's LCA or (ii) directly takes or receives electricity services from a lower voltage substation that electrically connects to Buyer's LCA.

"Letter of Credit" means an irrevocable, non-transferable standby letter of credit, the form of which must be substantially as contained in Exhibit I attached hereto; provided that, the issuer must be a Qualified Institution.

"Letter of Credit Default" means with respect to a Letter of Credit, the occurrence of any of the following events: (a) the issuer of such Letter of Credit shall fail to maintain a Credit Rating of at least "A"-, with a stable outlook designation from S&P and A3, with a stable outlook designation from Moody's, if such issuer is rated by both S&P and Moody's, "A-" by S&P with a stable outlook designation, if such issuer is rated only by S&P, or "A3" by Moody's with a stable outlook designation, if such issuer is rated only by Moody's; (b) the issuer of the Letter of Credit shall fail to comply with or perform its obligations under such Letter of Credit; (c) the issuer of such Letter of Credit shall disaffirm, disclaim, repudiate or reject, in whole or in part, or challenge the validity of, such Letter of Credit; (d) such Letter of Credit shall expire or terminate, or shall fail or cease to be in full force and effect at any time during the Term of the Agreement, in any such case without replacement; or (e) the issuer of such Letter of Credit shall become Bankrupt; provided, no Letter of Credit Default shall occur or be continuing in any event with respect to a Letter of Credit after the time such Letter of Credit is required to be canceled or returned to a Party in accordance with the terms of this Agreement.

"Local Capacity" means any and all Resource Adequacy attributes or other locational attributes associated with the PDR(s) designated by Seller and comprised of LCA Customers pursuant to Section 1.4, from a Local Capacity Resource (as defined in CAISO Tariff) in Buyer's Local Capacity Area, as applicable and as such attributes may be identified from time to time by the CPUC, CAISO, or other Governmental Body having jurisdiction, that can be counted toward Local RAR, which may be exclusive of any Flexible Capacity, as applicable to the Product.

"Local Capacity Area" or "LCA" means the areas where LCA Customers are electrically interconnected to any of the PG&E LCA Substations.

"Local RAR" means the local Resource Adequacy requirements established for LSEs by the CPUC pursuant to the CPUC Decisions, or by any other Governmental Body having jurisdiction. Local RAR may also be known as local area reliability, local Resource Adequacy, local Resource Adequacy procurement requirements, or local capacity requirement in other regulatory proceedings or legislative actions.

"LSE" means load-serving entity.

"Manager" has the meaning set forth in Section 10.1(b).

"Merger Event" means, with respect to a Party, that such Party consolidates or amalgamates with, merges into or with, or transfers substantially all its assets to another entity and (i) the resulting entity fails to assume all the obligations of such Party hereunder, or (ii) the resulting entity's creditworthiness is materially weaker than that of such Party immediately prior to such action. The creditworthiness of the resulting entity shall not be deemed to be 'materially weaker' so long as the resulting entity maintains a Credit Rating of at least that of the applicable Party, as the case may be, immediately prior to the consolidation, merger or transfer.

"Milestone" has the meaning set forth Section 3.3(b).

"Monthly Contracted Quantity" means the respective amount of each type of Product set forth in Exhibit B that Seller has agreed to provide to Buyer from the DRAM Resource for each day of the respective Showing Months.

"Monthly Quantity" means the aggregate amount of all Monthly Contracted Quantities set forth in Exhibit B that Seller has agreed to provide to Buyer from the DRAM Resource for each day of the respective Showing Months for the respective types of Product.

"Moody's" means Moody's Investors Service, Inc. or its successor.

"Must-Offer Obligation" means Seller's obligation to Bid or cause Seller's SC to Bid the DRAM Resource into the CAISO Markets based on the type of Product during the Availability Assessment Hours and in accordance with the CAISO Tariff.

"Net Qualifying Capacity" or "NQC" shall mean Net Qualifying Capacity as defined in the CAISO Tariff.

"Notification Time" means the 10:00 a.m. Pacific Prevailing Time on a Business Day.

"Non-Competitive Behavior" means bidding behavior providing clear evidence of market manipulation or collusion.

"Non-Defaulting Party" has the meaning set forth in Section 9.2.

"Notice" means notices, requests, statements or payments provided in accordance with Article 8.

"Partial DC Dispatch" has the meaning set forth in Section 1.6(a)(i).

"Performance Assurance" has the meaning set forth in Section 5.1(a). Performance Assurance must be in the form of Cash or Letter of Credit. Any Cash received and held by Buyer after drawing on any Letter of Credit will constitute Performance Assurance in the form of Cash.

"PG&E LCA Substations" means the substations located in Buyer's service territory as designated in EXHIBIT J and corresponding to the following LCAs as designated on EXHIBIT J: Kern, Stockton, Sierra, None, North Coast/North Bay, Humboldt, Greater Fresno Area, and/or Greater Bay Area.

"Potential Event of Default" means an event which, with Notice or passage of time or both, would constitute an Event of Default.

"Procurement Review Group" has the meaning set forth in Section 13.1.

"Product" means either System Capacity, Local Capacity and/or Flexible Capacity. The particular type of Product sold by Seller to Buyer under this Agreement is specified in Table 1.1(b). Buyer and Seller will have separate agreements for separate products and will combine multiple awards of the same product into one agreement at a weighted average price.

"Progress Report" has the meaning set forth in Section 3.3(b).

"Prohibited Resource" means a distributed generation technology using diesel, natural gas, gasoline, propane, or liquefied petroleum gas, in topping cycle Combined Heat and Power (CHP) or non-CHP configuration. The following resources are exempt: pressure reduction turbines and waste-heat-to-power bottoming cycle CHP, resources using renewable fuels (i.e. renewable gas, renewable diesel, and biodiesel) that have received certification from the California Air Resources Board, as well as energy storage resources not coupled with fossil fueled resources.

"Proxy Demand Resource" or "PDR" has the meaning in the CAISO Tariff.

"QC De-Rate Notice" shall have the meaning set forth in Section 3.1(b).

"QC Implementation Guidelines" has the meaning set forth in Section 3.1(a)(ii).

"Qualifying Capacity" means the load reduction for each PDR in the DRAM Resource, calculated utilizing the Capacity Baseline, consistent with the QC Implementation Guidelines, the CPUC Decisions and the CAISO Tariff.

"Qualified Institution" means either a U.S. commercial bank, or a U.S. branch of a foreign bank acceptable to Buyer in its sole discretion; and in each case such bank must have a Credit Rating of at least: (a) "A-, with a stable designation" from S&P and "A3, with a stable designation" from Moody's, if such bank is rated by both S&P and Moody's; or (b) "A-, with a stable designation" from S&P or "A3, with a stable designation" from Moody's, if such bank is rated by either S&P or Moody's, but not both, even if such bank was rated by both S&P and Moody's as of the date of issuance of the Letter of Credit but ceases to be rated by either, but not both of those Ratings Agencies.

"RAR" means the Resource Adequacy requirements established for LSEs by the Commission pursuant to the CPUC Decisions, the CAISO pursuant to the CAISO Tariff, or by any other Governmental Body having jurisdiction, or successor program requirements.

"Ratings Agency" means either S&P or Moody's (collectively the 'Ratings Agencies').

"Real-Time Market" has the meaning set forth in the CAISO Tariff.

"Referral Date" has the meaning set forth in Section 10.1(a)(i).

"Required Energy Quantity" or "REQ" has the meaning set forth in Section 1.7 and Exhibit E.

"Residential Customer" means a DRAM Resource Customer whose dwelling is single-family units, multi-family units, mobile homes, or other similar living establishments.

"Residential Customer Product" means Product that is comprised solely of Residential Customers and Small Commercial Customers; provided that the percentage of Residential Customers in the PDR(s) constituting the DRAM Resource is equal to or greater than ninety percent (90%). Where multiple PDRs, or portions thereof, are used to meet Seller's Demonstrated Capacity obligations, the percentage requirements apply in the aggregate, based on the total number of PDR Customer service accounts in the DRAM Resource used to show Demonstrated Capacity.

"Resource ID" has the meaning set forth in the CAISO Tariff.

"Resource Adequacy" and "Resource Adequacy Benefits" have the meanings set forth in the CPUC Decisions.

"Revenue Quality Meter Data" means interval meter data that has been validated, edited, and estimated in accordance with the Direct Access Standards for Metering and Meter Data as described in Rule 22.

"Rule 24" means Direct Participation Demand Response:
https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_24.pdf

"S&P" means Standard & Poor's Financial Services LLC, or its successor.

"SAID" or "Service Account Identification" means a Buyer specific identifier or number for tracking energy service deliveries for a specific load through one or more meters at a customer premises or location as described in Rule 1.

"Scheduling Coordinator" or "SC" has the meaning set forth in the CAISO Tariff.

"Seller" has the meaning set forth in the preamble.

"Settlement Amount" means the sum of the estimated Delivered Capacity Payments for all of the remaining Showing Months of the original Delivery Period as in effect prior to such early termination, including the current Showing Month if not invoiced pursuant to Section 4.2, as of the Early Termination Date, with such estimated Delivered Capacity Payments being based on the sum of the applicable Monthly Contracted Quantity times the applicable Contract Price for each type of Product.

"Shortfall Capacity" means the amount of capacity with respect to the Monthly Contracted Quantity for a type of Product for any portion of a Showing Month which was shown by Buyer in its Compliance Showing that CAISO determines requires outage replacement in accordance with Section 40.7 of the CAISO Tariff.

"Showing Month" shall be each day of each calendar month of the Delivery Period that is the subject of the Compliance Showing, as set forth in the CPUC Decisions and outlined in the CAISO Tariff. For illustrative purposes only, pursuant to the CAISO Tariff and CPUC Decisions in effect as of the Execution Date, the monthly Compliance Showing made in June is for the Showing Month of August.

"Small Commercial Customer" means a DRAM Resource Customer who: (a) has a maximum billing demand of 20 kW, or less, per meter during the most recent 12 month period, or (b) has an annual usage of 40,000 kWh, or less, during the most recent 12 month period.

"SubLAP" means the geographic location corresponding to each customer service account within the distribution network located in Buyer's service territory.

"Supply Plan" has the meaning set forth in the CAISO Tariff.

"System Capacity" means system Resource Adequacy Benefits associated with the PDR(s) designated by Seller pursuant to Section 1.4, as such attributes may be identified from time to time by the CPUC, CAISO, or other Governmental Body having jurisdiction, that can be counted toward RAR, which may be exclusive of any Local Capacity and Flexible Capacity as indicated on Table 1.1(b).

"Term" has the meaning set forth in Section 1.2.

"Termination Payment" means the sum of all amounts owed by the Defaulting Party to the Non-Defaulting Party under this Agreement, which shall include the Settlement Amount, less any amounts owed by the Non-Defaulting Party to the Defaulting Party determined as of the Early Termination Date. If Buyer is the Non-Defaulting Party and reasonably expects to incur penalties, fines or costs from the CPUC, the CAISO, or any other Governmental Body, then Buyer may estimate the penalties or fines and include them in the Termination Payment amount.

"Transfer" means, with respect to any Performance Assurance or Interest Amount, and in accordance with the instructions of the Party entitled thereto: (i) in the case of Cash, the payment or transfer by wire transfer into one or more bank accounts specified by the recipient; (ii) in the case of Letters of Credit, delivery of the Letter of Credit or an amendment thereto to the recipient.

"Unbundled Service Customer" means a retail customer of the Buyer acting as a utility distribution company, who takes and receives its electrical power requirements from a different Load Serving Entity that is not the Buyer, pursuant to PG&E's Electric Rule 22 Direct Access or Rule 23 Community Choice Service.

"Undelivered Energy Penalty" has the meaning set forth in Section 1.7.

