

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



October 14, 2016

**Advice Letter 4880-E**

Pacific Gas and Electric Company  
Attn: Erik Jacobson, Director, Regulatory Relations  
Senior Director, Regulatory Relations  
77 Beale Street, Mail Code B10C  
P.O. Box 770000  
San Francisco, CA 94177

**SUBJECT: PG&E 2017 Demand Response Auction Mechanism Purchase Agreements**

Dear Mr. Jacobson:

Advice Letter 4880-E is effective as of July 22, 2016, per Resolution E-4803 Ordering Paragraphs.

Sincerely,

A handwritten signature in cursive script that reads "Edward Randolph".

Edward Randolph  
Director, Energy Division

July 22, 2016

**Advice 4880-E**

(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

**Subject: PG&E's 2017 Demand Response Auction Mechanism Purchase Agreements**

**I. Purpose**

In compliance with Ordering Paragraph 16 of Resolution E-4728 ("Resolution"), Pacific Gas and Electric Company ("PG&E") hereby submits this Advice Letter to obtain approval of fourteen Purchase Agreements executed between PG&E and five winning participants, resulting from PG&E's 2017 Demand Response Auction Mechanism Request for Offers ("2017 DRAM RFO").

**II. Background****A. 2017 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 reached a compromise on how to resolve Phase Three issues and, on August 4, 2014, filed a motion to obtain Commission approval of their settlement. On December 9, 2014, the Commission issued D.14-12-024 ("Decision") which, among other things, approved the settlement agreement, with modifications, and authorized a pilot program which included procurement using the demand response auction mechanism ("DRAM"). On December 22, 2014, parties filed the compliance letter required by Ordering Paragraph ("OP") 2 of the Decision. On February 12, 2015, the Commission issued D.15-02-007, which accepted the compliance filing and clarified the status of the parties' agreement.

The Decision requires Southern California Edison Company, San Diego Gas & Electric Company 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. The DRAM implementation proposal and standard contract for the 2017 DRAM produced by this working

group were jointly submitted through a joint IOU advice letter on October 9, 2015 (“Joint IOU Advice Letter.”)<sup>1</sup> This Joint IOU Advice Letter was approved, subject to modification, by Resolution E-4754 on January 28, 2016. PG&E submitted the required CPUC modifications on February 8, 2016, via Supplemental AL 4719-E-A. Effective February 19, 2016, the CPUC approved the Supplemental Advice Letter through a Disposition Letter.

The 2017 DRAM is an IOU auction for monthly system Resource Adequacy (“RA”) associated with a DR product located in the IOU’s service area.<sup>2</sup> At a minimum, PG&E is expected to enter into Purchase Agreements for 10 MW of RA, with a least 20% being attributed to residential customers. Winning 2017 DRAM auction participants (“Sellers”) will bid their contracted capacity directly into the CAISO’s energy markets during the contracted months, which may include the months of January to December 2017. Seller bids in the 2017 DRAM must qualify for system, local, and/or flexible RA products, and therefore must meet the CAISO’s must-offer obligation for the appropriate RA product. 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. PG&E will reimburse certain Scheduling Coordinator (“SC”)-related amounts for Sellers. PG&E evaluated offers submitted to the 2017 DRAM using an offer evaluation template that was common to all three of the IOUs and approved by the Commission.

### **III. 2017 DRAM Pilot Summary**

#### **A. Auction Process**

##### **1. Auction Overview**

*RFO schedule and email notifications.* On March 3, 2016, PG&E sent an email notification to those who registered with PG&E to receive PG&E DRAM emails (*e.g.*, aggregators, previous DRAM RFO participants, etc.), announcing the 2017 DRAM RFO launch and RFO schedule.

In late March of 2016, the Commission asked that the IOUs delay the 2017 DRAM shortlist selection from May 6 until June 24, 2016, in effect delaying shortlist selection until the Commission ruled on the final decision on Rule 24 Intermediate Implementation (The final

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<sup>1</sup> The 2017 DRAM implementation proposal was submitted on October 9, 2015 as a joint IOU advice letter that was designated as SCE Advice 3292-E, PG&E Advice 4719-E, and SDG&E Advice 2796-E.

<sup>2</sup> DRAM Purchase Agreements constitute a PG&E DR program. DRAM Sellers are required to provide information to PG&E’s DR department, to enable PG&E’s DR department to administer the DRAM Purchase Agreements, including without limitation, Section 1.6, *Demonstrated Capacity*, Section 3.4, *Seller’s Obligations*, Section 4.2, *Invoice and Payment Process*, Section 7.2, *Additional Seller Representations, Warranties and Covenants*, and Section 6.6, *Customers in Buyer Automated Demand Response Programs*.

decision was issued on June 9, 2016, as D.16-06-008). Consequently, on March 24, 2016 PG&E emailed a market notification to those who registered for PG&E's 2017 DRAM RFO email notifications, announcing the following updated RFO schedule:

**Table 1: 2017 DRAM RFO Timeline**

<b>Date/Time</b>	<b>Event</b>
March 3, 2016	PG&E issued the 2017 DRAM RFO.
March 15, 2016	PG&E and other IOUs jointly held Bidders' Webinar for 2017 DRAM RFO.
April 18, 2016 no later than 1:00 P.M.(PPT)	Offers due to the Power Advocate online platform.
June 24, 2016	PG&E selected offers and notified selected and waitlisted participants.
July 1, 2016	Deadline for originally selected and waitlisted participants to return signed acceptance letters.
July 8, 2016	PG&E notified waitlisted participants if they had been selected.
July 8, 2016	Selected participants submitted a signed Purchase Agreement to PG&E.
July 22, 2016	PG&E filed executed standard form Purchase Agreements for Commission approval.

On March 25, 2016, the Commission also sent an email about the modified 2017 DRAM schedule to the Service List for Rulemaking 13-09-011.

On each of the three additional occasions when new information was posted on the 2017 DRAM website, PG&E emailed market notifications to PG&E's email distribution list.

*RFO website.* PG&E created a website dedicated to PG&E's 2017 DRAM RFO ([www.pge.com/dram](http://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 2017 DRAM RFO Protocol, form of Purchase Agreement, and Excel offer form;<sup>3</sup>
- (3) information on how to obtain customer information under Electric Rule 24;

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<sup>3</sup> 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 earlier in 2015;
- (5) a link to register for PG&E's 2017 DRAM RFO email notifications; and
- (6) other relevant information.

Webinars. A joint-IOU Bidders' Webinar was held to describe the 2017 DRAM RFO solicitation on March 15, 2016. This Webinar included the following topics:

- (1) introduction and overview;
- (2) bid valuation and selection;
- (3) 2017 DRAM RFO bid materials;
- (4) a walk-through of each of the IOU's 2017 DRAM RFO Offer Forms; and
- (5) closing remarks.

The Webinar had 76 participants via WebEx, six phone attendees, and additional people who watched the video recording of the Webinar after it ended. The IOUs received 31 questions, which were answered during the Webinar and posted in the "Bidder's Webinar Frequently Asked Questions" document, available on each of the IOU's 2017 DRAM RFO websites.

PG&E also plans to host a Workshop on Receiving Customer Data for Rule 24 and the 2017 DRAM in August 2016.

RFO mailbox. PG&E created a mailbox dedicated to the 2017 DRAM RFO: [DRAMRFO@pge.com](mailto:DRAMRFO@pge.com). PG&E received a number of questions through this mailbox prior to the offer due date. Altogether, the three IOUs received an additional 42 DRAM questions, collaborated on the responses, and posted this information to their respective 2017 DRAM RFO websites. The market-sensitive questions received during and after the Bidders' Webinar are further discussed in Confidential Appendix C, "DRAM Evaluation Metrics."

## **2. Offer Overview**

In response to the 2017 DRAM RFO, PG&E received 95 offers (107 offers, if variations of offers are included) totaling approximately 126.4 MW of non-residential demand response and 69.4 MW of residential demand response (195.8 MW total) for August 2017 capacity. Of the offers received, 0.2 MW were for local capacity, and 195.6 MW were for system capacity. The total estimated number of participating service accounts is 91,920, not including variations of offers. A spreadsheet of all 2017 DRAM offers received is provided in Confidential Appendix A, "2017 DRAM Offers Received and Shortlisted," pursuant to Resolution Ordering Paragraph 16.

### 3. Offer Evaluation

Identify Non-conforming Offers. PG&E screened all offers against the following eligibility requirements: minimum monthly quantity of 100 kW, maximum monthly quantity of 10,000 kW, a required offer for August, and a maximum of twenty (20) bids per bidder.

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

Benefits = Sum of (Offered Volume<sub>*P*</sub> x Product Value<sub>*P*</sub>) where *P* is each Product

Costs = Offered Volume<sub>*P*</sub> x Offered Pricing<sub>*P*</sub> + SC Cost, where *P* is each Product

Net Market Value = Benefits – Costs

Net Market Value per Unit in \$/kW-year = Net Market Value in Dollars divided by Weighted Average Monthly Volume in kilowatts

Qualitative Evaluation.

PG&E added 1% of each Offer's NMV per Unit to their NMV per Unit score, if the bidder had Diverse Business Enterprise (DBE) status or plans to obtain this status prior to the beginning of the 2017 DRAM deliveries.

### 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 the following 2017 DRAM objectives:

- (1) not exceeding the service account limit PG&E currently expects to be able to support under Rule 24 in late 2016/early 2017, consistent with Ordering Paragraph 11 of the Resolution;
- (2) procuring at least 10 MW capacity, of which at least 20% of the MW is residential bids, per the Resolution; and,
- (3) not exceeding the \$6 million budget cap, per the Resolution.

With respect to the Rule 24 service account evaluation criteria, Intermediate Implementation of Rule 24 in D.16-06-008 authorized a cumulative total of 40,000 registrations, and 200,000 Customer Information Service Request for Demand Response Providers ("CISR-DRPs") by no later than March 17, 2017. PG&E started its Intermediate Implementation effort immediately upon issuance of D. 16-06-008, and estimated that prior to March 17, 2017, it would be able to support an additional 20,000 Rule 24 registrations, beyond the approximately 5,000 registrations

that are already in use for the 2016 DRAM.<sup>4</sup> Therefore, the Rule 24 service account limit used for the 2017 DRAM selection of winning offers was set at 20,000. An additional explanation on the selection process is contained in Confidential Appendix B, “Valuation Process Summary” and in Section d of Confidential Appendix C, “2017 DRAM Evaluation Metrics.”

## **B. 2017 DRAM Results**

PG&E executed contracts for 21.4 August MW capacity, approximately double the 2017 DRAM 10 MW amount for PG&E. Fifty-two percent (52%) of the MWs are for residential products, and all MWs are for 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 are for nine or twelve months, and contract deliveries begin in either January or March 2017. A list of the Sellers who received 2017 DRAM Purchase Agreements is provided in Table 2, below.

**Table 2: 2017 DRAM Sellers**

Chai, Inc.
Earth Networks, Inc.
Electric Motor Werks, Inc.
EnerNOC, Inc.
Stem, 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 2017 DRAM results please see Confidential Appendix C, “2017 DRAM Evaluation Metrics.”

## **IV. Request for Commission Approval**

PG&E requests that the Commission approve the 2017 DRAM Purchase Agreements through a disposition letter issued by the Director of Energy Division within thirty (30) days of the date of this Advice Letter, that is, by August 21, 2016. The disposition letter should find that:

1. Each of the submitted 2017 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

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<sup>4</sup> Please see PG&E’s June 30, 2016 “Compliance Filing Pursuant To D.15-03-042, Ordering Paragraph 1, Quarterly Report To Track Progress Of Rule 24’s Implementation” for Rule 24 active registrations that have been approved. The IT infrastructure to support the increase from a cumulative 25,000 registrations to 40,000 registrations is expected to be in place by the March 17, 2017 deadline established in D.16-06-008.

2. The solicitation and selection of the 2017 DRAM Sellers was consistent with PG&E's approved 2017 DRAM Program Solicitation Protocol, and that the price of delivered RA is reasonable and prudent.

## **V. Request for Confidential Treatment**

In support of this Advice Letter, PG&E has provided the following confidential information: the executed 2017 DRAM Purchase Agreements, information about the participants and offers submitted in response to PG&E's 2017 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 2017 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: 2017 DRAM Offers Received and Shortlisted
- Confidential Appendix B: Valuation Process Summary
- Confidential Appendix C: 2017 DRAM Evaluation Metrics
- Confidential Appendix D: Independent Evaluator Report (Redacted version included with public filing)
- Confidential Appendix F: Executed 2017 DRAM Purchase Agreements

## **VI. Protests**

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than August 11, 2016, 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, 4<sup>th</sup> 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 B10C  
P.O. Box 770000  
San Francisco, California 94177

Facsimile: (415) 973-7226  
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).

## **VII. Effective Date**

PG&E requests that this Tier 1 advice filing become effective upon date of filing, which is July 22, 2016.

