

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



August 14, 2017

PG&E AL 5109-E

Erik Jacobson
Director, Regulatory Relations
Pacific Gas & Electric Company
77 Beale St., P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Staff Disposition of: PG&E AL 5109-E- PG&E's 2018-2019 Demand Response Auction Purchase Agreements

Dear Mr. Jacobson:

The CPUC Energy Division (ED) approves Pacific Gas and Electric Company's Advice Letter (AL) 5109-E in its entirety. PG&E AL 5109-E shall go into effect as of the date of filing, June 30, 2017, as requested by PG&E in AL 5109-E.

On June 30, 2017, PG&E timely filed a Tier 1 Advice Letter with signed contracts resulting from the third solicitation of the Demand Response Auction Mechanism (DRAM) pilot. On July 20, 2017 the following parties submitted protests to PG&E's Advice Letter: CPower, EnerNOC, Inc., and EnergyHub (collectively, the "Joint DR Parties"). The Joint DR Parties did not contest the results of the auction or Commission approval of the proposed contracts. Rather, the Joint DR Parties requested that Commission direction be provided in response to information provided by PG&E and its Independent Evaluator that raised several concerns. Specifically, the Joint DR Parties requested that the Commission order a workshop or working group open to all stakeholders to transparently analyze the issues noted below as a basis to improve future DRAM RFOs.

The issues raised:

- The need for greater transparency in solicitation results, particularly on budget expenditures and results (administrative costs; churn; the role of residential set-asides); and,
- The transparency and validity of the evaluation and selection metrics used by IOUs.

On July 27, 2017, PG&E timely filed a response to the Joint DR Parties protest. PG&E notes several instances where it disputes Joint DR Parties' assertions as incorrect, and it agrees that Commission review is needed (residential set-aside).

Energy Division's *Research Plan for the Demand Response Auction Mechanism (DRAM) I, II, & III Pilots (2015 – 2017)*, issued in April, 2017 indicated that the ED study Project Manager will determine the "appropriate timing for one more informal public workshops and/or conference calls to discuss progress of the study" with all parties and will provide ten days advance notification of such workshops to the Service List for R.13-09-011 (DRAM Study Plan, pg. 4). The topics raised by the Joint DR Parties are appropriate to consider as part of the agenda for these previously-

Erik Jacobson
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identified workshop(s) or call(s), alongside topics raised by PG&E or other parties. This approach aligns well with the Joint DR Parties' requested timeline and purpose of additional workshops or working group. In addition, PG&E provided responses that address many of the Joint DR Parties' concerns in their reply; these too can serve as the basis for further discussions. Thus, no additional public process is approved at this time and PG&E AL 5109-E is approved in its entirety.

Please contact Cathleen Fogel of Energy Division at cathleen.fogel@cpuc.ca.gov with any questions.

Sincerely,



Edward Randolph
Director, Energy Division

Cc: ED Tariff Unit (edtariffunit@cpuc.ca.gov)
Erik Jacobson, Director of Regulatory Relations (PGETariffs@pge.com)
Sarah Steck Meyers, Attorney at Law (ssmeyers@att.net)
Mona Tierney-Lloyd, EnerNOC, Inc. (mtierney-lloyd@enernoc.com)
Jennifer A. Chamberlin, CPower (JAC@CPowerEnergyManagement.com)
Erika Diamond, EnergyHub (diamond@energyhub.net)
Gigio Sakota, SCE (gigio.sakota@sce.com)
Russell G. Worden, Regulatory Operations (AdviceTariffManager@sce.com)
Laura Genao, Regulatory Affairs c/o Karyn Gansecki (Karyn.Gansecki@sce.com)
Megan Caulson, Regulatory Tariff Manager (mcaluson@semprautilities.com)
Service list: R.13-09-011

Erik Jacobson
Director
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St. Mail Code B23A
P.O. Box 770000
San Francisco, CA 94177

Fax: 415.973.1448

June 30, 2017

Advice 5109-E
(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

Subject: PG&E's 2018-2019 Demand Response Auction Mechanism Purchase Agreements

I. Purpose

In compliance with Resolution E-4817 ("Resolution"), Pacific Gas and Electric Company ("PG&E") hereby submits this Advice Letter to obtain approval of 10 Purchase Agreements executed between PG&E and five winning participants, resulting from PG&E's 2018-2019 Demand Response Auction Mechanism Request for Offers ("2018-2019 DRAM RFO").

II. Background

A. 2018-2019 DRAM Decision and Implementing Resolutions

On September 13, 2013, the California Public Utilities Commission ("CPUC" or "Commission") issued Order Instituting Rulemaking ("R.") 13-09-011 to enhance the role of demand response ("DR") in meeting the state's resource planning needs and operations. The Commission addressed the issues covered by the rulemaking in three phases. Generally, Phase Three issues dealt with future DR program design and operations. A majority of the parties formed a settlement on how to resolve Phase Three issues and, on August 4, 2014, filed a motion to obtain Commission approval. On December 9, 2014, the Commission issued Decision ("D.") 14-12-024 which, among other things, approved the settlement agreement, with modifications, and authorized the demand response auction mechanism ("DRAM") pilot with a standard contract.

D. 14-12-024 required Southern California Edison Company ("SCE"), San Diego Gas & Electric Company ("SDG&E") and PG&E (collectively, the Investor-Owned Companies or "IOUs") to design and implement DRAM for 2016 ("2016 DRAM") and 2017 ("2017 DRAM"). An "open to the public" working group actively collaborated on the DRAM pilot design and standard contract language under the active and on-going supervision of the Commission staff.

Concurrently with PG&E's implementation of its 2017 DRAM, the Commission addressed the need for additional, post-2017 DRAM auctions via the process used to review and approve the

Utilities' 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 in 2017. That decision also required the IOUs to re-establish the DRAM working group to develop the proposal for the 2017 DRAM auction for 2018 deliveries.

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 filed an advice letter on behalf of the IOUs on September 1, 2016, under PG&E AL 4900-E, SCE AL 3466-E, and SDG&E AL 2949-E (collectively, "PG&E AL 4900-E, et al"), with the proposal resulting from the working group, including the associated auction design and pro forma contract. One of the key modifications that expand on the experience of the prior two auctions includes making the third DRAM pilot a two-year auction. In addition, this third auction proposed modified to differentiate products between a Proxy Demand Resource ("PDR") and a Reliability Demand Response Resource ("RDRR"), incorporate Scheduling Coordinator ("SC") costs into the bid price instead of keeping it separate, and add Flexible Capacity Category 1 as an additional option for Sellers to broaden the DRAM pilot to all RA products categories.

The Commission approved this advice letter, with modifications, in Resolution E-4817 ("Resolution"), but also ordered a supplemental advice letter ("AL") to be filed within 14 days demonstrating compliance with the Resolution. In particular, the Resolution also ordered the utilities to:

"The IOUs will aggressively work to ensure that Rule 24/32 registrations do not limit participation in the 2018-19 DRAM. To accomplish this, the IOUs will estimate their 2018-19 DRAM registration requirements and submit a Tier 3 Advice Letter outlining registration needs as soon as feasible, before the launch of the 2018 DRAM RFO. The IOUs will procure 2018-19 DRAM resources up to their approved budget limits of \$3 million for SDG&E and \$12 million each for SCE and PG&E, or to a point at which there is a clear price outlier in bids, whichever comes first. To reject a bid based on an assessment that it represents a price outlier, the IOUs will first discuss with the Energy Division, and Energy Division must agree, before rejecting the bid."²

The utilities jointly filed a supplemental AL to PG&E AL 4900-E, et al, on February 2, 2017,³ and filed a Tier 3 AL on February 7, 2017, to increase the number of Rule 24 registrations

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

² Resolution E-4817, OP 8.

³ PG&E Advice 4900-E-A, SCE Advice 3466-E-A, and SDG&E Advice 2949-E-A (collectively, "PG&E AL 4900-E-A, et al").

beyond the Intermediate Implementation Step authorized in D.16-06-008.⁴ The Commission suspended the supplemental AL (PG&E AL 4900-E-A, et al) on February 29, 2017, but issued a letter on March 7, 2017, allowing the utilities to continue with the DRAM III RFO AL schedule approved in the Resolution, as Commission staff determined a resolution was necessary to consistently address the prohibited resources policy as proposed in both PG&E AL 4900-E, et al, and the utilities' ALs implementing the prohibited resources policy for other utility DR programs affected by D.16-09-056.⁵ The Commission issued Resolution E-4838 on April 28, 2017, consolidating the prohibited resources restrictions for Supply Side Demand Response programs and pilots, including approval with modifications of AL 4900-E-A, et al, as directed in Resolution E-4817. Resolution E-4838 also ordered the utilities to file a second supplemental AL by May 8, 2017, that includes the modifications to the DRAM pro forma contract as approved in that resolution, with a shortened protest and reply period. The utilities filed PG&E AL 4900-E-B, et al, on May 8, 2017, and subsequently filed PG&E AL 4900-E-C, et al, on May 22, 2017, to make additional modifications pertaining to the prohibited resources language. On May 23, 2017, the Commission approved PG&E AL 4900-E, et al; PG&E AL 4900-E-A, et al; PG&E AL 4900-E-B, et al; and PG&E AL 4900-E-C, et al, per Resolution E-4817 and Resolution E-4838 Ordering Paragraphs, effective May 22, 2017.

The 2018-2019 DRAM is an IOU auction for monthly Resource Adequacy ("RA") associated with a DR product located in the IOU's service area. PG&E is required to enter into Purchase Agreements up to this authorized budget or to a point at which bids are clear price outliers, whichever comes first. Winning 2018-2019 DRAM auction participants ("Sellers") will bid their contracted capacity directly into the California Independent System Operator's (CAISO's) energy markets during the contracted months, which may include the months of January, 2018 to December, 2019 and must include bids for August, 2018. If the bid includes capacity during 2019, then August, 2019 must be included in the bid as well. Seller bids in the 2018-2019 DRAM must qualify for system, local, and/or flexible RA products, and therefore must meet the CAISO's must-offer obligation (MOO) for the appropriate RA product. Similar to the 2016 DRAM and the 2017 DRAM, the IOU will only acquire the RA tags, which represent the RA attributes of demand response, and will have no claim on revenues the Sellers may receive from the CAISO energy market in the 2018-2019 DRAM.

III. 2018-2019 DRAM Summary

A. Auction Process

1. Auction Overview

⁴ PG&E Advice 5014-E, SCE Advice 3553-E, and SDG&E Advice 3041-E. PG&E proposed to provide 75,000 total Rule 24 registrations, which represents an incremental 35,000 registrations above the Intermediate Implementation Step of 40,000 registrations. These ALs have not yet been approved.

⁵ PG&E Advice 4991-E; SCE Advice 3542-E, and SDG&E Advice 3031-E (collectively, "PG&E AL 4991-E, et al.").

RFO schedule and email notifications. On March 10, 2017, PG&E sent an email notification to more than 2,800 industry contacts (e.g., aggregators, previous IOU RFO participants, DRAM mailing list, etc.) and those who registered with PG&E to receive PG&E DRAM emails, announcing the 2018-2019 DRAM RFO launch and RFO schedule.

Table 1: 2018-2019 DRAM RFO Timeline

Date/Time	Event
March 10, 2017	PG&E issued the 2018-2019 DRAM RFO.
March 21, 2017	PG&E and other IOUs jointly held Bidders' Webinar for 2018-2019 DRAM RFO.
April 10, 2017 no later than 1:00 P.M.(PPT)	Offers due to the Power Advocate online platform.
April 11, 2017	PG&E notified non-conforming bidders with a Request to Cure
April 24, 2017	Bidder cure period ended
May 24, 2017	PG&E selected offers and notified selected and waitlisted participants.
May 31, 2017	Deadline for originally selected to return signed acceptance letters.
June 5, 2017	Selected participants submitted a signed Purchase Agreement to PG&E.
June 30, 2017	PG&E filed executed standard form Purchase Agreements for Commission approval.

RFO website. PG&E created a website dedicated to PG&E's 2018-2019 DRAM RFO (www.pge.com/dram), where the following information was posted:

- (1) a history of the DRAM and relevant Commission decisions and advice letters;
- (2) the solicitation documents, including the 2018-2019 DRAM RFO Protocol ("Protocol"), pro forma Purchase Agreement,⁶ and Excel offer form;⁷
- (3) information on how to obtain customer information under Electric Rule 24;

⁶ PG&E later updated the DRAM website to provide information associated to Prohibited Resource Draft Resolution E-4838 to inform bidders that a Commission resolution was expected to modify the Attachment C DRAM Purchase Agreement.

⁷ The Excel offer form included an electronic signature whereby the Seller agreed to abide by the terms and conditions of the Protocol and to maintain confidentiality regarding their offer.

- (4) a packet of information about SC services and estimated costs obtained from a SC RFI that the IOUs held in 2015;
- (5) a link to register for PG&E's 2018-2019 DRAM RFO email notifications; and
- (6) other relevant information.

Webinars. A joint-IOU Bidders' Webinar was held to describe the 2018-2019 DRAM RFO solicitation on March 21, 2017. This Webinar included the following topics:

- (1) introduction and overview;
- (2) bid valuation and selection;
- (3) 2018-2019 DRAM RFO bid materials;
- (4) a walk-through of each of the IOU's 2018-2019 DRAM RFO Offer Forms; and
- (5) closing remarks.

The Webinar had 65 participants via WebEx and phone and additional people who watched the video recording of the Webinar after it ended. The IOUs received approximately 33 questions during the Webinar, which were answered and posted in the "Bidder's Webinar Frequently Asked Questions" document, available on each of the IOU's 2018-2019 DRAM RFO websites.

RFO mailbox. PG&E created a mailbox dedicated to the DRAM RFO: DRAMRFO@pge.com. PG&E received a number of questions through this mailbox prior to the offer due date.

Altogether, the three IOUs received 43 DRAM questions across the Webinar and the RFO mailbox, collaborated on and worked with the independent evaluator to review the responses, and posted this information to their respective 2018-2019 DRAM RFO websites.

2. Offer Overview

In response to the 2018-2019 DRAM RFO, PG&E received 83 offers totaling approximately 160 MW of non-residential demand response and 40 MW of residential demand response (approximately 200 MW total) for August 2018 capacity, and approximately 185 MW of non-residential demand response and 50 MW of residential demand response (approximately 235 MW total) for August 2019 capacity, excluding exclusive offers. Of all of the offers received, approximately 270 MW of offers, including exclusive offers, were received, of which, approximately 230 MW were for system capacity only, approximately 35 MW for local capacity only, approximately 4 MW were for flexible capacity only, and approximately 1 MW was for flexible and local capacity. The total estimated number of participating service accounts is almost 80,000, excluding exclusive offers. Of these, almost 70,000 are new service accounts not in a prior DRAM resource. A spreadsheet of all 2018-2019 DRAM offers received is provided in Confidential Appendix A, "2018-2019 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 kW for PDR or 500 kW for RDRR, a required offer for August 2018 (and August 2019 if offering capacity in 2019), 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 per Unit in \$/kW-year = Net Market Value in Dollars divided by Average Monthly Volume in kilowatts

Net Market Value = Benefits – Costs

Benefits = Sum of (Offered Volume_{*p*} x Product Value_{*p*}) where *P* is each Product

Costs = Sum of (Offered Volume_{*p*} x Offered Pricing_{*p*}) where *P* is each Product

Qualitative Evaluation.

PG&E added qualitative assessment criteria to its quantitative evaluation by adjusting an Offer's NMV per unit to reflect additional value or additional risk associated with the Offer. The following qualitative assessment criteria were applied:

Positive factors (decrease costs by):

- 1% for bidders who are small businesses, as registered with the California Department of General Services or the U.S. Small Business Association.

Negative factors (increase costs by):

- 15% for bidders who willfully terminated or defaulted on a past DRAM purchase agreement or submitted offers that demonstrated bidding behavior providing clear evidence of market manipulation or collusion
- 5% for bidders who did not sign a DRAM purchase agreement when previously extended a shortlist offer; for bidders who signed a 2017 DRAM contract but delivered Supply Plans to an IOU for DRAM totaling less than 50% of the aggregate contracted capacity for all months; or, for bidders who did not sign a 2017 DRAM contract but who signed a 2016 DRAM contract, delivered Supply Plans to an IOU that totaled less than 50% of the contracted capacity for August and September, 2016.

4. Offer Selection

Using the evaluation criteria described above, PG&E ranked the offers from highest to lowest NMV per Unit. PG&E then selected offers with the highest rank to obtain a portfolio meeting its

three primary 2018-2019 DRAM objectives:

- (1) procuring at 20% of its DRAM 2018-2019 portfolio from residential product bids;
- (2) not exceeding the \$12 million budget cap, per the Resolution; and
- (3) not exceeding its previously established 330 MW cap on reliability demand response programs.

PG&E limited the reliability demand response products taken in this DRAM due to previous regulatory directive. As outlined in D.10-06-034 and per the terms of a 2010 settlement, PG&E is subject to a MW cap on programs categorized as reliability programs.⁸ This cap is statewide; calculated based on the CAISO's all-time coincident peak demand; and proportioned to each IOU, with PG&E's share totaling 330 MW. PG&E's has two types of demand response resources that are, in total, subject to this cap: (i) the approximately 300 MW of resources currently in its Base Interruptible Program (BIP); and (ii) DRAM resources that are categorized as RDRRs. Due to this, PG&E worked with the Commission's Energy Division to develop a prioritization structure to allocate room under the cap in a "first come, first serve" principle, which prioritized existing customers participating in BIP or a 2017 DRAM RDRR contract as of the beginning of the evaluation period, April 10, 2017. Bidders interested in submitting RDRR offers were instructed to provide additional information, as outlined in Appendix D and E of the Protocols, in order to qualify their RDRR bids for the prioritized categories.

5. Contract Execution

After selecting its initial shortlist and extending contract offers to selected counterparties, PG&E became aware that one counterparty to which PG&E extended a contract had violated the terms of the DRAM RFO. These terms are outlined in the DRAM RFO solicitation protocols.

Specifically, this counterparty violated the Confidentiality and Representation and Warranty provisions of the Protocol by sharing pricing and bid status information with another bidder. The Confidentiality provisions state 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.*⁹

⁸ This was later reaffirmed in D.16-06-029, OP 18, where the Commission decided that it is not necessary to suspend the cap.

⁹ 2018-2019 Demand Response Auction Mechanism (DRAM) Request for Offers Solicitation Protocol issued March 10, 2017 and revised March 30, 2017, p. 14.

https://www.pge.com/pge_global/common/pdfs/save-energy-money/energy-management-programs/demand-response-programs/2018-demand-response/2018-demand-response-auction-mechanism/PGE-2018-2019-DRAM-Protocol-March-30-Update.pdf

Per the terms of the Protocol, breach of the protocol constitutes grounds for bidder disqualification.¹⁰ Therefore, after consultation with the Independent Evaluator for the 2018-2019 DRAM solicitation and with the Commission’s Energy Division, PG&E disqualified this bidder and did not countersign the purchase agreement previously extended to it.

Additional information about this bidder disqualification may be found in Confidential Appendix B: Valuation Process and Confidential Appendix D: Independent Evaluator Report.

IV. 2018-2019 DRAM Results

PG&E executed contracts for approximately 80 MW of August 2018 capacity and 90 MW of August 2019 capacity, which is approximately 60% more than the August capacity procured in the 2017 DRAM. Twenty four percent (24%) of the MWs are for residential products. Almost 20 MW are for local RA, although none of the selected offers are for flexible RA products. All MWs provide system capacity. One DRAM Seller will bid their Product(s) as Reliability Demand Response Resource (RDRR), while the other four DRAM Sellers will bid their Products as Proxy Demand Resources (PDRs). Executed contract terms range from 23 to 24 months, and contract deliveries begin in either January or February 2018. A list of the Sellers who received 2018-2019 DRAM Purchase Agreements is provided in Table 2, below.