"Verification Administrator" has the meaning set forth in CPUC Resolution E-4838 and CPUC Resolution E-4906.

EXHIBIT B
MONTHLY CONTRACTED QUANTITY
AND
CORRESPONDING CONTRACT PRICE

Showing Month	**Product [Insert]** **[Year]**	
	Monthly Contracted Quantity (kW for each day of Showing Month)	**Contract Price ($/kW-month)**
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

[Parties to complete one table for each type of Product indicated in Table 1.1(b) and accepted bid information.]

EXHIBIT C-1

Form of Notice of Demonstrated Capacity

EXHIBIT C1 - Notice of Demonstrated Capacity (QC)

For use with System and Local Capacity Product

Showing Month: .....
Seller: .....
Seller Contact Name: .....
Seller Contact Phone: .....
SCID: .....
Local Capacity Area (LCA): ..... *(mark "n/a" if not a Local Capacity Product)*

Total "**Qualifying Capacity**"♠ (MW): .....
Total "**Demonstrated Capacity**" (MW): .....
Residential Product (Yes/No): .....
In Delivered Capacity Payment formula, "A" = ...

PDRs in the DRAM Resource				- - - "Demonstrated Capacity" (MW) - - -						Prohibited Resources Adjustment		Demonstrated Capacity Payment formula				Residential Product Delivery			Local Capacity Product Delivery	
				For each PDR Resource (row), chose one demonstration method (column) to establish monthly Demonstrated Capacity						Complete for all resources		Complete for all resources								
				DC Test Maximum hourly load reduction during DC Test(s) conducted by Seller's SC during Showing Month		**Must Offer Obligation (MOO)** Average amount of capacity Seller bid into CAISO Markets during Showing Month		**DC Dispatch** Maximum hourly load reduction from DC Dispatch(es) during Showing Month		**Adjusted MW Claimed** Specify the MW portion used to meet the contract obbligation		DC-QC Ratio	B Value	C Value	Delivered Capacity Payment	**Residential Product** This section is only required if delivering Residential Customer Product			**Local Capacity Product** This section is only required if delivering Local Capacity Product	
PDR Resource Name	**CAISO Resource ID**	**Assigned QC (MW)**	**Assigned NQC (MW)**	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Default Adjustment Value (DAV) (MW)	Net MW Claimed	Ratio	Adjusted DC	Residential Customer Product Threshold, if applicable	A * B * C	Total Service Accounts**	Residential Customer Service Accounts**	Small Business Customer Service Accounts**	Total Service Accounts**	Customer Service Accounts within specified LCA**
		0.00 MW	**0.00 MW**																	
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00					
Demonstrated Capacity ===>					0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00				0	0
IMPORTANT NOTES: ♠ **"Total Qualifying Capacity" is the total Supply Plan quantity identified through Section 3.1.**				1) August Showing Month requires average hourly load reduction for two consecutive clock hours. 2) Only include results during the CAISO Availability Assessment Hours (AAH).		1) PDR must be bid into the Day-Ahead Market		1) August Showing Month requires average hourly load reduction for two consecutive clock hours. 2) Only include results during the CAISO AAH.		Per DRAM Agreement Section 7.2(b)(v), provide the Default Adjustment Value, if any.		Per DRAM Agreement Section 4.1				Percent Residential Accounts			Percent Local Accounts	
				2) Calculate using the same PDR Capacity Baseline used for Month Ahead Supply Plan		2) Only include bids submitted in compliance with the CAISO AAH.		2) Calculate using the same PDR Capacity Baseline used for Month Ahead Supply Plan and CAISO Settlement Baseline												

The information provided by Seller in this Notice of Demonstrated Capacity is required by Section 1.6 of the Agreement.

[1] A combination of a market dispatch and test could be used to satisfy the August two consecutive hour requirement if the CAISO market dispatch does not cover the two consecutive hours.

EXHIBIT C-2

Form of Notice of Demonstrated Capacity

EXHIBIT C2 - Notice of Demonstrated Capacity (EFC)

For use with System and Local Capacity Product

Showing Month: .....
Seller: .....
Seller Contact Name: .....
Seller Contact Phone: .....
SCID: .....
Local Capacity Area (LCA): ..... *(mark "n/a" if not a Local Capacity Product)*

Total "**Qualifying Capacity**"♠ (MW): .....
Total "**Demonstrated Capacity**" (MW): .....
Residential Product (Yes/No): .....
In Delivered Capacity Payment formula, "A" = ...

PDRs in the DRAM Resource					--- "Demonstrated Capacity" (MW) ---						Prohibited Resources Adjustment		Demonstrated Capacity Payment formula				Residential Product Delivery			Local Capacity Product Delivery	
					For each PDR Resource (row), chose one demonstration method (column) to establish monthly Demonstrated Capacity						Complete for all resources		Complete for all resources								
					DC Test Maximum hourly load reduction during DC Test(s) conducted by Seller's SC during Showing Month		**Must Offer Obligation (MOO)** Average amount of capacity Seller bid into CAISO Markets during Showing Month		**DC Dispatch** Maximum hourly load reduction from DC Dispatch(es) during Showing Month		**Adjusted MW Claimed** Specify the MW portion used to meet the contract obligation		DC-QC Ratio	B Value	C Value	Delivered Capacity Payment	**Residential Product** This section is only required if delivering Residential Customer Product			**Local Capacity Product** This section is only required if delivering Local Capacity Product	
PDR Resource Name	CAISO Resource ID	Assigned QC (MW)	Assigned EFC (MW)	Flexible Category (1, 2, or 3)	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Raw Demonstrated Capacity	Lesser of Assigned NQC or Raw Demonstrated Capacity	Default Adjustment Value (DAV) (MW)	Net MW Claimed	Ratio	Adjusted DC	Residential Customer Product Threshold, if applicable	A * B * C	Total Service Accounts**	Residential Customer Service Accounts**	Small Business Customer Service Accounts**	Total Service Accounts**	Customer Service Accounts within specified LCA**
		0.00 MW	0.00 MW			0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
						0.00 MW		0.00 MW		0.00 MW						$0.00					
				Demonstrated Capacity ===>		0.00 MW		0.00 MW		0.00 MW		0.00 MW				$0.00				0	0
IMPORTANT NOTES: ♠ **"Total Qualifying Capacity" is the total Supply Plan quantity identified through Section 3.1.**					1) August Showing Month requires average hourly load reduction for two consecutive clock hours. 2) Only include results during the CAISO Availability Assessment Hours (AAH).		1) PDR must be bid into the Day-Ahead Market		1) August Showing Month requires average hourly load reduction for two consecutive clock hours. 2) Only include results during the CAISO AAH.		Per DRAM Agreement Section 7.2(b)(v), provide the Default Adjustment Value, if any.		Per DRAM Agreement Section 4.1				Percent Residential Accounts			Percent Local Accounts	
					2) Calculate using the same PDR Capacity Baseline used for Month Ahead Supply Plan		2) Only include bids submitted in compliance with the CAISO AAH.		2) Calculate using the same PDR Capacity Baseline used for Month Ahead Supply Plan and CAISO Settlement Baseline												

The information provided by Seller in this Notice of Demonstrated Capacity is required by Section 1.6 of the Agreement.

[1] A combination of a market dispatch and test could be used to satisfy the August two consecutive hour requirement if the CAISO market dispatch does not cover the two consecutive hours.

EXHIBIT D
COMMUNICATION PROTOCOLS FOR DATA ISSUES
(D.19-12-040, OP 26)

Below are the approved Protocols for Data Issues Communication - DRAM Sellers must use the most current version of the Final DRAM Template, "Data Issue Reporting" (originally published March 13, 2020 and subsequently updated on July 21, 2020 and November 20, 2020).

- Buyer and Seller shall each designate a point of contact for all data delivery inquiries and notify the Commission's Energy Division, the Buyer, and the Seller of any changes to this point of contact.

- Buyer shall facilitate a monthly call for Seller to report data issues.

- Seller shall perform troubleshooting prior to notifying Buyer of any data issues including: a) verifying the Application Programming Interface data request was correctly formatted; b) verifying Seller's customer lists are updated, including removing customers whose service accounts have been closed; and c) verifying that missing data is not a result of a planned or unplanned outage where Buyer has notified Seller.

- Seller shall notify Buyer of data errors using the standardized data template finalized by the Commission's Energy Division pursuant to OP 27 of D.19-12-040, as the same may be modified from time to time.

- Buyer shall confirm receipt of Seller's inquiry and provide an estimated time of resolution of the inquiry within two (2) Business Days after receipt thereof.

- Buyer shall update Seller on a regular basis and when the estimated time of resolution could change.

- Buyer shall confirm resolution of the inquiry and data delivery.

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

DATA ISSUE REPORTING TEMPLATE
Last Update:11/20/2020

DRP/Seller Contact Info	Name of DRP	
	Rule 24/32 DRP ID	
	Submission Date	
	DRP Contact Name	
	DRP Email addresses	
Issue Info	Authorization Mode	
	Type of data issue	
	Describe the data issue	
	Account Number	
	Subscription ID	
	UUID(s)	
	Date range for requested data	
	API call used and error message(s) received	
	Date and time of API call error	

Instructions:

	Item	Field	Description
DRP Contact Info	1	Name of DRP	Enter name of vendor registered with IOU as a Demand Response Provider (DRP)
	2	Rule 24/32 DRP ID	PG&E only. Enter the PG&E assigned 10 digit identifier
	3	Date Submitted to IOU	Enter date in MM/DD/YYYY format
	4	Name of person submitting form	Provide first and last name
	5	DRP Email addresses for IOU responses	Enter DRP email addresses for IOU responses on this issue
Issue Info	6	Authorization Mode (CISR-DRP Form vs Online)	Identify the mode used by the customer to create the data sharing authorization
	7	Type of data issue	Identify the type of data issue by making a selection in the drop down: Revenue Quality Meter Data (RQMD) interval; Raw/Non-RQMD interval; Billing; Customer; DR Program Info; API Call Failure; File Retrieval Issue. *Note: DRPs are to submit one intake form per data issue.*
	8	Describe the data issue	Describe the issue you are encountering for the type of data issue identified in Item 7 above.
	9	Account Number	**SCE & SDG&E only.** Enter the Account Number for the customer impacted by the data issue. If the data issue impacts multiple Accounts, please add the Account Number information in the tab titled Mulitple UUIDs.
	10	Subscription ID	**PG&E & SCE only.** Provide the subscription ID associated with each UUID impacted by the data issue. If the data issue impacts multiple Subscription IDs, please add the Subscription ID information in the tab titled Mulitple UUIDs.
	11	UUID(s)	**PG&E & SDG&E only.** Enter the UUID for the customer impacted by the data issue. If the data issue impacts multiple UUIDs, please add the UUID information in the tab titled Mulitple UUIDs.
	12	Date range for requested data	Specify the start and end dates of requested data on a per customer basis. If there are multiple UUIDs, please add the date information in the tab titled Mulitple UUIDs per customer. *Note: This item only pertains to issues related to Billing or Interval data.*
	13	API call used and error message(s) received	Paste the actual API call used into this field and indicate the response error code and response error message you received
	14	Date and time of API call error	Enter the dates and times of failed API calls

By submitting this form, the DRP attests that it has performed basic troubleshooting steps before notifying the IOU of the issue. Basic troubleshooting steps, include: (1) verifying that the applicable API calls were correctly formatted; (2) verifying that the DRP's customer list has been updated to remove service accounts that are closed; (3) verifying that missing data is not a result of a planned or unplanned outage where the IOU has notified the DRP; and (4) verifying that the customer's data sharing authorization is in the active status (i.e., it has not expired or been revoked).