## **VIII. 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: Rachel McMahon – 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 2017 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 DRAM Standard Purchase Agreement

**Attachments Filed on a Confidential Basis with the Advice Letter:**

Confidential Appendix A: 2017 DRAM Offers Received and Shortlisted  
Confidential Appendix B: Valuation Process Summary  
Confidential Appendix C: 2017 DRAM Evaluation Metrics  
Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.  
Confidential Appendix F: Executed 2017 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: Qxy1@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) #: **4880-E**

**Tier: 1**

Subject of AL: **PG&E's 2017 Demand Response Auction Mechanism Purchase Agreements**

Keywords (choose from CPUC listing): Compliance, Agreements, Contracts

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: E-4728

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 the attached matrix that identifies all of the confidential information

Confidential information will be made available to those who have executed a nondisclosure agreement:  Yes  No

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Grant Brohard, (415) 973-0106

Resolution Required?  Yes  No

Requested effective date: **July 22, 2016**

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., 4<sup>th</sup> 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 B10C**

**P.O. Box 770000**

**San Francisco, CA 94177**

**E-mail: PGETariffs@pge.com**

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

**PACIFIC GAS AND ELECTRIC COMPANY  
DEMAND RESPONSE RULEMAKING (R.13-09-011)**

**DECLARATION OF GRANT BROHARD  
SEEKING CONFIDENTIAL TREATMENT  
FOR CERTAIN DATA AND INFORMATION  
CONTAINED IN CONFIDENTIAL ATTACHMENTS TO ADVICE LETTER 4880-E**

I, Grant Brohard, declare:

1. I am a Manager in the Demand Response Department within the Customer Care Organization at Pacific Gas and Electric Company (PG&E). In this position, my responsibilities include the overall administration of PG&E's Demand Response (DR) programs, which include the Aggregator Managed Portfolio (AMP), Capacity Bidding Program (CBP), Demand Bidding Program (DBP), Base Interruptible Program (BIP), SmartAC, Optional Binding Mandatory Curtailment Program (OBMC), and Scheduled Load Reduction Program (SLRP). I have overall responsibility for administering the contracts, tariffs, and relationships with the third party aggregators who participate in those programs. I also support PG&E's DR regulatory and product development efforts. I am responsible for the Demand Response Auction Mechanism (DRAM) Request For Offers (RFO) including analysis of bids, contracting with the winning bidders, and administration of the DRAM contracts. This declaration is based on my personal knowledge of what the demand response aggregators consider to be confidential market information, including the information in the declarations from DRAM Sellers Chai, Inc., Earth Networks, Inc., EnerNOC, Inc., Electric Motor Werks, Inc., and Stem, Inc., accompanying this declaration, and my understanding of the Commission's decisions protecting the confidentiality of market-sensitive information.

2. Based on my knowledge and experience, the attached declarations of certain DR aggregators with whom PG&E has executed DRAM contracts, and in accordance with Decision (D.) 06-06-066, D.08-04-023 and relevant Commission rules, I make this declaration seeking

confidential treatment of certain materials in the DRAM Independent Evaluator Report (Confidential Appendix D), and the confidential DRAM materials in Confidential Appendices A, B, C, and F. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes confidential market sensitive data and information covered by the designated provisions of the IOU Matrix, Appendix 1 of D.06-06-066, and General Order 66-C, subsection 2.8 . The matrix also specifies why confidential protection is justified. Further, the data and information: (1) is not already public; and (2) cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this reference, I am incorporating into this declaration all of the explanatory text in the attached matrix that is pertinent to my declaration.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct. Executed on July 20, 2016 at San Francisco, California.

  
Grant J. Brohard

**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 eMotorWerks Inc  
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE ELECTRIC  
MOTOR WERKS, INC. 2017 DRAM CONTRACT**

I, Valery Miftakhov, declare as follows:

1. I submit this Declaration in support of continuing treatment for Electric Motor Werks, Inc.'s (Electric Motor Werks') 2017 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 CEO for Electric Motor Werks. My business address is 846 Brantsen Rd., San Carlos CA 94070, I have been employed by Electric Motor Werks since 2011. My responsibilities in that position include the representation of Electric Motor Werks before regulatory agencies in California on energy regulatory matters. I represent Electric Motor Werks 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 Electric Motor Werks' views on various energy policy issues related to Electric Motor Werks' demand response resource interests in the State.

3. Electric Motor Werks bid into PG&E's DRAM II auction for 2017, and was awarded DRAM II contract. In accordance with the DRAM II protocols, Electric Motor Werks has executed a DRAM contract with PG&E.

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

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

6. Electric Motor Werks 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 Electric Motor Werks 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 Electric Motor Werks' competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Electric Motor Werks relative to other aggregators who could use Electric Motor Werks' 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 Electric Motor Werks DRAM II 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 Carlos, California, on **July 12, 2016**.



(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 JOSEPH COLE HERSHKOWITZ  
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE CHAI INC.  
2017 DRAM CONTRACTS**

I, Joseph Cole Hershkowitz, declare as follows:

1. I submit this Declaration in support of continuing treatment for Chai Inc.'s (Chai's) 2017 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 CEO for Chai. My business address is 525 S. Hewitt St., Los Angeles, CA, 90013, I have been employed by Chai since July 2012. My responsibilities in that position include the representation of Chai before regulatory agencies in California on energy regulatory matters. I represent Chai 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 Chai's views on various energy policy issues related to Chai's demand response resource interests in the State.

3. Chai bid into PG&E's DRAM II auction for 2017, and was awarded DRAM II contracts. In accordance with the DRAM II protocols, Chai has executed DRAM contracts with PG&E.

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



5. The information in the Chai DRAM II contract(s) (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 Chai.

6. Chai 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, contract term, associated pricing, etc., would be detrimental to Chai 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 Chai's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Chai relative to other aggregators who could use Chai'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 Chai DRAM II contracts, until two years after the final extension of the contracts 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 Los Angeles CA on 7/17, 2016.

A handwritten signature in black ink, appearing to be 'C. Chai', written over a horizontal line.

(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 \_\_\_\_\_  
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE STEM, INC.  
2017 DRAM CONTRACT**

I, , declare as follows:

1. I submit this Declaration in support of continuing treatment for STEM, Inc.'s (Stem's) 2017 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 Business Development for Stem. My business address is 100 Rollins Road, Millbrae, CA 94030, I have been employed by Stem since 2015. My responsibilities in that position include the representation of Stem before regulatory agencies in California on energy regulatory matters. I represent Stem 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 Stem's views on various energy policy issues related to Stem's demand response resource interests in the State.

3. Stem bid into PG&E's DRAM II auction for 2017, and was awarded a DRAM II contract. In accordance with the DRAM II protocols, Stem has executed a DRAM contract with PG&E.

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

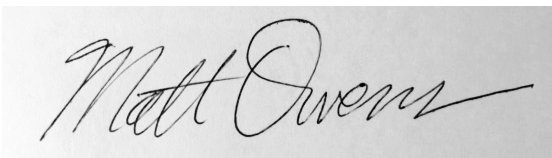
5. The information in the Stem DRAM II contract (and the PG&E advice letter) on the monthly kW, prices, contract term, and the type of product (residential/non-residential), are sensitive, competitive, confidential market information for Stem.

6. Stem 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 Stem 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 Stem's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Stem relative to other aggregators who could use Stem'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 Stem DRAM II 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 Millbrae, CA on **July 18**, 2016.

A rectangular box containing a handwritten signature in black ink that reads "Matt Owens".

---

(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 JADEN CRAWFORD  
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE EARTH  
NETWORKS, INC. 2017 DRAM CONTRACT**

I, Jaden Crawford, declare as follows:

1. I submit this Declaration in support of continuing treatment for Earth Networks, Inc.'s (Earth Networks') 2017 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 Energy Markets for Earth Networks. My business address is 12410 Milestone Center Drive, Suite 300, Germantown MD, I have been employed by Earth Networks since February, 2016. My responsibilities in that position include the representation of Earth Networks before regulatory agencies in California on energy regulatory matters. I represent Earth Networks 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 Earth Networks's views on various energy policy issues related to Earth Networks's demand response resource interests in the State.

3. Earth Networks bid into PG&E's DRAM II auction for 2017, and was awarded a DRAM II contract. In accordance with the DRAM II protocol, Earth Networks has executed a DRAM contract with PG&E.

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

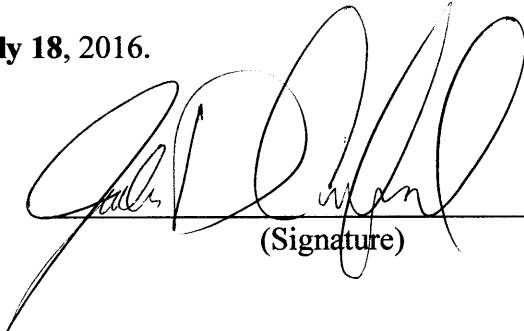
5. The information in the Earth Networks DRAM II contract (and the PG&E advice letter) on the monthly kW's, prices, contract term, and the type of product (residential/non-residential), are sensitive, competitive, confidential market information for Earth Networks.

6. Earth Networks 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 Earth Networks 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 Earth Networks's competitively sensitive market information could adversely impact other commercial negotiations with other existing or potential counterparties, and could de-position Earth Networks relative to other aggregators who could use Earth Networks' 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 Earth Networks DRAM II 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 Wellesley, MA on **July 18, 2016**.



(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 MICHAEL BERDIK  
IN SUPPORT OF CONFIDENTIAL TREATMENT FOR THE ENERNOC,  
INC. 2017 DRAM CONTRACT**

I, Michael Berdik, declare as follows:

1. I submit this Declaration in support of continuing treatment for EnerNOC, Inc.'s (EnerNOC') 2017 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 General Counsel for EnerNOC. My business address is 1 Marina Park Drive, Suite 400, Boston, MA 02110, I have been employed by EnerNOC since March, 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 II Auction and the subsequent award to EnerNOC by PG&E.

3. EnerNOC bid into PG&E's DRAM II auction for 2017, and was awarded a DRAM II contract. In accordance with the DRAM II protocol, EnerNOC has executed a DRAM contract with PG&E.

4. Based upon information conveyed by PG&E to EnerNOC, EnerNOC understands that the EnerNOC DRAM II contract will be filed by PG&E in an advice letter to request Commission approval.

5. The information in the EnerNOC DRAM II contract (and the PG&E advice letter) including the monthly kW's, prices, term and 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 II results being released, to the extent they are consistent with the CPUC's rules on privacy and aggregated data release.

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, term, associated pricing, and product-specific information 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 II contract, until two years after the final extension of the contract expires. However, as stated previously, EnerNOC does not object to aggregated DRAM II results being released publicly so long as the release is consistent with the CPUC's rules on privacy and aggregated data release.

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 the Commonwealth of Massachusetts on July 20, 2016.

DocuSigned by:  
*Michael Berdik*  
C2142C55B79442D...  
\_\_\_\_\_  
(Signature)

**PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

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

**ADVICE LETTER 4880-E**

July 22, 2016

**IDENTIFICATION OF CONFIDENTIAL INFORMATION**

<b>Redaction Reference</b>	<b>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To</b>	<b>Justification for Confidential Treatment</b>	<b>Length of Time Data To Be Kept Confidential</b>
<b>Document: Advice Letter 4880 -E</b>			
<b>Confidential Appendix A: DRAM Offers Received and Shortlisted</b>	D.06-06-066, IOU Matrix,  Item VIII) A, Bid information;  Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Appendix A provides a spreadsheet of all of the offers received in response to PG&E's 2017 DRAM solicitation, ranked by weighted average unit cost. 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 service accounts per offer, weighted average unit cost (\$/kW), total contract cost, and proposed RA availability by month.  All of the information contained in RFO bids is confidential for three years after winning bidders have been selected, that is, submitted for CPUC approval, except for information specifically identified as public. Only the total number of projects and MW bid by resource type, and evaluation guidelines are presumed to be public. Appendix A does not contain any information that is identified as public. PG&E has treated all of the information within Appendix A as confidential. The confidentiality of DRAM offer information should be protected pursuant to Item VIII of the IOU matrix.	Three years from July 22, 2016
<b>Confidential Appendix B: Valuation Process Summary</b>	D.06-06-066, IOU Matrix,  Item VIII) A, Bid information;  Item VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Appendix B provides confidential aspects of the valuation, scoring, and selection process. The discussion in Appendix B identifies discrete offers and PG&E's analysis of offer characteristics. This information constitutes information recognized as confidential by Item VIII) B. of the IOU Matrix.  All of the information contained in RFO bids is confidential for three years after winning bidders have been selected, that is, submitted for CPUC approval, except for information specifically identified as public. Only the total number of projects and MW bid by resource type, and evaluation guidelines are presumed to be public. Appendix B does not contain any information that is identified as public. PG&E has treated all of the information within Appendix B as confidential. The confidentiality	Three years from July 22, 2016



**PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

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

**ADVICE LETTER 4880-E**

July 22, 2016

**IDENTIFICATION OF CONFIDENTIAL INFORMATION**

<b>Redaction Reference</b>	<b>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To</b>	<b>Justification for Confidential Treatment</b>	<b>Length of Time Data To Be Kept Confidential</b>
		of DRAM offer information should be protected pursuant to Item VIII of the IOU matrix.	
<b>Confidential Appendix C: DRAM Evaluation Metrics</b>	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 C provides a quantitative description of the DRAM solicitation in terms of multiple variables, including:</p> <ul style="list-style-type: none"> <li>(a) Participation statistics including outreach statistics; the number of aggregators and large individual customers participating in the DRAM and their characteristics (e.g., new to California or existing); total number of MW offered into the DRAM for each month; the distribution of the size of bids;</li> <li>(b) Discussion of the competitiveness of the solicitation, including the total number of offers, the number of MW offered for August 2017, Total Contract Cost (\$), and # of Service Accounts bid into the solicitation;</li> <li>(c) Winning Bid Information including number of aggregators and large individual customers winning bids in the DRAM; aggregators broken down into new to California or existing; number of MW of accepted bids for each month; distribution of the size of accepted bids; distribution of the prices of bids inclusive of scheduling coordinators costs; distribution of the prices of bids exclusive of scheduling coordinators costs; and distribution of total costs of winning bids;</li> <li>(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.</li> </ul> <p>Information about the effectiveness of the DRAM protocol includes:</p> <ul style="list-style-type: none"> <li>(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</li> </ul>	Three years from July 22, 2016

**PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

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

**ADVICE LETTER 4880-E**

July 22, 2016

**IDENTIFICATION OF CONFIDENTIAL INFORMATION**

<b>Redaction Reference</b>	<b>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To</b>	<b>Justification for Confidential Treatment</b>	<b>Length of Time Data To Be Kept Confidential</b>
		<p>number of conformance check issues;</p> <p>(f) Participants’ familiarity with the CAISO products, performance requirements and markets through a survey at the bidder’s conference;</p> <p>(g) Discussion of the scheduling coordinator costs and its effect on the auction results; and</p> <p>(h) Limits imposed by the supply-side integration and Rule 24/32 limitations.</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&amp;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&amp;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, and evaluation guidelines are presumed to be public. Appendix C does not contain any information that is identified as public. PG&amp;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>	
<b>Confidential Appendix D: Independent Evaluator Report of Merrimack Energy Group, Inc.</b>	D.06-06-066, IOU Matrix, Item VIII) A, Bid information; Item VIII) B) Specific	The purpose of the Independent Evaluator (“IE”) Report is to determine on the basis of bid information whether PG&E’s conduct of the DRAM RFO fulfilled Commission requirements. The IE Report 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	Three years from July 22, 2016

**PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

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

**ADVICE LETTER 4880-E**

July 22, 2016

**IDENTIFICATION OF CONFIDENTIAL INFORMATION**

<b>Redaction Reference</b>	<b>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To</b>	<b>Justification for Confidential Treatment</b>	<b>Length of Time Data To Be Kept Confidential</b>
	quantitative analysis involved in scoring and evaluation of participating bids.	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 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.	
<b>Confidential Appendix F: Executed DRAM Contracts</b>	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 through December 2017, and would remain confidential through December 2018 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 Public records not open to public inspection include: (2.8) Information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest. (E.g.: Evidence Code Sec. 1040.)</p>	The 2017 DRAM Contracts should be confidential through December 2019, i.e., for two years after their expiration pursuant to the DRAM Sellers’ Confidentiality Declarations, but in any event, through at least December 2018.

**PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

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

**ADVICE LETTER 4880-E**

July 22, 2016

**IDENTIFICATION OF CONFIDENTIAL INFORMATION**

<b>Redaction Reference</b>	<b>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To</b>	<b>Justification for Confidential Treatment</b>	<b>Length of Time Data To Be Kept Confidential</b>
		<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> <p>Attached to PG&amp;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: Chai, Inc., EnerNOC, Inc., Electric Motor Werks, Inc., Stem, Inc., and Earth Networks, 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>	

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

## **Confidential Appendix A**

### **2017 DRAM Offers Received and Shortlisted**

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

## **Confidential Appendix C**

### **2017 DRAM Evaluation Metrics**

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

## **Redacted Appendix D**

# **Independent Evaluator Report of Merrimack Energy Group, Inc.**



***Public***

***Pacific Gas & Electric Company  
2017 Demand Response Auction Mechanism (DRAM)  
Request for Offers***

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

***July 22, 2016***

***Prepared by  
Merrimack Energy Group, Inc.***



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## APPENDICES

Appendix A – PG&E – Offers Received for DRAM RFO

Appendix B – PG&E – Summary of Contracts Executed

## I. Introduction

### A. Overview of the Demand Response Auction Mechanism (DRAM) 2017 Pilot Program<sup>1</sup>

On March 3, 2016, Pacific Gas & Electric Company (“PG&E” or “Company”) issued its 2017 Demand Response Auction Mechanism (“DRAM”) Request for Offers Solicitation Protocol (“2017 DRAM RFO”). The DRAM RFO is intended to solicit offers (“Offers”) from participants (“Participants” or “Bidders”) to provide resource adequacy (“RA”) capacity (“Product”) to the three Investor Owned Utilities (“IOUs”) under a standard form, non-negotiable purchase agreement (“PA”).<sup>2</sup> The 2017 DRAM RFO is seeking local, system and flexible Resource Adequacy (“RA”) resources. The Solicitation Protocol describes the process by which PG&E seeks, evaluates, and accepts Bidder’s Offers from winning Bidders (“Sellers”) who bid Proxy Demand Resource (“PDR”) or Reliability Demand Response Resources (“RDRR”) by third party sellers acting directly, or indirectly through Scheduling Coordinators, as wholesale Demand Response Providers (“DRPs”) in order to participate directly in the CAISO Day-Ahead or Real Time Energy Market (“Respondents”).

PG&E issued this RFO to enhance the role of DR in meeting the state’s resource planning needs and operational requirements in accordance with Decision (“D”) 14-12-024 – Decision Resolving Several Phase Two Issues and Addressing the Motion for Adoption of Settlement Agreement on Phase Three Issues approved on December 4, 2014 issued by the California Public Utilities Commission (“CPUC” or “Commission”). The orders and resolutions of the CPUC are described below in the **Procedural History and Regulatory Requirements (Orders and Resolutions)** section of this Introduction.

The 2017 DRAM is a pay-as-bid auction of monthly local, system, and flexible RA for Offerors to bid directly in the California Independent System Operator (CAISO) market, with participation from customers in PG&E’s service territory. Offerors must bid directly into the CAISO day-ahead or real time energy market and any resulting revenues or liabilities shall solely be that of the Offeror (or “Respondent”). Capacity offered may vary by month and may be offered during one or more months from January to December 2017, provided, however, that a minimum bid size was required for all months for local capacity.

All offers shall meet the minimum eligibility requirements included in PG&E’s DRAM RFO instructions. Offers that are evaluated as most attractive via the quantitative and qualitative methodology described in the 2017 DRAM RFO Solicitation Protocol may be

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<sup>1</sup> The DRAM is a two-year pilot program that is designed to enable Demand Response (“DR”) wholesale market participation by providing a competitive means to a capacity contract outside of the IOU DR program. The first year of the pilot was conducted in 2015 for RA from Demand Response Resources delivered in the period June, 2016 through December, 2016. On January 8, 2016, PG&E timely filed a Tier 1 Advice Letter (“AL 4772-E”) with the results of the first year of the DRAM pilot pursuant to Resolution E-4728 and Resolution E-4737. On February 8, 2016, the CPUC Energy Division approved Advice Letter 4772-E in its entirety (“2016 DRAM Approval”).

<sup>2</sup> San Diego Gas & Electric Company (“SDG&E”) and Southern California Edison Company (“SCE”) also issued their 2017 DRAM RFO’s on the same day as planned.

shortlisted. PG&E intends for resources selected from the DRAM RFO to count towards PG&E's local, system and flexible RA obligations.

Subject to Offer pricing, as well as other factors identified in this Solicitation Protocol, PG&E is seeking to procure at least 10 MW of System, Local, and Flexible RA Product (as measured during the month of August) in this RFO within its service territory. At least 2 MW of the total shall be attributed to a Residential Customer Product.

As noted, a Bidder can submit an Offer for Product in this RFO as either: (1) a PDR that is offered into both the Day-Ahead ("DA") and Real-Time ("RT") markets or (2) an RDRR that is offered in the RT market for dispatch only under emergency conditions, but that also may be offered in the DA market.

All purchases will be made according to the terms and conditions set forth in the DRAM PA. This Solicitation Protocol sets forth the procedures a Bidder must follow in order to participate in the RFO.

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

- Electric Rule 24 ("Rule 24") governs how PG&E interacts with 3<sup>rd</sup> party Demand Response Providers ("DRP"). The DRAM pilot is subject to the provisions of Rule 24, and any limitations authorized by the CPUC relative to its implementation;
- PG&E will accept System, Local<sup>3</sup> and Flexible<sup>4</sup> Capacity Products in the 2017 DRAM RFO;
- 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), as defined in the CAISO Tariff;
- Each Bidder's Offer must include Product for August 2017;
- 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 RA as well as 2 MW of Local RA, 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;
- PG&E will presume all Bidders' Offers are independent of each other, unless otherwise specified in the Offer Form;
- Offers may be for Residential Customers or Non-Residential Customer Products, and must be identified as such in the Offer Form. A Residential Product is that

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<sup>3</sup> 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 must be bid as either PDR or RDRR.

<sup>4</sup> Flexible Capacity Product may be 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 Business Practice Manual.

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 acceptance of Offers may be limited by the number of service agreements available for the Sellers’ DR resources;
- PG&E acceptance of Offers may be subject to the CPUC budget limitations;
- The Delivery Period will be no earlier than January 1, 2017 and no later than December 31, 2017;
- The Bidder must submit its Offers via the Attachment A, Offer Form, with a monthly Quantity (Capacity kW) and Contract Price (\$/kW) for each applicable Showing Month (January – December 2017). If a Bidder does not wish to offer Product during a particular month, it should include a zero for that month in their Offer Form.

Offerors may not modify the PA submitted as part of their offer package. Offerors may submit Offers to sell Product to PG&E using the PA. The PA is non-negotiable and is available on the RFO Website. Accordingly, the Offeror shall submit its Product Pricing as part of its Offer submittal that assumes the costs of Offeror’s adherence to the provisions of the PA.

The RFO documents available to Participants include: (1) 2017 DRAM RFO Protocol; (2) Offer Form; (3) Corporate Structure and Financials; (4) DRAM Purchase Agreement; (5) Notice of Demonstrated Capacity; and (6) Scheduling Coordinator Request for Information.

As outlined in the RFO Protocol, offers were originally due on April 4, 2016. However, the due date for Offers for all utilities was eventually pushed back to April 18, 2016.

The RFO Protocol also outlines the evaluation criteria to be applied to evaluate and select the shortlisted offers from those submitted. The RFO Protocol indicates that all offers will initially be assessed for conformance with the eligibility requirements set out in this RFO Protocol. Participants should conform their offers to the criteria in order to be considered. For PG&E, both quantitative and qualitative considerations will be included in evaluating offers.

Pursuant to regulatory requirements of the California Public Utilities Commission, PG&E retained Merrimack Energy Group, Inc. (“Merrimack Energy”) as the Independent Evaluator (“IE”) for this market solicitation.<sup>5</sup>

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

On September 19, 2013, the California Public Utilities Commission (CPUC) issued an Order Instituting Rulemaking (OIR) in Decision (D.) 13-09-011 to enhance the role of

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<sup>5</sup> Merrimack Energy is currently the only IE on the IE list for all three IOUs. Merrimack Energy was therefore retained by all three IOUs for this assignment.

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)<sup>6</sup> be used to obtain a new resource comprising Demand Response resources which would be aggregated as Proxy Demand Resources (“PDRs”) Reliability Demand Response Resources (“RDRRs”) by third parties in order to participate directly in the CAISO Day-Ahead or Real-Time Energy Markets<sup>7</sup>. 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 rulemaking<sup>8</sup>, 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”)<sup>9</sup>. In D. 14-12-024, Ordering Paragraphs 5 and 6, the utilities were ordered to file an advice letter for the DRAM, together with a standard pro-forma contract and to work collaboratively with stakeholders in the DRAM pilot design working group.

## **2016 DRAM**

In their Tier Three Advice Letter filed for the 2016 DRAM on April 20, 2015 (“April 20 Advice Letters”)<sup>10</sup>, 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.

Pursuant to the 2016 DRAM RFO Pilot design described in the April 20, 2015 Advice Letter, the following highlights are identified:

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<sup>6</sup> The DRAM was formally introduced by the CPUC in D. 14-03-026 (March 27, 2014), as described further below.

<sup>7</sup> Bidding Demand Response into the CAISO market has been a CPUC objective since 2007. Finding of Fact 12, D. 14-12-024.

<sup>8</sup> 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).

<sup>9</sup> 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).

<sup>10</sup> AL 3208-E (Southern California Edison Company); AL 4618-E (Pacific Gas and Electric Company); AL 2729-E (San Diego Gas & Electric Company).

- the delivery period for the subject contract was set as June to December 2016;
- the IOUs would follow standard RFO practices for the DRAM solicitation, including a pre-bid conference and the requested use of an Independent Evaluator, and would use a common Offer Sheet which separates the capacity bid prices from the SC costs expected;
- the DR resource must register as a PDR and was required to offer, through a Scheduling Coordinator (SC), the DR resource into the CAISO market during the Must Offer Obligation (MOO) hours;
- the DRAM PDRs, like all PDRs, would be required to meet PDR 2016 minimum availability requirements;
- the DRAM PDRs would be composed of retail customers with the same Load Serving Entity (LSE), located within the same Utility Distribution Company (UDC) as the IOU holding the auction and also within the same CAISO Sub Load Aggregation Point (SLAP);
- the number of the Seller's DR resource(s) could not exceed the limitations D. 15-03-042 places on the number of customer service account registrations for each IOU;<sup>11</sup>
- the Monthly bid maximum would be 10 MW for PG&E and SCE and 2 MW for SDG&E;
- the funding for the winning bids in the 2016 DRAM Pilot would generally be limited to \$4 million each for PG&E and SCE and to \$1 million for SDG&E;
- the IOUs would in general use a DRAM standard contract based on existing RA contracts and providing that the DRAM Product meet both CPUC system RA requirements<sup>12, 13</sup> and CAISO MOO requirements;

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<sup>11</sup> 14,000 registrations for SCE; 10,000 registrations for PG&E and 7,000 registrations for SDG&E.

<sup>12</sup> "To the extent possible, System, Local, and Flexible RA eligibility requirements should remain consistent across all resource types, including storage and supply-side DR. These requirements include the ability to operate for at least four consecutive hours at maximum power output (Pmax RA), and to do so over three consecutive days. Resources wishing to qualify for System or Local RA must also have the capability to offer into the CAISO markets, either via economic bids or via self-scheduling, under the Must Offer Obligation (MOO) applicable for that resource type." D. 14-06-050, Appendix B, p. B-2. In the Advice Letter, due to various complications, the IOUs requested, consistent with D. 14-06-050, language that the contracted Monthly Quantity, with after-the-fact demonstrations be used as a proxy for Qualifying Capacity as otherwise set forth in D. 14-06-050, AL 3208-E, p. 13-14 (Demonstrated Capacity in the DRAM standard contract to be based on one of three Seller options). See also: Resolution E-4728, Finding Paragraph 7, Ordering Paragraph 5, below, and D. 15-06-063 (approving use of contract capacity in 2016 DRAM.)

<sup>13</sup> In AL 3208-E, p. 14, the IOUs requested a waiver of CPUC RA penalties imposed on the IOUs but arising from the DRAM Sellers' inability to provide the contracted capacity.



- The IOUs proposed various techniques relating to existing tariffed DR programs in order to make a significant population of active DR customers available for DRAM aggregators; and
- The Evaluation Criteria would have both quantitative and qualitative features.