Table 2: 2018-2019 DRAM Sellers

AutoGrid Systems, Inc.
EnerNOC, Inc.
OhmConnect, Inc.
Sunrun Inc.
Tesla, Inc.

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 2018-2019 DRAM results, please see Confidential Appendix C, “2018-2019 DRAM Evaluation Metrics.”

V. Request for Commission Approval

PG&E requests that the Commission approve the 2018-2019 DRAM Purchase Agreements through a disposition letter issued by the Director of Energy Division by August 4, 2017.¹¹ The disposition letter should find that:

¹⁰ Protocol, p. 18.

¹¹ As stated in the Resolution, page 39.

1. Each of the submitted 2018-2019 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 by PG&E's DR group; and
2. The solicitation and selection of the 2018-2019 DRAM Sellers was consistent with PG&E's approved 2018-2019 DRAM Program Solicitation Protocol, and that the price of delivered RA is reasonable and prudent.

VI. Request for Confidential Treatment

In support of this Advice Letter, PG&E has provided the following confidential information: the executed 2018-2019 DRAM Purchase Agreements, information about the participants and offers submitted in response to PG&E's 2018-2019 DRAM RFO including the evaluation and analysis of the value of such offers, information that more specifically describes the value of the energy procured in terms of the rights and obligations of the parties, and the confidential results of the solicitation.

A Declaration Seeking Confidential Treatment is being submitted along with this Advice Letter, as required by D.08-04-023, OP 8, to demonstrate the confidentiality of material and to invoke the protection of confidential information provided under either the terms of the IOU Matrix, Appendix 1 of D.06-06-066 and Appendix C of D.08-04-023, or General Order 66-C. In addition, declarations from several 2018-2019 DRAM Sellers accompany this Advice Letter to support the request for confidential treatment of their confidential and sensitive business information.

Confidential Attachments:

- Confidential Appendix A: 2018-2019 DRAM Offers Received and Shortlisted
- Confidential Appendix B: Valuation Process Summary
- Confidential Appendix C: 2018-2019 DRAM Evaluation Metrics
- Confidential Appendix D: Independent Evaluator Report (Redacted version included with public filing)
- Confidential Appendix F: Executed 2018-2019 DRAM Purchase Agreements

VII. Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than July 20, 2017, which is twenty (20) days after the date of this filing. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B23A
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-1448
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, telephone number, postal address, and (where appropriate) 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).

VIII. Effective Date

PG&E requests that this Tier 1 advice filing become effective upon date of filing, which is June 30, 2017.

IX. Notice

In accordance with General Order 96-B, Section IV, a copy of this Advice Letter is being sent electronically and via U.S. mail to parties shown on the attached list and the service list for R.13-09-011. Address changes to the General Order 96-B list and electronic approvals should be directed to 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. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>.

/S/

Erik Jacobson
Director, Regulatory Relations

cc: Cathleen Fogel – Energy Division
Service List for R.13-09-011

Limited Access to Confidential Material:

The portions of this Advice Letter marked Confidential Protected Material are submitted under the confidentiality protection of Section 583 and 454.5(g) of the Public Utilities Code and General Order 66-C. This material is protected from public disclosure because it consists of, among other items, the Purchase Agreements themselves and price information of a proposed 2018-2019 DRAM Purchase Agreement, and competitive solicitation information, which are protected pursuant to D.06-06-066 and D.08-04-023. Separate Declarations seeking Confidential Treatment regarding the Confidential Protected Material are being submitted concurrently to Energy Division.

Attachments Publicly Filed with the Advice Letter:

Redacted Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.
Appendix E: PG&E's Pro Forma 2018-2019 DRAM Purchase Agreement
Appendix G: Confidentiality Declaration and Matrix

Attachments Filed on a Confidential Basis with the Advice Letter:

Confidential Appendix A: 2018-2019 DRAM Offers Received and Shortlisted
Confidential Appendix B: Valuation Process Summary
Confidential Appendix C: 2018-2019 DRAM Evaluation Metrics
Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.
Confidential Appendix F: Executed 2018-2019 DRAM Purchase Agreements

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING 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:

ELC GAS
 PLC HEAT WATER

Contact Person: Yvonne Yang

Phone #: (415) 973-2094

E-mail: Yvonne.Yang@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **5109-E**

Tier: 1

Subject of AL: **PG&E's 2018-2019 Demand Response Auction Mechanism Purchase Agreements**

Keywords (choose from CPUC listing): Compliance

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: Resolution E-4817

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: _____

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: Yes, see Confidentiality Declaration and Matrix

Confidential information will be made available to those who have executed a nondisclosure agreement: Yes

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Neda Oreizy . (415) 973-4534, NXOC @pge.com

Resolution Required? Yes No

Requested effective date: **June 30, 2017**

No. of tariff sheets: N/A

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: N/A

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

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

California Public Utilities Commission

Energy Division

EDTariffUnit

505 Van Ness Ave., 4th Flr.

San Francisco, CA 94102

E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Erik Jacobson

Director, Regulatory Relations

c/o Megan Lawson

77 Beale Street, Mail Code B23A

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

CONFIDENTIAL PROTECTED MATERIAL
Submitted Pursuant to PUC section 583,
confidential pursuant to D.06-06-066,
IOU Matrix, Sections VII, B), and VIII, B)

Confidential Appendix A
2018-2019 DRAM Offers Received and
Shortlisted

CONFIDENTIAL PROTECTED MATERIAL
Submitted Pursuant to PUC section 583,
confidential pursuant to D.06-06-066,
IOU Matrix, Sections VII, B), and VIII, B)

Confidential Appendix B

Valuation Process Summary

CONFIDENTIAL PROTECTED MATERIAL
Submitted Pursuant to PUC section 583,
confidential pursuant to D.06-06-066,
IOU Matrix, Sections VII, B), and VIII, B)

Confidential Appendix C

2018-19 DRAM Evaluation Metrics

CONFIDENTIAL PROTECTED MATERIAL
Submitted Pursuant to PUC section 583,
confidential pursuant to D.06-06-066,
IOU Matrix, Sections VII, B), and VIII, B)

Redacted Appendix D

Independent Evaluator Report of Merrimack Energy Group, Inc.

Public Version

*Pacific Gas & Electric Company
2018-2019 Demand Response Auction Mechanism
(DRAM 3)*

*Request for Offers
Resource Adequacy Resources*

*Final Report of the Independent Evaluator
On the Bid Evaluation and Selection Process*

June 30, 2017

*Prepared by
Merrimack Energy Group, Inc.*



I. Introduction

A. Overview of the Demand Response Auction Mechanism (DRAM) 2018-2019 Pilot Program

On March 10, 2017, Pacific Gas & Electric Company (“PG&E” or “Company”) issued its Request for Offers (“RFO”) for Resource Adequacy for the 2018 Demand Response Auction Mechanism Pilot (“DRAM 3 RFO” or “2018 DRAM RFO”).¹ The intent of the DRAM 3 RFO is to solicit offers from participants (“Participants”) 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 DRAM 3 RFO process, PG&E is seeking to procure System, Local, and Flexible capacity products. The Solicitation Protocol describes the process by which PG&E seeks, evaluates, and accepts Bidder’s Offers from winning bidders who bid Proxy Demand Resources (“PDR”) or Reliability Demand Response Resources (“RDRR”) in the California System Operator (“CAISO”) whole market.

The 2018-2019 DRAM RFO is governed by CPUC Resolution E-4817 and E-4838 Ordering Paragraphs and CPUC’s disposition to PG&E’s Advice Letter 4900-E, 4900-E-A, 4900-E-B and 4900-E-C. Resolution E-4817 instructs the IOUs to procure either up to their authorized budget caps (\$12 million for PG&E) or to a point at which there is a clear outlier, whichever comes first.

In this DRAM RFO, PG&E is soliciting offers for System, Local and Flexible Capacity Products. System Capacity Product must bid into the Day Ahead market during “Availability Assessment Hours” as defined in the CAISO Business Practice Manual. System Capacity Product may be bid as either PDR or RDRR. 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 that they are providing Local Capacity for. Local Capacity Product may be bid as either a PDR or RDRR. Flexible Capacity Product may be Category 1 (base ramping), Category 2 (peak ramping) or Category 3 (super peak ramping), and must meet the Flexible Capacity required bidding hours specified in the most recent CAISO Resource Adequacy Availability Incentive Mechanism (“RAAIM”). Flexible Capacity Product must be bid as a PDR, and must be able to participate in both Day-ahead and Real-Time markets.

PG&E is seeking to procure RA capacity up to its authorized budget of \$12 million within its service territory, with a minimum of 20% of RA MW capacity for August, 2018 deliveries from Residential Customers (as defined in the DRAM Agreement).

The DRAM RFO solicitations are a pay-as-bid auction of monthly local, system, and flexible RA for Participants to bid directly into the CAISO market, with participation from customers in PG&E’s service territory. Participants must bid directly into the

¹ Southern California Edison Company (“SCE”) and San Diego Gas & Electric Company (“SDG&E”) also issued their 2018 DRAM RFO’s on the same day as planned.

CAISO day-ahead or real-time energy market and any resulting revenues or liabilities shall solely be that of the Participant. Capacity offered may vary by month and may be offered during one or more months from January 2018 to December 2019, but must include delivery during the month of August, 2018. Participants offering capacity for 2019 must at a minimum include August capacity for 2019.

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 DRAM 3 RFO Solicitation Protocol:

- In order to participate in the CAISO market, each CAISO resource must be: (1) at least 100 kW per PDR, and at least 500 kW per RDRR; (2) composed of retail customers within PG&E's service territory; and (3) within the same CAISO Sub Load Aggregation Point (SubLap) and Load Serving Entity (LSE), as those terms are defined in the CAISO Tariff;
- Each Bidder's Offer must include Product minimally for August 2018;
- A single Offer may consist of multiple PDRs and RDRRs;
- 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 Local 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 Excel Offer Form;
- 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 to PG&E than the Bidder's offer #2, PG&E may stipulate that the Bidder cannot accept offer #2 unless it also accepts offer #1;
- PG&E will presume all Bidder's Offers are independent of each other, unless otherwise specified 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";
- PG&E's acceptance of Offers may be subject to the CPUC budget limitations;
- PG&E's acceptance of Offers may be subject to meeting the CPUC requirement that at least 20% of all MW procured come from Residential bids;
- PG&E will only be able to procure a limited amount of RDRR in this RFO, because PG&E has met its Reliability DR cap pursuant to D. 10-06-034. As of the launch of the 2018-2019 DRAM RFO, PG&E estimates up to 30 MW of available room under this Reliability DR cap for 2018 and 2019. This headroom is subject to change. The Commission has instructed PG&E to give preference to customers that are part of an RDRR Product in the 2017 DRAM. PG&E reserves the right to

- add a rider to the contract and/or a letter of agreement, when and if applicable, based on implementation of this policy;
- The Delivery Periods will be no earlier than January 1, 2018 and no later than December 31, 2019;
 - The Bidder must submit its Offer via the Attachment A, Offer Form, with a Monthly Quantity (Capacity kW) and Contract Price (\$/kW) for each applicable Showing Month (January 2018 – December 2019). If the Bidder does not wish to offer Product during a particular month, it should include a zero for that month in the Offer Form.

Participants must submit Offers to sell Product to PG&E using the 2018 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) 2018-2019 DRAM RFO Protocol; (2) Attachment A - Offer Form; (3) Attachment C - DRAM Purchase Agreement; (4) Attachment B – Corporate Structure and Financials; (5) Attachment D – Application of the Reliability Cap to RDRR Offers; (6) Attachment E – RDRR Bids with Existing Customer Forms; (7) Rule 24 Website and other related information; (8) Scheduling Coordinator RFI Information Packet; and (9) Prohibited Resource Final Resolution E-4838.

The RFO also outlines the evaluation criteria to be applied to evaluate and select the shortlisted offers from those submitted. The RFO 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 per unit – from highest to lowest – in dollars per kilowatt year (\$/kW-year). The net market value per unit is calculated using total net market value in dollars for the numerator, and average monthly volume in kilowatts for the denominator. The result of the quantitative analysis is a merit-order ranking of all complete and conforming Offers.

Net market value² is defined as Benefits minus Costs. PG&E will calculate an Offer's benefits using its forecast capacity 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.

For the 2018-2019 DRAM RFO, PG&E will apply to each Offer's cost, as appropriate, an adjustment based on the Qualitative Factors contained in Table 1.³ The joint IOU

² Monthly benefits and costs are discounted using PG&E's after-tax weighted average cost of capital.

³ In AL 4900-E the IOUs proposed additional qualitative criteria to evaluate the prior experience of bidders, including the two criteria listed above, as well as adding a criterion for certified small business. In

DRAM qualitative assessment scoring matrix will be used to calculate such adjustment. An Offer's cost 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.

Table 1: Qualitative Evaluation Criteria

		Score	Score	Weight	Weighted Score
	Answer	Yes	No		(Score x weight)
Small Business					
Are you a certified small business	Yes/no	1	0	-1%	
Prior Experience					
Have you willfully terminated or defaulted on a past DRAM PA, or submitted offers that demonstrated bidding behavior providing clear evidence of market manipulation or collusion?	Yes/no	1	0	15%	
Have you not signed a DRAM PA when extended a shortlist offer, or delivered Supply Plans to the IOUs for DRAM totaling, in aggregate, less than 50% of the contracted capacity for all months in 2017 that the IOUs have received Supply Plans for, at the time of offer submittal? If you don't have a 2017 DRAM PA, have you delivered Supply Plans to the IOUs for DRAM totaling, in aggregate, less than 50% of the contracted capacity	Yes/no	1	0	5%	

Resolution E-4817, the CPUC directed the utilities to limit themselves in their 2018-2019 DRAM bid evaluation process to the qualitative criteria approved, and those not explicitly disallowed, in this Resolution. The CPUC concluded "In general, we believe it is reasonable for the IOUs to apply some criteria to evaluate past bidder performance, as long as these are fair and balanced." (pages 26-27).

for both August and September 2016.					
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As an example of how the qualitative criteria will be applied, a bidder who is not a certified small business and violates the two experience criteria will have an evaluation score for rank order purposes that is based on total cost of the offer times 1.2. The higher cost is used in conjunction with the benefits associated with the offer to derive the NPV \$/kW-year quantitative value.

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.⁴

B. Cumulative DRAM Procedural History and Regulatory Requirements (Orders and Resolutions)

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)⁵ 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 Markets⁶. 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.

In D. 14-12-024 (December 4, 2014), the CPUC resolved various issues in the evolving phases of the rulemaking⁷, 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”)⁸. In D. 14-12-024, Ordering Paragraphs 5 and 6, the utilities were ordered to file an advice letter for the DRAM,

⁴ Merrimack Energy was retained by all three IOUs for this assignment. Merrimack Energy has also served as IE for the previous two DRAM Pilot solicitations.

⁵ The DRAM was formally introduced by the CPUC in D. 14-03-026 (March 27, 2014), as described further below.

⁶ Bidding Demand Response into the CAISO market has been a CPUC objective since 2007. Finding of Fact 12, D. 14-12-024.

⁷ 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).

⁸ 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).

together with a standard pro-forma contract and to work collaboratively with stakeholders in the DRAM pilot design working group.

2016 DRAM (DRAM 1 RFO)

In their Tier Three Advice Letter filed for the 2016 DRAM on April 20, 2015 (“April 20 Advice Letters”)⁹, 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, were approved with modifications. Resolution E-4728-E resolved open issues arising from the April 20 Advice Letters as follows¹⁰:

- The DRAM is a two-year pilot program that is designed to enable DR wholesale market participation by providing a competitive means to a capacity contract outside of any IOU DR program;
- The minimum target for the 2016 DRAM Pilot is 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 encourages the IOUs to procure viable bids beyond the 22 MW minimum authorization, up to either the applicable Rule 24 registration limit or budget limitation¹¹;
- 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 are not allowed in the DRAM program, storage is 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 Pilot¹²;
- DRAM contracts must adhere to RA criteria, as well as CAISO obligations and criteria;

⁹ AL 3208-E (Southern California Edison Company); AL 4618-E (Pacific Gas and Electric Company); AL 2729-E (San Diego Gas & Electric Company).

¹⁰ 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.

¹¹ Resolution E-4728, Ordering Paragraph 14.

¹² Resolution E-4728, Ordering Paragraph 6.

- 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 cap¹³) was approved equal to 20% of the total MWs procured¹⁴ for each IOU for residential customers (defined as aggregations of at least 90% residential customers). The purpose of the set-aside is 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 wishes to reject that are either clear outliers or where there is evidence of market manipulation, present those bids and explain the reasons for rejection in advance of actually rejecting the bids;
- AL 3208-E states that cost-effectiveness evaluation does not apply to pilots. However, for purposes of fully analyzing the costs and benefits of the program, the IOUs are 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 contracts. The IOUs are 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 includes 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 that will be applied equally across the IOUs. 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 removed¹⁵;
- 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 is accepted;

¹³ Resolution E-4728, Finding Paragraph 29.

¹⁴ Resolution E-4728, Finding Paragraph, 30.

¹⁵ Resolution E-4728, Finding Paragraph 7, Ordering Paragraph 5.

- In addition to signed DRAM contracts, the IOUs are required to file all bids received for the DRAM pilot;
- The Resolution requires 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. 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.

2017 DRAM (DRAM 2 RFO)

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.¹⁶

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,

¹⁶ 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.

the IOUs were encouraged to procure up to the 2017 budget limitation or the available authorized Rule 24 registrations, whichever comes first;¹⁷

- 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;
- 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.

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 programs. 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 are 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. 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

¹⁷ 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."

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 is a clear price outlier in bids, whichever comes first. To reject a bid based on an assessment that it represents a price outlier, the IOUs will 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;
- Authorize 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 at no penalty if CAISO rule changes negatively impact their ability to deliver the capacity and energy as indicated;
- 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. 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 this 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 II and DRAM III.¹⁸ “In DRAM III, (1) Sellers are required to differentiate between a Proxy Demand Resource (PDR) and a Reliability Demand Response Resource (RDRR); (2) scheduling coordinator costs are now to be bid as part of the product capacity costs; (3) an option is 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.

C. 2018 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.¹⁹

Table 2: 2018 DRAM Schedule

DRAM 3 RFO Event	Date
Issuance of the DRAM RFO	March 10, 2017
DRAM RFO Bidder’s Pre-Bid Conference	March 21, 2017
Offers Due	April 10, 2017

¹⁸ Resolution E-4817 also identified the differences between the first and second DRAM pilots (DRAM I and DRAM II). These include: (1) in DRAM II a Seller could elect to offer deliveries over 12 months, from January to December as opposed to a partial year in DRAM I; and (2) DRAM II allowed for local and flexible resource adequacy offers, in addition to system capacity.

¹⁹The schedule included in Table 3 generally reflects the schedule included in PG&E’s RFO Protocol.

Notification of Offer Non-Conformances	April 17, 2017
Bidder Cure Period Ends to Cure	April 24, 2017
Notification to Bidders of Selection	May 24, 2017
Deadline to Submit Signed PAs	June 5, 2017
Advice Letter Filings for Executed PAs	June 30, 2017

D. 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.

II. Description of the Role of the IE throughout the Solicitation

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 2018-19 DRAM 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. 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.