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

DATA ISSUE REPORTING TEMPLATE

Last Update:11/20/2020

Account Number (SCE and SDG&E only)	Subscription ID (PG&E & SCE only)	UUID(s) (PG&E & SDG&E only)	Start Date	End Date

EXHIBIT E
MINIMUM ENERGY DISPATCH REQUIREMENTS
(D.19-12-040 Attachment 1, Appendix C)

Below are the approved Requirements for Minimum Energy Dispatch Requirements – DRAM Sellers must use the most current version of the Final DRAM Templates, "Required Energy Quantity – A/B" (originally published March 13, 2020, and subsequently updated on July 21, 2020 and November 20, 2020), as represented by the template diagram at the end of this Exhibit E for Seller's submission pursuant to Section 1.7(b).

1. DRAM Resources must deliver a "Required Energy Quantity" ("REQ") equal to 30 megawatt hours (MWh) per megawatt (MW) of Average Qualifying Capacity ("AQC"). The AQC shall be assessed as a total sum of the individual PDRs in the DRAM Resource.

2. The REQ shall be delivered during the Term and during the Availability Assessment Hours.

3. Seller shall submit documentation to the Buyer showing CAISO settlements for the Delivered Energy Quantity ("DEQ"), along with the calculation of AQC, at the time of the Seller's last Demonstrated Capacity invoice submission or when Seller has received sufficient Revenue Quality Meter Data, whichever is earlier. The DEQ shall be assessed as a total sum of the individual PDRs in the DRAM Resource, and shall not exceed the REQ. To protect the confidentiality of market related data, Sellers may omit price and revenue data.

4. If the REQ is not delivered by the end of the Term, Seller will be assessed an Undelivered Energy Penalty based on the calculation set forth in Section 1.7(c) of the Agreement.

[template diagram on following page]

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

REQUIRED ENERGY QUANTITY TEMPLATE - A
Last Update: 11/20/2020

Demand Response Provider (DRP) Name	Investor Owned Utility (IOU)	Contract ID	Required Energy Quantity (MWh)	Delivered Energy (MWh)	Undelivered Energy (MWh)	Undelivered Energy Penalty ($)	Monthly Quantity (MW)												Average of 3 Highest Monthly QC (MW)
							Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	
			0	From REQ-B		($10,000*T9)*(1 –(E9/D9))													

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PUBLIC UTILITIES COMMISSION

REQUIRED ENERGY QUANTITY TEMPLATE -B
Last Update: 11/20/2020

Note that per D.19-12-040, **ONLY** CAISO Market Dispatches are authorized to be used for the purpose of the Requirend Energy Quantity compliance. (DRPs shall not use any other event type incl. voluntary dispatch, out-of-market test,... for to fill out this template).

Demand Response Provider (DRP) Name	Investor Owned Utility (IOU)	Contract ID	CAISO Resource ID	Delivered Energy (MWh) via CAISO Market Dispatch										Baseline Methodology
				Date	Time	Day Ahead Market Bid Quantity (MW)	DAM Quantity Scheduled/Awarded (MW)	Real Time Market Bid Quantity (MW)	RTM Quantity Scheduled/Awarded (MW)	Expected Energy Quantity (MWh)	Delivered Energy Quantity (MWh)	Metered Load (RQMD) (MW)	Baseline Quantity (MW)	

EXHIBIT F

Form of Notice of Showing Month Supply Plan

Sample Counterparty Monthly Supply Plan Template

Contact Information			Supply Plan Information for Resources under DRAM Purchase Agreement to PG&E															
Contact Person	Phone Number	Email	Seller (or Seller's agent) SCID	Resource ID in CAISO Master File	System RA Capacity (QC) (MW 00.00 No rounding)	Local RA Capacity (QC) (MW 00.00 No rounding)							Flex RA Capacity (EFC) (MW 00.00 No rounding)	Flex RA Category (1, 2, or 3)	RA Capacity Effective Start Date (mm/dd/yyyy hh: mm:ss)	RA Capacity Effective End Date (mm/dd/yyyy hh: mm:ss)	Resource Capacity Contract Number	SCID of Load Serving Entity
						Greater Bay	Humboldt	North Coast/ North Bay	Sierra	Stockton	Fresno	Kern						

The information provided by Seller in this monthly Supply Plan template is required by Section 1.4 of the DRAM Resource Purchase Agreement with Buyer.

EXHIBIT G
IMPLEMENTATION GUIDELINES FOR QUALIFYING CAPACITY
(D.19-07-009 Appendix A)

Below are the approved Guidelines for Qualifying Capacity – DRAM Sellers must use the most current versions of the Final DRAM Templates, "QC Supporting Data-Monthly" and "QC Monthly-Historical Data" (originally published March 13, 2020 , and subsequently updated on July 21, 2020, and November 20, 2020), as represented by the template diagram at the end of this Exhibit G, for Seller's submission pursuant to Section 3.1(a)(ii).

A. Seller shall provide the following details to the Buyer for each PDR in the DRAM Resource by the deadline specified in Section 3.1(a)(ii):

1. Customer class (or percent of mix): Residential Customer, non-Residential Customer

2. Nature of load being aggregated: such as, whole house, air conditioning load, storage, building load, pumps, electric vehicles, or other (Seller shall provide a description)

3. Dispatch method: automated via cloud control, or other (Seller shall provide a description)

4. Projected number of SAIDs, including a breakdown of the active and registered number of SAIDs within the total projected service account numbers. Active and Registered SAIDs shall be defined as SAIDs that have been registered in the CAISO Demand Response Registration System (DRRS) as of the date of this submission with an active status.

5. Projected aggregated load (if storage based, projected aggregated capacity).

6. For Residential Customers, projected percentage of load impact or reduction (if storage based, projected percentage of capacity delivered). For non-Residential Customers, total load impact.

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 Seller shall reference suitable publicly available performance data that best represents the anticipated performance of the DRAM Resource. Along with the supporting performance data, the following details for the DRAM Resource associated with the supporting performance data should be provided to establish similar characteristics:

   a. Customer class (or percentage mix): Residential Customer, non-Residential Customer

   b. Nature of load being aggregated: such as, whole house, air conditioning load, storage, building load, pumps, electric vehicles, or other (Seller shall provide a description)

   c. Dispatch method: automated via cloud control, or other (Seller shall provide a description)

d. Number of SAIDs

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 for Residential Customers. A.6 for non-Residential Customers.

B. Qualifying Capacity estimates should be provided for the Resource Adequacy measurement hours and the CAISO Availability Assessment Hours.

C. The same baseline must be used for estimation of Qualifying Capacity at different stages of the Agreement.

D. To the extent the projected percentage load impact for capacity delivered in A.6 deviates from the supporting data in A.7, Seller shall provide supplemental information to explain the reasonableness of the resulting "Estimated Qualifying Capacity" provided in A.8.

E. To the extent the DRAM Resource consists of heterogenous combination of load types (in terms of A.1 through A.3 characteristics), Seller shall 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 Seller's submission prior to Buyer's Compliance Showing deadline for each year, it is sufficient to provide the information required by this Exhibit for the Showing Month with the highest megawatts. For Seller's submission prior to Buyer's Compliance Showing deadline for each Showing Month, the information required by this Exhibit shall correspond to the applicable Showing Month.

G. At the time of Seller's submission prior to the Buyer's Compliance Showing deadline each year, it is sufficient to provide the information required by this Exhibit at the aggregate DRAM Resource level. For Seller's submission prior to Buyer's Compliance Showing deadline for each Showing Month, the information required by this Exhibit must be provided at the PDR level.

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

QC SUPPORTING DATA TEMPLATE

Last Update: 7/21/2020

Instructions:

For each CAISO Resource ID's projected load impact, provide the supporting historical data.

Supporting historical performance data must be from a prior test or market dispatch for a DR resource with similar characteristics as the customer class, nature of load being aggregated, and dispatch method. Where historical data is not available, Seller should reference suitable publicly available performance data that best represents the anticipated performance of the resource.

Demand Response Provider (DRP) Name	Investor Owned Utility (IOU)	Offer No.	Offered/Contracted Monthly Capacity (MW)	*Highest QC Month - Residential Customers*													*Historical Performance - Residential Customers*								*Highest QC Month - Non-residential Customers*													*Historical Performance - Non-residential Customers*							Estimated QC available (MW) 00.00
				Load Type(s) (Air Conditioning, Energy Storage-Building Load, Pumps, Electric Vehicles, Other - describe)	Dispatch Method (DRP Controlled, Customer Automated, Manual or Other - describe)	# Registered Service Accounts	# Forecasted Service Accounts	Total Projected Service Accounts	Projected Load of Registered Customers (kW)	Projected Load of Forecasted Customers (kW)	Total Projected Load (MW) 00.00	Per-customer Impact of Registered SAs (kW)	Per-customer Impact of Forecasted SAs (kW)	Total Projected Load Impact (kW)	Total Load Impact/ Total Load (%)	Optional Notes	Load Type	Dispatch Method	# Registered SAs	Per-customer Load Impact (kW)	Total Load Impact (kW) 00.00	% Load Impact	Optional Notes	Load Type(s) (Air Conditioning, Energy Storage-Building Load, Pumps, Electric Vehicles, Other - describe)	Dispatch Method (DRP Controlled, Customer Automated, Manual or Other - describe)	# Registered Service Accounts	# Forecasted Service Accounts	Total Projected Service Accounts	Projected Load of Registered Customers (kW)	Projected Load of Forecasted Customers (kW)	Total Projected Load (MW) 00.00	Total Impact of Registered SAs (kW)	Total Impact of Forecasted SAs (kW)	Total Projected Load Impact (kW)	Total Load Impact/ Total Load (%)	Optional Notes	Load Type	Dispatch Method	# Registered SAs	Total Load (kW) 00.00	Total Load Impact (kW) 0.00	Total Load Impact/Total Load (%)	Optional Notes	
								0.00			0			0.00															0			0.00													-
TOTAL:																																														0

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

QC SUPPORTING DATA TEMPLATE

Last Update: 7/21/2020

Instructions:

For each CAISO Resource ID's projected load impact, provide the supporting historical data on the "QC Monthly-Historical Data" tab.

Supporting historical performance data must be from a prior test or market dispatch for a DR resource with similar characteristics as the customer class, nature of load being aggregated, and dispatch method. Where historical data is not available, Seller should reference suitable publicly available performance data that best represents the anticipated performance of the resource.