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

- 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 limitation<sup>15</sup>;
- 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 Pilot<sup>16</sup>;
- DRAM contracts must adhere to RA criteria, as well as CAISO obligations and criteria;
- DRAM customers would not need to be known in advance of contract execution and certain provisions proposed to allow existing DR customers to migrate to DRAM were approved;
- Net Metering Customers would be allowed to participate in the DRAM program;
- A set-aside (without any cost cap<sup>17</sup>) was approved equal to 20% of the total MWs procured<sup>18</sup> 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;

<sup>14</sup> 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.

<sup>15</sup> Resolution E-4728, Ordering Paragraph 14.

<sup>16</sup> Resolution E-4728, Ordering Paragraph 6.

<sup>17</sup> Resolution E-4728, Finding Paragraph 29.

<sup>18</sup> Resolution E-4728, Finding Paragraph, 30.



- The IOUs are directed to each inform the CPUC 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 proposes 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 IOUs discretion;
- The IOUs are 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 removed<sup>19</sup>;
- 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;
- 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;

As set forth in Resolution E-4728, Ordering Paragraph 22, Supplemental Advice Letters were filed by all three IOUs after the Resolution<sup>20</sup> and were approved September 24, 2015 by the CPUC Energy Division (ED)<sup>21</sup>. 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 the 2016

<sup>19</sup> Resolution E-4728, Finding Paragraph 7, Ordering Paragraph 5.

<sup>20</sup> PG&E AL 4618-E-A and 4618-E-B; SDG&E AL 2729-E-A; and SCE AL 3208-E-A (DRAM Resolution Compliance Supplements).

<sup>21</sup> The ED clarified in the September 24, 2015 Letter certain questions regarding the continuing eligibility of DR participants in DRAM who are existing IOU DR program participants.

DRAM PAs with the selected Offerors in December, 2015. On January 8, 2016, PG&E timely filed a Tier 2 Advice Letter (“AL”) (“AL 4772-E”) with the results of the first year of the DRAM pilot pursuant to Resolution E-4728 and Resolution E-4737. On February 8, 2016, the CPUC Energy Division approved AL 4772-E in its entirety for effect on that date (“2016 DRAM Approval”).

## **2017 DRAM**

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. In the 2017 DRAM Advice Letter, at pages 3-5, the expansion of the Product definitions for the RA resources sought by the Companies in the second year of the DRAM Pilot was described by the IOUs as follows:

### **“Product Definition**

Local RA constitutes resources within specific areas (Local Capacity Areas, or LCAs) that CAISO has determined to have unique needs beyond what can be served by system-level resources. Both System RA and Local RA resources must obtain a Qualifying Capacity (QC) prior to inclusion in the year-ahead and monthly RA filings.

Flexible RA is intended to address the needs created by the increased adoption of intermittent supply resources. In D.14-06-050<sup>22</sup>, flexible capacity is defined as: “economically dispatched resources needed by the California ISO to manage grid reliability during the greatest three-hour continuous ramp in each month.” All Flexible RA resources must receive a QC value as either a System or Local resource, and must also obtain an Effective Flexible Capacity (EFC) value (which can be greater than, less than, or equal to the QC).

The CAISO offers two products through which DR can be offered as an energy resource. Proxy Demand Resource (PDR) is available for DR offered on an economic basis. PDR can be offered into both the Day Ahead (DA) and Real Time (RT) markets. Reliability Demand Response Resource (RDRR) is available for DR offered primarily on an emergency basis for reliability in emergency situations. RDRR must be offered in the RT market for dispatch under emergency conditions, but it may also be offered in the DA market for dispatch on an economic basis. System RA and Local RA can be offered as either PDR or RDRR. Flexible RA can only be offered as PDR because RDRR requires discrete dispatch (i.e. the dispatch cannot be a partial award of the offered MWs) and because Flexible RA resources must participate economically in both the DA and RT markets.

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<sup>22</sup> Decision Adopting Local Procurement and Flexible Capacity Obligations For 2015, And Further Refining the Resource Adequacy Program, Appendix A; July 1, 2014.

### **Application in the 2017 DRAM Contract**

To accommodate DRAM Sellers that wish to offer a portfolio of product types and an associated Scheduling Coordinator (SC) cost, the 2017 DRAM contract allows the Seller to provide more than one product type. For example, a Seller may wish to offer 5 MW of System RA as well as 2 MW of Local RA. The 2017 DRAM contract would allow this under two conditions. First, each product must be provided with unique customers—the same customer cannot be used to demonstrate capacity for more than one product. Second, the Seller will only be paid according to the Demonstrated Capacity conditions for each unique product type. Using the example above, the Seller would only be paid for the 2 MW of Local RA if the Seller meets the contractual requirements for Local RA. The Seller could not seek compensation for the 2 MW as System RA under the claim that 2 MW were demonstrated, just of a different product type.

The 2017 DRAM contract bundles all associated RA capacity benefits within the same product type; a Buyer's commitment to provide Local RA includes the associated System RA attributes. Likewise, a Buyer's commitment to provide Flexible RA includes the associated Local RA or System RA attributes (hence Flexible RA must be offered on a basis of either Flexible-Local or Flexible-System). However, as noted above, the Seller is paid only for Demonstrated Capacity relative to the primary product type promised in the contract (i.e. System, Local, or Flexible)."

### **Resolution E-4754**

On January 28, 2016, the Energy Division of the CPUC approved, with modifications, the 2017 DRAM Advice Letter 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 findings and orders.

- That the parties comply with a policy on the use of generation or storage that is different than Resolution E-4728 if adopted before the 2017 DRAM contracts are signed (Finding 3);
- That the QC and EFC method and policy in D.14-06-050 allows for the use of program design (contract capacity) to establish initial QC and EFC if historical data are unavailable or inappropriate and further, for such resources, that Sellers are exempt from load impact analysis (Findings 5 and 6);
- CAISO has proposed a 20-minute response time for PDRs and RDRRs, while the CPUC has not adopted a comparable dispatch requirement, a difference that should not be resolved in this pilot (Findings 8 and 9);
- No modifications of the confidentiality provisions of the DRAM PAs are justified at present (Finding 15);
- The 2017 DRAM can be funded, consistent with the intent of D. 14-120024, from the 2015-2016 program year budget (Findings 16 and 17);
- It is reasonable that Sellers should be exempt from Flexible RA obligations if budget requests for real time and ancillary services functionality are not timely approved and the associated functionality is not enabled in a timely period (Finding 18);

- The minimum procurement targets from the 2016 DRAM should be carried forward and the limits clarified (Finding 20);
- The IOUs should guard against the use of Back-up Generation by modifying the 2017 DRAM PA Section 7.2(b)(v) to include a new final sentence and to read in full as follows (Ordering Paragraph (“OP”) 2):

“During each month of the Delivery Period, if any participating Customers in the DRAM Resource have Back-up Generation, Seller shall ensure that such Back-up Generation is not used during a Dispatch by any PDR or RDRR providing Product to Buyer during such month. Seller shall use at least one of the following options to demonstrate that participating Customers did not use Back-up Generation during a Dispatch of a PDR or RDRR providing Product to Buyer: (w) provide an attestation with each invoice that no participating Customer in the PDR or RDRR providing Product in the invoiced month used Back-up Generation during a Dispatch; (x) prohibit participating Customers from having Back-up Generation in its DRAM Resource; (y) monitor metering on the participating Customer’s DRAM Resource to ensure that no Back-up Generation was used during a Dispatch of a PDR or RDRR providing Product to Buyer; and (z) require, in its agreement with its participating Customers, that no Back-up Generation may be used during a Dispatch of a PDR or RDRR providing Product to Buyer. If the Commission approves a policy and/or requirement dictating an approach for regulating the usage of generation or storage during DR events on or before the date on which this contract is signed by the parties, then that policy and/or requirement shall apply, and this contract shall be modified as directed by the Commission or its staff.”

- “Contract capacity may be used to establish initial QC and EFC for DRAM resources for which historical data are not available, consistent with D.14-06-050.” (OP 3)
- The IOUs shall modify Section 3.3(c) in the pro forma contract by adding two new final sentences as follows: “This section 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.” (OP 4):
- The IOUs were ordered to delete the final sentence in Section 3.4(a) of the proposed 2017 DRAM PA, reading “In the event that these requirements conflict or the CAISO or CPUC do not provide a corresponding requirement to the other Governmental Bodies, Seller shall comply with the most stringent requirement of the Governmental Bodies.” (OP 5)
- The IOUs were ordered to replace Section 3.5 of the proposed 2017 DRAM PA, with Section 3.5 of the 2016 DRAM PA approved in Resolution E-4728 and subsequent disposition letter, specifically to continue the 2016 DRAM PA exemption of Sellers from any indemnification of 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.” (OP 6):
- 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 (OP 8 and 9).<sup>23</sup>

- In order to avoid a Buyer termination option in the event of certain funding delays, the IOUs were ordered to modify Section 1.5(c) of the proposed 2017 DRAM PA so that the subject provision read as follows: “(c) In the event that the CPUC does not approve Buyer’s request for funding to support real time and ancillary services capability and the Buyer has not yet enabled real time or ancillary services functionality, by the time that the DRAM Resource is offered into the CAISO market, on or after January 1, 2017 per the terms of this agreement, Buyer shall provide notice to Seller and Seller shall be exempt from both any obligation to provide flexible capacity and any associated penalties. Once Buyer has enabled real time or ancillary services functionality and Sellers are able to provide flexible capacity to the CAISO market, this section shall have no further effect.” (OP 10);
- 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 and the IOUs were again encouraged to procure up to the 2017 budget limitation or the available authorized Rule 24/32 registrations, whichever came first (OP 11).<sup>24</sup>

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).

### C. 2017 DRAM Schedule

In accordance with the applicable orders, resolutions and Advice Letters, each of the IOUs, including PG&E, adopted the following simultaneous<sup>25</sup> schedule:

Launch 2017 DRAM RFO	3/3/16
Pre-Bid Joint IOU Conference	3/15/16
Deadline to submit any questions	4/11/16
Answers to all Questions will be posted	4/14/16
DRAM RFO Offer package due	4/18/16

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<sup>24</sup> 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.” (OP 13)

<sup>25</sup> Individual IOU dates in November and December, 2015 for implementing contract selection and presentations were expected to, and did in fact, vary.

IOUs Notifies non-conforming Offerors (request to “cure”)	4/25/16
Offeror “Cure” period concludes	5/2/16
PG&E notifies Offerors of selection	6/24/16
Deadline to submit signed contracts	7/8/16
IOU files Tier 1 advice letter seeking CPUC approval of Contracts	7/22/16
Approximate CPUC Contract Approval	8/26/16

#### **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 RFP?
9. Based on your analysis of the RFP bids, the bid process, and the overall market, does the contract 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 2017 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 weekly 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 ten years. In Decision 04-12-048 (December 16, 2004), the CPUC required the use of an IE by investor-owned utilities (IOUs) in resource solicitations where there are affiliate, 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.<sup>26</sup> Instead, the IE would be consulted by the IOU, along with the Procurement Review Group (“PRG”) on the design, administration, and evaluation aspects of the Request for Proposals (“RFP”). The Decision identifies the technical expertise and experience of the IE with regard to industry contracts, quantitative evaluation methodologies, power market derivatives, and other aspects of power project development. From a process standpoint, the IOU could contract directly with the IE, in consultation with its PRG, but the IE would coordinate with the Energy Division.

In the Advice Letter filed by the three investor-owned utilities (“IOUs”) on April 20, 2015, the IOUs indicated they planned to engage an Independent Evaluator (“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 2017 DRAM RFO

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<sup>26</sup> 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).



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 weekly 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 2017 DRAM 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 adopted by all three utilities;
- Participated in discussions with all utilities to address response to comments from Bidders after the 2016 DRAM RFO;
- 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 call with Bidders regarding conformance issues;
- 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 manager 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 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**

Outreach activities are important to the success of a competitive solicitation process. For the initial 2016 DRAM RFO pilot, the IOUs developed and implemented two such outreach efforts: one for the Scheduling Coordinator ("SC") Request for Information ("RFI"), and the other for the DRAM RFO solicitation. For the SC RFI, the IOU team attempted to contact all the companies and contacts on the SC list maintained by CAISO. The list comprised approximately 153 contacts, some of which included an email address and/or phone number and others which did not include any contact information.

Nevertheless, based on discussions with the IE, the IOU team did attempt to contact all names on the list and were successful in reaching the majority of the contacts listed. The utilities reached out to those SCs that responded in the SC RFI, and gave them the opportunity to refresh their information in the SC packet posted on each of the IOU's websites.

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 this RFO.<sup>27</sup> This includes companies who have 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 DRAM RFO included over 6,500 contacts.

In addition, each utility also issued a news release announcing the launch of the DRAM RFO pilot. The IOU's outreach activities resulted in a 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 2017 DRAM RFO was much more robust than the response to the 2016 DRAM RFO with more Participants submitting offers and more capacity being offered as well.

PG&E also established a section on the Company website for distribution of information to prospective Participants. In addition to the RFO Protocol document, Offer Form, and PA, the website contained all the pertinent solicitation documents, a list of questions from potential Participants and answers provided by the utilities related to the solicitation, Pre-Bid Web Conference Presentation, Commission Decisions, Advice Letters, PG&E Rule 24, PowerAdvocate Instructions, DBE Program information, Schedule of the DRAM solicitation, and PG&E's Electric System Map, and PG&E's SubLap map.

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 Respondents for all products?
- Did the utility adequately market the solicitation?

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<sup>27</sup> The list of potential candidates was based on a compilation of the lists for all three IOUs.