A. Regulatory Requirements for the Independent Evaluator

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 IE’s in California IOU procurement processes has evolved over the past twelve years. 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.²⁰ 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

²⁰ 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).

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.

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

B. 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 DRAM 3 RFO pilot program, 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 DRAM 3 RFO documents for each IOU;
- Participated in PRG meetings prior to and during the solicitation process for each utility;
- Reviewed and discussed the bid evaluation methodology with all three utilities;

- Participated in the Pre-Bid Conference 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 DRAM 3 Solicitation with PG&E's project team;
- Reviewed and assessed PG&E's 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 bids and any revisions to the shortlist;
- Prepared the IE report for inclusion with the utility Advice Letter filings seeking approval for the contracts executed;

This report provides an assessment and review of PG&E's DRAM 3 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.

III. How did PG&E Conduct Outreach to Bidders and Was the Solicitation Robust

A. Describe the IOU Outreach to Potential Bidders

For the 2016 DRAM RFO, the IOUs' outreach efforts targeted approximately 2,900 contacts from companies involved in DR and other programs for its distribution list for the initial RFO.²¹ 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. The IE also identified a number of DR program participants from other ISOs or markets and provided the contact list to the IOUs' project team involved in the outreach activities. For the 2017 DRAM RFO, the utilities added other contacts to the original list, if appropriate. The distribution list for the 2017 and 2018 DRAM RFOs included over 6,500 contacts.

The IOUs' outreach activities resulted in a reasonably robust response in terms of the number of participants and the quantity and quality of the proposals received. As we will discuss later, the response to the DRAM 3 RFO was not as robust as the response to the DRAM 2 RFO process, both in terms of the number of Bidders and overall number of offers.

²¹ 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.

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

- PG&E Advice Letters;
- CPUC Resolution E-4817;
- Recent CPUC Decisions;
- 2018-2019 DRAM RFO Protocol and related documents;
- DRAM RFO Bidders Webinar Presentation;
- 2018 DRAM FAQs;
- CAISO Bidding Information;
- CISR – DRP Form;
- CISR – DRP Form Instructions;
- Steps Necessary to Receive Customer Data;
- Rule 24 Information;
- Rule 24 Checklist;
- Scheduling Coordinator RFI Information Packet;
- DRAM Purchase Agreement;
- Frequently Asked Questions;
- Map of PG&E’s Electric System;
- 2016 and 2017 DRAM RFO websites;
- PG&E SubLAP Map;
- CAISO Local Capacity Information

The IE found the website easy to access and easy to download information.

B. 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?

C. Was the Solicitation Adequately Robust

PG&E received 83 original offers on April 10, 2017 from [REDACTED] Bidders, compared to 95 offers from [REDACTED] Bidders in the 2017 DRAM RFO. There were [REDACTED] new Bidders in the 2018 DRAM RFO compared to the 2017 DRAM RFO. Of the Bidders competing in the process, [REDACTED] provided residential offers only, [REDACTED] provided non-residential offers only, and [REDACTED] provided both residential and non-residential offers. There were [REDACTED] non-

residential and ■ residential offers submitted. Overall, there was a total of approximately 239.5 MW submitted for August, 2018 and 268.5 MW for August, 2019.

The IE concludes that PG&E’s outreach activities were more than adequate and led to a reasonably robust market response based on the competitive number of Participants and options submitted. Participants submitted RA offers that included all months in the contract terms (i.e. January – December, 2018-2019), summer months only, select months at Bidder discretion as well as a mix of residential and non-residential customer classes.

IV. Description of PG&E’s Proposal Evaluation Methodology

This section of the report provides an overall description of PG&E’s evaluation methodology and criteria for DRAM resources. PG&E developed an internal evaluation methodology designed to assess DRAM offers to meet requirements for the DRAM 3 RFO based on the set of constraints and eligibility criteria identified in the RFO Instructions and the requirements outlined in the CPUC Resolutions. As will be discussed in this section, the three California utilities, including PG&E, developed a generally consistent “value oriented” quantitative evaluation methodology for the DRAM 3 RFO as well as applying qualitative criteria to adjust the quantitative valuation results.

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 offers²² 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 and Advice Letters unless Offers are rejected as price outliers or in cases where there is clear evidence of market manipulation. PG&E’s solicitation is seeking to procure DR resources under the following identified constraints:

- DR Budget Cap of \$12 million;
- 20% of capacity which must be from residential Offers;²³
- Application of the reliability cap to RDRR offers²⁴.

²² Based on the schedule, there is a 7-day cure period from April 17, 2017 to April 24, 2017 to cure offers.

²³ “Residential Offer” is a DRAM resource composed of at least 90% of customers on residential tariffs and no more than 10% of customers on small commercial tariffs.

²⁴ PG&E is required to cap the amount of reliability DR it can use to meet its Resource Adequacy (RA) obligation. This amounts to 330 MW today. PG&E has consulted with the Energy Division to develop a “first come, first serve” principle for prioritizing the customer experience for existing customers on affected programs, which includes approximately 300 MW from the Base Interruptible Program and 30 MW from the 2017 DRAM RDRR contracts. Therefore, PG&E will not be able to accept more 2018-2019 DRAM RDRR contracts than there is room under the cap. PG&E has asked bidders to self-identify the category of prioritization of their RDRR offers, and prioritized categories will be subject to verification before being selected in order of prioritized customer category.

PG&E evaluated conforming offers using a quantitative and qualitative assessment. PG&E performs a quantitative evaluation of each conforming offer and ranks those offers based on each offer's net market value (NMV)²⁵ per unit – from highest to lowest – in dollars per kilowatt year (\$/kW-year).²⁶ The NMV per unit is calculated using total NMV dollars for the numerator, and average monthly volume in kilowatts for the denominator. The result of the quantitative analysis is a merit-order ranking of all complete and conforming offers.

PG&E calculates an offer's benefits using its forecast of 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.

For the 2018 -2019 DRAM RFO, PG&E will apply to each offer's cost, as appropriate, an adjustment based on the Qualitative Factors 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.

Capacity Value will be multiplied by 1.15 since every 1 kW of DR resources reduces RA requirements by 1.15 kW. All costs and benefits will be discounted using PG&E's 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.²⁷ 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 20% residential set-aside requirement and the total budget cap.

Prior to issuance of the DRAM 3 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.

After submission of Offers, the IE 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.

Framework and Principles for Evaluating PG&E's Bid Evaluation Methodology

²⁵ NMV = Benefits – Costs. Monthly discounting is applied to the costs and benefits using PG&E's after-tax weighted average cost of capital.

²⁶ Net Market Value per Unit in \$/kW-year = NPV of the NMV dollars divided by the NPV of the average monthly volume in kW.

²⁷ Costs and benefits are discounted back to May 1, 2017 as the basis for the evaluation results.

This section of the report addresses the principles and framework underlying Merrimack Energy's review of PG&E's methodology for the 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 based on the criteria specified in the bid documents?
- 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?
- Does the price evaluation methodology allow for consistent evaluation of offers of different sizes and in-service dates?

Evaluation Criteria and Methodology

PG&E's DRAM 3 RFO Solicitation Protocol adequately defines the products solicited (Section III in PG&E's 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 Participants. The RFO documents also provide the Offer Forms which the Participants should complete as part of their offer. As described in the RFO Solicitation Protocol, as a first step all incoming proposals were initially assessed for conformance with the basic submittal and eligibility requirements identified in the 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 offered for each month relative to PG&E's projection of market RA value.

As is typical in procurement processes, the DRAM 3 RFO does 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 Pre-Bid Web Conference and a sample spreadsheet model was provided to bidders based on hypothetical rather than actual RA price curves. The methodology was consistently and reasonably applied to all offers given the type of product sought. Respondents were aware of the importance of August in meeting DRAM targets as well as the value of summer month RA capacity relative to other months, although the specific values were not identified.

In summary, the description and implementation of the evaluation methodology, criteria, and inputs meets the requirements of the Resolutions. While the Qualitative Scoring Matrix for the Dram 3 RFO includes two additional criteria to reflect bidder performance,

one issue to consider for future DRAM solicitations (after completion of the pilot) is whether the evaluation process should contain stricter thresholds or stricter qualitative criteria based on performance of Participants who were awarded contracts and their experience performing under the contract.

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. 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 methodology is reasonably straightforward, is easy to implement, and can be reviewed and audited easily;
- The 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 market projections relative to the bid 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 DRAM 3 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.) as opposed to a cost-only evaluation methodology used for the 2016 DRAM RFO. In particular, the methodology is capable of evaluating a range of products and offer types;
- The methodology does reflect the importance of summer capacity costs and volumes offered;
- The methodology is consistently applied for both residential and non-residential customers.

In conclusion, the IE is of the opinion that the general methodology used by PG&E (and the other IOUs) for evaluating DRAM RFO offers is 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 spending, and customer set-aside 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.

V. 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 DRAM 3 solicitation including providing comments on the 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, organizing and summarizing the bids received, reviewing and commenting on the evaluation and selection process and results at each step of the evaluation and selection process, and participating in meetings with the PRG. The key project activities are listed in this section of the report in conjunction with the activities of the IE.

Project Team Meetings

Contrary to previous DRAM solicitations, meetings of the evaluation teams for each utility were limited in the DRAM 3 solicitation process relative to the first two DRAM pilot processes. Instead, discussions among the utilities focused on specific issues, such as the evaluation methodology.

Preparation/Launch of the DRAM RFO

The IE reviewed a draft of PG&E's DRAM RFO Solicitation Protocol and the Offer Forms prior to launch and provided minor comments to PG&E. The IE and PG&E's DRAM team members also had discussions regarding the bid evaluation methodology prior to the launch.

The RFO was issued on March 10, 2017 as planned. The DRAM 3 RFO Instructions, Offer Form, and related documents were posted to the DRAM 3 RFO website at that time. The documents included on PG&E's DRAM RFO website were identified previously in this report.

Pre-Bid (Bidders) Web Conference

The IOUs held a Pre-Bid Web Conference on March 21, 2017 for interested Participants to provide an overall perspective on the solicitation process including the products sought, eligibility requirements, bid evaluation and selection methodology and process, requirements of the Participants, process schedule, and steps in the process. In addition, the utilities provided a description of the Offer Forms used by each utility and SDG&E provided a sample spreadsheet model and used the model to describe the evaluation methodology. Participants 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 Pre-Bid Web Conference presentation and provide a few comments on the draft materials.

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

- Introduction and Overview (including a description of the DRAM Pilot)
- Role and Responsibilities of each party (CAISO, Scheduling Coordinator, Wholesale Demand Response Provider or Aggregator, Seller, Buyer, and Customer Data provisions by the IOU)
- Bid Valuation and Selection
- DRAM Request for Offers Bid Materials

- Walk-Through of IOU DRAM RFO Offer Forms
- Closing Remarks

One of the points raised by the IOUs was a description of the changes in the DRAM 3 program relative to the DRAM 2 solicitation. Table 3 provides the comparison table presented in the presentation and highlights the important changes.

Table 3: Revisions to the DRAM 3 Process Relative to DRAM 2

Items	2017 DRAM (DRAM 2)	2018 DRAM (DRAM 3)
RA (Capacity) Products	System, Local, and Flexible Capacity Categories (1, 2 and 3)	System, Local and Flexible Capacity Categories (1, 2, and 3)
Showing (Operating) Months	January – December 2017	Two years (2018-2019); January – December
Budget	\$6 million for PG&E and SCE; \$1.5 million for SDG&E	\$12 million each for PG&E and SCE; \$3 million for SDG&E
Rule 24/32 Registration Cap	SCE – 42,000; PG&E – 40,000; SDG&E – 30,000	None – Pending funding approvals of Tier 1 filing (SCE) and Tier 3 (PG&E, SDG&E)
Demonstrated Capacity (Agreement Articles 1.6, 3.3)	Seller choice of: Average monthly bid during Showing Month hours in compliance with CAISO MOO, maximum hourly load reduction, Seller capacity test, or maximum hourly load reduction during actual Dispatch.	Order of fulfillment for each Showing Month: <ol style="list-style-type: none"> 1. Results of actual dispatch; if none, then 2. Results of Seller capacity test before end of month (excludes August) 3. If Showing Month is not subject to mandatory capacity testing, then average monthly bid amount can be used.
Prohibited Resources (Agreement Article 7)	BUGS prohibition	Attestations, default adjustment value added to BUGS prohibition Final provisions subject to change, pending CPUC final resolution
Ability to set Capacity to zero based on RA Rule changes	Not applicable	Yes

PG&E included a slide in the presentation deck that described PG&E’s Reliability Cap valuation and selection process. PG&E reiterated that it estimates up to 30 MW of available room under the Reliability DR cap for 2018 and 2019.

PG&E also listed the Confidentiality provisions of the 2018-2019 DRAM Solicitation Protocol in its section of the IOU presentation at the Pre-Bid Web Conference. PG&E presented the following points with regard to confidentiality:

- No Bidder shall collaborate on or discuss with any other Bidder or potential Bidder Offer strategies, the substance of any Offer(s), including without

- limitations the price or any other terms or conditions of any Offer(s), or whether PG&E has selected offers or not.
- PG&E shall follow a similar confidentiality protocol regarding submitted bids.
 - The treatment of confidential information described above shall continue to apply to information related to Selected Offers which are formalized through execution of a Purchase Agreement.

Approximately 65 Participants called into the Pre-Bid Web Conference, including a number of potential new Participants.

Discussion of Bid Evaluation Methodology

After discussions, the utilities agreed to continue to implement a generally consistent quantitative methodology based on a Net Market Value type of methodology which involved calculating the difference between costs for each offer as bid relative to the benefit received based on the same quantity of MWs offered each month. Calculation of the benefits would be based on each utility's projection of RA value for each product solicited, if applicable. This would essentially be compared to the offer cost for each month.

The utilities agreed to discount costs and benefits based on their discount rates to generate a net present value calculation for each offer. The utilities also agreed to apply an average kW per year metric as the denominator for calculating a single metric to use for evaluation and ranking purposes.²⁸ All utilities also applied a 1.15 factor for valuing RA benefits.

A major point of difference was the treatment of qualitative criteria. While the utilities generally agreed on the matrix for scoring and evaluation, there were differences regarding the qualitative criteria and weights applied in the evaluation process by each utility. In this regard, the utilities were able to include their own weights and qualitative criteria in the matrix for purposes of conducting the evaluation.

While the methodology does not allow for the same calculation of prices and value for the offers submitted across each utility since each utility is using different RA forecasts, different products and different discount rates, the methodology does allow for a reasonably consistent evaluation by each utility for the products solicited.²⁹

Questions and Answers

The utilities received and answered forty-three questions for the DRAM 3 RFO. Questions were generally received at the Pre-Bid Web Conference as well as additional

²⁸ The selected metric to evaluate and rank order offers was NPV (PV \$/kW-year), where kW-year was based on an annualized value of the average kW offered each month (i.e. Net Value/sum of kW-months x 12).

²⁹ The primary difference in the evaluation methodology used by the utilities is that SCE did not discount the kW's bid in the denominator, while SDG&E and PG&E did discount the kW's.

questions after the conference. Once questions were received, the utilities each provided input to the responses. The IE reviewed and commented on final draft responses to ensure the responses were clear and consistent. The Q&As were organized by topic and posted on each utility’s website. Table 4 summarizes the number of questions and answers provided by topic area included in the Frequently Asked Questions which are posted to the IOU websites.

Table 4: Summary of Questions and Answers by Topic Area

Topic Area	Number of Questions/Responses
RFO General	20
Supply Plan/RA/Local/System/Flex	5
Capacity Demonstration and Must Offer Obligations	3
Purchase Agreement	0
Proxy Demand Resource (PDR)/Reliability Demand Resource (RDRR)	9
Prohibited Resources/Back-Up Generators	1
Scheduling Coordinator	0
Customer Eligibility	4
CISR – DPR/Green Button	1
Total	43

The IOUs compiled the questions received by each utility, distributed the questions to a utility representative for each utility, prepared initial responses to the questions, and distributed the draft responses for further comment. The responses to the questions generally reflected the combined input of team members from each utility and consensus regarding a consistent response, if possible. Overall, the IE felt the IOUs were responsive and thorough with regard to the responses to bidders and provided valuable information to assist bidders with regard to responses to the RFO.

Receipt of Offers

Offers were received as scheduled on April 10, 2017. For PG&E, offers were submitted to the PowerAdvocate Platform set up 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, 83 offers³⁰ were submitted, less that the 95 offers submitted by [REDACTED] Bidders for the 2017 DRAM RFO process.³¹ [REDACTED] new Participants submitted offers to PG&E’s DRAM 3 RFO. [REDACTED] Participants submitted offers into all three PG&E DRAM RFO’s. [REDACTED] of the [REDACTED] Bidders from the 2017 DRAM RFO did not submit offers to the 2018 DRAM RFO.

³⁰ Of the 83 offers submitted, [REDACTED] were for System RA, [REDACTED] for Local RA, and [REDACTED] included Flex RA.

³¹ Forty-nine offers from ten Bidders were submitted to PG&E’s 2016 DRAM RFO.

██████ Participants offered a mix of residential and non-residential customer accounts. ██████ Participants ██████████ submitted offers for residential only service accounts. ██████ Participants ██████████ submitted offers for non-residential service accounts only. ██████████ submitted offers for both residential and non-residential accounts,

In summary, eligible Bidders submitted offers that included a total of over 80,000 Customer registrations and 239.5 MW of August RA capacity in 2018 and 268.5 MW of August RA capacity in 2019, with a total cost of approximately ██████ million.³²

The IE downloaded the proposals and reviewed the offers along with PG&E's project team. The IE prepared its own summary of the offers received including high level summary information of the offer quantities and pricing for each product. The IE used this information 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, the customer class offered, estimated number of registrations, monthly capacity and pricing offered, and total costs for each offer.

Conformance of Offers/Cure Period

The DRAM RFO schedule allowed approximately 14 days from submission of offers on April 10, 2017 to identify any conformance issues and to allow bidders to cure any non-conformance issues associated with their offers by the cure deadline of April 24, 2017.

With regard to conformance issues, ██████████
██████████
██████████
██████████
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██████████
██████████

Offer Ranking and Selection

After the conformance stage, PG&E proceeded to complete its review and assessment and rank offers based on its evaluation methodology. The evaluation 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;³³

³² PG&E estimates that 204.5 MW were submitted for August 2018 when adjusted for mutually exclusive offers, totaling \$30.4 million in cost.

³³ The bid cost includes Scheduling Coordinator costs for DRAM 3.

2. Calculate the total RA value of the offer for each month as the product of the monthly capacity offered times SCE's forecast of the RA value for each month based on the product submitted by the Respondent;
3. Multiply the total RA value by 1.15;
4. Calculate the Net Present Value of the cost and benefit streams based on PG&E's discount rate of 7% which is used for most solicitation processes;
5. Apply any qualitative adjustment to the cost at this point in the evaluation;
6. Calculate the difference between the benefits and costs for each offer;
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.

PG&E held several team meetings to review the evaluation results and rankings and to begin the selection process. PG&E's team created several possible scenarios for meeting the DRAM targets and constraints and discussed each of the scenarios with the objective of honing in on a few preferred scenarios. For each scenario, PG&E provided information on the number of sellers selected, number of offers, total MW for August, total cost, residential percentage, and the weighted average Net Market Value of the offers included in each scenario. The IE was invited to and attended the meetings of the PG&E evaluation team to assess the rankings and selection of offers.