Demand Response Provider (DRP) Name	Investor Owned Utility (IOU)	Contract ID	CAISO Resource ID	Monthly Contracted Capacity (MW)	Qualifying Capacity on Month Ahead Supply Plan (MW)	*Current Month - Residential Customers*														*Current Month - Non-Residential Customers*														Estimated QC available (MW) 00.00
						Load Type(s) (Air Conditioning, Energy Storage-Building Load, Pumps, Electric Vehicles, Other - describe)	Dispatch Method (DRP Controlled, Customer Automated, Manual or Other - describe)	# Registered Service Accounts	# Forecasted Service Accounts	Total Projected Service Accounts	Projected Load of Registered Customers (kW)	Projected Load of Forecasted Customers (kW)	Total Projected Load (kW) 00.00	Per-customer Impact of Registered SAs (kW)	Per-customer Impact of Forecasted SAs (kW)	Total Projected Load Impact (kW)	Total Load Impact/ Total Load (%)	Baseline Methodology	Optional Notes	Load Type(s) (Air Conditioning, Energy Storage-Building Load, Pumps, Electric Vehicles, Other - describe)	Dispatch Method (DRP Controlled, Customer Automated, Manual or Other - describe)	# Registered Service Accounts	# Forecasted Service Accounts	Total Projected Service Accounts	Projected Load of Registered Customers (kW)	Projected Load of Forecasted Customers (kW)	Total Projected Load (kW) 00.00	Total Impact of Registered SAs (kW)	Total Impact of Forecasted SAs (kW)	Total Projected Load Impact (kW)	Total Load Impact/ Total Load (%)	Baseline Methodology	Optional Notes	
										0.00			0			0.00								0.00			0			0.00				0.00
TOTAL:																																		

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

QC SUPPORTING DATA TEMPLATE - HISTORICAL PERFORMANCE DATA
Last Update: 7/21/2020

Instructions:
Provide the supporting historical data for each CAISO Resource ID's projected load impact from the "QC Supporting Data-Monthly" tab.
Supporting historical performance data must be from a prior test or market dispatch for a DR resource with similar characteristics as the customer class, nature of load being aggregated, and dispatch method. Where historical data is not available, Seller should reference suita

Demand Response Provider (DRP) Name	Investor Owned Utility (IOU)	Contract ID	CAISO Resource ID	*Historical Performance Data*													
				Load Type(s) (Air Conditioning, Energy Storage-Building Load, Pumps, Electric Vehicles, Other - describe)	Dispatch Method (DRP Controlled, Customer Automated, Manual or Other - describe)	Dispatch Date	Dispatch Time	# Registered Residential Service Accounts	# Registered Non-Res. Service Accounts	Total Residential Load (kW) 00.00	Total Non-Res. Load (kW) 00.00	Total Residential Load Impact (kW)	Total Non-Res Load Impact (kW)	% Load Impact (Total Impact/Total Load)	Residential Baseline Methodology	Non-Residential Baseline Methodology	Optional Notes
TOTAL:																	

EXHIBIT H

MILESTONE SCHEDULE AND FORM OF PROGRESS REPORT

From the Effective Date of this Agreement and continuing until the commencement of the Delivery Period, Seller shall provide a monthly Progress Report containing, at a minimum, the information listed below, as applicable. In accordance with Section 3.3(b), the report must be sent via e-mail in the form of a single Adobe Acrobat file or facsimile to Buyer, on the tenth (10th) calendar day of each month, or within five (5) calendar days after Buyer's request.

1. An executive summary;
2. An updated Milestone Schedule
3. Chart showing schedule, percent completion, and percent change from previous report of major items and activities;
4. Forecast activities for next month; and
5. Potential issues affecting the DRAM Resource.

A list of milestones and completion dates for the DRAM Resource ("Milestone Schedule") is as follows. DRAM Sellers must use the most current version of the Final DRAM Template, "Milestone Progress" originally published March 13, 2020, and subsequently updated on July 21, 2020), as represented by the template diagram below

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION

DRAM SELLER/DRP MILESTONE PROGRESS TEMPLATE

Last Update: 11/20/2020

Seller Info	Name of Seller	
	Rule 24/32 DRP ID	
	Contract Term Start Date	
	Seller Contact Name	
	Seller Email address	

Submission Date	**Milestone**
	<u>CAISO Registration Milestones:</u> **Deadline for achievement of each Milestone is forty-five (45) calendar days prior to first Month-Ahead Supply Plan submission**
	Seller or its Scheduling Coordinator registers as a CAISO Demand Response Provider, including execution of a DR Provider Agreement.
	Seller has become or has contracted with a Scheduling Coordinator or CAISO DR Provider and has identified the name of the Scheduling Coordinator
	Seller or its Scheduling Coordinator has completed other CAISO requirements, including executing a Meter Service Agreement (MSA SC) and obtaining DR Registration System (DRRS) access.
	Seller or Scheduling Coordinator has registered a resource pursuant to Section 4.13 of the CAISO tariff and applicable CAISO BPM and received Net Qualifying Capacity (NQC) approval from the CPUC and CAISO
	Seller has attested to having reviewed the CAISO's Demand Response User Guide

Buyer/Utility Data Systems Integration Milestones: **Deadline for achievement of each Milestone is forty-five (45) calendar days prior to first Month-Ahead Supply Plan submission**	
	Seller has completed Buyer Onboarding Process for Rule 24/32
	Seller has completed registration with Buyer's data sharing platform and completed all connectivity requirements
	Seller has obtained a Click-Through authorization and/or submitted a Customer Information Service Request DR Provider form for processing
	Seller has utilized Buyer's Application Programming Interface to obtain the full Rule 24/32 data set for a customer authorization
California Public Utilities Commission (CPUC) Registration Milestones: **Deadline for achievement of each Milestone is forty-five (45) calendar days prior to first Supply Plan submission**	
	Seller has executed the Demand Response Provider Service Agreement with Buyer.
	Seller has executed and notarized the CPUC Demand Response Service Provider Registration Application Form
	Seller has paid the $100 fee
	If Seller includes residential or small commercial customers in its aggregation, Seller has received approval for the customer letter and posted the bond
	Seller has obtained a CPUC registration certificate or registration has been published on the CPUC's website
Resource Adequacy Milestones: **Deadline for achievement of each Milestone is set forth in Exhibit F, "Implementation Guidelines for Qualifying Capacity"**	
	Prior to first month of meeting Qualifying Capacity requirements, Seller has had phone call with Buyer to discuss resource creation and progress
	Seller has submitted Qualifying Capacity information in a timely manner

EXHIBIT I

PG&E Form of Letter of Credit

Issuing Bank Letterhead and Address

STANDBY LETTER OF CREDIT NO. XXXXXXXX

Date: [insert issue date]

Beneficiary:

Applicant: [Insert name of Applicant and address]

Attention:

Letter of Credit Amount: [insert amount]

Expiry Date: [insert expiry date]

Ladies and Gentlemen:

By order of **[Insert name of Applicant]** ("Applicant"), we hereby issue in favor of **[Insert name of Beneficiary] (**the "Beneficiary") our irrevocable standby letter of credit No. **[Insert number of letter of credit]** ("Letter of Credit"), for the account of Applicant, for drawings up to but not to exceed the aggregate sum of U.S. $ **[Insert amount in figures followed by (amount in words)]** ("Letter of Credit Amount"). This Letter of Credit is available with **[Insert name of bank, and the city and state in which it is located]** by sight payment, at our offices located at the address stated below, effective immediately. This Letter of Credit will expire at our close of business on **[Insert expiry date]** (the "Expiry Date").

Funds under this Letter of Credit are available to the Beneficiary against presentation of the following documents (which may be presented by physical delivery or by facsimile, e-mail or other electronic transmission):

1. Beneficiary's signed and dated sight draft in the form of Annex A hereto, referencing this Letter of Credit No. **[Insert number]** and stating the amount of the demand; and

2. One of the following dated statements signed by an authorized representative or officer of Beneficiary:

   A. "**[Insert name of Beneficiary]** (the "Beneficiary") is entitled to draw the amount of **[Spell out the amount followed by (US$xxxxxxxx.xx)],** under Letter of Credit No. **[Insert number]** owed by **[Insert name of Beneficiary's counterparty under the DRAM Resource Purchase Agreement]** or its assignee to Beneficiary under or in connection with the Demand Response Auction Mechanism Resource Purchase Agreement dated **[Insert the Execution Date of the DRAM Resource Purchase Agreement]** between the Beneficiary and **[Insert name of Beneficiary's counterparty under the DRAM Resource Purchase Agreement]** or its assignee"

   B. "Letter of Credit No. **[Insert number]** will expire in thirty (30) days or less and **[Insert name of Beneficiary's counterparty under the DRAM Resource Purchase Agreement]** or its assignee has not provided replacement Performance Assurance acceptable to **[Insert name of Beneficiary] (the Beneficiary")**, and the amount of **[Spell out the amount followed by (US$xxxxxxxx.xx)]** of the accompanying sight draft does not exceed the amount of Performance Assurance that **[Insert name of Beneficiary's counterparty under the DRAM Resource Purchase Agreement]** or its assignee is required to transfer to the Beneficiary under the terms of the Demand Response Auction Mechanism Resource Purchase Agreement dated **[Insert the Execution Date of the DRAM Resource Purchase Agreement]** between **[Insert name of Beneficiary's counterparty under the DRAM Resource Purchase Agreement]** and the Beneficiary.

Special Conditions:

1. Partial and multiple drawings under this Letter of Credit are allowed;
2. All banking charges associated with this Letter of Credit are for the account of the Applicant;
3. This Letter of Credit is not transferable; and
4. A drawing for an amount greater than the Letter of Credit Amount is allowed, however, payment shall not exceed the Letter of Credit Amount.

We engage with you that drafts drawn under and in compliance with the terms and conditions of this Letter of Credit will be duly honored upon presentation, if presented on or before the Expiry Date (or after the Expiry Date as provided below regarding events of Force Majeure), at **[Insert bank's address for drawings]**.

All demands for payment shall be made either by presentation of copies or original documents, or by facsimile, e-mail, or other electronic transmission of documents to **[Insert fax number, email or other electronic transmission address]**, Attention: **[Insert name of bank's receiving department] or [Insert e-mail or other electronic transmission address]**. If a demand is made by facsimile transmission, e-mail or other electronic transmission, the originals or copies of documents must follow by overnight mail, and you may contact us at **[Insert phone number(s)]** to confirm our receipt of the transmission. Your failure to seek such a telephone confirmation does not affect our obligation to honor such a presentation.

Our payments against complying presentations under this Letter of Credit will be made no later than on the sixth (6th) banking day following a complying presentation.

Except as stated herein, this Letter of Credit is not subject to any condition or qualification. It is our individual obligation, which is not contingent upon reimbursement and is not affected by any agreement, document, or instrument between us and the Applicant or between the Beneficiary and the Applicant or any other party.

Except as otherwise specifically stated herein, this Letter of Credit is subject to and governed by the *Uniform Customs and Practice for Documentary Credits, 2007 Revision,* International Chamber of Commerce (ICC) Publication No. 600 (the "UCP 600"); provided that, if this Letter of Credit expires during an interruption of our business as described in Article 36 of the UCP 600, we will honor drafts presented in compliance with this Letter of Credit if presented within thirty (30) days after the resumption of our business, and we will effect payment accordingly.

The electronic copy of this Letter of Credit shall be the operative instrument until such time as the original is received. This Letter of Credit can be amended or terminated by facsimile, e-mail or other electronic transmission.

The law of the State of New York shall apply to any matters not covered by the UCP 600.

For telephone assistance regarding this Letter of Credit, please contact us at **[insert number and any other necessary details]**.

Very truly yours,

[insert name of issuing bank]

By: _____
Authorized Signature

Name: **[print or type name]**

Title: **[print or type title]**

Annex A SIGHT DRAFT

TO
[INSERT NAME AND ADDRESS OF PAYING BANK]

AMOUNT: $_____ DATE: _____

AT SIGHT OF THIS DEMAND PAY TO THE ORDER OF [insert name of Beneficiary] THE AMOUNT OF U.S.$_____(_____ U.S. DOLLARS)

DRAWN UNDER [INSERT NAME OF ISSUING BANK] LETTER OF CREDIT NO. XXXXXX.