### C. Was the Solicitation Adequately Robust

PG&E received one hundred seven (107) original offers<sup>28</sup> on April 18, 2016 from [REDACTED] counterparties, compared to 49 offers from [REDACTED] in the 2016 DRAM RFO. There were [REDACTED] new Participants, [REDACTED]. Of the offerors competing in the process, [REDACTED] provided residential offers only, [REDACTED] provided non-residential offers only, and [REDACTED] provided both residential and non-residential offers. Overall, there was a total of 195 MW submitted for August, 2017 based on unique offers. The unique offers were comprised of 57 residential offers (for 69 MW) and 38 non-residential offers (for 126.5 MW). The total number of expected new service accounts was 82,576, and the total number of service accounts that includes those already registered with CAISO was 91,920. The total cost of the eligible offers received was approximately [REDACTED], significantly above the cost cap established for PG&E.

The IE concludes that PG&E's outreach activities were more than adequate and led to a robust market response based on the competitive number of respondents and options submitted. Respondents submitted RA offer that included all months in the contract terms (i.e. January – December, 2017) 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 2017 RFO based on the set of constraints identified in the RFO and the requirements outlined in the CPUC Resolution. As will be discussed in this section, the three California utilities, including PG&E, developed a consistent "value oriented" quantitative evaluation methodology for the 2017 DRAM RFO based on comments submitted to the IE by Participants in the 2016 DRAM RFO. In addition, the utilities revised their offer sheets to be more uniform and also addressed the mutual exclusivity issues raised by the Participants. The value based methodology replaced the simplified cost evaluation methodology used by utilities for the 2017 DRAM solicitation.

As described in its 2017 DRAM RFO protocol document, PG&E starts by reviewing Offers against the Eligibility Requirements identified in the RFO for conformance purposes. PG&E may allow Bidders to cure any deficiencies contained in the Offer submittal. A Bidder's cure will be limited only to those areas or issues which PG&E designates as eligible to be cured. Conforming offers will then go through the analysis described later in this section to evaluate and rank the offers received. Offers will be shortlisted based upon the requirements identified in the DRAM Decisions, Resolutions

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<sup>28</sup> The total number of offers (107) includes all offer variations including mutually exclusive offers. If mutually exclusive offers are removed there are still a total of 95 unique offers.

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:

- A minimum target of 10 MW;
- 20% of which must be from residential Offers;<sup>29</sup>
- Select contracts, in aggregate, up to the funding or Electric Rule 24 registration limits is encouraged.<sup>30</sup>

Based on the schedule, there is proposed to be a 7-day cure period from April 26, 2016 to May 2, 2016.

PG&E will evaluate all offers on an identical basis using the evaluation criteria outlined below for both quantitative and qualitative criteria.

**Quantitative Criteria** – For the 2017 DRAM RFO, PG&E will calculate a net market value of the RA capacity associated with each Offer in its evaluation. Net market value is equal to an Offer's benefits minus its costs. An Offer's benefits are based on the forecast market value of each type of Product in the Offer, e.g. System Capacity, Local Capacity, and/or Flexible Capacity. An Offer's cost is determined by multiplying (a) the Offer's volume per product per month by (b) the Offer's bid price per product per month, then adding all these monthly values together and finally adding Scheduling Coordinator costs. Subsequently, Offers will be ranked by net market value per unit – in units of \$/kW-year – from highest to lowest. A net market value per unit is calculated using total net market value in dollars for the numerator, and weighted average monthly volume in kilowatts for the denominator.

An individual Offer can contain multiple types of Products on multiple rows in the Offer Form. Although PG&E does not require additional Local or Flexible Capacity for its portfolio in 2017, PG&E will consider such Products in the 2017 DRAM RFO. The result of the quantitative analysis is a merit-order ranking of all complete conforming Offers, based on their net market value per unit.

**Qualitative Criteria** – for the 2017 DRAM RFO, PG&E will apply a qualitative adjustment factor only for the Diverse Business Enterprise criteria. To implement the qualitative assessment of an Offer, a "Qualitative Adjustment Factor" will be added to the net market value per unit before re-ranking the Offers. PG&E applies a 1% adjustment factor associated with this criterion.

The qualitative evaluation matrix developed and used by the utilities contains the following five questions:

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<sup>29</sup> "Residential Offer" is a DRAM resource composed of at least 90% residential customers and no more than 10% small commercial customers based on registrations by rate.

<sup>30</sup> For this 2017 DRAM RFO, the funding limit is \$6.0 million and the customer registration limit is 10,000. This limit may be increased based on the progress of current Electric Rule 24 activities.

- Have you (the Seller) participated in a DR program or DR market anywhere as an aggregator;
- Do you have or will obtain before the program begins, DBE status;
- Are you going to use enabling technology with at least 90% of your PDR customers?
- Will your DRAM resource require any permits, interconnection agreements, environmental studies, or additional land rights prior to operation;
- Is there any ongoing investigation or an investigation that has occurred within the last five years with respect to any alleged violation of any rule, regulation, or law associated with any commodity, securities, environmental, or financial market regarding any DR services you were/are providing?

PG&E’s weights for all criteria except the DBE criteria are set at 0%, meaning there is no adjustment associated with any of this criteria. For the DBE criteria, if a Bidder responds “no” to the following question; “Do you have, or will you obtain before the program begins, DBE status”, the bid will be subject to a 1% adjustment to the quantitative score.

Prior to issuance of the 2017 DRAM RFO, the IE reviewed PG&E’s and the other utilities evaluation methodology and participated in calls with PG&E’s project manager along with the teams of the other utilities to review and discuss the proposed revised methodology and ensure the methodology was reasonably consistent to facilitate participation by Bidders.

After submission of Offers, the IE also summarized and ranked the offers received by each utility as a check relative to the summary prepared by the utility. The IE also reviewed PG&E’s and other utility assessment 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 utility assessment.

### **Framework and Principles for Evaluating PG&E’s Bid Evaluation Methodology**

This section of the report addresses the principles and framework underlying Merrimack Energy’s review of PG&E’s methodology for the 2017 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 developed its 2017 DRAM RFO Protocol which adequately defines at a high level the products required, the basis for the solicitation, the principles and objectives of PG&E, the evaluation criteria, quantitative and qualitative evaluation factors, and the information required from the Participants. The 2017 DRAM RFO Protocol also provides the Offer Forms which the Participants should complete as part of their offer. As described in the RFO Protocol as a first step all incoming proposals were initially assessed for conformance with the basic submittal and eligibility requirements identified in the 2017 DRAM RFO. Subsequent to the conformance review, PG&E undertook a quantitative and qualitative assessment, with the qualitative assessment treated as an adder to the quantitative results. As stated in the RFO, PG&E ranked the proposals based on Net Market Value which reflects the relationship between the bid price offered for each month relative to PG&E's projection of market RA value. In sum, Net Market Value is equal to an Offer's benefits minus costs.

As is typical in procurement processes, the 2017 DRAM RFO does not provide the detailed inputs (i.e. RA prices projected for each month and product) but does provide a description of the specific methodology that PG&E will use in the evaluation. The methodology was reviewed with the IE in advance of receipt of offers and discussed with PG&E's project team. The methodology was consistently and reasonably applied to all offers given the type of product sought. Any issues associated with a consistent evaluation of different project sizes, products or offer months were not relevant for this solicitation which sought only Demand Response RA products for the January to December, 2017 period. Participants 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.<sup>31</sup>

The Offer Form and 2017 DRAM RFO Protocol identified the specific qualitative factors on which the offers would be evaluated. PG&E stated in its RFO Protocol that it will apply a qualitative adjustment factor only for the Diverse Business Enterprise criteria described above. To implement the qualitative assessment of an Offer, a "Qualitative Adjustment Factor" will be added to the net market value per unit before re-ranking the Offers.

In summary, the description and implementation of the evaluation methodology, criteria, and inputs meets the requirements of the Resolution and industry standards for this solicitation. One issue to consider for future DRAM solicitations (after completion of the pilot) is whether the evaluation process should contain stricter thresholds or qualitative

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<sup>31</sup> Two factors not provided to Bidders included the application of discounting the costs for each offer and the application of a 1.15 factor adjustment in accounting for the value of RA in the analysis to be consistent with CAISO rules.



criteria based on performance of Bidders 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 (and the other two IOU'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 and cost in evaluating and ranking offers. Furthermore, this methodology is valuable for the 2017 DRAM RFO in which the utilities were considering a range of RA products (i.e. system and local RA, flex options, etc.) as opposed to a cost evaluation methodology used for the 2016 DRAM RFO. In particular, PG&E developed its methodology to be able to evaluate a range of products and offer types;
- The methodology does include factors for both the quantitative and qualitative evaluation. The qualitative criteria are transparent and are essentially self-defining;
- 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.

The weaknesses of the methodology include the following:

- The initial qualitative adjustment percentages have proven to be relatively insignificant. For the pilot program, the reliance on quantitative factors as a primary or sole determinant is reasonable. However, the value and importance of qualitative factors should be reviewed after the initial two pilot solicitations, particularly if Respondents awarded contracts are not able to perform;
- Although one might argue that not including the utility RA forecasts by product is not transparent, such a practice of not providing the forecast to bidders is typical industry practice;
- The methodology may include a slight bias against offers that include only a portion of the months rather than all twelve months given the methodology used by the utilities to calculate the average monthly volume offered. In this

methodology, months with no offers are included as 0 in the calculation of average monthly volume.

In conclusion, the IE is of the opinion that the 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, MW and customer reservation 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 2017 DRAM solicitation including providing comments on the RFO documents, participating in weekly conference calls with the IOU's project teams prior to receipt of offers, discussing the bid evaluation methodology and selection process, 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**

Weekly meetings for the IOU 2017 DRAM team began in early January, 2016. The meetings occurred during the timeframe leading up to submission of offers. After submission of offers, the utilities ceased regular meetings and focused on their own assessments and communications with Bidders regarding the specific offers submitted to the particular utility. For the 2017 DRAM RFO specific agenda items discussed during the meetings included development of the 2017 DRAM quantitative evaluation methodology, schedule for undertaking the process and potential schedule implications associated with CPUC's decision on registrations, creation of the Pre-Bid Conference presentation, and revisions to the contract provisions.

A representative of Merrimack Energy participated in the majority of the project team calls and either provided comments or responded to questions and comments raised by team members regarding fairness or other issues related to the IE's role in the solicitation process.

### **Preparation/Launch of the DRAM RFO**

The IE provided comments to PG&E on both the DRAM RFO Solicitation Protocol as well as the Offer forms prior to launch of the 2017 DRAM RFO on March 3, 2016. The



IE and PG&E's DRAM team lead also had discussions on the bid evaluation methodology proposed by PG&E prior to the launch.

The RFO was issued on March 3, 2016 as planned. PG&E posted its' Demand Response Auction Mechanism (DRAM) Request for Offers Solicitation Protocol ("2017 DRAM RFO"). The 2017 DRAM RFO Solicitation Protocol and related documents were posted to the 2017 DRAM RFO website. PG&E's DRAM RFO website included the following documents:

- CPUC Resolutions and Advice Letters
- 2017 DRAM RFO Protocol;
  - Attachment A – Offer Form
- Attachment B – Corporate Structure and Financial
- Attachment C – DRAM Purchase Agreement
- Exhibit C-1 – Notice of Demonstrated Capacity
- Project Schedule
- DRAM RFO Bidder Webinar Presentation
- Bidders Webinar Frequently Asked Questions
- PowerAdvocate Registration Information and Instructions
- Scheduling Coordinator Request for Information (SC RFI)
- CAISO Bidding Information
- 2016 DRAM RFO
- PG&E Sub-Lap Map
- CAISO Local Capacity Information
- Electric Rule 24
- FAQs

### **Pre-Bid (Bidders) Web Conference**

The IOUs held a Pre-Bid Web Conference on March 15, 2016 for interested Offerors 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 Offerors/Respondents, process schedule, and steps in the process. Offerors/Respondents 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. Merrimack Energy participated in project team calls leading up to development of the Pre-Bid Conference presentation and provided comments and suggestions during the discussions focused on development of the Pre-Bid Conference materials.

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

- Introduction and Overview
- Bid Valuation and Selection
- DRAM Request for Offers Bid Materials
- Walk-Through of IOU DRAM RFO Offer Forms
- Closing Remarks

Approximately 82 Participants either participated via WebEx or called into the Pre-Bid Web Conference, including a number of potential new Participants.

### **Discussion of Bid Evaluation Methodology**

One of the major revisions to the 2017 DRAM RFO process was a change in the methodology used to evaluate and rank offers. In the 2016 DRAM RFO process, the utilities generally considered the cost of offers bid along with monthly weights to evaluate and rank offers. The responses of several Participants to the survey conducted by the IE called for a more consistent evaluation process. In addition, both ORA and the IE recommended the development of a consistent methodology among all three utilities as well as a more consistent Offer Form and treatment of mutual exclusivity of offers.

The utilities began to address the issue of a consistent evaluation methodology at weekly DRAM meetings. Discussions focused on revising the evaluation process from a cost-based methodology to a more traditional value-based methodology designed to evaluate both the costs of the offers submitted relative to the value placed on the product by each utility. While the utilities generally agreed to the overall methodology, several other issues emerged for discussion:

- Would costs and benefits be based on nominal or discounted dollars?
- What is the best approach for normalizing the kW in the denominator for evaluation and ranking purposes?
- How would the benefits be derived for each utility?
- How would each utility treat qualitative factors?
- Should an adjustment factor of 1.15 be used for calculation of the RA benefits in order to give a more accurate depiction of the RA benefits received?

After several discussions, the utilities agreed to implement a consistent 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. This would essentially be compared to the cost bid for each month. PG&E will accept offers for the following products – System RA, Local RA, and Flexible Capacity Products. In the Offer Form PG&E has identified seven local areas (designated from Product B1 to B7), Flexible Capacity Products which may be Category 2 (peak ramping) or Category 3 (super-peak ramping) and several Flexible Category 2 and 3 designations (D2-1 to D2-7 and D3-1 to D3-7) as defined in the DRAM Solicitation Protocol.