PRG Meeting – DRAM 3 RFO Final Selection

PG&E presented its final evaluation results and project selection to the PRG on May 16, 2017. PG&E presented a comparison of the three DRAM solicitations which included a summary of the MW selected and total cost. PG&E summarized the number of offers submitted, number of bidders, and new participants for the 2018-2019 RFO. PG&E also identified any bidders that were subject to the qualitative adjustment and the basis for the adjustment. [REDACTED]

[REDACTED]

[REDACTED]

34 [REDACTED]

[REDACTED]

The shortlisting decisions were based on the Net Market Value metric - NPV\$/kW-year, based on discounted kW. The offers were generally selected in rank order through the first [REDACTED] offers³⁵ based on the metric identified by PG&E as the metric it would use for ranking and selection purposes. PG&E then selected [REDACTED] residential offers [REDACTED] out of rank order to meet the 20% residential requirement. PG&E then included [REDACTED] offers [REDACTED]

[REDACTED] to procure close to the budget cap. [REDACTED]:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Table 5 provides a summary of the shortlisted offers that PG&E presented to the PRG at its May 16, 2017 meeting [REDACTED].

³⁵ [REDACTED]

Table 5 Summary of PG&E Shortlist Offers

Rank	Bidder	Offer #	Product Type	Residential (Y or N)	Total Accounts	2018 August kW	Total Bid Cost (\$)	NPV(\$/kW-yr)	Selected
[Redacted Content]									

As a result, for its recommended shortlist, PG&E selected [REDACTED] offers from [REDACTED] counterparties. The offers selected are summarized with the following statistics:

- 81.0 MW of Demand Response RA in August, 2018;
- Total cost of [REDACTED] million (including Administrative costs);
- 19.2 MW of Residential capacity for August, 2018, which is equivalent to 23.7% of all RA capacity selected for August;
- Total customer account registrations of 48,481;

PG&E selected offers out of rank order [REDACTED] to meet the residential set-aside requirement, and to procure closer to the budget cap.

Merrimack Energy also provided its comments on the results of the solicitation process at the May 16, 2017 PRG meeting and also discussed trends in pricing and offers over the three DRAM pilot solicitations, including the following:

- Merrimack Energy was able to verify PG&E's evaluation results and rankings based on use of Merrimack Energy's model with PG&E inputs and offer pricing and volumes;
- The number of Bidders submitting proposals was [REDACTED] more than the number of Bidders in the initial DRAM pilot solicitation but fewer than the DRAM 2 pilot solicitation. This may indicate a diminished interest on the part of the market to compete in the DRAM pilot solicitations;
- PG&E received offers from a total of [REDACTED] different Bidders over the three DRAM solicitations, although there were [REDACTED] Bidders who have participated in all three PG&E DRAM pilot solicitations [REDACTED];
- On the positive side, prices offered are showing a downward trend over the three DRAM pilot solicitations, both for average prices overall and for August deliveries;
- However, the percentage of residential MWs offered for August deliveries (for both 2018 and 2019) have declined from previous DRAM solicitations and were approximately [REDACTED] of total MW offered. As a result, there is [REDACTED] [REDACTED] to meet the 20% residential requirement. PG&E, for example, had to dip deeper into the stack to pick up residential offers out of rank order to meet the 20% residential set-aside.

During the PRG discussions, at least one member of the PRG indicated that [REDACTED].

Contract Execution

The final steps in the DRAM RFO process involved shortlist notification through contract execution. According to the DRAM schedule, the IOUs were expected to contact the counterparties by May 24, 2017 to inform them of the status regarding shortlisting.

PG&E did notify the counterparties of shortlist selection of their offers on May 24, 2017. In the letter sent to shortlisted Bidders, PG&E informed the counterparties which offers were selected and also notified the Bidder that the Bidder was required to execute an attachment to the letter and return the executed signature to PG&E by May 31, 2017, indicating whether they essentially accepted the shortlist offer. As PG&E noted to the Bidder, by returning the attachment the Bidder was agreeing that it will not commit or offer, into any other solicitation or to any other party, any of the Product from the DRAM Resources that is the subject of the Offers listed in the notification letter. PG&E also informed Bidders that it will provide shortlisted Bidders with the Purchase Agreements on May 25, 2017, with signed copies due back to PG&E on June 5, 2017. PG&E also identified the amount of Performance Assurance due and informed Participants that the CAISO has proposed updates to its Business Practice Manual, including a change to the availability assessment hours.

On May 25, 2017 PG&E sent the selected shortlisted counterparties Purchase Agreements for the offers selected.

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted text block]

36 [Redacted footnote text]

As a result of [REDACTED], PG&E ended up contracting for 79.5 MW of 2018 August capacity at a total cost [REDACTED], with a residential percentage of 24.1% for August 2018.

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

VI. Fairness of PG&E's Offer Evaluation and Selection Process

Principles Used to Determine Fairness of Process

In evaluating PG&E's performance in implementing the DRAM 3 RFO pilot program, 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 Resolution with regard to the DRAM RFO pilot?
- Were the requirements listed in the DRAM RFO 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 by PG&E as being reasonable, consistent, and fair to all respondents and consistent with the pre-specified evaluation protocols and criteria identified in PG&E's DRAM RFO Solicitation Protocol documents. PG&E followed the process and methodology it had identified in ranking and selecting offers;
- PG&E applied qualitative factors in combination with quantitative factors. However, based on the IE review and assessment, [REDACTED]
[REDACTED]
[REDACTED];
- PG&E's evaluation and selection process resulted in PG&E meeting its targets subject to the budget amounts and residential target requirements identified in the Commission Resolution for the DRAM 3 RFO. PG&E's evaluation and selection process resulted in the following outcomes after several offers were either withdrawn or removed:
 - PG&E contracted for 79.5 MW of RA capacity for August, 2018;
 - PG&E met the Residential Set-Aside requirement of 20%, contracting for residential accounts totaling 24.10% of August capacity;
 - PG&E's expenditures of [REDACTED] million (including administrative costs of [REDACTED]) were slightly below its authorized budget cap of \$12 million;
- Based on our assessment of the evaluation process relative to the above criteria, it is our 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;

- PG&E and the other IOUs were diligent in answering questions submitted by potential Bidders and were thorough and complete in their responses. The answers were posted on the websites of the three IOUs;
- All offers submitted were eligible to compete in the process. There were no non-conforming offers for the DRAM 3 RFO for PG&E;
- Based on the responses and offers submitted by the Bidders, it appears that Bidders are now generally familiar with the process,³⁷ including the requirements of the utilities, the offer forms, evaluation methodology, contracts and other information required. For the most part, the offers were complete and thorough with few clarification requirements;
- The PRG was actively involved in the DRAM 3 RFO process via PG&E's presentation on Final Offer Selection on May 16, 2017. The presentation included a discussion of DRAM 3 selection requirements, a summary of the offers received, a list of offers in rank order, a recommended shortlist and basis for selection, the RFO schedule, and back-up 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.

VII. Contract Execution Process

The 2018 DRAM RFO Pro Forma Purchase Agreement ("2018 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.

In the September, 2016 DRAM Advice Letter³⁸ for the 2018 DRAM filed by the utilities, the utilities proposed several miscellaneous contract updates from the 2017 DRAM pilot, including the following:

- Removed Seller termination right for actions or inactions of Buyer or CAISO, or for insufficient Rule 24/32 registrations, while preserving Sellers right to adjust Product Monthly Quantity in such instances;

³⁷ [REDACTED]

³⁸ The Advice Letter contained a red-line version and clean version of the proposed PA.

- Clarified that the Notice to Buyer is due before the earliest applicable Buyer’s Compliance Showing deadlines with CAISO and CPUC for each Showing Month (Section 3.1(a));
- Clarified that the Product included in a Supply Plan for a given Showing Month exactly match information submitted by Seller or its Scheduling Coordinator to CAISO (Section 3.1(b));
- Clarified that Seller shall not include a PDR or RDRR in the DRAM Resource, if the PDR or RDRR is concurrently enrolled or otherwise concurrently committed to another DR program offered, maintained, or funded by Buyer. Furthermore, the PDR or RDRR in the DRAM Resource cannot also be part of a Distributed Energy Resource Aggregation (Section 3.4(c));
- Clarified that Section 3.3(c), regarding load impact analysis requirements, is irrelevant for the 2018 and 2019 RA Compliance Year;
- Clarified language regarding when Performance Assurance would be required, to better align with standard IOU Performance Assurance requirements (Section 5.1);
- Clarified that additional financial information (Section 5.6) may be required if requested by a Party, only if available;
- Clarified that PG&E may require access to financial information, only for contracts with a Delivery Period of more than two years (Section 5.7);
- Clarified that a single occurrence of Demonstrated Capacity for a type of Product being less than Product Monthly Quantity would not be a Seller Event of Default (Section 9.1(a)iii);
- In Exhibit A, Definitions, added definitions of “Distributed Energy Resource Aggregation,” “DRAM III Pilot Program,” and “Full Dispatch;” clarified definitions of “Product” and “Termination Payment.

The IOU’s proposed changes to the PA were generally accepted in Resolution E-4817. On March 7, 2017, in its Direction to Proceed with the DRAM III RFO, the CPUC required the IOUs to modify the DRAM III pro forma contract to address Commission direction in D.16-09-056 restricting the use of prohibited resources to reduce load during demand response events. The IOUs posted a red-line of the changes and a clean PA on their websites.

VIII. Safeguards and Methodologies Employed

Sections VI, Confidentiality and Section XI, Bidder’s Representations and Warranties in PG&E’s RFO Solicitation Protocol address safeguards in the process. Section VI 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 XI 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.

IX. Recommendation 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 10 Purchase Agreements with five Demand Response Providers.³⁹ The agreements resulted from a competitive solicitation process that generated a reasonably robust level of competition for the 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 Resolution.

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.

The contracts executed were generally selected in rank order⁴⁰ and serve to meet the DRAM RFO pilot program requirements as contained in the CPUC Resolutions with regard to the spending caps and residential capacity thresholds. Overall, the 10 contracts executed were reasonably selected and executed, and merit approval. PG&E selected offers in order up to the 20% Residential limit when ranked by NPV\$/kW-year. Through this solicitation, PG&E procured 79.5 MW of August 2018 capacity at a cost of [REDACTED] million.

PG&E decided to procure up to the amounts identified above for the following reasons:

- The 20% residential requirement was the most challenging constraint for PG&E and required PG&E to by-pass [REDACTED] non-residential offers in rank order to meet the residential requirements;

³⁹ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁴⁰ PG&E initially selected the first [REDACTED] offers (adjusted for exclusive offers) in rank order. Subsequently, PG&E selected [REDACTED] offers to meet the 20% residential set-aside target. PG&E then selected offers from [REDACTED] additional counterparties to secure contracts with a total cost that approached the budget cap. [REDACTED]
[REDACTED]
[REDACTED]

- PG&E decided to initially select offers very close to the budget cap up to [REDACTED] million (including administrative costs);
- Of the 10 contracts executed by PG&E, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Any issues associated with the appropriate level of procurement for this initial DRAM RFO and whether PG&E should have executed additional contracts does not affect the contracts executed, which should be approved in any case.

As a result, the IE concludes that the resulting contracts are reasonable and appropriate.

X. Conclusions and Recommendations

The results of PG&E's 2018 DRAM RFO Solicitation process for DR products are generally consistent with policy objectives. First, the response of the market was reasonably robust in that there were sufficient offers to generate a competitive market response but from the IE perspective was disappointing overall and was dominated by two large participants. PG&E was able to execute contracts that resulted in spending levels approaching the budget cap, while at the same time meeting the 20% residential set-aside requirement. The primary constraint facing PG&E in its selection was the 20% residential requirement, which was an overriding factor in PG&E's procurement decisions, since PG&E had to by-pass [REDACTED] offers in rank order to meet the residential set-aside.

The IE reviewed the market response and pricing from the three DRAM pilots undertaken by PG&E in an attempt to assess market trends. On the positive side, the clear evidence is that offer prices have fallen [REDACTED] from DRAM 1 to DRAM 3 for August deliveries and for offers overall. However, there are also a few negative trends that are emerging. First, the number of participants have declined from DRAM 2 to DRAM 3. Second, the response of the market illustrates that two major competitors, [REDACTED], dominated the offers submitted, accounting for [REDACTED] of the 83 total offers submitted. Third, the response from participants providing residential offers has also declined.

For the reasons stated herein, Merrimack Energy concludes that the short-listing decisions by PG&E in the 2018 DRAM RFO pilot were reasonable and based on the requirements and evaluation criteria set forth in the RFO documents. PG&E followed its established protocols and methodology in evaluating and selecting offers for DRAM RFO RA capacity requirements. The resulting 10 contracts from [REDACTED] offers (down from the original [REDACTED] offers selected) under review are for DRAM Purchase Agreements with five counterparties, representing 79.5 MW of August 2018 capacity. We believe the PAs

are reasonable, are in the best interests of customers under the parameters of the DRAM pilot, and should be approved.

Recommendations

Based on our involvement throughout the process, the IE has the following recommendation for PG&E for undertaking future similar solicitations:

- 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 and implications that future solicitations could be dominated by a few participants. One concern of the IE is the decline in interest from the market for a process that includes minimum penalties for non-performance and a larger volume of contract capacity available via DRAM 3. Before proceeding with a formal DRAM auction process, the IE believes that a detailed review of the experiences of the past three DRAM solicitations, with a focus on why DR market participants (both those who have participated and those active in other markets who have not) have or have not participated, should be undertaken.

Appendix E

PG&E's Pro Forma 2018-2019 DRAM Purchase Agreement

2018-2019 DRAM RFO PRO FORMA

**DEMAND RESPONSE AUCTION MECHANISM RESOURCE PURCHASE
AGREEMENT**

between

[NAME OF SELLER]

and

PACIFIC GAS AND ELECTRIC COMPANY

**DEMAND RESPONSE AUCTION MECHANISM RESOURCE PURCHASE AGREEMENT
BETWEEN
[SELLER] AND PACIFIC GAS AND ELECTRIC COMPANY**

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BETWEEN
[SELLER] AND *PACIFIC GAS AND ELECTRICT COMPANY***

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BETWEEN
[SELLER] AND PACIFIC GAS AND ELECTRICT COMPANY**

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**DEMAND RESPONSE RESOURCE PURCHASE AGREEMENT
BETWEEN
[SELLER] AND *PACIFIC GAS AND ELECTRICT 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 [Date] (“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(s) as indicated in Table 1.1(b) in the respective amount of the Product Monthly Quantity, as indicated in Exhibit E, subject to and in accordance with the terms and conditions of this Agreement. More than one type of Product from Table 1.1(b) may be indicated. Each type of Product indicated in Table 1.1(b) shall be referred to individually or collectively as “Product” for purposes of this Agreement, as applicable.

(b) The Product is:

TABLE 1.1(b)		
	Product	LCA
<input type="checkbox"/>	Product A: System Capacity	Not applicable
<input type="checkbox"/>	Product B1: Local Capacity with System Capacity	Greater Bay
<input type="checkbox"/>	Product B2: Local Capacity with System Capacity	Humboldt
<input type="checkbox"/>	Product B3: Local Capacity with System Capacity	North Coast/North Bay
<input type="checkbox"/>	Product B4: Local Capacity with System Capacity	Sierra
<input type="checkbox"/>	Product B5: Local Capacity with System Capacity	Stockton

TABLE 1.1(b)		
	Product	LCA
<input type="checkbox"/>	Product B6: Local Capacity with System Capacity	Fresno
<input type="checkbox"/>	Product B7: Local Capacity with System Capacity	Kern
<input type="checkbox"/>	Product C1-0: Flexible Capacity (Flexible Category 1) with System Capacity	Not applicable
<input type="checkbox"/>	Product C2-0: Flexible Capacity (Flexible Category 2) with System Capacity	Not applicable
<input type="checkbox"/>	Product C3-0: Flexible Capacity (Flexible Category 3) with System Capacity	Not applicable
<input type="checkbox"/>	Product D1-1: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Greater Bay
<input type="checkbox"/>	Product D1-2: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Humboldt
<input type="checkbox"/>	Product D1-3: Flexible Capacity (Flexible Category 1) with Local and System Capacity	North Coast/North Bay
<input type="checkbox"/>	Product D1-4: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Sierra
<input type="checkbox"/>	Product D1-5: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Stockton
<input type="checkbox"/>	Product D1-6: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Fresno
<input type="checkbox"/>	Product D1-7: Flexible Capacity (Flexible Category 1) with Local and System Capacity	Kern
<input type="checkbox"/>	Product D2-1: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Greater Bay
<input type="checkbox"/>	Product D2-2: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Humboldt
<input type="checkbox"/>	Product D2-3: Flexible Capacity (Flexible Category 2) with Local and System Capacity	North Coast/North Bay
<input type="checkbox"/>	Product D2-4: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Sierra
<input type="checkbox"/>	Product D2-5: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Stockton
<input type="checkbox"/>	Product D2-6: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Fresno

TABLE 1.1(b)		
	Product	LCA
<input type="checkbox"/>	Product D2-7: Flexible Capacity (Flexible Category 2) with Local and System Capacity	Kern
<input type="checkbox"/>	Product D3-1: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Greater Bay
<input type="checkbox"/>	Product D3-2: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Humboldt
<input type="checkbox"/>	Product D3-3: Flexible Capacity (Flexible Category 3) with Local and System Capacity	North Coast/North Bay
<input type="checkbox"/>	Product D3-4: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Sierra
<input type="checkbox"/>	Product D3-5: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Stockton
<input type="checkbox"/>	Product D3-6: Flexible Capacity (Flexible Category 3) with Local and System Capacity	Fresno
<input type="checkbox"/>	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

{IOU Comment: Seller to choose only one option which applies to all Products for this Agreement}

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

(e) Seller to indicate whether the Product is:

_____ a Proxy Demand Resource (PDR); or

_____ a Reliability Demand Response Resource (RDRR).

1.2. Term

The “Term” of this Agreement shall commence upon the Execution Date and shall continue until the expiration of the Delivery Period unless terminated earlier in accordance with the terms and conditions of this Agreement.

1.3. Delivery Period

The “Delivery Period” shall commence on the later of (a) the first day of the first month that begins after sixty (60) days following CPUC Approval, and (b) [Date], and shall continue in full force and effect until [Date] *{IOU Comment: 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.

{IOU Comment: Dates will be based on Seller’s bid that was selected by the IOU in the RFO. Currently that would be no earlier than January, 2018 and no later than December, 2019.}

1.4. Seller’s Designation of the DRAM Resource

- (a) On or before the later of (1) the first day of the first month that begins after the date that is sixty (60) days following CPUC Approval, and (2) the date that is sixty (60) days prior to the first Showing Month, and on a monthly basis thereafter no less than sixty (60) 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 or RDRR providing each type of Product pursuant to this Agreement.
 - (ii) Confirm in writing to Buyer that each PDR or RDRR identified by Seller pursuant to Section 1.4(a)(i) for each type of Product is comprised solely of Bundled Service Customers or Unbundled Service Customers.
 - (iii) If the Product pursuant to this Agreement is a Joint Resource, Seller shall confirm in writing to Buyer (x) the amount of the capacity of such Joint Resource that will be used to show Demonstrated Capacity for the applicable type of Product under this Agreement and (y) the total capacity of such Joint Resource for the applicable type of Product.
- (b) Sellers may sell and deliver System Capacity and Local Capacity from PDRs or RDRRs and may sell and deliver Flexible Capacity only from PDRs.
- (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) and/or RDRR(s) pursuant Section 1.4(a)(i).