REMIT FUNDS AS FOLLOWS:

[INSERT PAYMENT INSTRUCTIONS]

DRAWER

BY: _____
NAME AND TITLE

EXHIBIT J
PG&E LOCAL CAPACITY AREA SUBSTATIONS

SUBSTATION	SUBSTATION_CD	LCA[1]
18TH STREET	02239	Greater Bay Area
21ST AVENUE	02255	Greater Bay Area
6TH AVENUE	02253	Greater Bay Area
7TH STANDARD	25458	Kern
8TH AVENUE	01267	Greater Bay Area
ACTON	02247	Greater Bay Area
AIRWAYS	25204	Greater Fresno Area
ALHAMBRA	01410	Greater Bay Area
ALLEGHANY	15210	Sierra
ALMADEN	08231	Greater Bay Area
ALPAUGH	25400	None
ALPINE	16356	None
ALTO	04203	North Coast/North Bay
AMES	08390	Greater Bay Area
ANDERSON	10326	None
ANGIOLA	25215	Greater Fresno Area
ANITA	10284	None
ANNAPOLIS	04286	North Coast/North Bay
ANTELOPE	25202	None
ANTLER	10327	None
APPLE HILL	15366	Sierra
ARANA	08301	Greater Bay Area
ARBUCKLE	06208	None
ARCATA	19202	Humboldt
ARLINGTON	01370	Greater Bay Area
ARVIN	25380	None
ASHLAN AVE	25205	Greater Fresno Area
ATASCADERO	18254	None
ATWATER	25361	Greater Fresno Area
AUBERRY	25415	Greater Fresno Area
AUBURN	15216	Sierra
AVENA	16357	Stockton
AVENAL	25500	Greater Fresno Area
BABEL	01385	Greater Bay Area
BAHIA	04325	None
BAIR	02426	Greater Bay Area
BAKERSFIELD	25337	None
BALCH NO 1	25250	Greater Fresno Area
BALFOUR	01432	Greater Bay Area
BANCROFT	01303	Greater Bay Area
BANGOR	10319	Sierra
BANTA	16247	Stockton
BARRETT	01302	Greater Bay Area

[1] "None" indicates substation is not in a designated LCA; eligible for System Capacity only or Flexible Capacity with System Capacity not tied to an LCA.

SUBSTATION	SUBSTATION_CD	LCA[1]
BARRY	15211	Sierra
BARTON	25357	Greater Fresno Area
BASALT	04246	North Coast/North Bay
BATAVIA	06866	None
BAY MEADOWS	02401	Greater Bay Area
BAYSHORE	02289	Greater Bay Area
BAYWOOD	18280	None
BEACH (Q)	02234	Greater Bay Area
BEAR VALLEY	25219	Greater Fresno Area
BECK STREET	01264	Greater Bay Area
BELL	15270	Sierra
BELLE HAVEN	02402	Greater Bay Area
BELLEVUE	04318	North Coast/North Bay
BELMONT	02403	Greater Bay Area
BELRIDGE 1A	25437	None
BELRIDGE 1B	25438	None
BEN LOMOND	08304	Greater Bay Area
BERESFORD	02404	Greater Bay Area
BERKELEY F	01206	Greater Bay Area
BERKELEY T	01266	Greater Bay Area
BERRENDA A	25426	None
BERRENDA C	25448	None
BETHEL BANK	01815	Greater Bay Area
BIG BASIN	08284	Greater Bay Area
BIG BEND	10375	Sierra
BIG LAGOON	19236	Humboldt
BIG MEADOWS	10281	None
BIG RIVER	04308	North Coast/North Bay
BIG TREES	08305	Greater Bay Area
BIOLA	25221	Greater Fresno Area
BLACKWELL	25468	None
BLUE LAKE	19218	Humboldt
BOGARD	10330	None
BOGUE	15378	Sierra
BOLINAS	04226	North Coast/North Bay
BOLTHOUSE FARMS	25818	Kern
BONITA	25539	Greater Fresno Area
BONNIE NOOK	15230	Sierra
BORDEN	25512	Greater Fresno Area
BORONDA	18246	Greater Bay Area
BOSTON	01332	Greater Bay Area
BOSWELL	25494	Greater Fresno Area
BOWLES	25353	Greater Fresno Area
BRENTWOOD	01459	Greater Bay Area
BRIDGEVILLE	19246	Humboldt
BRITTON	08361	Greater Bay Area
BROOKSIDE	01321	Greater Bay Area
BROWNS VALLEY	15292	Sierra
BRUNSWICK	15248	Sierra

SUBSTATION	SUBSTATION_CD	LCA[1]
BRYANT	01309	Greater Bay Area
BUCKS CREEK	10221	Sierra
BUELLTON	18304	None
BUENA VISTA	18226	Greater Bay Area
BULLARD	25396	Greater Fresno Area
BURLINGAME	02405	Greater Bay Area
BURNEY	10331	None
BURNS	18358	Greater Bay Area
BUTTE	10308	None
CABRILLO	18310	None
CADET	25482	None
CAL WATER	25545	Kern
CALAVERAS CEMENT	16221	None
CALFLAX	25344	Greater Fresno Area
CALIFORNIA AVE	25228	Greater Fresno Area
CALISTOGA	04271	North Coast/North Bay
CALPELLA	04341	North Coast/North Bay
CALPINE	04801	North Coast/North Bay
CAMBRIA	18277	None
CAMDEN	25230	Greater Fresno Area
CAMP EVERS	08362	Greater Bay Area
CAMPHORA	18207	Greater Bay Area
CANAL	25209	Greater Fresno Area
CANTUA	25359	Greater Fresno Area
CAPAY	10211	None
CARBONA	16309	Stockton
CARLOTTA	19229	Humboldt
CARNATION	25528	Kern
CARNERAS	25232	None
CAROLANDS	02406	Greater Bay Area
CARQUINEZ	04328	North Coast/North Bay
CARRIZO PLAINS	25346	None
CARUTHERS	25237	Greater Fresno Area
CASSERLY	08311	Greater Bay Area
CASSIDY	25427	Greater Fresno Area
CASTRO	02248	Greater Bay Area
CASTRO VALLEY	01409	Greater Bay Area
CASTROVILLE	18235	Greater Bay Area
CATLETT	15376	Sierra
CAWELO B	25262	Kern
CAWELO C	25263	Kern
CAYETANO	01442	Greater Bay Area
CAYUCOS	18255	None
CEDAR CREEK	10332	None
CELERON	25527	None
CHALLENGE	10320	Sierra
CHANNEL	16307	Stockton
CHARCA	25450	None
CHEROKEE	16365	Stockton

SUBSTATION	SUBSTATION_CD	LCA[1]
CHESTER	10318	None
CHICO A	10205	None
CHICO B	10249	None
CHICO C	10265	None
CHOLAME	18256	None
CHOWCHILLA	25410	Greater Fresno Area
CLARK ROAD	10309	None
CLARKSVILLE	15361	Sierra
CLAY	16334	None
CLAYTON	01202	Greater Bay Area
CLEAR LAKE	04214	North Coast/North Bay
CLIFF DRIVE	08323	Greater Bay Area
CLOVERDALE	04282	North Coast/North Bay
CLOVIS	25408	Greater Fresno Area
CMC	18311	None
COALINGA NO 1	25216	Greater Fresno Area
COALINGA NO 2	25238	Greater Fresno Area
COARSEGOLD	25443	Greater Fresno Area
COAST RD	08882	Greater Bay Area
COLONY	16223	Stockton
COLUMBIA HILL	15247	Sierra
COLUMBUS	25395	Kern
COLUSA	06202	None
COLUSA JUNCTION	06207	None
CONCORD NO 1	01296	Greater Bay Area
CONTRA COSTA	01365	Greater Bay Area
COPPERMINE	25241	Greater Fresno Area
COPUS	25387	Kern
CORCORAN	25217	Greater Fresno Area
CORDELIA	06270	North Coast/North Bay
CORDELIA	06270	None
CORNING	10333	None
CORONA	04349	North Coast/North Bay
CORRAL	16299	None
CORTINA	06312	None
COTATI	04227	North Coast/North Bay
COTTLE	16371	None
COTTONWOOD	10293	None
COUNTRY CLUB	16312	None
COVELO	04306	North Coast/North Bay
CRESCENT MILLS	10313	None
CRESSEY	25470	Greater Fresno Area
CROWS LANDING	16325	Stockton
CURTIS	16335	Stockton
CUYAMA	25314	None
DAIRYLAND	25242	Greater Fresno Area
DAIRYVILLE	10334	None
DALY CITY	02264	Greater Bay Area
DAVIS	06204	Sierra

SUBSTATION	SUBSTATION_CD	LCA[1]
DAYTON ROAD	10294	None
DEEPWATER	06362	Sierra
DEL MAR	15258	Sierra
DEL MONTE	18222	Greater Bay Area
DELEVAN	06955	None
DESCHUTES	10335	None
DEVILS DEN	25345	None
DIABLO CANYON	18900	None
DIAMOND SPRINGS	15226	Sierra
DINUBA	25409	Greater Fresno Area
DIVIDE	18257	None
DIXON	06206	None
DIXON LANDING	01472	Greater Bay Area
DOBBINS	15374	Sierra
DOLAN ROAD	18238	Greater Bay Area
DOS PALOS	25404	Greater Fresno Area
DOWNIEVILLE DIESEL	15800	Sierra
DRUM	15232	Sierra
DUMBARTON	01447	Greater Bay Area
DUNBAR	04307	North Coast/North Bay
DUNLAP	25406	Greater Fresno Area
DUNNIGAN	06381	None
EAST GRAND	02257	Greater Bay Area
EAST MARYSVILLE	15233	Sierra
EAST NICOLAUS	15215	Sierra
EAST QUINCY	10255	None
EAST STOCKTON	16313	Stockton
ECHO SUMMIT	15803	Sierra
EDENVALE	08295	Greater Bay Area
EDES	01368	Greater Bay Area
EEL RIVER	19238	Humboldt
EIGHT MILE	16391	None
EL CAPITAN	25388	Greater Fresno Area
EL CERRITO G	01250	Greater Bay Area
EL DORADO PH	15276	Sierra
EL NIDO	25245	Greater Fresno Area
EL PATIO	08292	Greater Bay Area
EL PECO	25398	Greater Fresno Area
ELECTRA	16216	None
ELK	04298	North Coast/North Bay
ELK CREEK	10278	None
ELK HILLS	25244	None
EMBARCADERO (Z)	02287	Greater Bay Area
EMERALD LAKE	02408	Greater Bay Area
ERTA	08351	Greater Bay Area
ESQUON	10217	None
ESTUDILLO	01348	Greater Bay Area
EUREKA A	19212	Humboldt
EUREKA E	19233	Humboldt

SUBSTATION	SUBSTATION_CD	LCA[1]
EVERGREEN	08201	Greater Bay Area
FAIRHAVEN	19245	Humboldt
FAIRMOUNT	01265	Greater Bay Area
FAIRVIEW	01343	Greater Bay Area
FAIRWAY	18206	None
FAMOSO	25246	Kern
FELLOWS	25424	None
FELTON	08314	Greater Bay Area
FIGARDEN	25455	Greater Fresno Area
FIREBAUGH	25347	Greater Fresno Area
FITCH MOUNTAIN	04275	North Coast/North Bay
FLINT	15253	Sierra
FLORENCE	01269	Greater Bay Area
FMC	08387	Greater Bay Area
FOOTHILL	18295	None
FORESTHILL	15218	Sierra
FORT BRAGG A	04276	North Coast/North Bay
FORT ORD	18240	Greater Bay Area
FORT ROSS	04285	North Coast/North Bay
FORT SEWARD	19232	Humboldt
FRANKLIN	01392	Greater Bay Area
FREMONT	01435	Greater Bay Area
FRENCH CAMP	16329	Stockton
FRENCH GULCH	10338	None
FROGTOWN	16345	Stockton
FRUITLAND	19231	Humboldt
FRUITVALE	25339	Kern
FULTON	04256	North Coast/North Bay
GABILAN	18233	Greater Bay Area
GALLO	25490	Greater Fresno Area
GANSNER	10302	None
GANSO	25454	None
GARBERVILLE	19222	Humboldt
GARCIA	04304	North Coast/North Bay
GARDNER	25493	None
GATES	25393	None
GEARY	01359	Greater Bay Area
GERBER	10339	None
GEYSERVILLE	04289	North Coast/North Bay
GIFFEN	25315	Greater Fresno Area
GILL	01355	Greater Bay Area
GIRVAN	10340	None
GLENN	10260	None
GLENWOOD	02409	Greater Bay Area
GOLDTREE	18258	None
GONZALES	18213	Greater Bay Area
GOOSE LAKE	25420	None
GRAND ISLAND	06246	Sierra
GRANT	01438	Greater Bay Area