The utilities also 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 after several iterations to apply an average kW per month metric as the denominator for calculating a single metric to use for evaluation and ranking purposes. All utilities also applied the 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. In this regard, the utilities agreed upon a solution whereby the project viability scoring matrix proposed by SDG&E would be adopted, but the utilities were able to include their own weights and qualitative criteria in the matrix for purposes of conducting the evaluation. As previously noted, PG&E adjusted the quantitative evaluation results by the qualitative score to derive a total score for evaluation and ranking purposes. However, the maximum adjustment was only 1% for supplier diversity.

While the methodology does not allow an accurate comparison of the prices and value of 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 consistent evaluation by each utility for the products solicited.

**Questions and Answers**

The utilities received and answered thirty-one questions at the Pre-Bid Conference and forty-two 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 1 below summarizes the number of questions and answers provided by topic area as included under Frequently Asked Questions on each IOU’s website.

**Table 1: Summary of Q&As by Topic Area**

<b>Topic Area</b>	<b>Number of Questions/Responses</b>
RFO General	19
Supply Plan/RA/Local/System/Flex	6
Capacity Demonstration and Must Offer Obligations	1
Purchase Agreement	4
Proxy Demand Resource (PDR)/Reliability Demand Resource (RDRR)	5
Scheduling Coordinator	2
Customer Eligibility	2
CISR – DRP/Green Button	3
<b>Total</b>	<b>42</b>

The IOUs compiled the questions received by each utility, distributed the questions to each utility representative, prepared initial responses to the questions, and distributed the draft responses for further comment. The team also met for the weekly team calls and discussed the responses to questions. The responses to the questions generally reflected the combined input of team members and consensus regarding a consistent response, if possible. The IE participated in weekly meetings, made comments as necessary and

opined on issues which emerged regarding fairness issues associated with responses to potential bidders seeking immediate input. 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 18, 2016. For PG&E, Offers were submitted to the PowerAdvocate Platform established for the solicitation. A total of sixteen Bidders submitted offers. In all, 109 offers were originally submitted, more than twice as many were submitted for the 2016 DRAM RFO.<sup>32</sup> [REDACTED] new Participants submitted offers to the 2017 DRAM RFO, [REDACTED].

Eligible Respondents offered a mix of residential and non-residential customer accounts. [REDACTED] Participants [REDACTED] submitted offers for residential only customer accounts. [REDACTED] Participants [REDACTED] submitted offers for non-residential customer accounts only. [REDACTED] submitted offers for both residential and non-residential accounts,

In summary, after considering the non-conforming offers described in the next section of this report, eligible Participants submitted offers that included a total of 91,920 customer registrations, 196 MW of August RA capacity, with a total cost of [REDACTED].

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 offers and 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.

Appendix A provides the IE's list of the offers received, including the Offeror, the customer class offered, number of accounts, monthly capacity and pricing offered, scheduling costs and total costs for each offer.

### **Conformance of Offers/Cure Period**

The DRAM RFO schedule allowed approximately 14 days from submission of offers to identify any conformance issues and to allow bidders to cure any non-conformance issues associated with their offers. With respect to the cure period allowed for non-conforming Offerors to cure their Offers, the utilities were to notify Respondents on April 25, 2016, with conclusion of the cure period on May 2, 2016.

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<sup>32</sup> Forty-nine offers from [REDACTED] Respondents were submitted to the 2016 DRAM RFO.

[REDACTED]

[REDACTED]

[REDACTED] As a result of this revision, PG&E evaluated and ranked 107 offers.

**Offer Evaluation and Ranking**

After accounting for issues raised in the conformance/clarification assessment, PG&E proceeded to complete its review and assessment and rank offers based on its evaluation methodology. PG&E will perform a quantitative assessment of each conforming Offer and rank those Offers based on each Offer’s net market value (“NMV”) per unit, in \$/kW-year. The evaluation methodology consisted of the following steps:

1. Calculate the total bid cost for each offer by multiplying the Offer’s volume per month for the product offered by the Offer’s price per month, then adding all of the monthly values;
2. Add the Scheduling Coordinator costs for each month for which an offer was submitted;
3. Calculate the sum of an Offer’s benefits based on the product of the monthly capacity offered times PG&E’s forecast of the RA value for each month based on the product submitted by the Participant;<sup>33</sup>
4. Calculate the Net Present Value of the cost and benefit streams based on PG&E’s discount rate;
5. Calculate the difference between the costs and benefits to generate Net Market Value;
6. Divide Net Market Value by the NPV of the average monthly kW submitted for each offer;
7. Multiply the Net Market Value by the Qualitative Score Cost (e.g. if qualitative score is 9%, the value is total weighted cost \* (1 + .09);

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<sup>33</sup> PG&E applied its generic forecast to all products submitted because PG&E did not require any local or flexible capacity.

Offers are then ranked by Net Market Value per unit (\$/kW-year) – from highest to lowest.

**May PRG Meeting – 2017 DRAM RFO: Offers Received and Evaluation Methodology**

PG&E provided a presentation to the PRG on May 17, 2016 to inform the PRG of the status of the Offers submitted and a description of the evaluation methodology to be used to evaluate and rank bids. [REDACTED]:

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

[REDACTED]

[REDACTED]

[REDACTED]

**June 21 PRG Meeting – 2017 DRAM RFO Proposed Shortlist Selection**

PG&E provided an update to the PRG regarding the 2017 DRAM RFO process on June 21, 2016 along with its proposed shortlist selection and the rationale for selection.

[REDACTED]  
[REDACTED]:

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

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Large redacted text block]

[Redacted text block]

<sup>34</sup> The NPV\$/kW-year values reflect the qualitative Adjustment Factor.

[Redacted]

[Redacted]

[Redacted]

35

[Redacted]

[Redacted]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**Contract Execution**

The final steps in the DRAM RFO process involved shortlist notification and contract execution. According to the DRAM schedule, the IOUs were expected to contact the counterparties by June 24, 2016 to inform them of the status regarding shortlisting. PG&E notified all Participants of their status on June 24, 2016. Participants were informed whether they were selected for contract award, not selected or selected for the waitlist. For those offers selected, PG&E sent a copy of the 2017 DRAM PA as well as Exhibit B. In its letter to selected Participants PG&E notified the Participant that a Word file of the Purchase Agreement was due by July 8, 2016 including a signature page and Performance Assurance was due 10 business days after execution of the PA. Shortlisted Participants were also informed that they would be notified by July 8, 2016 if they would be removed from the waitlist and selected for contract execution.

Although the contract was a standard contract with no revisions allowed, there were a few clean-up items that were addressed prior to execution of the final contracts. The clean-up items generally involved credit provisions.

Appendix B contains the applicable information for each contract executed that supports the summary information 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 2017 DRAM 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 PG&E's DRAM RFO Protocol 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 Protocol documents. As described in this report PG&E indicated that it intended to rank offers based on quantitative and qualitative factors, with the qualitative score serving as up to a 1% adder to the price evaluation results. PG&E followed the process and methodology it had identified in ranking offers, with the qualitative factor score serving as an upward adjustment to the quantitative results.
- PG&E's evaluation and selection process resulted in PG&E meeting the MW procurement and residential target requirements identified in the Commission Resolution for the 2017 DRAM RFO. PG&E considered customer registrations as a constraining factor, particularly for the first few months of 2017. However, PG&E did not spend up to its authorized spending cap based on its decision to constrain the amount of offers selected based on its assessment of the number of registrations it could process. PG&E took registration limits and cost into account in making final selections as presented to the PRG in June 2017. [REDACTED]

[REDACTED] PG&E's evaluation and selection process resulted in the following outcomes:

- PG&E selected fourteen offers for 21.4 MW of RA capacity for August, above its 10 MW initial target;
- Approximately 52% of all August capacity was met by Residential customer accounts, significantly above the 20% threshold;
- PG&E's expenditures of [REDACTED] authorized budget cap of \$6 million;
- [REDACTED];

- PG&E identified a concern with registration limits. PG&E stated in its presentation to the PRG that it would have about 10,000 new registrations available for the first part of 2017, but later updated this registration limit to 20,000.
- Based on our assessment of the evaluation process relative to the above criteria, it is our opinion that all Offerors 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. We also observed no difference in the treatment of Offerors regarding clarification questions for Offerors, correspondence and communications with Offerors, and follow-up contacts. PG&E (in conjunction with the other IOUs) also conducted a Pre-Bid 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 generally 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;
- PG&E did not classify any offers as non-conforming, although offers from [REDACTED] were clarified and revised before evaluations were finalized;
- PG&E did seek clarification from Bidders if necessary to ensure there were no misunderstandings regarding the offers submitted. However, the IE is not aware of any cases where one or more Bidders were advantaged over others based on the clarification process. It certainly appeared that bidders are now more familiar with the process and requirements and responded with fewer requirements for clarification;
- The PRG was actively involved in the 2017 DRAM RFO process via PG&E's presentations at two PRG meetings in May and June 2016. At these meetings PG&E provided information on the offers received, the bid evaluation methodology, the evaluation and ranking of offers, possible selection scenarios and the proposed scenario selected.
- Our assessment is that PG&E's evaluation of the offers was fair, reasonable and consistent. PG&E's initial assessment that it was constrained regarding its ability to process its allowable registrations influenced its initial offer selection. Upon reassessment, PG&E felt it could absorb 10,000 additional registrations [REDACTED]. [REDACTED]; PG&E exhibited diligence in the evaluation process, informed the IE at each step, and sought input from the IE consistently throughout the process;

## VII. Contract Execution Process

The 2017 DRAM Purchase Agreement (“2017 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 2017 DRAM PA was intended to be executed without negotiations or changes, Respondents were not allowed to provide a redline mark-up.

In the October 9, 2015 2017 DRAM Advice Letter, at pages 4-5, the contract changes in the proposed 2017 DRAM PA, compared to the first year 2016 DRAM PA, were described as follows:

“The following list summarizes additional contract terms and conditions introduced to accommodate Local RA, Flexible RA, and RDRR:

- Expanded the product table in Section 1.1 to allow for all possible variations of each RA product type. This table will be unique to each IOU and its respective LCAs. The monthly quantity and price of each DR product will be provided as Exhibit E to the agreement.
- Generalized the contract’s use and applications of PDR to include RDRR. Because the contract is for RA-qualifying DR capacity—and is essentially indifferent to the type of CAISO energy product through which that capacity is offered—major changes were not necessary to accommodate RDRR. One exception, as discussed above, is that Flexible RA must be provided as PDR.
- Updated the section on Demonstrated Capacity to include measurement criteria specific to Flexible RA. Unlike System or Local RA, Flexible RA is measured by the average hourly load reduction (as opposed to the maximum hourly load reduction). This difference is intended to capture Flexible RA’s requirement for at least three hours of sustained energy output.
- Added geographic definitions of the LCAs for SCE and PG&E (SDG&E’s service territory is contained within a single LCA). Local RA must be composed of customers residing within the designated LCA. However, the Seller is not required to make each CAISO resource registration entirely homogenous in terms of all service accounts being located with the same LCA. A Seller may use a portion of a PDR or RDRR registration, or a Joint PDR or Joint RDRR to demonstrate Local RA.
- *Added terms in Section 3.5 to require the Seller to indemnify or reimburse the Buyer for costs assessed or caused by CAISO for shortfall capacity<sup>36</sup>, and deleted from Section 3.4 certain Seller indemnities related to penalties that should not be imposed in connection with the DRAM pilot.”*

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<sup>36</sup> The italicized language is no longer accurate since Resolution E-4754 in OP 6 required the replacement of the proposed 2017 language for Section 3.5 with the original 2016 language for Section 3.5. The latter explicitly exempts Sellers from costs allocated to the Buyer for CAISO capacity payments under the Capacity Procurement Mechanism (“CPM”). See: Section I, Introduction, **Cumulative DRAM Procedural History and Regulatory Requirements (Orders and Resolutions)**, *supra*,

In the following Table 5, the key provisions of the contract are summarized.

**Table 5: Key Contract Provisions**

<b>Provision</b>	<b>Purpose</b>
General Form of Agreement	Demand Response Resource Purchase Agreement (PA): incorporates elements of the Edison Electric Institute (“EEI”) Master Power Purchase and Sale Agreement between the Parties used in Resource Adequacy (RA) contracts, and elements of existing Demand Response (DR) contracts
§1.1 Purchase and Sale of Product (includes Residential or non-Residential Customer Product options by Seller choice in §1.1(c); See also: §3.2 Resource Adequacy Benefits obligations of Seller.	Product is newly defined for the 2017 DRAM: “ <u>Product</u> ” means any or all of System Capacity, Local Capacity and/or Flexible Capacity. The particular type of Product sold by Seller to Buyer under this Agreement is specified in Table 1.1(b).” delivery and sale obligation is for Monthly Quantity at the Contract Price set forth in §1.5 (DRAM Product Monthly Quantity (kW) and Contract Price (\$/kW-month) can change for each RA Compliance Month that the Seller bids on and as accepted by the Buyer.)
§1.3 Delivery Period	Cannot commence without CPUC Approval and at least a 60-day delay; possible 2017 Showing Months include entire 2017 calendar year.
§1.4 Seller’s Designation of DRAM Resource	Prior to each Showing Month, Seller provides Resource IDs for each PDR or RDRR providing Product and Parties cooperate to implement Rule 32 to enroll and register PDR and/or RDRR Customers. Under new Section 1.4(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.”
§1.5 Monthly Quantity and Contract Price	<p>DRAM Product Monthly Quantity (kW) and Contract Price (\$/kW-month) can change for each RA Showing Month that the Seller bids on and as accepted by the Buyer;</p> <p>If Seller is not able to register the DRAM Resource for part or all of the Monthly Quantity for a Showing Month due solely to (i) the actions or inactions of Buyer or the</p>