1.5. Product Monthly Quantity and Corresponding Contract Price

- (a) The Product Monthly 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 E.
- (b) In the event that Seller is not able to register the DRAM Resource for part or all of a Product Monthly 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 D.16-06-008, Ordering Paragraph 2, then Seller may, in its sole discretion, by providing Notice to Buyer on or before the date that is sixty (60) days prior to the Showing Month for which Seller is unable to register the DRAM Resource, reduce the Product Monthly 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 Product Monthly 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 1, either (i) reduce the Product Monthly Quantity for the following year or (ii) terminate this Agreement. Any such reduction or termination will be effective as of January 1 of the year following the next August 1 after Buyer's notice (for example, a reduction or termination notice on July 31, 2017 would be effective on January 1, 2018, and a reduction or termination notice on November 1, 2017 would be effective on January 1, 2019).
- (d) In the event that the Buyer has not yet enabled real time or ancillary services functionality that is adequate for the Buyer's CPUC-approved Rule 24 registrations, by the time that the DRAM Resource is offered into the CAISO Markets (on or after January 1, 2018 per the terms of this Agreement), Buyer shall provide Notice to Seller at least 60 days prior to the Showing Month and Seller shall be exempt from both any obligation to provide Flexible Capacity and any associated penalties. Once Buyer has provided 30 days' Notice to Seller that Buyer has enabled real time or ancillary services functionality that is adequate for the Buyer's approved Rule 24 registrations, so that Sellers are able to provide Flexible Capacity to the CAISO Markets, this Section 1.5(d) shall have no further effect.
- (e) 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 Product Monthly Quantity for each type of Product for such Showing Month that Seller was capable of delivering ("Demonstrated Capacity"), including one of the following, as provided below:
- (i) The results of a Dispatch of the applicable PDR or RDRR in the DRAM Resource during the Showing Month, provided that the PDR or RDRR provided load reduction during all of the hours referenced in the Dispatch Instruction corresponding to the applicable MOO hours. The Demonstrated Capacity for System and Local Capacity will equal the maximum hourly load reduction during any hour of such Dispatch as calculated using the Capacity Baseline and the Demonstrated Capacity for Flexible Capacity will equal the average hourly load reduction calculated using the Capacity Baseline.
 - (ii) In the event that there is no Full Dispatch of the PDR or RDRR in the DRAM Resource during the Showing Month under 1.6(a)(i) above the results of a capacity test conducted by the Seller's SC during the applicable Showing Month, if and as required under Section 3.3(b) below. The Demonstrated Capacity for System or Local Capacity with respect to such PDR or RDRR will equal the maximum hourly load reduction during such test as calculated using the Capacity Baseline. The Demonstrated Capacity for Flexible Capacity with respect to such PDR will equal the average hourly load reduction during such test as calculated using the Capacity Baseline; or
 - (iii) In the event that there is no Full Dispatch of the applicable PDR or RDRR in the DRAM Resource during the Showing Month as contemplated under 1.6(a)(i) above, or test of the applicable PDR or RDRR in the DRAM Resource during the Showing Month as contemplated under 1.6(a)(ii) above, the average amount of capacity for the applicable PDR or RDRR in the DRAM Resource that the Seller bid into the applicable CAISO Markets solely during the hours of the Showing Month in compliance with the CAISO MOO.
- (b) 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.

- (c) If the DRAM Resource is comprised of more than one PDR or RDRR, then Seller may establish the portion of the Demonstrated Capacity for a specific type of Product associated with each such PDR or RDRR by using the methods based on the descriptions in Sections 1.6(a)(i)-(iii), in which case the Demonstrated Capacity for a specific type of Product will equal the sum of the individual PDR or RDRRs demonstrated capacities.
- (d) If any respective PDR or RDRR in the DRAM Resource is a Joint Resource, Seller's invoice shall indicate (x) the amount of the capacity of such Joint Resource used to show Demonstrated Capacity for a specific type of Product for such month and (y) the total capacity of such Joint Resource during such month.
- (e) 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 or RDRR for such type of Product.
- (f) 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.
- (g) Following Buyer's receipt of Seller's invoice and Notice of Demonstrated Capacity, Buyer may, upon Notice to Seller, require Seller to provide documentation from Seller or Seller's SC that establishes to Buyer's reasonable satisfaction the Demonstrated Capacity of each Product type from a PDR, RDRR or Joint Resource as stated by Seller in its invoice for the applicable Showing Month. In the event that Seller does not provide such documentation within ten (10) Business Days from Buyer's Notice or such documentation is not reasonably satisfactory to Buyer, then Buyer may require an audit of Seller or Seller's SC records upon Notice ("Audit Notice"). With respect to an Audit Notice, Seller shall cause its SC to allow Buyer or its designated independent third-party auditor to have access to the records and data necessary to conduct such audit within five (5) Business Days of Seller's receipt of an Audit Notice; *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 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 the conducting such audit are the sole responsibility of Buyer.

ARTICLE 2. CPUC APPROVAL

2.1. Obtaining CPUC Approval

Within thirty (30) 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) 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 ten (10) Business Days before the earliest monthly applicable Buyer's Compliance Showing deadlines with the CAISO and the CPUC for each Showing Month, Seller shall submit, or shall cause Seller's SC(s) to submit, Notice to Buyer which includes Seller's Supply Plan for such Showing Month in a form substantially similar to Exhibit D, or in 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 a Showing Month.
- (b) Seller shall, on a timely basis, submit, or cause its SC to submit, a Supply Plan to CAISO in accordance with the CAISO Tariff to identify and confirm the Product Monthly Quantity for each type of Product to be provided to Buyer from the DRAM Resource for each Showing Month. The quantities in the Supply Plan that is submitted to the Buyer under Section 3.1(a) 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 Product Monthly Quantity 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 and Testing

- (a) Within a reasonable period of time, or such time prescribed by the CPUC, Seller shall provide to the CPUC all information requested by the CPUC relating to Seller's obligations and performance pursuant to this Agreement and the DRAM III Pilot Program 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) If a PDR or RDRR in the DRAM Resource has not had a Full Dispatch during August of each year when Seller is providing August capacity, then Seller shall cause a test of such PDR(s) or RDRR(s) in accordance with D.14-06-050, Appendix B, prior to expiration of that month, and provide the results of such test to Buyer through their Demonstrated Capacity.

In addition, if the Delivery Period is greater than six months per calendar year, and if a test or Full Dispatch has not occurred within the first half of the Delivery Period in said calendar year, excluding August, then a test must be conducted in accordance with D.14-06-050, Appendix B, within the first half of the Delivery Period (e.g., for an Agreement with an eight month term for 2018, a second test would be required at some point in the first four months). Such test may not occur in August. Seller is permitted multiple retests during the calendar month of such testing.

If the test results demonstrate a capacity of 50.00 percent (%) or less of the Product Monthly Quantity for that month, then a retest would be required for those PDR or RDRR that are 50 percent (%) or less of their Product Monthly Quantity, within 30 days of Seller receiving data of the test results, if a Full Dispatch has not occurred during that 30 day period. If the retest results demonstrate a capacity of 50 percent (50%) or less of the applicable Product Monthly Quantity, then Seller will conduct an additional retest.

- (c) Seller shall comply with the requirements for load impact analysis in D.14-06-050, Appendix B, and provide to the CPUC a load impact evaluation consistent

with the Load Impact Protocols in D. 08-04-050 and data required by D.14-06-050. This Section 3.3(c) is applicable only for DRAM Resources for which historical data are available. If historical data are not available, Seller is not required to perform a load impact analysis. Pursuant to Decision 16-06-045, Ordering Paragraph 5a, this provision is moot for the 2018 and 2019 RA Compliance Year.

3.4. Seller's Obligations

- (a) Seller shall, and shall cause each of the PDRs or RDRRs 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 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 or RDRR 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.

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 or the CAISO, resulting from Seller's failure to do, or cause to be done, any of the following:

- (a) Provide any portion of the Monthly Quantity for any portion of the Delivery Period, 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 a Monthly 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 Quantity for each Showing Month;
- (c) Comply with the requirements in Section 3.2 to enable Buyer to meet its RAR; or
- (d) Meet CPUC Resource Adequacy requirements per the CPUC Filing Guide.

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 x B x C x D) for each type of Product.

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

Where:

- A = The Contract Price of the applicable type of Product for the applicable Showing Month, including SC costs.
- B = The lesser of (i) the Demonstrated Capacity for each type of Product for the applicable Showing Month, and (ii) the corresponding Product Monthly Quantity for the applicable Showing Month
- 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.
- D = (i) 1.0 if Seller has chosen to deliver RDRR in Section 1.1(e); or (ii) if Seller has chosen to deliver PDR in Section 1.1(e), the percentage of Product delivered that is PDR.

4.2. Invoice and Payment Process

- (a) As soon as practicable after the end of each Showing Month, Seller will render to Buyer an invoice for the payment obligations, if any, incurred hereunder with respect to such Showing Month.
- (b) Buyer will pay Seller all undisputed invoice amounts on or before the later of (i) the twentieth (20th) day of each month, or (ii) the tenth (10th) day after receipt of

Seller's invoice and Demonstrated Capacity or, if such day is not a Business Day, then on the next Business Day.

- (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.
- (g) With respect to any Joint Resource, if Seller and any third party both submit claims to Buyer for payment with respect to such Joint Resource which, when added together, exceed the total capacity of the Joint Resource, Buyer shall not be obligated to make payment to Seller in respect of such Joint Resource until Seller reconciles the error with such third party and Seller re-submits the corrected invoice to Buyer.
- (h) With respect to a Joint Resource, if such Joint Resource's Demonstrated Capacity for a particular type of Product in any Showing Month is less than such Joint Resource's assigned NQC and/or EFC for such type of Product (as set forth in Exhibit C), Seller shall have the right to demonstrate to Buyer the Joint Resource's actual performance, and shall be compensated in accordance with Section 1.6. In the event Buyer finds Seller's demonstration inconclusive, the Joint Resource's total capacity shall be allocated pro-rata among the parties with rights to a portion of such Joint Resource's type of Product based on the information required to be provided in Section 1.6(d), and Seller's compensation shall be calculated using its percentage allocation of such PDR's or RDRR's capacity, accordingly.

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 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 ("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), Seller shall post the Performance Assurance with Buyer within ten (10) Business Days of the Execution Date.

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, and (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. 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. Seller shall have the right to specify the means of effecting the reduction in Performance Assurance. 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, (iii) 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 (iv) 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 for which any unsatisfied payment obligations of Seller exist has occurred or been designated as the result of an Event of Default with respect to Seller, 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 (a)(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

- (a) If requested by a Party, the other Party shall deliver, if available, (a) within one hundred twenty (120) 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) 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

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.

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

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, RDRR or DRAM Resource, as applicable.

6.2. Buyer Provision of Information

Buyer shall, to the extent available and permitted by Applicable Law, including Rule 24, provide specific information consistent with the CISR-DRP form 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 to Seller, 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) 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) 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.

- (i) Buyer has the right to disclose to the CPUC all such information provided by Seller pursuant to this Section 6.4.
- (ii) 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 or Other Utility Program

Seller agrees to and acknowledges the following with respect to Buyer's ADR Customers which are included in Seller's DRAM Resource:

- (a) ADR Customers in Buyer's ADR are eligible to participate concurrently in Buyer's ADR and Seller's DRAM Resource, subject to the requirements of this Agreement and Applicable Laws. The ADR Customer remains responsible for fulfilling its obligations under Buyer's ADR 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 or RDRR, and (ii) operation of the ADR Customers' ADR equipment to respond to an Award. During the time period that an ADR Customer is enrolled in a DRAM Resource, Buyer will not send notifications to such ADR Customer of Awards and will not operate ADR Customers' ADR equipment.
- (c) If Seller or its DRP enrolls an ADR Customer in Seller's DRAM Resource, Seller shall provide Buyer 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 with Notice within fifteen (15) days after an ADR Customer leaves Seller's DRAM Resource.
- (d) ADR Customers in their first year of participation in ADR who enroll in a DRAM Resource will be required to demonstrate performance through the DRAM Resource to qualify for ADR technology incentive payments that future Commission decision(s) applicable to 2018 and 2019 may require.
- (e) Seller shall notify in writing all of its ADR Customers of the items set forth in this Section 6.6 prior to enrolling such ADR Customers in Seller's DRAM Resource, as applicable pursuant to Section 1.4.

- (f) Buyer may communicate (i) with the Seller's ADR Customers about the ADR Customer's participation in a DRAM Resource and ADR, and (ii) with the ADR Customers with respect to anything involving their participation in ADR.
- (g) Promptly following receipt of Buyer's Notice, Seller shall provide to Buyer all information necessary for Buyer to administer the ADR Customers' participation in Buyer's ADR, 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 or RDRR 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 ADR Customer's participation in the Seller's DRAM Resource as described in this Section 6.6(g) will be used in conjunction with the ADR Customer's participation in Buyer's demand response programs, to calculate the ADR Customer's performance for its approved kW in the ADR.
- (h) If Seller does not provide all the information Buyer needs to administer the ADR Customer's participation in Buyer's ADR, the ADR Customer will be in non-compliance with the requirements of ADR.
- (i) Following the termination or expiration of this Agreement, Buyer may notify the ADR Customers in Seller's DRAM Resource that such ADR Customers need to participate in a utility demand response program, if such ADR Customers are within the first three years of their commitment to ADR as of the date of such termination or expiration.
- (j) Seller agrees to and acknowledges the following with respect to Buyer's Customers in another Utility program, which are also included in Seller's DRAM Resource: When a Customer's participation in another Utility program is dependent upon Customer's inclusion in Seller's DRAM Resource, Seller shall provide to Buyer all information reasonably necessary or useful to establish and confirm the inclusion of such Customers in the Seller's DRAM Resource.

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 not 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 or RDRR 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 or RDRR for the DRAM Resource, if Seller is not the DRP; and
- (iv) Seller will not use, grant, pledge, assign, or otherwise commit any Product Monthly Quantity to meet the RAR, Local RAR, and/or Flexible RAR, as applicable, of, 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 or RDRR 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 or RDRR providing Product to Buyer. Seller shall provide any returning Residential Customers with notice of such provision. Any customer that does not accept the prohibition will not be eligible to participate in the Seller's DRAM Resource.
 - B. For all non-Residential Customers, Seller shall require that each Customer execute an attestation (1) indicating whether it has a Prohibited Resource on site; (2) indicating that if it has a Prohibited Resource it will not use the resource to reduce load during a Dispatch by any PDR or RDRR providing Product to Buyer; or, (3) if applicable, certifying that the Customer may have to use a Prohibited Resource during Demand Response events for operational, health or safety reasons, providing the nameplate capacity of the Prohibited Resource, and agreeing to a default adjustment in which the amount of Product such Customer can provide is reduced by the nameplate capacity of the Prohibited Resource (or, if the Customer has multiple Prohibited Resources, by the sum of the nameplate capacity values from all Prohibited Resources on the site), regardless of whether the Prohibited Resource was actually used. Seller shall collect and store all such Customer attestations and make them available upon request after December 31, 2017, to the CPUC or to the Buyer, as directed by the CPUC.
 - C. For new non-Residential Customers, the attestation shall occur at the time of enrollment and shall be provided with an electronic signature. For returning non-Residential Customers, Seller shall provide notice to the Customers of the new provision and outreach to the Customers that a signature, which may be an electronic signature, attesting to the prohibition or the default adjustment, shall be provided to Seller no later than December 31, 2017. Any new non-Residential customer that

does not complete this component of the enrollment process will not be eligible to participate in Seller's DRAM Resource. Any existing non-Residential Customer that fails to do so by December 31, 2017 will be removed from Seller's DRAM Resource but will be eligible to re-enroll subject to the requirements associated with the prohibition.

- D. 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 days from receipt of notice to cure such Type-One Non-Compliance. If the instance of non-compliance involves either (a) the Customer attested to the "does not have" or "no-use" provisions of Prohibited Resource(s) but is verified to have used a Prohibited Resource to reduce load during a demand response event; or (b), a Customer intentionally submits an invalid nameplate capacity value for the Prohibited Resource(s) (collectively "Type Two Non-Compliance"), then Customer will be removed from Seller's DR program as follows. If there is an instance of (a) an uncured Type One Non-Compliance, or (b) a Type Two Non-Compliance, the consequences will be removal from Seller's DR program and ineligibility to enroll in any DR 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).
- E. 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, (a) Sellers will provide DAVs monthly (with Demonstrated Capacity information); and, (b) Sellers will ensure that bids in the wholesale market 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 (the Plan). For Customer contracts executed with Seller prior to the CPUC's adoption of the Plan,

installation of additional interval metering will not be required for verification purposes.

- F. By December 31, 2017, and on an annual basis thereafter for all residential customers, 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 CPUC upon Buyer's request.
- G. Seller shall include provisions in its contracts with non-Residential Customers providing that Customers may adjust their DAV, if (a) the Customer's change in DAV results from a change in the operational status of a Prohibited Resource associated with the Customer's Service Account; and, (b) Seller has verified this change in operational status

- (vi) If any respective PDR or RDRR is a Joint Resource, Seller shall ensure that: (x) the use of the Joint Resource does not result in Buyer making payment in respect of Demonstrated Capacity for a type of Product in excess of the total capacity of the Joint Resource, whether to Seller or any other party, regardless of whether payment is made under this Agreement, another agreement in the DRAM III Pilot Program, any other demand resource agreement or program, or any combination thereof; (y) the use of the Joint Resource does not result in Buyer making payment more than once in respect of capacity relating to a particular customer registered in the Joint Resource, regardless of whether payment is made under this Agreement, another agreement in the DRAM III Pilot Program, any other demand resource agreement or program, or any combination thereof; and (z) Seller has the right to access and provide to Buyer the records and data regarding any DRAM Resource Customer that is not designated by Seller under Section 1.6(d) as part of the amount to be used to show Demonstrated Capacity for a type of Product under this Agreement to permit Buyer to audit such Joint Resource under Section 1.6(g) to the same extent Buyer may audit PDRs or RDRRs that are not Joint Resources.

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:

Phone:

Facsimile:

Email:

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

BNK:

ABA:

ACCT:

Credit and Collections

Attn:

Phone:

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; provided that a single occurrence during the Delivery Period of Demonstrated Capacity for a type of Product being less than Product Monthly Quantity for such type of Product in a Showing Month shall not be a Seller Event of Default.
 - (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

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]** under such agreements or instruments (after giving effect to any applicable notice requirement or grace period).

- (iv) 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) days of Notice of such breach by 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) 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; and
- (j) The obligation of confidentiality as set forth in Article 13.

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 on the Cover Sheet hereof, 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 such request, at a mutually agreed time and place. If the matter is not resolved within 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 5 Business Days of the Referral Date the Executives shall establish a mutually acceptable location and date, which date shall not be greater than 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 45 calendar days of the Referral Date, or if the Party receiving the written request to meet, pursuant to subpart (a) above, refuses or will not meet within 10 Business Days, either Party may initiate mediation of the controversy or claim according to the terms of the following Section 10.1(b).

- (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 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 10.1(c) 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 or any payment disputes resulting from the use of a Joint Resource;
 - (ii) Seller's failure to fulfill its obligations regarding Resource Adequacy Benefits as set forth in Article 3;
 - (iii) any violation of Applicable Law 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 (INDEMNITY), 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 Obligation

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 (a) 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(e) and (f); (b) to the extent necessary for the enforcement of this Agreement; (c) 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; (d) to the extent such information is or becomes generally available to the public prior to such disclosure by a Party; (e) 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); (f) 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 (g) 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 (a) or (e) of the foregoing sentence of this Article 13.

13.2. Obligation to Notify

In connection with discovery requests or orders pertaining confidential information in connection with this Agreement as referenced in Section 13.1(a) ("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, this confidentiality obligation. With respect to information provided in connection with this Agreement, this obligation 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

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), (i) 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, (ii) 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 (iii) 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.