SUBSTATION	SUBSTATION_CD	LCA[1]
GRASS VALLEY	15203	Sierra
GRAYS FLAT	10253	None
GREEN VALLEY	08319	Greater Bay Area
GREENBRAE	04309	North Coast/North Bay
GUALALA	04284	North Coast/North Bay
GUERNSEY	25266	Greater Fresno Area
GUSTINE	16311	Stockton
HALF MOON BAY	02410	Greater Bay Area
HALSEY	15224	Sierra
HAMILTON A	10212	None
HAMILTON BRANCH	10236	None
HAMMER	16330	None
HAMMONDS	25340	Greater Fresno Area
HARDING	16331	Stockton
HARDWICK	25371	Greater Fresno Area
HARRIS	19243	Humboldt
HARTER	15285	Sierra
HARTLEY	04321	North Coast/North Bay
HATTON	18229	Greater Bay Area
HAYWARD O	01224	Greater Bay Area
HENRIETTA	25268	Greater Fresno Area
HERDLYN	16374	None
HICKS	08343	Greater Bay Area
HIGGINS	15269	Sierra
HIGHLANDS	04336	North Coast/North Bay
HIGHWAY	04265	North Coast/North Bay
HILLSDALE	02411	Greater Bay Area
HOLLISTER	18249	Greater Bay Area
HOLLYWOOD	01317	Greater Bay Area
HONCUT	10321	Sierra
HOOPA	19240	Humboldt
HOPLAND	04225	North Coast/North Bay
HORSESHOE	15257	Sierra
HUMBOLDT BAY	19234	Humboldt
HUNTERS POINT (P)	02233	Greater Bay Area
HURON	25316	Greater Fresno Area
IGNACIO	04248	North Coast/North Bay
INDIAN FLAT	25269	Greater Fresno Area
INDUSTRIAL ACRES	18230	Greater Bay Area
IONE	16388	None
JACINTO	10285	None
JACOBS CORNER	25477	Greater Fresno Area
JAMESON	06380	None
JANES CREEK	19239	Humboldt
JARVIS	01350	Greater Bay Area
JERSEY ISLAND	01832	Greater Bay Area
JESSUP	10344	None
JOLON	18298	None
JUDAH	02240	Greater Bay Area

SUBSTATION	SUBSTATION_CD	LCA[1]
KANAKA	10322	Sierra
KEARNEY	25270	Greater Fresno Area
KERCKHOFF	25256	Greater Fresno Area
KERMAN	25271	Greater Fresno Area
KERN OIL	25272	Kern
KERN POWER	25526	Kern
KESWICK	10345	None
KETTLEMAN HILLS	25273	Greater Fresno Area
KING CITY	18203	None
KINGSBURG	25224	Greater Fresno Area
KIRKER	01445	Greater Bay Area
KNIGHTS LANDING	06272	Sierra
KONOCTI	04331	North Coast/North Bay
LAKEVIEW	25341	None
LAKEVILLE	04337	North Coast/North Bay
LAKEWOOD	01353	Greater Bay Area
LAMMERS	16277	Stockton
LAMONT	25391	Kern
LARKIN (Y)	02280	Greater Bay Area
LAS AROMAS	01360	Greater Bay Area
LAS GALLINAS A	04299	North Coast/North Bay
LAS PALMAS	25492	Greater Fresno Area
LAS POSITAS	01440	Greater Bay Area
LAS PULGAS	02412	Greater Bay Area
LATHROP	16303	Stockton
LAURELES	18237	Greater Bay Area
LAWNDALE	02244	Greater Bay Area
LAWRENCE	08342	Greater Bay Area
LAYTONVILLE	04268	North Coast/North Bay
LE GRAND	25536	Greater Fresno Area
LEMOORE	25360	Greater Fresno Area
LERDO	25349	Kern
LINCOLN	15370	Sierra
LINDEN	16207	Stockton
LIVE OAK	15377	Sierra
LIVERMORE	01214	Greater Bay Area
LIVINGSTON	25226	Greater Fresno Area
LLAGAS	08318	Greater Bay Area
LOCKEFORD	16368	Stockton
LOCKHEED NO 1	08299	Greater Bay Area
LOCKHEED NO 2	08300	Greater Bay Area
LODI	16211	Stockton
LOGAN CREEK	10314	None
LONE TREE	01323	Greater Bay Area
LOS ALTOS	08224	Greater Bay Area
LOS COCHES	18215	None
LOS GATOS	08202	Greater Bay Area
LOS MOLINOS	10348	None
LOS OSITOS	18208	None

SUBSTATION	SUBSTATION_CD	LCA[1]
LOST HILLS	25428	None
LOW GAP	19241	Humboldt
LOYOLA	08216	Greater Bay Area
LUCERNE	04335	North Coast/North Bay
MABURY	08219	Greater Bay Area
MADERA	25276	Greater Fresno Area
MADISON	06317	None
MAGUNDEN	25277	Kern
MAINE PRAIRIE	06867	None
MALAGA	25425	Greater Fresno Area
MANCHESTER	25392	Greater Fresno Area
MANTECA	16261	Stockton
MANZANITA	18315	Greater Bay Area
MAPLE	01352	Greater Bay Area
MAPLE CREEK	19210	Humboldt
MARICOPA	25421	None
MARINA (F)	02278	Greater Bay Area
MARIPOSA	25445	Greater Fresno Area
MARTELL	16301	None
MARYSVILLE	15201	Sierra
MAXWELL	06288	None
MC ARTHUR	10349	None
MC CALL	25412	Greater Fresno Area
MC FARLAND	25318	Kern
MC KEE	08353	Greater Bay Area
MC MULLIN	25441	Greater Fresno Area
MCAVOY TAP	01809	Greater Bay Area
MCKITTRICK	25278	None
MEADOW LANE	01430	Greater Bay Area
MENDOCINO	04295	North Coast/North Bay
MENDOTA	25231	Greater Fresno Area
MENLO	02413	Greater Bay Area
MERCED	25280	Greater Fresno Area
MERCED FALLS	25281	Greater Fresno Area
MERIDIAN	06254	None
MESA	18282	None
METTLER	16370	None
MIDDLE RIVER	16209	None
MIDDLETOWN	04314	North Coast/North Bay
MIDWAY	25261	None
MILLBRAE	02269	Greater Bay Area
MILPITAS	08283	Greater Bay Area
MIRA VISTA	01233	Greater Bay Area
MIRABEL	04209	North Coast/North Bay
MISSION (X)	02201	Greater Bay Area
MIWUK	16366	Stockton
MOLINO	04257	North Coast/North Bay
MONARCH	16230	Stockton
MONROE	04330	North Coast/North Bay

SUBSTATION	SUBSTATION_CD	LCA[1]
MONTAGUE	08389	Greater Bay Area
MONTE RIO	04281	North Coast/North Bay
MONTEREY	18209	Greater Bay Area
MONTICELLO	04305	North Coast/North Bay
MORAGA	01380	Greater Bay Area
MORGAN HILL	08324	Greater Bay Area
MORMON	16321	Stockton
MORRO BAY	18301	None
MOSHER	16372	None
MOUNTAIN QUARRIES	15228	Sierra
MOUNTAIN VIEW	08203	Greater Bay Area
MT EDEN	01376	Greater Bay Area
MUNI MARINA	02828	Greater Bay Area
NAPA	04202	North Coast/North Bay
NARROWS	15313	Sierra
NEW HOPE	16208	None
NEWARK 12KV	01222	Greater Bay Area
NEWARK 21KV	01223	Greater Bay Area
NEWBURG	19215	Humboldt
NEWHALL	25446	Greater Fresno Area
NEWMAN	16274	Stockton
NORCO	25469	None
NORD	10307	None
NORIEGA	02251	Greater Bay Area
NORTECH	08246	Greater Bay Area
NORTH BRANCH	16323	None
NORTH DUBLIN	01405	Greater Bay Area
NORTH TOWER	04204	Greater Bay Area
NOTRE DAME	10204	None
NOVATO	04221	North Coast/North Bay
OAK	01260	Greater Bay Area
OAK PARK	16327	Stockton
OAKHURST	25442	Greater Fresno Area
OAKLAND C	01201	Greater Bay Area
OAKLAND D	01204	Greater Bay Area
OAKLAND I	01208	Greater Bay Area
OAKLAND J	01209	Greater Bay Area
OAKLAND K	01210	Greater Bay Area
OAKLAND L	01211	Greater Bay Area
OAKLAND X	01254	Greater Bay Area
OCEAN	02258	Greater Bay Area
OCEANO	18260	None
OILFIELDS	18239	None
OLD RIVER	25282	Kern
OLEMA	04229	North Coast/North Bay
OLETA	16354	Sierra
OLIVEHURST	15290	Sierra
OPAL CLIFFS	08345	Greater Bay Area
OREGON TRAIL	10352	None

SUBSTATION	SUBSTATION_CD	LCA[1]
ORICK	19226	Humboldt
ORINDA	01235	Greater Bay Area
ORLAND B	10270	None
ORO FINO	10303	None
ORO LOMA	25537	Greater Fresno Area
OROSI	25284	Greater Fresno Area
OROVILLE	10252	Sierra
ORTIGA	25431	Greater Fresno Area
OTTER	18294	Greater Bay Area
PACIFIC GROVE	18244	Greater Bay Area
PACIFIC PIPE GRAPEVI	25544	None
PACIFICA	02281	Greater Bay Area
PALMER	18303	None
PALO SECO	01318	Greater Bay Area
PANAMA	25342	Kern
PANOCHE	25367	None
PANORAMA	10346	None
PARADISE	10283	None
PARKWAY	04205	None
PARLIER	25229	Greater Fresno Area
PARSONS	01366	Greater Bay Area
PASO ROBLES	18261	None
PAUL SWEET	08325	Greater Bay Area
PEABODY	06364	None
PEACHTON	10324	Sierra
PEASE	15375	Sierra
PENNGROVE	04347	North Coast/North Bay
PENRYN	15256	Sierra
PENTLAND	25531	None
PEORIA	16378	Stockton
PERRY	18307	None
PETALUMA A	04212	North Coast/North Bay
PETALUMA C	04263	North Coast/North Bay
PHILO	04260	North Coast/North Bay
PIERCY	08391	Greater Bay Area
PIKE CITY	15220	Sierra
PINE GROVE	16375	None
PINECREST	16316	Stockton
PINEDALE	25285	Greater Fresno Area
PIPER BANK	01812	Greater Bay Area
PIT NO 1	10372	None
PIT NO 3	10373	None
PIT NO 5	10132	None
PIT NO 7	10350	None
PITTSBURG	01216	Greater Bay Area
PLACER	15246	Sierra
PLACERVILLE	15308	Sierra
PLAINFIELD	06344	None
PLEASANT GROVE	15244	Sierra