	<p>CAISO, (ii) insufficient Rule 32 registrations under Conclusion of Law 10 in D.15-03-042 being available to Seller, or (iii) CPUC Approval not occurring at least sixty (60) days prior to the first Showing Month, Seller has rights to reduce Monthly Quantity or terminate the PA, without fault (§1.5(b), (d))</p> <p>Under new Section 1.5(c), when the Buyer has certain delays enabling real time and ancillary services functionality, Sellers are exempt from providing Flexible Capacity until the functionality is established.</p>
§1.6 Demonstrated Capacity	<p>Monthly capacity payments to Seller will be made based on the lesser of Demonstrated Capacity and Monthly Quantity (see §4.1) where “Demonstrated Capacity” will be based on one of the following three Seller options for each Showing Month: (i) The results of a capacity demonstration test conducted by the Seller’s SC; (ii) The average capacity Seller bid the PDR(s) or RDRR(s) into the market associated with Seller’s Must Offer Obligation (MOO); or (iii) The results of the PDR’s or RDRR’s performance in response to a CAISO Dispatch Instruction. New Section 1.6(f) provides “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.”</p> <p>Buyer has rights to require documentation and an audit of Seller records to assure satisfaction of Demonstrated Capacity (§1.6(g)).</p>
§2.1 Obtaining CPUC Approval; §2.2 CPUC Approval Termination Right	<p>Buyer has duty to file for approval within 30 days of Execution.</p> <p>Seller and Buyer have no fault termination rights if approval is not obtained within 60 days of filing.</p>
§3.1 Delivery of Product	<p>Seller must submit Supply Plan for each Showing Month (form in Exhibit D) 10 Business Days before Compliance Showing deadlines and further submit Supply Plan conforming to CAISO Tariff.</p>
§3.3(a) and (b) CPUC Information and Minimum Testing; §3.3(c) load	<p>Seller must provide to the CPUC all information requested by the CPUC relating to Seller’s</p>

<p>impact analysis when historical data available</p>	<p>obligations and performance pursuant to 2017 DRAM Pilot Program; Seller must cause a test of a PDR or RDRR in the DRAM Resource by end of Delivery Period if no dispatch or test otherwise occurs within Delivery Period. New §3.3(c) provides: “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.”</p>
<p>§3.4 and § 3.5 Seller’s Obligations; Indemnities for Failure to Perform</p>	<p>Blanket provisions require compliance with all applicable CAISO Tariff provisions, defined CPUC Decisions and other Applicable Laws including bidding during Availability Assessment Hours and provide for indemnification of Buyer for costs and penalties imposed by CPUC or by CAISO for significant failures to provide Monthly Quantity and other RA Benefits and related requirements. Sellers are explicitly exempt from CAISO CPM capacity costs (similar to 2016 DRAM).</p>
<p>Article 4: Payment and Billing</p>	<p>The article details the payment algorithm, including recovery of SC services as estimated in bid; sets forth the invoicing and payment process; and provides that Seller retains CAISO revenues and pays CAISO costs, penalties and charges. Provisions are now applicable to “each type of Product”.</p>
<p>Article 5: Credit and Collateral</p>	<p>If Seller has no Credit Rating or does not have adequate credit ratings, under §5.1(a), Seller shall maintain certain defined types (cash or Letter of Credit) of collateral (Performance Assurance) in an amount equal to twenty percent (20%) of the estimated Delivered Capacity Payments for all of the remaining months of the Delivery Period including the current month. Under §5.1(c), Performance Assurance, required under §5.1(a), must be posted 10 days after contract execution (similar to the 2016 DRAM requirement).</p>



	<p>Buyer shall have a security interest in the Performance Assurance and the substitution, administration and exercise of rights against, the Performance Assure are described in detail.</p> <p>§5.7 requires access to financial information of Seller on a timely basis if Buyer determines it is required to collect and consolidate financial information under applicable SEC rules. Note that an abbreviated §5.7 applies for PG&amp;E.</p> <p>§5.8 waives Uniform Commercial Code provisions regarding financial assurances.</p>
§6.1 Limitation of Liability of Buyer	Buyer has no obligation to any DRAM Resource Customer in or with respect to participation in a PDR or RDRR or any DRAM Resource and Seller indemnifies Buyer in this regard.
§6.2 Buyer Provision of Information	Buyer has obligation to provide use and meter data consistent with Rule 32 and CISR-DRP form adopted by the CPUC and is liable for charges from CAISO or CPUC incurred by Seller due solely to Buyer's failure.
§6.3 Changes in Law	<u>Changes which make terms of the PA incapable of performance trigger a right to request good faith negotiation of required changes in the PA; and result in a no fault right to terminate if the negotiations due not succeed.</u>
§6.6 Customers in Buyer Auto Demand Response Program	If a Seller will use Customers in Buyer Auto Demand Response Program, new detailed provisions set forth how the dual eligibility is to be handled. <sup>37</sup>

<sup>37</sup> Section 6.6 **Customers in Buyer Automated Demand Response 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 Section 6.6 and this Agreement. 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.

<p>§7.2 Additional Seller Representations</p>	<p>Seller has specific covenants regarding the exclusive nature of the RA Benefits from the Monthly Quantity, the non-use of Back-up Generation (BUG), and how Joint PDRs should be used. A new sentence has been added to §7.2(v) anticipating new developments in CPUC policy on BUG or storage use (“If the Commission approves a policy and/or requirement dictating an approach for regulating the usage of generation or storage during DR events on or before the date on which this contract is signed by the parties, then that policy and/or requirement shall apply, and</p>
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(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 the remaining 40% technology incentive payment of ADR.

(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.

	this contract shall be modified as directed by the Commission or its staff.”)
Article 9: Events of Default; Termination	In addition to conventional defaults, a Seller may be guilty of a cross-default under its borrowing agreements (§9.1(b)(iv)). §9.1(a)(iii) has been clarified with the following proviso: “provided that an occurrence 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.” Conventional Early Termination rights and the duty to make a Termination Payment are provided for. Note that §9.3(b) has been corrected to assure that an otherwise applicable Exhibit A definition of Settlement Amount is not payable to a Defaulting Party: if the Termination Payment is negative, i.e., the Non-Defaulting Party owes the Defaulting Party more than the vice versa, “then Settlement Amount shall be zero dollars (\$0)”,
Article 10: Dispute Resolution	The PG&E-specific provisions mirror those of SDG&E and provide for a sequence of Manager negotiation, Executive Referral, JAMS mediation and finally mandatory arbitration.
Article 11: Indemnification	Seller has broad indemnification obligations with respect to its failures, including liability for consequential damages incurred by a third-party.
Exhibit A New Definitions reflect expanded Products	Among the new definitions in the 2017 DRAM PA are the following:  <p>“<u>Flexible Capacity</u>” 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 2 or 3 as described in the CAISO Tariff.</p> <p>“<u>Flexible RAR</u>” 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.</p> <p>“<u>Joint Resource</u>” 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</p>

DRP) who are not considered part of the respective PDR or RDRR for purposes of meeting Seller’s obligations under this Agreement.

["LA Basin LCA Substations” means the following substations located in the CAISO area: ALMITOSW, AMERON, BANNING, BARRE, BOTTLE, CABAZON, CARODEAN, CENTER, CHEVMAIN, CHINO, CONCHO, DELAMO, DEVERS, EAGLROCK, EISENHOW, EL CASCO, EL NIDO, ELLIS, ETIWANDA, FARREL, GARNET, GOODRICH, GOULD, HI DESER, HINSON, IEEC-G1, IEEC-G2, INDIAN W, JOHANNA, LA FRESA, LAGUBELL, LCIENEGA, LITEHIPE, LTHRNECK, LWIS ANM, MARASCHI, MESA CAL, MIRALOMA, OLINDA, PADUA, RIOHONDO, SANBRDNO, SANTA RO, SANTIAGO, SONG2XR1, SONG2XR2, SONG2XU1, SONG2XU2, SONG3XR1, SONG3XR2, SONG3XU1, SONG3XU2, TAMARISK, THORNHIL, VALLEY-S, VALLEYSC, VIEJO66, VILLA PK, VSTA, WALNUT, WINTEC8, WINTECX1, WINTECX2, YUCCA, and ZANJA.] *[For SCE Agreements only]*

“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.

“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 ] *[PG&E definition]* [the areas where LCA Customers are electrically interconnected to any of the LA Basin LCA Substations and/or the Big Creek/Ventura LCA Substations.] *[SCE definition].*

“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.

["PG&E LCA Substations” means the substations located in Buyer’s service territory as designated in Schedule 1.1(b) and corresponding to the following LCAs as designated on Schedule 1.1(b): Kern, Stockton, Sierra, Other, North Coast/North Bay, Humboldt, Greater Fresno Area, and/or Greater Bay Area.] *[PG&E Definition]*

“Product” means any or all of System Capacity, Local Capacity and/or Flexible Capacity. The particular type of Product sold by Seller to Buyer under this Agreement is specified in Table 1.1(b).

“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.

	<p><u>“Residential Customer”</u> means a DRAM Resource Customer <i>[which is a Single Family or Multi-Family Dwelling customer on a Domestic rate, including RV Parks, Residential Hotels, and Mobile Home Parks and includes electric vehicle charging for customers on Domestic Rate if separately metered, as such capitalized terms are defined in Rule 1] {For SCE} [which is a single family or multi-family dwelling customer on SDG&amp;E domestic rate schedule "DR", "DR-TOU", "TOU-DR", "DR-SES", "DM", "DS", "DT", "DT-RV", "EV-TOU", or "EV-TOU-2] {for SDG&amp;E} [whose dwelling is single-family units, multi-family units, mobile homes, or other similar living establishments] {for PG&amp;E} .</i></p> <p><u>“Residential Customer Product”</u> means Product that is comprised solely of Residential Customers and Small Commercial Customers; <i>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.</i></p>
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As noted, PG&E executed a total of 14 PAs with counterparties. The executed PAs are provided as part of the Advice Letter filing.

**VIII. Safeguards and Methodologies Employed**

The RFO contains a detailed section on Confidentiality that defines the confidentiality requirements between PG&E and the Offeror. In addition, this section identifies that PG&E may disclose confidential information to comply with law or regulations. PG&E also identifies whom it contemplates would likely have access to confidential information. 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 14 PAs with Demand Response Providers. 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 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 Respondent. 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, agreement on the level of credit required, and any issues associated with existing contracts that could be transitioned to a DRAM RFO contract.

The contracts executed were selected in rank order and serve to generally meet the DRAM RFO pilot program requirements as contained in the CPUC Resolution with regard to the MW target, registration limit, and residential capacity thresholds. Overall, the 14 contracts executed were reasonably selected and executed, and merit approval. 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 the 2017 DRAM RFO solicitation process for DR products are generally consistent with policy objectives. First, the response of the market was robust and exceeded 2016 DRAM participation in terms of the number of offers and Participants. Second, the Company was able to meet its 2017 DRAM MW targets as required, at a low and reasonable cost given the options available. The constraint that most affected PG&E's decisions was the registration limits.

Third, the IE found that the IOUs were aggressive and inclusive in marketing the 2017 DRAM RFO pilot, contacting over 6,000 potential contacts. Fourth, one of the issues raised in the Resolution was the concern of a potential lack of participation by residential customers. However, the market response illustrated a significant response from residential customers which resulted in PG&E selecting over 50% of its August capacity from residential accounts, substantially over the 20% residential threshold for both its shortlist and final contracts. Furthermore, based on the evaluation and rank ordering process, residential accounts were priced competitively with offers for non-residential accounts. Whether this result is based on the residential set-aside or not,<sup>38</sup> the result is encouraging for inclusion of residential accounts in Demand Response RFO offers.

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<sup>38</sup> Merrimack Energy has issued a survey to over 135 contacts including contacts from companies that did participate in the DRAM RFO, those that registered but did not submit an offer, other active market participants, and industry players in other markets to assess their view on whether the residential set-aside had an impact on their involvement or not in the RFO. Merrimack Energy also structured the survey to attempt to receive feedback overall on the lessons learned with regard to the initial DRAM pilot RFO. The results of the survey, conclusions and lessons learned for the program overall will be presented in a separate document.

For the reasons stated herein, Merrimack Energy concludes that the short listing decisions by PG&E in this initial DRAM RFO pilot were generally reasonable based on the assessed registration constraints 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 14 contracts under review are for DRAM Purchase Agreements with five counterparties. We believe the PAs are reasonable, are in the best interests of customers, and should be approved.

### **Recommendations**

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

- PG&E (and other utilities) should consider expanding or revising its list of qualitative factors to include viability type criteria based on the experiences from the first two DRAM RFO pilot programs. For example, experience gained by observing the performance of Offerors who were awarded contracts in the past two solicitations should begin to be reflected into the evaluation and selection process by either increasing the threshold requirements or revising the qualitative criteria or weights;
- PG&E (and other utilities) should review the quantitative methodology to address two factors: (1) the basis for including the average monthly MW offered for all 12 months of the year. Alternatively, the utilities may want to consider reviewing this metric and consider whether the average of all 12 months should be considered or the average of the months in which an offer is provided;

## **Appendix E**

# **PG&E's DRAM Standard Purchase Contract**



**2017 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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**DEMAND RESPONSE RESOURCE PURCHASE AGREEMENT  
BETWEEN  
[SELLER] AND PACIFIC GAS AND ELECTRIC COMPANY**

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

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

**PREAMBLE**

This Demand Response Resource Purchase Agreement, together with its exhibits (the “Agreement”) is entered into by and between Pacific Gas and Electric Company, a California corporation (“Buyer” or “PG&E”), 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:

<b>TABLE 1.1(b)</b>		
	<b>Product</b>	<b>LCA</b>
<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

<b>TABLE 1.1(b)</b>		
	<b>Product</b>	<b>LCA</b>
<input type="checkbox"/>	Product B4: Local Capacity with System Capacity	Sierra
<input type="checkbox"/>	Product B5: Local Capacity with System Capacity	Stockton
<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 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 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
<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

TABLE 1.1(b)		
	Product	LCA
<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

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

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

## 1.2. Term

The “Term” of this Agreement shall commence upon the Execution Date and shall continue until the expiration of the Delivery Period 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]* *{The Date should be the last calendar day of the last Showing Month}*, unless terminated earlier in accordance with the terms and conditions of this Agreement. Notwithstanding anything to the contrary contained in this Agreement, the Delivery Period will not commence until CPUC Approval is obtained or waived by Buyer in its sole discretion.