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

[SELLER]

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: _____
Title: _____
Date: _____

EXHIBIT A

DEFINITIONS

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

“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.

“Arbitrator” has the meaning set forth in Article 10.

“Audit Notice” has the meaning set forth in Section 1.6(g).

“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.

“Award” has the meaning set forth in Section 6.6(a).

“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 or any successor entity performing the same functions.

“CAISO Markets” has the meaning set forth in the CAISO Tariff.

“CAISO Tariff” means the 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 the CAISO baseline as applicable to the PDR(s) or RDRR(s) in the DRAM Resource, as specified in the CAISO Tariff.

“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 the “Monthly” Federal Funds Rate (as reset on a monthly basis based on the latest month for which such rate is available) as reported in Federal Reserve Bank Publication H.15-519, or its successor publication.

“Claiming Party” has the meaning set forth in Article 14.

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

“Compliance Showings” means the (i) RAR compliance or advisory showings (or similar or successor showings), in each case, 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 E for each Showing Month.

“CPM Capacity” has the meaning set forth in the 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, and any other existing or subsequent decisions, resolutions, or rulings related to resource adequacy, including, without limitation, the CPUC Filing Guide, in each case as may be amended from time to time by the CPUC.

“CPUC Filing Guide” is the 2016 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, (a) the rating then assigned to such entity’s unsecured senior long-term debt obligations (not supported by third party credit enhancements), or (b) if such entity does not have a rating for its unsecured senior long-term debt obligations, then the rating assigned to such entity as an issuer rating by S&P and/or Moody’s. If the entity is rated by both S&P and Moody’s and such ratings are not equivalent, the lower of the two ratings shall determine the Credit Rating. If the entity is rated by either S&P or Moody’s, but not both, then the available rating shall determine the Credit Rating.

“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 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.

“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.

“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 III Pilot Program” means the program during 2018 and 2019 for the Product as described in CPUC D.14-12-024 and D.16-06-029.

“DRAM Resource” means the PDR(s) or RDRR(s) that Seller identifies pursuant to Section 1.4 that will provide Product to Buyer.

“DRAM Resource Customer” is a Bundled Service Customer and/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.

“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) or RDRRs 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.

“Full Dispatch” means a dispatch of a PDR or RDRR of the DRAM Resource in the CAISO market for 100% of the associated monthly capacity, as submitted in a Seller’s Supply Plan for that Showing Month.

“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.

“Interest Amount” means with respect to a Party and an Interest Period, the sum of the daily interest amounts for all 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.

“Joint Resource” means respectively a PDR or RDRR which includes DRAM Resource Customers registered by the Seller (or its DRP) and other customers registered by another aggregator (or its DRP) who are not considered part of the respective PDR or RDRR for purposes of meeting Seller’s obligations under this Agreement.

“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 B 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 (i) "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, (ii) "A-" by S&P with a stable outlook designation, if such issuer is rated only by S&P, or (iii) "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, however, that 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) or RDRRs 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.

"Mediator" has the meaning set forth in Section 10.2.

"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.

"Monthly Quantity" means the aggregate amount of all Product Monthly Quantities set forth in Exhibit E 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 Investor Services, Inc. or its successor.

“Must-Offer Obligation” or “MOO” 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 and in accordance with the CAISO Tariff.

“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.

“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 F and corresponding to the following LCAs as designated on EXHIBIT F: Kern, Stockton, Sierra, Other, 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 Article 13.

“Product” means either System Capacity (PDR or RDRR), Local Capacity (PDR or RDRR) and/or Flexible Capacity (PDR). 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 contracts for separate products and will combine multiple awards of the same product into one contract at a weighted average price.

“Prohibited Resource” means a 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, as well as storage and storage coupled with renewable generation that meet the relevant greenhouse gas emissions standards adopted for the Self Generation Incentive Program.

“Proxy Demand Resource” or “PDR” has the meaning in the CAISO Tariff.

“Product Monthly Quantity” means the respective amount of each type of Product set forth in Exhibit E that Seller has agreed to provide to Buyer from the DRAM Resource for each day of the respective Showing Months.

“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 any of S&P, Moody’s, and Fitch (collectively the ‘Ratings Agencies’).

“Reliability Demand Response Resource” or “RDRR” has the meaning in the CAISO Tariff.

“Resource Adequacy Benefits” has the meaning in the CPUC Decisions.

“Resource ID” has the meaning in the CAISO Tariff.

“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.

“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/regulation/DemandResponseOIR/Other-Docs/Joint-PSS/2013/DemandResponseOIR_Other-Doc_Joint-PSS_20130204_262339Atch01_262340.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 months of the Delivery Period, including the current 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 Product Monthly Quantity times the applicable Contract Price for each type of Product.

“Shortfall Capacity” means the amount of capacity with respect to the Product Monthly 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: (1) has a maximum billing demand of 20 kW, or less, per meter during the most recent 12 month period, or (2) has an annual usage of 40,000 kWh, or less, during the most recent 12 month period.

“Supply Plan” has the meaning set forth in the CAISO Tariff.

“System Capacity” means system Resource Adequacy Benefits associated with the PDR(s) or RDRRs 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 expect to incur penalties, fines or costs from the CPUC, the CAISO, or any other Governmental Body, then Buyer may estimate the of those 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, 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 CPUC Rule 22 Direct Access or Rule 23 Community Choice Service.

EXHIBIT B

PG&E'S FORM OF LETTER OF CREDIT

Issuing Bank Letterhead and Address

STANDBY LETTER OF CREDIT NO. XXXXXXXXX

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:

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\$xxxxxxx.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\$xxxxxxx.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 by presentation of copies or original documents, or by facsimile transmission of documents to **[Insert fax number or numbers]**. Attention: **[Insert name of bank's receiving department]**. If a demand is made by facsimile 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 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 C-1

Form of Notice of Demonstrated Capacity

EXHIBIT C1 - Notice of Demonstrated Capacity (QC)

Demand Response Auction Mechanism (DRAM)

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 "Monthly Quantity"* (MW): _____
 Total "Demonstrated Capacity" (MW), Net of Prohibited Resources Adjustment: 0.00 MW
 Residential Product (Yes / No): _____
 Therefore, in Delivered Capacity Payment formula, "B" = 0.00 MW and "D" = _____

PDRs and/or RDRRs in the DRAM Resource			--- "Demonstrated Capacity" (MW) --- It is Seller's responsibility to use the required Demonstrated Capacity method for each Resource per Section 1.6(a) of DRAM Purchase Agreement.						Joint Resource Adjustment		Prohibited Resources Adjustment		Residential Product Delivery			Local Capacity Product Delivery	
PDR / RDRR Resource Name	CAISO Resource ID	Assigned NQC (MW)* 0.00 MW	Capacity Test Maximum hourly load reduction during capacity test conducted by Seller's SC during Showing Month		Must Offer Obligation (MOO) Average capacity amount Seller bid into CAISO during Showing Month		Dispatch Results Maximum hourly load reduction resulting from Dispatch during Showing Month		MW Claimed Specify the MW portion used to meet the contract obligation		Adjusted MW Claimed Specify the MW portion used to meet the contract obligation		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	
			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	Joint Resource? (Yes/No)	MW Claimed	Default Adjustment Value (DAV) (MW)	Net MW Claimed	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									
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**EXHIBIT E
PRODUCT MONTHLY QUANTITY
AND
CORRESPONDING CONTRACT PRICE**

Showing Month	Product [Insert]			
	2018		2019	
	Monthly Quantity (kW for each day of Showing Month)	Contract Price (\$/kW-month)	Monthly 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 F
PG&E LCA SUBSTATIONS

Local Capacity Area	Substation_cd	Substation Description
Greater Bay Area	1201	OAKLAND_C
Greater Bay Area	1202	CLAYTON
Greater Bay Area	1204	OAKLAND_D
Greater Bay Area	1206	BERKELEY_F
Greater Bay Area	1208	OAKLAND_I
Greater Bay Area	1209	OAKLAND_J
Greater Bay Area	1210	OAKLAND_K
Greater Bay Area	1211	OAKLAND_L
Greater Bay Area	1213	ANTIOCH
Greater Bay Area	1214	LIVERMORE
Greater Bay Area	1216	PITTSBURG
Greater Bay Area	1220	WALNUT_CREEK
Greater Bay Area	1222	NEWARK
Greater Bay Area	1224	HAYWARD_O
Greater Bay Area	1233	MIRA_VISTA
Greater Bay Area	1235	ORINDA
Greater Bay Area	1243	ALTAMONT
Greater Bay Area	1250	EL_CERRITO_G
Greater Bay Area	1252	RICHMOND_Q
Greater Bay Area	1254	OAKLAND_X
Greater Bay Area	1260	OAK
Greater Bay Area	1264	BECK_STREET
Greater Bay Area	1265	FAIRMOUNT
Greater Bay Area	1266	BERKELEY_T
Greater Bay Area	1267	8TH_AVENUE
Greater Bay Area	1269	FLORENCE
Greater Bay Area	1284	RIDGE
Greater Bay Area	1296	CONCORD_NO_1
Greater Bay Area	1298	WARD
Greater Bay Area	1302	BARRETT
Greater Bay Area	1303	BANCROFT
Greater Bay Area	1309	BRYANT
Greater Bay Area	1311	SAN LEANDRO
Greater Bay Area	1314	SOLANO
Greater Bay Area	1315	RADUM
Greater Bay Area	1317	HOLLYWOOD
Greater Bay Area	1318	PALO_SECO
Greater Bay Area	1321	BROOKSIDE
Greater Bay Area	1323	LONE_TREE

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Bay Area	1324	WHITNEY
Greater Bay Area	1326	SOTO
Greater Bay Area	1330	PLEASANT_HILL
Greater Bay Area	1331	RUSSELL
Greater Bay Area	1334	SPRUCE
Greater Bay Area	1335	WALDO
Greater Bay Area	1338	WOOD
Greater Bay Area	1343	FAIRVIEW
Greater Bay Area	1346	SAN_LORENZO
Greater Bay Area	1347	RICHMOND_R
Greater Bay Area	1348	ESTUDILLO
Greater Bay Area	1350	JARVIS
Greater Bay Area	1352	MAPLE
Greater Bay Area	1353	LAKESWOOD
Greater Bay Area	1355	GILL
Greater Bay Area	1356	SARANAP
Greater Bay Area	1358	ROBLES
Greater Bay Area	1359	GEARY
Greater Bay Area	1360	LAS_AROMAS
Greater Bay Area	1365	CONTRA_COSTA
Greater Bay Area	1366	PARSONS
Greater Bay Area	1368	EDES
Greater Bay Area	1370	ARLINGTON
Greater Bay Area	1373	ORIOLE
Greater Bay Area	1374	WALL
Greater Bay Area	1375	VASCO
Greater Bay Area	1376	MT_EDEN
Greater Bay Area	1378	VIRGINIA
Greater Bay Area	1380	MORAGA
Greater Bay Area	1381	WAYNE
Greater Bay Area	1384	STUART
Greater Bay Area	1385	BABEL
Greater Bay Area	1391	WILLOW_PASS
Greater Bay Area	1392	FRANKLIN
Greater Bay Area	1405	NORTH_DUBLIN
Greater Bay Area	1409	CASTRO_VALLEY
Greater Bay Area	1410	ALHAMBRA
Greater Bay Area	1416	ROSSMOOR
Greater Bay Area	1423	SAN_RAMON
Greater Bay Area	1424	SUNOL
Greater Bay Area	1426	POINT_PINOLE
Greater Bay Area	1430	MEADOW_LANE
Greater Bay Area	1432	BALFOUR

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Bay Area	1434	VALLEY_VIEW
Greater Bay Area	1435	FREMONT
Greater Bay Area	1437	SAN_PABLO
Greater Bay Area	1438	GRANT
Greater Bay Area	1440	LAS_POSITAS
Greater Bay Area	1442	CAYETANO
Greater Bay Area	1445	KIRKER
Greater Bay Area	1447	DUMBARTON
Greater Bay Area	1450	VINEYARD
Greater Bay Area	1459	BRENTWOOD
Greater Bay Area	1465	TIDEWATER
Greater Bay Area	1466	TASSAJARA
Greater Bay Area	1467	SOBRANTE
Greater Bay Area	1469	RESEARCH
Greater Bay Area	1472	DIXON_LANDING
Greater Bay Area	1809	MCAVOY_TAP
Greater Bay Area	1810	SHORE_ACRES_BANK
Greater Bay Area	1812	PIPER_BANK
Greater Bay Area	1815	BETHEL_BANK
Greater Bay Area	1832	JERSEY_ISLAND
Greater Bay Area	2201	SF_X
Greater Bay Area	2203	SF_A
Greater Bay Area	2207	SF_E
Greater Bay Area	2209	SF_G
Greater Bay Area	2210	SF_H
Greater Bay Area	2213	SF_K
Greater Bay Area	2222	SF_J
Greater Bay Area	2226	SF_L
Greater Bay Area	2227	SF_M
Greater Bay Area	2228	SF_N
Greater Bay Area	2233	SF_P
Greater Bay Area	2234	SF_Q
Greater Bay Area	2239	18TH_STREET
Greater Bay Area	2240	JUDAH
Greater Bay Area	2244	LAWNDALE
Greater Bay Area	2247	ACTON
Greater Bay Area	2248	CASTRO
Greater Bay Area	2249	YOSEMITE
Greater Bay Area	2250	TARAVAL
Greater Bay Area	2251	NORIEGA
Greater Bay Area	2253	6TH_AVENUE
Greater Bay Area	2255	21ST_AVENUE
Greater Bay Area	2257	EAST_GRAND

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Bay Area	2258	OCEAN
Greater Bay Area	2259	RANDOLPH
Greater Bay Area	2260	WESTLAKE
Greater Bay Area	2261	PORTOLA
Greater Bay Area	2264	DALY_CITY
Greater Bay Area	2265	DALY_CITY_UNIT_SUB
Greater Bay Area	2267	SILVER
Greater Bay Area	2268	PLYMOUTH
Greater Bay Area	2269	MILLBRAE
Greater Bay Area	2270	SAN_BRUNO
Greater Bay Area	2272	SNEATH_LANE
Greater Bay Area	2278	MARINA
Greater Bay Area	2280	SF_Y
Greater Bay Area	2281	PACIFICA
Greater Bay Area	2285	SULLIVAN
Greater Bay Area	2286	SERRAMONTE
Greater Bay Area	2287	SF_Z
Greater Bay Area	2289	BAYSHORE
Greater Bay Area	2401	BAY_MEADOWS
Greater Bay Area	2402	BELL_HAVEN
Greater Bay Area	2403	BELMONT
Greater Bay Area	2404	BERESFORD
Greater Bay Area	2405	BURLINGAME
Greater Bay Area	2406	CAROLANDS
Greater Bay Area	2408	EMERALD_LAKE
Greater Bay Area	2409	GLENWOOD
Greater Bay Area	2410	HALF_MOON_BAY
Greater Bay Area	2411	HILLSDALE
Greater Bay Area	2412	LAS_PULGAS
Greater Bay Area	2413	MENLO
Greater Bay Area	2414	RALSTON
Greater Bay Area	2416	REDWOOD_CITY
Greater Bay Area	2418	SAN_CARLOS
Greater Bay Area	2419	SAN_MATEO
Greater Bay Area	2424	WATERSHED
Greater Bay Area	2425	WOODSIDE
Greater Bay Area	2426	BAIR
Greater Bay Area	8201	EVERGREEN
Greater Bay Area	8202	LOS_GATOS
Greater Bay Area	8203	MOUNTAIN_VIEW
Greater Bay Area	8216	LOYOLA
Greater Bay Area	8219	MABURY
Greater Bay Area	8224	LOS_ALTOS

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Bay Area	8225	SAN_JOSE_A
Greater Bay Area	8226	SAN_JOSE_B
Greater Bay Area	8231	ALMADEN
Greater Bay Area	8234	RIVER_OAKS
Greater Bay Area	8246	NORTECH
Greater Bay Area	8283	MILPITAS
Greater Bay Area	8292	EL_PATIO
Greater Bay Area	8295	EDENVALE
Greater Bay Area	8300	LOCKHEED NO.2
Greater Bay Area	8318	LLAGAS
Greater Bay Area	8324	MORGAN_HILL
Greater Bay Area	8337	SARATOGA
Greater Bay Area	8339	SWIFT
Greater Bay Area	8342	LAWRENCE
Greater Bay Area	8343	HICKS
Greater Bay Area	8348	STELLING
Greater Bay Area	8353	MC_KEE
Greater Bay Area	8361	BRITTON
Greater Bay Area	8363	WHISMAN
Greater Bay Area	8367	WOLFE
Greater Bay Area	8370	STONE
Greater Bay Area	8377	VASONA
Greater Bay Area	8380	TRIMBLE
Greater Bay Area	8387	FMC
Greater Bay Area	8389	MONTAGUE
Greater Bay Area	8390	AMES
Greater Bay Area	8391	PIERCY
Greater Fresno Area	25204	AIRWAYS
Greater Fresno Area	25205	ASHLAN_AVE
Greater Fresno Area	25215	ANGIOLA
Greater Fresno Area	25216	COALINGA_NO_1
Greater Fresno Area	25217	CORCORAN
Greater Fresno Area	25221	BIOLA
Greater Fresno Area	25224	KINGSBURG
Greater Fresno Area	25228	CALIFORNIA_AVE
Greater Fresno Area	25229	PARLIER
Greater Fresno Area	25230	CAMDEN
Greater Fresno Area	25234	REEDLEY
Greater Fresno Area	25235	SANGER
Greater Fresno Area	25236	SAN_JOAQUIN
Greater Fresno Area	25237	CARUTHERS
Greater Fresno Area	25238	COALINGA_NO_2
Greater Fresno Area	25241	COPPERMINE

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Fresno Area	25250	BALCH_NO_1
Greater Fresno Area	25256	KERCKHOFF
Greater Fresno Area	25266	GUERNSEY
Greater Fresno Area	25268	HENRIETTA
Greater Fresno Area	25270	KEARNEY
Greater Fresno Area	25271	KERMAN
Greater Fresno Area	25273	KETTLEMAN_HILLS
Greater Fresno Area	25284	OROSI
Greater Fresno Area	25285	PINEDALE
Greater Fresno Area	25289	SCHINDLER
Greater Fresno Area	25292	STONE_CORRAL
Greater Fresno Area	25294	TIVY_VALLEY
Greater Fresno Area	25295	TULARE_LAKE
Greater Fresno Area	25315	GIFFEN
Greater Fresno Area	25316	HURON
Greater Fresno Area	25344	CALFLAX
Greater Fresno Area	25345	DEVILS_DEN
Greater Fresno Area	25353	BOWLES
Greater Fresno Area	25357	BARTON
Greater Fresno Area	25359	CANTUA
Greater Fresno Area	25360	LEMOORE
Greater Fresno Area	25366	STROUD
Greater Fresno Area	25371	HARDWICK
Greater Fresno Area	25373	WEST_FRESNO
Greater Fresno Area	25392	MANCHESTER
Greater Fresno Area	25393	GATES
Greater Fresno Area	25396	BULLARD
Greater Fresno Area	25400	ALPAUGH
Greater Fresno Area	25406	DUNLAP
Greater Fresno Area	25408	CLOVIS
Greater Fresno Area	25409	DINUBA
Greater Fresno Area	25412	MC_CALL
Greater Fresno Area	25415	AUBERRY
Greater Fresno Area	25418	RESERVE_OIL
Greater Fresno Area	25425	MALAGA
Greater Fresno Area	25441	MC_MULLIN
Greater Fresno Area	25444	RAINBOW
Greater Fresno Area	25453	WAHTOKE
Greater Fresno Area	25455	FIGARDEN
Greater Fresno Area	25460	SAND_CREEK
Greater Fresno Area	25477	JACOBS_CORNER
Greater Fresno Area	25480	RANCHERS_COTTON
Greater Fresno Area	25491	WOODCHUCK