SUBSTATION	SUBSTATION_CD	LCA[1]
PLEASANT HILL	01330	Greater Bay Area
PLUMAS	15373	Sierra
PLYMOUTH	02268	Greater Bay Area
POINT ARENA	04338	North Coast/North Bay
POINT MORETTI	08293	Greater Bay Area
POINT PINOLE	01426	Greater Bay Area
PORTOLA	02261	Greater Bay Area
POSO MOUNTAIN	25364	Kern
POTRERO PP (A)	02203	Greater Bay Area
POTTER VALLEY PH	04228	North Coast/North Bay
PRUNEDALE	18296	Greater Bay Area
PUEBLO	04329	North Coast/North Bay
PURISIMA	18297	None
PUTAH CREEK	06368	None
RACETRACK	16376	Stockton
RADUM	01315	Greater Bay Area
RAINBOW	25444	Greater Fresno Area
RALSTON	02414	Greater Bay Area
RANCHERS COTTON	25480	Greater Fresno Area
RANDOLPH	02259	Greater Bay Area
RAWSON	10353	None
RED BLUFF	10354	None
REDBUD	04319	North Coast/North Bay
REDWOOD CITY	02416	Greater Bay Area
REEDLEY	25234	Greater Fresno Area
RENFRO	25457	None
RESEARCH	01469	Greater Bay Area
RESERVATION ROAD	18273	Greater Bay Area
RESERVE OIL	25418	Greater Fresno Area
RICE	06283	None
RICHMOND Q	01252	Greater Bay Area
RICHMOND R	01347	Greater Bay Area
RIDGE	01284	Greater Bay Area
RINCON	04332	North Coast/North Bay
RIO BRAVO	25286	None
RIO DEL MAR	08326	Greater Bay Area
RIO DELL	19225	Humboldt
RIPON	16380	Stockton
RISING RIVER	10355	None
RIVER OAKS	08234	Greater Bay Area
RIVER ROCK	25525	Greater Fresno Area
RIVERBANK	16319	Stockton
ROB ROY	08369	Greater Bay Area
ROBLES	01358	Greater Bay Area
ROCKLIN	15206	Sierra
ROLAND	08375	Greater Bay Area
ROSEDALE	25476	Kern
ROSSMOOR	01416	Greater Bay Area
ROUGH AND READY ISLA	16308	Stockton

SUBSTATION	SUBSTATION_CD	LCA[1]
RUSS RANCH	19247	Humboldt
RUSSELL	01331	Greater Bay Area
SALINAS	18201	Greater Bay Area
SALMON CREEK	04316	North Coast/North Bay
SALT SPRINGS	16369	None
SAN ARDO	18219	None
SAN BENITO	18274	Greater Bay Area
SAN BERNARD	25319	None
SAN BRUNO	02270	Greater Bay Area
SAN CARLOS	02418	Greater Bay Area
SAN JOAQUIN	25236	Greater Fresno Area
SAN JOAQUIN #2	25252	Greater Fresno Area
SAN JOAQUIN #3	25253	Greater Fresno Area
SAN JOSE A	08225	Greater Bay Area
SAN JOSE B	08226	Greater Bay Area
SAN JUSTO	18318	Greater Bay Area
SAN LEANDRO U	01311	Greater Bay Area
SAN LORENZO	01346	Greater Bay Area
SAN LUIS OBISPO	18263	None
SAN MATEO	02419	Greater Bay Area
SAN MIGUEL	18266	None
SAN PABLO	01437	Greater Bay Area
SAN RAFAEL	04201	North Coast/North Bay
SAN RAMON	01423	Greater Bay Area
SAND CREEK	25460	Greater Fresno Area
SANGER	25235	Greater Fresno Area
SANTA MARIA	18267	None
SANTA NELLA	25405	Greater Fresno Area
SANTA RITA	25354	Greater Fresno Area
SANTA ROSA A	04215	North Coast/North Bay
SANTA YNEZ	18272	None
SARANAP	01356	Greater Bay Area
SARATOGA	08337	Greater Bay Area
SAUSALITO	04249	North Coast/North Bay
SCE MCFARLAND	25811	Kern
SCE REFUGIO	18807	None
SCE TEHACHAPI	25813	None
SCE TEJON TIE	25819	None
SCHINDLER	25289	Greater Fresno Area
SEACLIFF	08350	Greater Bay Area
SEMITROPIC	25290	None
SERRAMONTE	02286	Greater Bay Area
SF E	02207	Greater Bay Area
SF G	02209	Greater Bay Area
SF H	02210	Greater Bay Area
SF J	02222	Greater Bay Area
SF K	02213	Greater Bay Area
SF L	02226	Greater Bay Area
SF M	02227	Greater Bay Area

SUBSTATION	SUBSTATION_CD	LCA[1]
SF N	02228	Greater Bay Area
SHADY GLEN	15243	Sierra
SHAFTER	25365	None
SHARON	25533	Greater Fresno Area
SHEPHERD	25206	Greater Fresno Area
SHINGLE SPRINGS	15365	Sierra
SHORE ACRES BANK	01810	Greater Bay Area
SIERRA CITY GENERATOR	15801	Sierra
SIGNETICS	08379	Greater Bay Area
SILVER	02267	Greater Bay Area
SILVERADO	04343	North Coast/North Bay
SISQUOC	18281	None
SKAGGS ISLAND	04334	North Coast/North Bay
SMARTVILLE	15379	Sierra
SMYRNA	25355	None
SNEATH LANE	02272	Greater Bay Area
SO. CAL. EDISON	25888	Greater Fresno Area
SO. CAL. EDISON #2	25885	Greater Fresno Area
SO. CAL. EDISON #3	25886	Greater Fresno Area
SOBRANTE	01467	Greater Bay Area
SOLANO	01314	Greater Bay Area
SOLEDAD	18205	Greater Bay Area
SONOMA	04272	North Coast/North Bay
SOQUEL	08330	Greater Bay Area
SOTO	01326	Greater Bay Area
SPANISH CREEK	10310	None
SPANSION	08385	Greater Bay Area
SPAULDING	15225	Sierra
SPENCE	18220	Greater Bay Area
SPRING GAP	16283	Stockton
SPRUCE	01334	Greater Bay Area
STAFFORD	04320	North Coast/North Bay
STAGG	16242	None
STANISLAUS	16282	Stockton
STELLING	08348	Greater Bay Area
STILLWATER	10356	None
STOCKDALE	25407	Kern
STOCKTON A	16237	Stockton
STOCKTON ACRES	16322	Stockton
STONE	08370	Greater Bay Area
STONE CORRAL	25292	Greater Fresno Area
STOREY	25461	Greater Fresno Area
STROUD	25366	Greater Fresno Area
STUART	01384	Greater Bay Area
SUISUN	06213	None
SULLIVAN	02285	Greater Bay Area
SUMMIT	15259	Sierra
SUNOL	01424	Greater Bay Area
SWIFT	08339	Greater Bay Area

SUBSTATION	SUBSTATION_CD	LCA[1]
SYCAMORE CREEK	10297	None
TAFT	25208	None
TAMARACK	15229	Sierra
TAR FLAT	16324	Stockton
TARAVAL	02250	Greater Bay Area
TASSAJARA	01466	Greater Bay Area
TECUYA	25451	None
TEJON	25293	None
TEMBLOR	25255	None
TEMPLETON	18305	None
TERMINOUS	16302	None
TEVIS	25532	Kern
TEXACO EMIDIO	25542	None
TIDEWATER	01465	Greater Bay Area
TIVY VALLEY	25294	Greater Fresno Area
TOCALOMA	04315	North Coast/North Bay
TOKAY	16888	None
TRACY	16288	Stockton
TRES PINOS	18322	Greater Bay Area
TRES VIAS	10325	Sierra
TRIMBLE	08380	Greater Bay Area
TRINIDAD	19223	Humboldt
TUDOR	15371	Sierra
TULARE LAKE	25295	None
TULUCAY	04230	North Coast/North Bay
TUPMAN	25456	None
TWISSELMAN	25440	None
TYLER	10357	None
UKIAH	04277	North Coast/North Bay
UPPER LAKE	04287	North Coast/North Bay
VACA DIXON	06359	None
VACAVILLE	06360	None
VALLEJO B	04245	Greater Bay Area
VALLEJO C	04255	North Coast/North Bay
VALLEY HOME	16298	Stockton
VALLEY VIEW	01434	Greater Bay Area
VASCO	01375	Greater Bay Area
VASONA	08377	Greater Bay Area
VICTOR	16328	Stockton
VIEJO	18285	Greater Bay Area
VIERRA	16270	Stockton
VINA	10358	None
VINEYARD	01450	Greater Bay Area
VIRGINIA	01378	Greater Bay Area
VOLTA	10254	None
WAHTOKE	25453	Greater Fresno Area
WALDO	01335	Greater Bay Area
WALL	01374	Greater Bay Area
WALNUT CREEK	01220	Greater Bay Area

SUBSTATION	SUBSTATION_CD	LCA[1]
WARD	01298	Greater Bay Area
WASCO	25296	None
WASHINGTON CITY GEN.	15804	Sierra
WATERLOO	16315	Stockton
WATERSHED	02424	Greater Bay Area
WATSONVILLE	08333	Greater Bay Area
WAYNE	01381	Greater Bay Area
WEBER	16348	Stockton
WEBER	16348	None
WEEDPATCH	25297	None
WEIMAR	15249	Sierra
WELLFIELD	25429	None
WEST FRESNO	25373	Greater Fresno Area
WEST LANE	16362	Stockton
WEST POINT	16320	None
WEST SACRAMENTO	06313	Sierra
WESTLAKE	02260	Greater Bay Area
WESTLEY	16267	Stockton
WESTPARK	25370	Kern
WHEATLAND	15281	Sierra
WHEELER RIDGE	25348	None
WHISMAN	08363	Greater Bay Area
WHITMORE	10360	None
WHITNEY	01324	Greater Bay Area
WILDWOOD	10361	None
WILKINS SLOUGH	06277	None
WILLIAMS	06205	None
WILLITS	04266	North Coast/North Bay
WILLOW CREEK	19217	Humboldt
WILLOW PASS	01391	Greater Bay Area
WILLOWS A	10274	None
WILSON	25430	Greater Fresno Area
WINDSOR	04350	North Coast/North Bay
WINTERS	06332	None
WISE	15227	Sierra
WISHON	25151	Greater Fresno Area
WOLFE	08367	Greater Bay Area
WOOD	01338	Greater Bay Area
WOODACRE	04302	North Coast/North Bay
WOODCHUCK	25491	Greater Fresno Area
WOODLAND	06203	Sierra
WOODSIDE	02425	Greater Bay Area
WOODWARD	25529	Greater Fresno Area
WRIGHT	25464	Greater Fresno Area
WYANDOTTE	10291	Sierra
YOSEMITE	02249	Greater Bay Area
ZACA	18268	None
ZAMORA	06319	Sierra

Confidential Appendix F

Executed 2024 DRAM Purchase Agreements

Appendix G

Confidentiality Declaration and Matrix

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

DECLARATION SUPPORTING CONFIDENTIAL DESIGNATION
ON BEHALF OF
PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

1. I, Sebastien Csapo, Principal Product Manager, Energy Efficiency, of Pacific Gas and Electric Company ("PG&E"), a California corporation. Aaron August, Vice President, Utility Partnership and Programs of PG&E, delegated authority to me to sign this declaration. My business office is located at:

   Pacific Gas and Electric Company
   300 Lakeside Drive
   Oakland, CA 94612

2. PG&E will produce the information identified in paragraph 3 of this Declaration to the California Public Utilities Commission ("CPUC") or departments within or contractors retained by the CPUC in response to a CPUC audit, data request, proceeding, or other CPUC request.