*{Dates will be based on Seller’s bid that was selected by the IOU in the RFO. Currently that would be no earlier than January, 2017 and no later than December, 2017.}*

## 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 any of the PDRs or RDRRs providing a type of 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 each 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 Conclusion of Law 10 in D.15-03-042 being available to Seller, 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, (x) reduce a Product Monthly Quantity for a particular type of Product for such Showing Month, or (y) terminate this Agreement; *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 such particular type of Product in the applicable Showing Month.
- (c) In the event that the CPUC does not approve Buyer's request for funding to support real time and ancillary services capability and the Buyer has not yet enabled real time or ancillary services functionality, by the time that the DRAM Resource is offered into the CAISO Markets, on or after January 1, 2017 per the terms of this Agreement, Buyer shall provide Notice to Seller and Seller shall be exempt from both any obligation to provide Flexible Capacity and any associated penalties. Once Buyer has enabled real time or ancillary services functionality and Sellers are able to provide Flexible Capacity to the CAISO Markets, this section shall have no further effect.

- (d) Seller's exercise of its rights under Section 1.5(b) with respect to a particular Product Monthly Quantity for a particular type of Product or Seller's exercise of its rights under Section 1.5(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 right pursuant to Sections 1.5(b)(y) or Seller's exercise of its rights pursuant to Section 1.5(c), except in the case of Seller's exercise of its rights pursuant to Section 1.5(b)(y) only in which case Buyer shall be liable to Seller for expenses, actually incurred by Seller as of the date of such termination, for SC services with respect to the DRAM Resource and this Agreement, in an amount not to exceed the sum of the monthly SC service payments during the months of the Delivery Term.

## **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, at Seller's election in its sole discretion, any one of the following:
  - (i) The results of a capacity test conducted by the Seller's SC during the applicable Showing Month. Such test shall consist of at least two (2) continuous hours of load reduction by the applicable PDR or RDRR in the DRAM Resource. 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 and 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;
  - (ii) 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 MOO; or
  - (iii) 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.

- (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 any one of the methods described 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 applicable Buyer's Compliance Showing deadlines for each Showing Month, Seller shall submit, or shall cause Seller's SC(s) to submit, Notice to Buyer which includes Seller's proposed 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 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.

### **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**

- (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 II 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 been tested or Dispatched between January 1, 2017 and the end of the Delivery Period, then Seller shall cause a test of such PDR(s) or RDRR(s) in accordance with D.14-06-050, Appendix B, by the end of the Delivery Period and provide the results of such test to Buyer for inclusion in Buyer's Compliance Showing to the CPUC.
- (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.

### **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.

### **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 compliance with Section 1.5(b);
- (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 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 penalties and fines. 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 sum of (A x B x D) for each type of Product plus C.

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

Where:

A = The Contract Price of the applicable type of Product for the applicable Showing Month

- 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 = The monthly SC services payment in the amount of *[Dollar Amount Text]* dollars (*[\$Number]*), if B is greater than zero for the applicable Showing Month.  
*{IOU Comment: SC services payment amount will be based on Seller's bid that was selected by the IOU in the RFO.}*
- D = 1.0 if Seller has chosen (i) not to deliver Residential Customer Product in Section 1.1(c) or (ii) to deliver Residential Customer Product in Section 1.1(c) and the Product delivered meets the definition of Residential Customer Product, or 0.90 if the Product delivered does not meet the definition of Residential Customer Product.

#### **4.2. Invoice and Payment Process**

- (a) 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 after CPUC Approval is obtained or waived by Buyer, Seller does not have a Credit Rating, or if its Credit Rating is below BBB- from S&P and 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) 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 (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.

#### **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**

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 Section 6.6 and this Agreement. 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 the remaining 40% technology incentive payment of ADR.
- (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.

## **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 Back-up Generation, Seller shall ensure that such Back-up Generation is not used during a Dispatch by any PDR or RDRR providing Product to Buyer during such month. Seller shall use at least one of the following options to demonstrate that participating Customers did not use Back-up Generation during a Dispatch of a PDR or RDRR providing Product to Buyer: (w) provide an attestation with each invoice that no participating Customer in the PDR or RDRR providing Product in the invoiced month used Back-up Generation during a Dispatch; (x) prohibit participating Customers from having Back-up Generation in its DRAM Resource; (y) monitor metering on the participating Customer's DRAM Resource to ensure that no Back-up Generation was used during a Dispatch of a PDR or RDRR providing Product to Buyer; and (z) require, in its agreement with its participating Customers, that no Back-up Generation may be used during a Dispatch of a PDR or RDRR providing Product to Buyer. If the Commission approves a policy and/or requirement dictating an approach for regulating the usage of generation or storage during demand response events on or before the date on which this Agreement is signed by the Parties, then that policy and/or requirement shall apply, and this Agreement shall be modified as directed by the Commission or its staff.
  - (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 II 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 II 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

Wire Transfer

BNK:

ABA:

Credit and Collections

Attn:

Phone:

ACCT:

Facsimile:

Email:

Notices of Event of Default or Potential Event of Default to:

*[Name]*

Phone:

Facsimile:

Email:

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

## **ARTICLE 9. EVENTS OF DEFAULT; TERMINATION**

### **9.1. Events of Default**

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

- (a) With respect to either Party:
  - (i) The failure to make, when due, any payment required to be made to the other Party pursuant to this Agreement, if such failure is not remedied within three (3) Business Days after written Notice of such failure is given by the Non-Defaulting Party;
  - (ii) Any representation or warranty made by such Party herein is false or misleading in any material respect when made or when deemed made or repeated if the representation or warranty is continuing in nature;
  - (iii) The failure to perform any material covenant, obligation, term or condition of this Agreement (except to the extent constituting a separate Event of Default), where such breach is not remedied within five (5) Business Days of Notice of such breach by the Non-Defaulting Party; provided that an occurrence 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
- (iv) During the Term, the occurrence and continuation of a default, event of default or other similar condition or event (however described) in respect of Seller under one or more agreements or instruments relating to indebtedness for borrowed money (whether present or future, contingent or otherwise), which results in such indebtedness for borrowed money (whether present or future, contingent or otherwise) becoming, or becoming capable at such time of being declared, immediately due and payable under such agreements or instruments, before it would otherwise have been due and payable, or a default by Seller in making one or more payments on the due date thereof in an aggregate amount of not less than **[To be determined]** under such agreements or instruments (after giving effect to any applicable notice requirement or grace period).

## **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.

[Remainder of Page Intentionally Left Blank]

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: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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.

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

“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).

“Back-up Generation” means fossil-fueled back-up generation owned or used by a Customer including but not limited to the following: (i) distributed generation technologies using diesel, natural gas, gasoline, propane or liquefied petroleum gas, whether or not in a combined heat and power configuration. Back-up Generation does not include energy storage systems; provided such energy storage systems meet the greenhouse gas emission factor thresholds in effect from time to time under the CPUC’s Self-Generation Incentive Program.

“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

## ATTACHMENT B

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.

## ATTACHMENT B

“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.

## ATTACHMENT B

“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.

“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 II Pilot Program” means the program during 2017 for the Product as described in CPUC D.14-03-026 and D.14-12-024.

“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 2 or 3 as described in the CAISO Tariff.

## ATTACHMENT B

“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.

“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



## ATTACHMENT B

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.

"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.

## ATTACHMENT B

“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-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 any or all of System Capacity, Local Capacity and/or Flexible Capacity. The particular type of Product sold by Seller to Buyer under this Agreement is specified in Table 1.1(b).

“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.

## ATTACHMENT B

“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:  
[http://www.pge.com/includes/docs/pdfs/mybusiness/energysavingsrebates/demandresponse/dram/ELEC\\_RULES\\_24.pdf](http://www.pge.com/includes/docs/pdfs/mybusiness/energysavingsrebates/demandresponse/dram/ELEC_RULES_24.pdf)

“S&P” means Standard & Poor’s Financial Services LLC, or its successor.

“SAID” or “Service Account Identification” means a Buyer specific identifier or number for tracking energy service deliveries for a specific load through one or more meters at a customer premises or location as described in Rule 1.

“Scheduling Coordinator” or “SC” has the meaning set forth in the CAISO Tariff.

“Seller” has the meaning set forth in the preamble.

“Settlement Amount” means the sum of the estimated Delivered Capacity Payments for all of the remaining 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 a 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

## ATTACHMENT B

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. If the Seller is the Non-Defaulting Party, then Seller may include in the Termination Payment amount the expenses, actually incurred by Seller and not previously paid by Buyer as of the Early Termination Date for SC services with respect to the DRAM Resource and this Agreement, in an amount not to exceed the sum of the monthly SC service payments during the months of the Delivery Term.

“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]**

ATTACHMENT B

Letter of Credit [insert Letter of Credit No.]  
Page # of #

\_\_\_\_\_  
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 E  
PRODUCT MONTHLY QUANTITY  
AND  
CORRESPONDING CONTRACT PRICE**

2017 Showing Month	Product [INSERT]	
	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 chart for each type of Product indicated in Table 1.1(b) and accepted bid information.]*

## ATTACHMENT B

### EXHIBIT F PG&E LCA SUBSTATIONS

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
Greater Bay Area		1324 WHITNEY

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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 LAKEWOOD
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

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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 LAWNSDALE
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

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Greater Bay Area		2257 EAST_GRAND
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

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Greater Bay Area	8219	MABURY
Greater Bay Area	8224	LOS_ALTOS
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



ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Greater Fresno Area	25237	CARUTHERS
Greater Fresno Area	25238	COALINGA_NO_2
Greater Fresno Area	25241	COPPERMINE
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

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Greater Fresno Area	25460	SAND_CREEK
Greater Fresno Area	25477	JACOBS_CORNER
Greater Fresno Area	25480	RANCHERS_COTTON
Greater Fresno Area	25491	WOODCHUCK
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

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**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Humboldt	19223	TRINIDAD
Humboldt	19225	RIO_DELL
Humboldt	19226	ORICK
Humboldt	19229	CARLOTTA
Humboldt	19231	FRUITLAND
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

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**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Kern	25349	LERDO
Kern	25355	SMYRNA
Kern	25364	POSO_MOUNTAIN
Kern	25365	SHAFTER
Kern	25370	WESTPARK
Kern	25380	ARVIN
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

ATTACHMENT B

**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
North Coast and North Bay		4205PARKWAY
North Coast and North Bay		4209MIRABEL
North Coast and North Bay		4212PETALUMA_A
North Coast and North Bay		4215SANTA_ROSA_A
North Coast and North Bay		4221NOVATO
North Coast and North Bay		4226BOLINAS
North Coast and North Bay		4227COTATI
North Coast and North Bay		4229OLEMA
North Coast and North Bay		4230TULUCAY
North Coast and North Bay		4245VALLEJO_B
North Coast and North Bay		4246BASALT
North Coast and North Bay		4248IGNACIO
North Coast and North Bay		4249SAUSALITO
North Coast and North Bay		4255VALLEJO_C
North Coast and North Bay		4256FULTON
North Coast and North Bay		4257MOLINO
North Coast and North Bay		4263PETALUMA_C
North Coast and North Bay		4265HIGHWAY
North Coast and North Bay		4271CALISTOGA
North Coast and North Bay		4272SONOMA
North Coast and North Bay		4275FITCH_MOUNTAIN
North Coast and North Bay		4281MONTE_RIO
North Coast and North Bay		4282CLOVERDALE
North Coast and North Bay		4285FORT_ROSS
North Coast and North Bay		4289GEYSERVILLE
North Coast and North Bay		4299LAS_GALLINAS_A
North Coast and North Bay		4302WOODACRE
North Coast and North Bay		4305MONTICELLO
North Coast and North Bay		4307DUNBAR
North Coast and North Bay		4309GREENBRAE
North Coast and North Bay		4315TOCALOMA
North Coast and North Bay		4316SALMON_CREEK
North Coast and North Bay		4318BELLEVUE
North Coast and North Bay		4320STAFFORD
North Coast and North Bay		4325BAHIA
North Coast and North Bay		4328CARQUINEZ
North Coast and North Bay		4329PUEBLO
North Coast and North Bay		4330MONROE
North Coast and North Bay		4332RINCON
North Coast and North Bay		4334SKAGGS_ISLAND
North Coast and North Bay		4337LAKEVILLE
North Coast and North Bay		4343SILVERADO

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**EXHIBIT F (CONT'D)  
PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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



## ATTACHMENT B

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
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
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

ATTACHMENT B

**EXHIBIT F (CONT'D)**  
**PG&E LCA SUBSTATIONS**

<b>Local Capacity Area</b>	<b>Substation_cd</b>	<b>Substation Description</b>
Stockton		16888 TOKAY

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

## **Confidential Appendix F**

### **Executed 2017 DRAM Contracts**

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

AT&T	Division of Ratepayer Advocates	Office of Ratepayer Advocates
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)
California Cotton Ginners & Growers Assn	Hanna & Morton	Sempra Utilities
California Energy Commission	International Power Technology	SoCalGas
California Public Utilities Commission	Intestate Gas Services, Inc.	Southern California Edison Company
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, LLC
City of San Jose	Los Angeles Dept of Water & Power	Tiger Natural Gas, Inc.
Clean Power	MRW & Associates	TransCanada
Clean Power Research	Manatt Phelps Phillips	Troutman Sanders LLP
Coast Economic Consulting	Marin Energy Authority	Utility Cost Management
Commercial Energy	McKenna Long & Aldridge LLP	Utility Power Solutions
Cool Earth Solar, Inc.	McKenzie & Associates	Utility Specialists
County of Tehama - Department of Public Works	Modesto Irrigation District	Verizon
Crossborder Energy	Morgan Stanley	Water and Energy Consulting
Davis Wright Tremaine LLP	NLine Energy, Inc.	Wellhead Electric Company
Day Carter Murphy	NRG Solar	Western Manufactured Housing Communities Association (WMA)
Defense Energy Support Center	Nexant, Inc.	YEP Energy
Dept of General Services	ORA	