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Greater Fresno Area	25492	LAS_PALMAS
Greater Fresno Area	25494	BOSWELL
Greater Fresno Area	25500	AVENAL
Greater Fresno Area	25525	RIVER_ROCK
Greater Fresno Area	25529	WOODWARD
Greater Fresno Area	25859	TULE_POWER_HOUSE
Greater Fresno Area	25888	SO._CAL._EDISON
Humboldt	4214	CLEAR_LAKE
Humboldt	4225	HOPLAND
Humboldt	4228	POTTER_VALLEY_P_H
Humboldt	4260	PHILO
Humboldt	4266	WILLITS
Humboldt	4268	LAYTONVILLE
Humboldt	4276	FORT_BRAGG_A
Humboldt	4277	UKIAH
Humboldt	4284	GUALALA
Humboldt	4286	ANNAPOLIS
Humboldt	4287	UPPER_LAKE
Humboldt	4295	MENDOCINO
Humboldt	4298	ELK
Humboldt	4304	GARCIA
Humboldt	4306	COVELO
Humboldt	4308	BIG_RIVER
Humboldt	4314	MIDDLETOWN
Humboldt	4319	REDBUD
Humboldt	4321	HARTLEY
Humboldt	4331	KONOCTI
Humboldt	4335	LUCERNE
Humboldt	4336	HIGHLANDS
Humboldt	4338	POINT_ARENA
Humboldt	4341	CALPELLA
Humboldt	19202	ARCATA
Humboldt	19210	MAPLE_CREEK
Humboldt	19212	EUREKA_A
Humboldt	19215	NEWBURG
Humboldt	19217	WILLOW_CREEK
Humboldt	19218	BLUE_LAKE
Humboldt	19222	GARBERVILLE
Humboldt	19223	TRINIDAD
Humboldt	19225	RIO_DELL
Humboldt	19226	ORICK
Humboldt	19229	CARLOTTA
Humboldt	19231	FRUITLAND

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Humboldt	19232	FORT_SEWARD
Humboldt	19233	STATION E EUREKA
Humboldt	19234	HUMBOLDT_BAY
Humboldt	19236	BIG_LAGOON
Humboldt	19238	EEL_RIVER
Humboldt	19239	JANES_CREEK
Humboldt	19240	HOOPA
Humboldt	19241	LOW_GAP
Humboldt	19243	HARRIS
Humboldt	19245	FAIRHAVEN
Humboldt	19246	BRIDGEVILLE
Humboldt	19247	RUSS_RANCH
Kern	25202	ANTELOPE
Kern	25208	TAFT
Kern	25232	CARNERAS
Kern	25244	ELK_HILLS
Kern	25246	FAMOSO
Kern	25255	TEMBLOR
Kern	25261	MIDWAY
Kern	25272	KERN_OIL
Kern	25277	MAGUNDEN
Kern	25278	MCKITTRICK
Kern	25282	OLD_RIVER
Kern	25286	RIO_BRAVO
Kern	25290	SEMITROPIC
Kern	25293	TEJON
Kern	25296	WASCO
Kern	25297	WEEDPATCH
Kern	25314	CUYAMA
Kern	25318	MC_FARLAND
Kern	25319	SAN_BERNARD
Kern	25337	BAKERSFIELD
Kern	25339	FRUITVALE
Kern	25341	LAKEVIEW
Kern	25342	PANAMA
Kern	25346	CARRIZO_PLAINS
Kern	25348	WHEELER_RIDGE
Kern	25349	LERDO
Kern	25355	SMYRNA
Kern	25364	POSO_MOUNTAIN
Kern	25365	SHAFTER
Kern	25370	WESTPARK
Kern	25380	ARVIN

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Kern	25387	COPUS
Kern	25391	LAMONT
Kern	25395	COLUMBUS
Kern	25407	STOCKDALE
Kern	25420	GOOSE_LAKE
Kern	25421	MARICOPA
Kern	25424	FELLOWS
Kern	25429	WELLFIELD
Kern	25437	BELRIDGE_1A
Kern	25440	TWISSELMAN
Kern	25448	BERRENDA_C
Kern	25450	CHARCA
Kern	25451	TECUYA
Kern	25454	GANSO
Kern	25456	TUPMAN
Kern	25457	RENFRO
Kern	25458	7TH_STANDARD
Kern	25468	BLACKWELL
Kern	25469	NORCO
Kern	25476	ROSEDALE
Kern	25482	CADET
Kern	25493	GARDNER
Kern	25526	KERN_POWER
Kern	25527	CELERON
Kern	25528	CARNATION
Kern	25531	PENTLAND
Kern	25532	TEVIS
Kern	25542	TEXACO_EMIDIO
Kern	25544	PACIFIC_PIPE_GRAPEVINE
Kern	25545	CAL_WATER
Kern	25811	SCE_MCFARLAND
Kern	25813	SCE_TEHACHAPI
North Coast and North Bay	4201	SAN_RAFAEL
North Coast and North Bay	4202	NAPA
North Coast and North Bay	4203	ALTO
North Coast and North Bay	4204	NORTH_TOWER
North Coast and North Bay	4205	PARKWAY
North Coast and North Bay	4209	MIRABEL
North Coast and North Bay	4212	PETALUMA_A
North Coast and North Bay	4215	SANTA_ROSA_A
North Coast and North Bay	4221	NOVATO
North Coast and North Bay	4226	BOLINAS
North Coast and North Bay	4227	COTATI

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
North Coast and North Bay	4229	OLEMA
North Coast and North Bay	4230	TULUCAY
North Coast and North Bay	4245	VALLEJO_B
North Coast and North Bay	4246	BASALT
North Coast and North Bay	4248	IGNACIO
North Coast and North Bay	4249	SAUSALITO
North Coast and North Bay	4255	VALLEJO_C
North Coast and North Bay	4256	FULTON
North Coast and North Bay	4257	MOLINO
North Coast and North Bay	4263	PETALUMA_C
North Coast and North Bay	4265	HIGHWAY
North Coast and North Bay	4271	CALISTOGA
North Coast and North Bay	4272	SONOMA
North Coast and North Bay	4275	FITCH_MOUNTAIN
North Coast and North Bay	4281	MONTE_RIO
North Coast and North Bay	4282	CLOVERDALE
North Coast and North Bay	4285	FORT_ROSS
North Coast and North Bay	4289	GEYSERVILLE
North Coast and North Bay	4299	LAS_GALLINAS_A
North Coast and North Bay	4302	WOODACRE
North Coast and North Bay	4305	MONTICELLO
North Coast and North Bay	4307	DUNBAR
North Coast and North Bay	4309	GREENBRAE
North Coast and North Bay	4315	TOCALOMA
North Coast and North Bay	4316	SALMON_CREEK
North Coast and North Bay	4318	BELLEVUE
North Coast and North Bay	4320	STAFFORD
North Coast and North Bay	4325	BAHIA
North Coast and North Bay	4328	CARQUINEZ
North Coast and North Bay	4329	PUEBLO
North Coast and North Bay	4330	MONROE
North Coast and North Bay	4332	RINCON
North Coast and North Bay	4334	SKAGGS_ISLAND
North Coast and North Bay	4337	LAKEVILLE
North Coast and North Bay	4343	SILVERADO
North Coast and North Bay	4347	PENNGROVE
North Coast and North Bay	4349	CORONA
North Coast and North Bay	4801	CALPINE
Other	6202	COLUSA
Other	6203	WOODLAND
Other	6204	DAVIS
Other	6205	WILLIAMS
Other	6206	DIXON

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	6207	COLUSA_JUNCTION
Other	6208	ARBUCKLE
Other	6213	SUISUN
Other	6246	GRAND_ISLAND
Other	6254	MERIDIAN
Other	6270	CORDELIA
Other	6272	KNIGHTS_LANDING
Other	6277	WILKINS_SLOUGH
Other	6283	RICE
Other	6288	MAXWELL
Other	6312	CORTINA
Other	6313	WEST_SACRAMENTO
Other	6314	RUSSELL_(SMUD)
Other	6317	MADISON
Other	6319	ZAMORA
Other	6332	WINTERS
Other	6344	PLAINFIELD
Other	6359	VACA_DIXON
Other	6360	VACAVILLE
Other	6362	DEEPWATER
Other	6364	PEABODY
Other	6368	PUTAH_CREEK
Other	6380	JAMESON
Other	6381	DUNNIGAN
Other	6866	BATAVIA
Other	6867	MAINE_PRAIRIE
Other	8284	BIG_BASIN
Other	8293	POINT_MORETTI
Other	8301	ARANA
Other	8304	BEN_LOMOND
Other	8305	BIG_TREES
Other	8311	CASSERLY
Other	8314	FELTON
Other	8319	GREEN_VALLEY
Other	8323	CLIFF_DRIVE
Other	8325	PAUL_SWEET
Other	8326	RIO_DEL_MAR
Other	8330	SOQUEL
Other	8333	WATSONVILLE
Other	8345	OPAL_CLIFFS
Other	8350	SEACLIFF
Other	8351	ERTA
Other	8362	CAMP_EVERS

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	8369	ROB_ROY
Other	8375	ROLAND
Other	8882	COAST_RD.
Other	8887	QUARRY_RD.
Other	10132	PIT_NO_5
Other	10202	CENTERVILLE
Other	10204	NOTRE_DAME
Other	10205	CHICO_A
Other	10211	CAPAY
Other	10212	HAMILTON_A
Other	10217	ESQUON
Other	10221	BUCKS_CREEK
Other	10236	HAMILTON_BRANCH
Other	10249	CHICO_B
Other	10252	OROVILLE
Other	10253	GRAYS_FLAT
Other	10254	VOLTA
Other	10255	EAST_QUINCY
Other	10260	GLENN
Other	10265	CHICO_C
Other	10270	ORLAND_B
Other	10274	WILLOWS_A
Other	10278	ELK_CREEK
Other	10281	BIG_MEADOWS
Other	10283	PARADISE
Other	10284	ANITA
Other	10285	JACINTO
Other	10291	WYANDOTTE
Other	10293	COTTONWOOD
Other	10294	DAYTON_ROAD
Other	10297	SYCAMORE_CREEK
Other	10302	GANSNER
Other	10303	ORO_FINO
Other	10307	NORD
Other	10308	BUTTE
Other	10309	CLARK_ROAD
Other	10310	SPANISH_CREEK
Other	10313	CRESCENT_MILLS
Other	10314	LOGAN_CREEK
Other	10318	CHESTER
Other	10319	BANGOR
Other	10320	CHALLENGE
Other	10321	HONCUT

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	10322	KANAKA
Other	10324	PEACHTON
Other	10325	TRES_VIAS
Other	10326	ANDERSON
Other	10327	ANTLER
Other	10330	BOGARD
Other	10331	BURNEY
Other	10332	CEDAR_CREEK
Other	10333	CORNING
Other	10334	DAIRYVILLE
Other	10335	DESCHUTES
Other	10338	FRENCH_GULCH
Other	10339	GERBER
Other	10340	GIRVAN
Other	10344	JESSUP
Other	10345	KESWICK
Other	10346	PANORAMA
Other	10348	LOS_MOLINOS
Other	10349	MC_ARTHUR
Other	10350	PIT_NO_7
Other	10352	OREGON_TRAIL
Other	10353	RAWSON
Other	10354	RED_BLUFF
Other	10355	RISING_RIVER
Other	10356	STILLWATER
Other	10357	TYLER
Other	10358	VINA
Other	10360	WHITMORE
Other	10361	WILDWOOD
Other	10372	PIT_NO_1
Other	10373	PIT_NO_3
Other	16267	WESTLEY
Other	16274	NEWMAN
Other	16283	SPRING_GAP
Other	16298	VALLEY_HOME
Other	16311	GUSTINE
Other	16316	PINECREST
Other	16319	RIVERBANK
Other	16324	TAR_FLAT
Other	16325	CROWS_LANDING
Other	16335	CURTIS
Other	16366	MIWUK
Other	16371	COTTLE

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	16376	RACETRACK
Other	16378	PEORIA FLAT
Other	18201	SALINAS
Other	18203	KING_CITY
Other	18204	CARMEL
Other	18205	SOLEDAD
Other	18206	FAIRWAY
Other	18207	CAMPORA
Other	18208	LOS_OSITOS
Other	18209	MONTEREY
Other	18213	GONZALES
Other	18215	LOS_COCHES
Other	18219	SAN_ARDO
Other	18220	SPENCE
Other	18222	DEL_MONTE
Other	18226	BUENA_VISTA
Other	18229	HATTON
Other	18230	INDUSTRIAL_ACRES
Other	18233	GABILAN
Other	18235	CASTROVILLE
Other	18237	LAURELES
Other	18238	DOLAN_ROAD
Other	18239	OILFIELDS
Other	18240	FORT_ORD
Other	18244	PACIFIC_GROVE
Other	18246	BORONDA
Other	18249	HOLLISTER
Other	18254	ATASCADERO
Other	18255	CAYUCOS
Other	18256	CHOLAME
Other	18257	DIVIDE
Other	18258	GOLDTREE
Other	18260	OCEANO
Other	18261	PASO_ROBLES
Other	18263	SAN_LUIS_OBISPO
Other	18266	SAN_MIGUEL
Other	18267	SANTA_MARIA
Other	18268	ZACA
Other	18272	SANTA_YNEZ
Other	18273	RESERVATION_ROAD
Other	18274	SAN_BENITO
Other	18277	CAMBRIA
Other	18280	BAYWOOD

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	18281	SISQUOC
Other	18282	MESA
Other	18285	VIEJO
Other	18294	OTTER
Other	18295	FOOTHILL
Other	18296	PRUNEDALE
Other	18297	PURISIMA
Other	18298	JOLON
Other	18301	MORRO_BAY
Other	18303	PALMER
Other	18304	BUELLTON
Other	18305	TEMPLETON
Other	18307	PERRY
Other	18310	CABRILLO
Other	25151	WISHON
Other	25209	CANAL
Other	25219	BEAR_VALLEY
Other	25226	LIVINGSTON
Other	25231	MENDOTA
Other	25242	DAIRYLAND
Other	25245	EL_NIDO
Other	25252	SAN_JOAQUIN_#2_PH
Other	25253	SAN_JOAQUIN_#3_PH
Other	25269	INDIAN_FLAT
Other	25276	MADERA
Other	25280	MERCED
Other	25281	MERCED_FALLS
Other	25340	HAMMONDS
Other	25347	FIREBAUGH
Other	25354	SANTA_RITA
Other	25361	ATWATER
Other	25388	EL_CAPITAN
Other	25398	EL_PECO
Other	25404	DOS_PALOS
Other	25405	SANTA_NELLA
Other	25410	CHOWCHILLA
Other	25427	CASSIDY
Other	25430	WILSON
Other	25431	ORTIGA
Other	25442	OAKHURST
Other	25443	COARSEGOLD
Other	25445	MARIPOSA
Other	25446	NEWHALL

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Other	25461	STOREY
Other	25464	WRIGHT
Other	25470	CRESSEY
Other	25490	GALLO
Other	25512	BORDEN
Other	25536	LE_GRAND
Other	25537	ORO_LOMA
Other	25539	BONITA
Other	25885	SO._CAL._EDISON_#2
Other	25886	SO._CAL._EDISON_#3
Sierra	15201	MARYSVILLE
Sierra	15203	GRASS_VALLEY
Sierra	15206	ROCKLIN
Sierra	15210	ALLEGHANY
Sierra	15211	BARRY
Sierra	15215	EAST_NICOLAUS
Sierra	15216	AUBURN
Sierra	15218	FORESTHILL
Sierra	15220	PIKE_CITY
Sierra	15224	HALSEY
Sierra	15225	SPAULDING
Sierra	15226	DIAMOND_SPRINGS
Sierra	15227	WISE
Sierra	15228	MOUNTAIN_QUARRIES
Sierra	15229	TAMARACK
Sierra	15230	BONNIE_NOOK
Sierra	15232	DRUM
Sierra	15233	EAST_MARYSVILLE
Sierra	15243	SHADY_GLEN
Sierra	15244	PLEASANT_GROVE
Sierra	15246	PLACER
Sierra	15247	COLUMBIA_HILL
Sierra	15248	BRUNSWICK
Sierra	15249	WEIMAR
Sierra	15253	FLINT
Sierra	15256	PENRYN
Sierra	15257	HORSESHOE
Sierra	15258	DEL_MAR
Sierra	15259	SUMMIT
Sierra	15269	HIGGINS
Sierra	15270	BELL
Sierra	15276	EL_DORADO_PH
Sierra	15281	WHEATLAND

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Sierra	15285	HARTER
Sierra	15290	OLIVEHURST
Sierra	15292	BROWNS_VALLEY
Sierra	15308	PLACERVILLE
Sierra	15313	NARROWS
Sierra	15361	CLARKSVILLE
Sierra	15365	SHINGLE_SPRINGS
Sierra	15366	APPLE_HILL
Sierra	15370	LINCOLN
Sierra	15371	TUDOR
Sierra	15373	PLUMAS
Sierra	15374	DOBBINS
Sierra	15375	PEASE
Sierra	15376	CATLETT
Sierra	15377	LIVE_OAK
Sierra	15378	BOGUE
Sierra	15379	SMARTVILLE
Sierra	15803	ECHO_SUMMIT
Stockton	16138	TIGER_CREEK
Stockton	16207	LINDEN
Stockton	16208	NEW_HOPE
Stockton	16209	MIDDLE_RIVER
Stockton	16211	LODI
Stockton	16216	ELECTRA
Stockton	16221	CALAVERAS_CEMENT
Stockton	16223	COLONY
Stockton	16230	MONARCH
Stockton	16237	STOCKTON_A
Stockton	16242	STAGG
Stockton	16247	BANTA
Stockton	16261	MANTECA
Stockton	16270	VIERRA
Stockton	16277	LAMMERS
Stockton	16282	STANISLAUS
Stockton	16288	TRACY
Stockton	16299	CORRAL
Stockton	16301	MARTELL
Stockton	16302	TERMINOUS
Stockton	16307	CHANNEL
Stockton	16308	ROUGH_AND_READY_ISL
Stockton	16309	CARBONA
Stockton	16312	COUNTRY_CLUB
Stockton	16313	EAST_STOCKTON

TABLE 1.1(b) (CONT'D)

Local Capacity Area	Substation_cd	Substation Description
Stockton	16315	WATERLOO
Stockton	16320	WEST_POINT
Stockton	16321	MORMON
Stockton	16322	STOCKTON_ACRES
Stockton	16323	NORTH_BRANCH
Stockton	16327	OAK_PARK
Stockton	16328	VICTOR
Stockton	16329	FRENCH_CAMP
Stockton	16330	HAMMER
Stockton	16331	HARDING
Stockton	16334	CLAY
Stockton	16345	FROGTOWN
Stockton	16348	WEBER
Stockton	16354	OLETA
Stockton	16356	ALPINE
Stockton	16357	AVENA
Stockton	16362	WEST_LANE
Stockton	16365	CHEROKEE
Stockton	16368	LOCKEFORD
Stockton	16369	SALT_SPRINGS
Stockton	16370	METTLER
Stockton	16372	MOSHER
Stockton	16374	HERDLYN
Stockton	16375	PINE_GROVE
Stockton	16380	RIPON
Stockton	16388	IONE
Stockton	16391	EIGHT_MILE
Stockton	16888	TOKAY

CONFIDENTIAL PROTECTED MATERIAL
Submitted Pursuant to PUC section 583,
confidential pursuant to D.06-06-066,
IOU Matrix, Sections VII, B), and VIII, B)

Confidential Appendix F
Executed 2018-2019 DRAM Purchase
Agreements

Appendix G

Confidentiality Declaration and Matrix

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Enhance
the Role of Demand Response in Meeting
the State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed: September 19, 2013)

**DECLARATION OF AutoGrid Systems, Inc
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE AUTOGRID
SYSTEMS, INC. 2018-2019 DRAM CONTRACT**

I, Amit Narayan, declare as follows:

1. I submit this Declaration in support of continuing treatment for AutoGrid Systems, Inc.'s (AutoGrid's) 2018-2019 Demand Response Auction Mechanism (DRAM) contract with Pacific Gas and Electric Company (PG&E). I have personal knowledge of the matters set forth herein, and could and would competently testify truthfully thereto.