   Name or Docket No. of CPUC Proceeding (if applicable): A.22-05-002

3. Title and description of document(s): PG&E Advice 6955-E.

4. These documents contain confidential information that, based on my information and belief, has not been publicly disclosed. These documents have been marked as confidential, and the basis for confidential treatment and where the confidential information is located on the documents are identified on the following chart:

Check	Basis for Confidential Treatment	Where Confidential Information is located on the documents
☐	Customer-specific data, which may include demand, loads, names, addresses, and billing data (Protected under PUC § 8380; Civ. Code §§ 1798 *et seq.*; Govt. Code § 6254; Public Util. Code § 8380; Decisions (D.) 14-05-016, 04-08-055, 06-12-029)	
☐	Personal information that identifies or describes an individual (including employees), which may include home address or phone number; SSN, driver's license, or passport numbers; education; financial matters; medical or employment history (not including PG&E job titles); and statements attributed to the individual (Protected under Civ. Code §§ 1798 *et seq.;* Govt. Code § 6254; 42 U.S.C. § 1320d-6; and General Order (G.O.) 77-M)	
☐	Physical facility, cyber-security sensitive, or critical energy infrastructure data, including without limitation critical energy infrastructure information (CEII) as defined by the regulations of the Federal Energy Regulatory Commission at 18 C.F.R. § 388.113 (Protected under Govt. Code § 6254(k), (ab); 6 U.S.C. § 131; 6 CFR § 29.2)	
X	Proprietary and trade secret information or other intellectual property and protected market sensitive/competitive data (Protected under Civ. Code §§3426 *et seq.*; Govt. Code §§ 6254, *et seq*., e.g., 6254(e), 6254(k), 6254.15; Govt. Code § 6276.44; Evid. Code §1060; D.11-01-036)	See attached Confidentiality Matrix
☐	Corporate financial records (Protected under Govt. Code §§ 6254(k), 6254.15)	
X	Third-Party information subject to non-disclosure or confidentiality agreements or obligations (Protected under Govt. Code § 6254(k); see, e.g., CPUC D.11-01-036)	See attached Confidentiality Matrix

☐ Other categories where disclosure would be against the public interest (Govt. Code § 6255(a))):

_____

_____

5. The importance of maintaining the confidentiality of this information outweighs any public interest in disclosure of this information. This information should be exempt from the public disclosure requirements under the Public Records Act and should be withheld from disclosure.
6. I declare under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.
7. Executed on this 29th day of May, 2023 at Merced, California.

Sebastien Csapo

Sebastien Csapo
Principal Product Manager
Energy Efficiency
Pacific Gas and Electric Company

PACIFIC GAS AND ELECTRIC COMPANY
APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)

DECLARATION OF SEBASTIEN CSAPO
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION
IN SUPPORT OF ADVICE SUBMITTED TO THE
CALIFORNIA PUBLIC UTILITIES COMMISSION

I, Sebastien Csapo, declare:

1. I am presently employed by Pacific Gas and Electric Company (PG&E) and am a Principal Product Manager in the Energy Efficiency department, under the Vice President of Utility Partnership and Programs. In this position, I am responsible for overseeing PG&E's Demand Response Auction Mechanism (DRAM). In carrying out these responsibilities, I have personal knowledge of PG&E's DRAM competitive solicitations, which are the subject of Advice 6955-E. This declaration is based on my personal knowledge of PG&E's practices and my understanding of the California Public Utilities Commission's ("Commission" or "CPUC") decisions protecting the confidentiality of market-sensitive information.

2. Based on my knowledge and experience, and in accordance with the Decisions 06-06-066, 08-04-023, 14-10-033, and relevant Commission rules, I make this declaration seeking confidential treatment for certain data and information contained in the documents that PG&E provided in Advice.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes confidential market sensitive data and information covered by G.O. 99-D and/or D.06-06-066. The matrix also specifies why confidential protection is justified. Further, the data and information: (1) is not already public; and (2) cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this

reference, I am incorporating into this declaration all of the explanatory text that is pertinent to my testimony in the attached matrix.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct. Executed on May 29, 2023, at Merced, California.

Sebastien Csapo

Sebastien Csapo
Principal Product Manager
Energy Efficiency Procurement
Pacific Gas and Electric Company

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)
ADVICE LETTER 6955-E
June 1, 2023

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time Data To Be Kept Confidential
Document: Advice Letter 6955-E			
Confidential Appendix A: DRAM Offers Received and Shortlisted	D.06-06-066, IOU Matrix, Item VIII) A, Bid information; Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Appendix A provides a spreadsheet of all of the offers received in response to PG&E's 2024 DRAM solicitation, ranked by weighted average net market value per unit. Appendix A also identifies those offers that were selected for the shortlist and contract execution. Specifically, this spreadsheet includes both shortlisted and non-shortlisted offers, their respective monthly quantities, offered price ($/kW-month), residential versus non-residential status, total number of Rule 24 service accounts per offer, weighted average unit cost ($/kW), total contract cost, and proposed RA availability by month. The spreadsheet also includes PG&E's confidential internal system, local, and flexible RA price forecasts ($/kW-month). All of the information contained in RFO bids is confidential for three years after winning bidders have been selected, that is, submitted for CPUC approval, except for information specifically identified as public. Only the total number of projects and MW bid by resource type, and evaluation guidelines are presumed to be public. Appendix A does not contain any information that is identified as public. PG&E has treated all of the information within Appendix A as confidential. The confidentiality of DRAM offer information should be protected pursuant to Item VIII of the IOU matrix.	Three years from June 1, 2023
Confidential Appendix B: Valuation Process Summary	D.06-06-066, IOU Matrix, Item VIII) A, Bid information; Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Appendix B provides confidential aspects of the valuation, scoring, and selection process. The discussion in Appendix B identifies discrete offers and PG&E's analysis of offer characteristics. This information constitutes information recognized as confidential by Item VIII) A and B. of the IOU Matrix. All of the information contained in RFO bids is confidential for three years after winning bidders have been selected, that is, submitted for CPUC approval, except for information specifically identified as public. Only the total number of projects and MW bid by resource type, and evaluation guidelines are presumed to be public. The only information contained within Appendix B that is identified as public is the	Three years from June 1, 2023

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)
ADVICE LETTER 6955-E
June 1, 2023

IDENTIFICATION OF CONFIDENTIAL INFORMATION

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		description of the types of qualitative criteria and the qualifying capacity assessment requirements, the description of the long-run avoided cost of generation methodology, the description of the net long run avoided cost methodology, and the public summary-level information of the shortlisted offers. This information has already been stated elsewhere in the advice letter and its public attachments, therefore, PG&E has treated all of the remaining information within Appendix B as confidential. The confidentiality of DRAM offer information should be protected pursuant to Item VIII of the IOU matrix.	
Confidential Appendix C: DRAM Evaluation Metrics	D.06-06-066, IOU Matrix, Item VIII) A, Bid information; Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Appendix C provides a quantitative description of the DRAM solicitation in terms of multiple variables, including: (a) Participation statistics including outreach statistics; the number of aggregators and large individual customers participating in the DRAM and their characteristics (e.g., new DR provider or whether they have experience with PG&E as a DR provider); (b) Discussion of the competitiveness of the solicitation, including an overview of the DRAM market and offers submitted; (c) Winning Bid Information including number of aggregators and large individual customers winning bids in the DRAM; aggregators broken down into new DR provider or whether they have experience with PG&E as a DR provider; distribution of the size of accepted bids by Total Contract Cost ($); and (d) Benchmark data on RA costs including average cost of RA purchased, current CAISO Capacity Procurement Mechanism (CPM) cost, cost of comparable DR programs. Information about the effectiveness of the DRAM protocol includes: (a) Participants' initial ability to understand how to bid in the auction as demonstrated by the amount and types of questions raised by bidders,	Three years from June 1, 2023

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)
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		and number of conformance check issues; (b) Participants' familiarity with the CAISO products, performance requirements and markets; and (c) Issues with the evaluation process. The information about the participant responses to the protocol reveals the level of participation in the RFO, which may induce market participants to engage in behavior resulting in supply shortage or higher prices to PG&E. This confidential information is therefore market sensitive and should not be disclosed. The calculations provided in Appendix C utilize confidential offer information and participant behavior as inputs to determine, essentially, the presence of competition in the DRAM market. The discussion of whether there is sufficient competition to protect PG&E's customers from unreasonable prices is market sensitive information that can be protected as confidential under D.06-06-066. In addition, all of the information contained in RFO bids is confidential for three years after winning bidders have been selected, that is, submitted for CPUC approval, except for information specifically identified as public. Only the total number of offers and MW bid by resource type, evaluation guidelines, and the general outreach statistics are presumed to be public, and have already been stated in the advice letter itself. As no additional information is identified as public, PG&E has treated all of the information within Appendix C as confidential. The confidentiality of DRAM offer information should be protected pursuant to Item VIII of the IOU matrix.	
Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.	D.06-06-066, IOU Matrix, Item VIII) A, Bid information; Item VIII) B) Specific	The purpose of the Independent Evaluator ("IE") Report is to determine on the basis of bid information whether PG&E's conduct of the DRAM RFO fulfilled Commission requirements. The IE Report, including its two attachments, relies extensively on confidential information for its analysis and findings, so to provide as much information about the DRAM RFO as possible without divulging market sensitive information, PG&E has redacted confidential bid information and quantitative analysis involved in scoring and evaluating the bids from the IE Report. A public version of	Three years from June 1, 2023

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)
ADVICE LETTER 6955-E
June 1, 2023

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	quantitative analysis involved in scoring and evaluation of participating bids.	the IE report has been filed with the Advice Letter. PG&E has complied with the requirement to facilitate the public availability of its energy procurement information by masking its confidential data. Accordingly, the confidential version of the IE report should be protected from public disclosure.	
Confidential Appendix F: Executed DRAM Contracts	D.06-06-066, IOU Matrix, Demand Response Programs Item VII) B) Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Item VII) B) provides that contracts are confidential for three years from the date the contract states deliveries are to begin, or until one year following expiration, whichever comes first. The DRAM Contract delivery terms are January 2024 through December 2024, and would remain confidential through December 2025 under Item VII) B). The DRAM resource is a demand-side aggregation of customer load behavior that did not exist when the IOU Matrix was adopted by D.06-06-066. D.06-06-066, Ordering Paragraph 4, states, "Unless and until we change or repeal General Order (GO) 66-C (or opt to leave it intact upon examination), it shall continue to apply to data not addressed in the Matrix. In the interim, to the extent the Matrix contradicts GO 66-C, the Matrix shall govern." GO 66-C provides that information encompassed by Section 6252 of the Government Code, such as filed IOU energy procurement information, constitutes a public record that is open to public inspection except for specifically excluded material. It states: 2. EXCLUSIONS Public records not open to public inspection include: (2.8) Information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest. (E.g.: Evidence Code Sec, 1040.) GO 66-C notes that the CPUC may prevent the disclosure of public information if the public interest in confidentiality outweighs the need for disclosure. The Commission superseded GO 66-C with GO 66-D effective January 1, 2018, with limited exception. See, D. 17-09-23, p. 3. Information submitted subject to the requirements of D.06-06-	The 2024 DRAM Contracts should be confidential through December 31, 2025.

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U39E) FOR APPROVAL OF DEMAND RESPONSE PROGRAMS, PILOTS AND BUDGETS FOR PROGRAM YEARS 2023-2027 (A.22-05-002)
ADVICE LETTER 6955-E
June 1, 2023

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		066 may continue to be submitted consistent with the requirements of that decision and is exempted from the requirements of GO 66-D. Based upon this information, the DRAM contracts should remain confidential for a period of one year after their expiration dates.	

PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
Braun Blaising Smith Wynne, P.C.
California Community Choice Association
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency Financing

California Alternative Energy and Advanced Transportation Financing Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell
Downey Brand LLP
Dish Wireless L.L.C.

East Bay Community Energy Ellison Schneider & Harris LLP
Engineers and Scientists of California

GenOn Energy, Inc.
Green Power Institute
Hanna & Morton
ICF
iCommLaw
International Power Technology
Intertie

Intestate Gas Services, Inc.

Johnston, Kevin
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McClintock IP
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Stoel Rives LLP

Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)
Yep Energy