2. I am the Chief Executive Officer for AutoGrid. My business address is 255 Shoreline Drive, Suite 350, Redwood City, CA 94065, I have been employed by AutoGrid since 2011. My responsibilities in that position include the representation of AutoGrid before regulatory agencies in California on energy regulatory matters. I represent AutoGrid before the California Public Utilities Commission (CPUC) on matters affecting demand response resources in California. I submit comments, testimony, participate in workshops, hearings and all other forms of proceeding to reflect AutoGrid's views on various energy policy issues related to AutoGrid's demand response resource interests in the State.

3. AutoGrid bid into PG&E's DRAM III auction for 2018-2019, and was awarded a DRAM III contract. In accordance with the DRAM III protocols, AutoGrid has executed a DRAM contract with PG&E.

4. On information and believe, AutoGrid states that the AutoGrid DRAM III contract will be filed with the PG&E advice letter to request Commission approval of the AutoGrid DRAM III contract.

5. The information in the AutoGrid DRAM III contract (and the PG&E advice letter) on the monthly kW, prices, contract term, and the type of product (residential/non-residential), are sensitive, competitive, confidential market information for AutoGrid.

6. AutoGrid is actively participating in California's Demand Response programs with PG&E and other California load serving entities. Public release of commercially sensitive information such as the number of megawatts or kilowatt hours, product types, term, associated pricing, etc., would be detrimental to AutoGrid as we engage in market activity to offer aggregated demand response portfolio services to various load serving entities or directly into the CAISO markets. Public access to AutoGrid's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position AutoGrid relative to other aggregators who could use AutoGrid's sensitive market information to their own advantage.

7. Based on my knowledge and experience, I make this declaration to request the Commission to grant confidential treatment for the AutoGrid DRAM III contract, until two years after the final extension of the contract expires.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in Redwood City, CA, on **June 23, 2017**.



(Signature)

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Enhance
the Role of Demand Response in Meeting
the State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed: September 19, 2013)

**DECLARATION OF EnerNOC Inc
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE ENERNOC,
INC. 2018-2019 DRAM CONTRACT**

I, Michael Berdik, declare as follows:

1. I submit this Declaration in support of continuing treatment for EnerNOC's, Inc. (EnerNOC's) 2018-2019 Demand Response Auction Mechanism (DRAM) contract with Pacific Gas and Electric Company (PG&E). I have personal knowledge of the matters set forth herein, and could and would competently testify truthfully thereto.

2. I am the Vice President, General Counsel for EnerNOC. My business address is 1 Marina Park Drive, Suite 400, Boston, MA 02210, I have been employed by EnerNOC since 2008. My responsibilities in that position include managing the day-to-day legal operations of EnerNOC. I am aware of EnerNOC's participation in the DRAM III Auction and the subsequent award to EnerNOC by PG&E.

3. EnerNOC bid into PG&E's DRAM III auction for 2018-2019, and was awarded a DRAM III contract. In accordance with the DRAM III protocols, EnerNOC has executed a DRAM contract with PG&E.

4. It is EnerNOC's understanding that the EnerNOC DRAM III contract will be filed with the PG&E advice letter to request Commission approval of the EnerNOC DRAM III contract.

5. The information in the EnerNOC DRAM III contract (and the PG&E advice letter) on the monthly kW's, prices, contract term, and the specific attributes of the product

procured by PG&E, are sensitive, competitive, confidential market information for EnerNOC. However, EnerNOC does not object to aggregated results of the DRAM III auction for all DRAM III Sellers being released, to the extent the released information is consistent with the CPUC's rules on privacy and aggregated data release, and does not reveal individual aggregators' market-sensitive, specific information.

6. EnerNOC is actively participating in California's Demand Response programs with PG&E and other California load serving entities. Public release of commercially sensitive information such as the number of megawatts or kilowatt hours, product types, term, associated pricing, etc., would be detrimental to EnerNOC as we engage in market activity to offer aggregated demand response portfolio services to various load serving entities or directly into the CAISO markets. Public access to EnerNOC's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position EnerNOC relative to other aggregators who could use EnerNOC's sensitive market information to their own advantage.

7. Based on my knowledge and experience, I make this declaration to request the Commission to grant confidential treatment for the EnerNOC DRAM III contract, until two years after the final extension of the contract expires.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in Boston, MA, on June 26, 2017.

DocuSigned by:
Michael Berdik
C2142C55B79442D...

(Signature)

**DECLARATION SUPPORTING
CONFIDENTIAL DESIGNATION
ON BEHALF OF
PACIFIC GAS AND ELECTRIC COMPANY**

1. I, Brooke Reilly, Director, Demand Response and Data Platforms, of Pacific Gas and Electric Company (“PG&E”), a California corporation. Aaron Johnson, the Vice President, Customer Energy Solutions, delegated authority to me to sign this declaration. My business office is located at:

Pacific Gas and Electric Company
245 Market Street
Mailstop N3F
San Francisco, CA 94105

2. PG&E will produce the information identified in paragraph 2 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): R.13-09-011

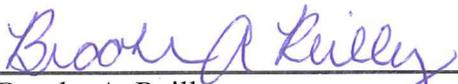
Title and description of document(s): PG&E Advice Letter 5109-E, PG&E’s 2018-2019 Demand Response Auction Mechanism Purchase Agreements.

3. 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
<input type="checkbox"/>	<p>Customer-specific data, which may include demand, loads, names, addresses, and billing data</p> <p>(Protected under PUC § 8380; Civ. Code §§ 1798 <i>et seq.</i>; Govt. Code § 6254; Public Util. Code § 8380; Decisions (D.) 14-05-016, 04-08-055, 06-12-029; and General Order (G.O.) 77-M)</p>	N/A
<input type="checkbox"/>	<p>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</p> <p>(Protected under Civ. Code §§ 1798 <i>et seq.</i> and G.O. 66-C)</p>	N/A
<input type="checkbox"/>	<p>Physical facility or cyber-security sensitive data or critical energy infrastructure information (CEII), as defined by the regulations of the Federal Energy Regulatory Commission at 18 C.F.R. § 388.113</p> <p>(Protected under Govt Code § 6254(k), (ab); 6 U.S.C. § 131; 6 CFR §29.2)</p>	N/A
<input type="checkbox"/>	<p>Accident reports</p> <p>(Protected under PUC § 315 and G.O. 66-C, 2.1)</p>	N/A
<input checked="" type="checkbox"/>	<p>Commercial records that, if revealed, would place PG&E at an unfair business disadvantage, including market-sensitive data; business plans and strategies; long-term fuel buying and hedging plans; price, load, or demand forecasts; power purchase agreements within three years of execution; and internal financial information</p> <p>(Protected under Govt Code §§ 6254, 6276.44; Evid Code § 1060; Civ. Code § 3426 <i>et seq.</i>; and G.O. 66-C, 2.2 (b)) and IOU Matrix, Appendix 1 to D.16-06-066.</p>	See attached Confidentiality Matrix
<input type="checkbox"/>	<p>Proprietary and trade secret information or other intellectual property</p> <p>(Protected under Civ. Code § 3426 <i>et seq.</i>; Govt Code § 6254.15)</p>	N/A

<input type="checkbox"/>	Corporate financial records (Protected under Govt Code § 6254.15)	N/A
<input checked="" type="checkbox"/>	Third-Party information subject to non-disclosure or confidentiality agreements (<i>See, eg., D.11-01-036</i>)	See attached Confidentiality Matrix
<input type="checkbox"/>	Other basis:	

4. 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.
5. I declare under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.
6. Executed on this 30th day of June, 2017 at San Francisco, California.



 Brooke A. Reilly,
 Director, Demand Response and Data
 Platforms,
 Pacific Gas and Electric Company

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Enhance
the Role of Demand Response in Meeting
the State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed: September 19, 2013)

**DECLARATION OF Sunrun Inc
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE SUNRUN INC.
2018-2019 DRAM CONTRACT**

I, Alexander McDonough, declare as follows:

1. I submit this Declaration in support of treatment for Sunrun Inc.'s (Sunrun's) 2018-2019 Demand Response Auction Mechanism (DRAM) contract with Pacific Gas and Electric Company (PG&E). I have personal knowledge of the matters set forth herein, and could and would competently testify truthfully thereto.

2. I am the Vice President, Public Policy for Sunrun. My business address is 595 Market Street, 29th Floor, San Francisco, CA 94105. I have been employed by Sunrun since January, 2017. My responsibilities in that position include managing Sunrun's approach on energy regulatory matters in California including matters affecting demand response resources. I, my team and outside counsel submit comments, testimony, participate in workshops, hearings and all other forms of proceeding to reflect Sunrun's views on various energy policy issues related to Sunrun's demand response resource interests in the State.

3. Sunrun bid into PG&E's DRAM III auction for 2018-2019, and was awarded a DRAM III contract. In accordance with the DRAM III protocols, Sunrun has executed a DRAM contract with PG&E.

4. On information and belief, Sunrun states that the Sunrun DRAM III contract will be filed with the PG&E advice letter to request Commission approval of the Sunrun DRAM III contract.

5. The information in the Sunrun DRAM III contract (and the PG&E advice letter) on the monthly kW, prices, contract term, and the type of product (residential/non-residential), are sensitive, competitive, confidential market information for Sunrun.

6. Sunrun is actively participating in California's Demand Response programs with PG&E and is looking to enter into similar demand response programs with other California load serving entities. Public release of commercially sensitive information such as the number of megawatts or kilowatt hours, product types, term, associated pricing, etc., would be detrimental to Sunrun as we engage in market activity to offer aggregated demand response portfolio services to various load serving entities or directly into the CAISO markets. Public access to Sunrun's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Sunrun relative to other aggregators who could use Sunrun's sensitive market information to their own advantage.

7. Based on my knowledge and experience, I make this declaration to request the Commission to grant confidential treatment for the Sunrun DRAM III contract, until two years after the final extension of the contract expires.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in San Francisco, California on 6/27/17.


(Signature)

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Enhance
the Role of Demand Response in Meeting
the State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed: September 19, 2013)

**DECLARATION OF Tesla, Inc
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE TESLA INC.
2018-2019 DRAM CONTRACT**

I, Ryan Hanley, declare as follows:

1. I submit this Declaration in support of continuing treatment for Tesla, Inc.'s (Tesla's) 2018-2019 Demand Response Auction Mechanism (DRAM) contract with Pacific Gas and Electric Company (PG&E). I have personal knowledge of the matters set forth herein, and could and would competently testify truthfully thereto.

2. I am the Director of Grid Services for Tesla. My business address is 444 De Haro St, Suite 101, San Francisco, CA 94107, I have been employed by Tesla since 2016. My responsibilities in that position include the representation of Tesla before regulatory agencies in California on energy regulatory matters. I represent Tesla before the California Public Utilities Commission (CPUC) on matters affecting demand response resources in California. I submit comments, participate in workshops, hearings and all other forms of proceeding to reflect Tesla's views on various energy policy issues related to Tesla's demand response resource interests in the State.

3. Tesla bid into PG&E's DRAM III auction for 2018-2019, and was awarded a DRAM III contract. In accordance with the DRAM III protocols, Tesla has executed a DRAM contract with PG&E.

4. On information and believe, Tesla states that the Tesla DRAM III contract will be filed with the PG&E advice letter to request Commission approval of the Tesla DRAM III contract.

5. The information in the Tesla DRAM III contract (and the PG&E advice letter) on the monthly kW, prices, contract term, and the type of product (residential/non-residential), are sensitive, competitive, confidential market information for Tesla.

6. Tesla is actively participating in California's Demand Response programs with PG&E and other California load serving entities. Public release of commercially sensitive information such as the number of megawatts or kilowatt hours, product types, term, associated pricing, etc., would be detrimental to Tesla as we engage in market activity to offer aggregated demand response portfolio services to various load serving entities or directly into the CAISO markets. Public access to Tesla's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Tesla relative to other aggregators who could use Tesla's sensitive market information to their own advantage.

7. Based on my knowledge and experience, I make this declaration to request the Commission to grant confidential treatment for the Tesla DRAM III contract, until two years after the final extension of the contract expires.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in San Francisco, CA, on June 26, 2017.



(Signature)

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

DEMAND RESPONSE RULEMAKING (R.13-09-011)

ADVICE LETTER 5109-E

June 30, 2017

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 5109 -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.	<p>Appendix A provides a spreadsheet of all of the offers received in response to PG&E's 2018-19 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-listed 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.</p> <p>The spreadsheet also includes PG&E's confidential internal system, local, and flexible RA price forecasts (\$/kW-month).</p> <p>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.</p>	Three years from June 30, 2017
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	<p>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) B. of the IOU Matrix.</p> <p>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</p>	Three years from June 30, 2017

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

DEMAND RESPONSE RULEMAKING (R.13-09-011)

ADVICE LETTER 5109-E

June 30, 2017

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
	participating bids.	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 description of the types of qualitative criteria. 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: <ul style="list-style-type: none">(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 the total number of offers, the number of MW offered for each month;, distribution of the size of bids by Total Contract Cost (\$), distribution of RA types and residential/non-residential product types, and # of Service Accounts bid into the solicitation;(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; per unit cost of offers;; distribution of the size of accepted bids by Total Contract Cost (\$); and distribution of total costs of winning bids;(d) Benchmark data on RA costs will be provided including average cost of RA purchased for August, current CAISO Capacity Procurement Mechanism (CPM) cost, cost of new capacity based on the latest adopted cost effectiveness protocol. Information about the effectiveness of the DRAM protocol includes: <ul style="list-style-type: none">(e) Participants' initial ability to understand how to bid in the auction as demonstrated by the amount and types of questions raised by bidders, and	Three years from June 30, 2017

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

DEMAND RESPONSE RULEMAKING (R.13-09-011)

ADVICE LETTER 5109-E

June 30, 2017

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
		<p>number of conformance check issues; and</p> <p>(f) Participants’ familiarity with the CAISO products, performance requirements and markets.</p> <p>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.</p> <p>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. 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 projects 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.</p>	
<p>Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.</p>	<p>D.06-06-066, IOU Matrix, Item VIII) A, Bid information;</p> <p>Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of</p>	<p>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 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 the IE report has been filed with the Advice Letter. PG&E has complied with the requirement to facilitate the</p>	<p>Three years from June 30, 2017</p>

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

DEMAND RESPONSE RULEMAKING (R.13-09-011)

ADVICE LETTER 5109-E

June 30, 2017

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
	participating bids.	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)	<p>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 2018 through December 2019, and would remain confidential through December 2020 under Item VII)B). However, the DRAM contracts should remain confidential for two years from their expiration date, based on information provided by the DRAM counterparties.</p> <p>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.</p> <p>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 <i>not</i> addressed in the Matrix. In the interim, to the extent the Matrix contradicts GO 66-C, the Matrix shall govern.”</p> <p>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:</p> <p>2. EXCLUSIONS</p> <p>Public records not open to public inspection include:</p> <p>(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.)</p> <p>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.</p>	The 2018-2019 DRAM Contracts should be confidential through December 2021, i.e., for two years after their expiration pursuant to the DRAM Sellers’ Confidentiality Declarations, but in any event, through at least December 2020.

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

DEMAND RESPONSE RULEMAKING (R.13-09-011)

ADVICE LETTER 5109-E

June 30, 2017

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
		<p>Attached to PG&E's request for confidential treatment of its DRAM contracts are declarations of the following DRAM counterparties seeking confidential treatment of their DRAM contracts for two years following their expiration dates: AutGrid Systems, Inc., EnerNOC, Inc., Sunrun Inc., and Tesla, Inc.</p> <p>Generally, the DRAM counterparties assert that public access to the market sensitive terms within their contracts could adversely impact other commercial negotiations with other counterparties, and could de-position the counterparties relative to other aggregators who could use their sensitive market information to their own advantage.</p> <p>Based upon this information, the DRAM contracts should remain confidential for a period of two years after their expiration dates.</p>	

**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

AT&T	Division of Ratepayer Advocates	Office of Ratepayer Advocates, Electricity Planning and Policy B
Albion Power Company	Don Pickett & Associates, Inc.	OnGrid Solar
Alcantar & Kahl LLP	Douglass & Liddell	Pacific Gas and Electric Company
Anderson & Poole	Downey & Brand	Praxair
Atlas ReFuel	Ellison Schneider & Harris LLP	Regulatory & Cogeneration Service, Inc.
BART	Evaluation + Strategy for Social Innovation	SCD Energy Solutions
Barkovich & Yap, Inc.	G. A. Krause & Assoc.	SCE
Bartle Wells Associates	GenOn Energy Inc.	SDG&E and SoCalGas
Braun Blaising McLaughlin & Smith, P.C.	GenOn Energy, Inc.	SPURR
Braun Blaising McLaughlin, P.C.	Goodin, MacBride, Squeri, Schlotz & Ritchie	San Francisco Water Power and Sewer
CENERGY POWER	Green Charge Networks	Seattle City Light
CPUC	Green Power Institute	Sempra Energy (Socal Gas)
CalCom Solar	Hanna & Morton	Sempra Utilities
California Cotton Ginners & Growers Assn	ICF	SoCalGas
California Energy Commission	International Power Technology	Southern California Edison Company
California Public Utilities Commission	Intestate Gas Services, Inc.	Southern California Gas Company (SoCalGas)
California State Association of Counties	Kelly Group	Spark Energy
Calpine	Ken Bohn Consulting	Sun Light & Power
Casner, Steve	Leviton Manufacturing Co., Inc.	Sunshine Design
Center for Biological Diversity	Linde	Tecogen, Inc.
City of Palo Alto	Los Angeles County Integrated Waste Management Task Force	TerraVerde Renewable Partners
City of San Jose	Los Angeles Dept of Water & Power	TerraVerde Renewable Partners, LLC
Clean Power	MRW & Associates	Tiger Natural Gas, Inc.
Clean Power Research	Manatt Phelps Phillips	TransCanada
Coast Economic Consulting	Marin Energy Authority	Troutman Sanders LLP
Commercial Energy	McKenna Long & Aldridge LLP	Utility Cost Management
Cool Earth Solar, Inc.	McKenzie & Associates	Utility Power Solutions
County of Tehama - Department of Public Works	Modesto Irrigation District	Utility Specialists
Crossborder Energy	Morgan Stanley	Verizon
Crown Road Energy, LLC	NLine Energy, Inc.	Water and Energy Consulting
Davis Wright Tremaine LLP	NRG Solar	Wellhead Electric Company
Day Carter Murphy	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Defense Energy Support Center	ORA	YEP Energy
Dept of General Services	Office of Ratepayer Advocates	Yelp Energy