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

Pacific Gas & Electric Company
ELC (Corp ID 39)
Status of Advice Letter 6469E
As of February 2, 2022

Subject: Procurement for Summers 2021 & 2022 Under Decision 21-02-028 and Decision 21-03-056

Division Assigned: Energy

Date Filed: 01-19-2022

Date to Calendar: 01-21-2022

Authorizing Documents: D2102028

Authorizing Documents: D2103056

Disposition:	**Accepted**
Effective Date:	**01-24-2022**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

edtariffunit@cpuc.ca.gov

AL Certificate Contact Information:

Annie Ho
415-973-8794
PGETariffs@pge.com

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

To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

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

The AL status certificate indicates:

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Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)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

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

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

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

Pacific Gas and Electric Company

Sidney Bob Dietz II
Director
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St., Mail Code B13U
P.O. Box 770000
San Francisco, CA 94177

Fax: 415-973-3582

January 19, 2022

Advice 6469-E
Pacific Gas and Electric Company (U 39 E)

Public Utilities Commission of the State of California

Subject: **Procurement for Summers 2021 & 2022 Under Decision 21-02-028 and Decision 21-03-056**

I. Purpose

Consistent with the guidance provided in Decision (D.) 21-02-028 and pursuant to D.21-03-056 Ordering Paragraph (OP) 14 (collectively, the Decisions), dated March 26, 2021, Pacific Gas and Electric Company (PG&E) respectfully submits this Tier 1 advice letter seeking the California Public Utilities Commission's (Commission or CPUC) approval of ten (10) short-term agreements (the Emergency Reliability Agreements) to procure incremental capacity to serve load at peak and net peak to prepare for potential extreme weather events in the summers of 2021 and 2022 (2021 – 2022 Summer Procurement) with preference for contract terms that are shorter in duration. These short-term agreements are summarized in Confidential Appendices A, B, and E of this Advice Letter. As set forth in the Decisions, PG&E is procuring on behalf of all customers in its service territory and requests that the total costs of the Emergency Reliability Agreements be allocated to all benefitting customers through the Cost Allocation Mechanism (CAM).

II. Background

As a result of the summer 2020 rotating outages, an Assigned Commissioner's Ruling (ACR) was issued on December 28, 2020 that directed the large investor-owned utilities (IOUs) to immediately seek contracts for incremental capacity, available for peak and net peak in the summers of 2021 and 2022. On February 11, 2021, the Commission subsequently issued D.21-02-028 directing the IOUs to seek contracts for additional power capacity for summer 2021 reliability and to submit those contracts for consideration before the Commission via advice letters of various tiers, with the costs and benefits allocated to all benefitting customers through the CAM.[1]

[1] D.21-02-028, p. 12.

On March 25, 2021, the Commission approved D.21-03-056, which directs the IOUs to take a number of actions to decrease peak and net peak demand and increase peak and net peak supply for the summers of 2021 and 2022.[2] The Decision requires that procured resources must be available to serve load at the peak and net peak, and directs the IOUs to give preference to storage contracts, upgrades resulting in increased efficiency of existing generation resources, and contract terms that are shorter in duration.[3]

OP 14 in D.21-03-056 authorizes the IOUs to continue their procurement efforts and endeavor to meet and exceed their respective incremental procurement targets to achieve an effective 17.5 percent planning reserve margin (PRM) for the months of May through October 2021 and 2022. Increasing the PRM from 15 percent to an effective 17.5 percent results in a minimum incremental procurement target of 450 megawatts (MW) for PG&E.[4] OP 14 further states that all procurement contracts shall be submitted to Energy Division via a Tier 1 advice letter on a continuing basis, except for contracts for incremental gas generation of five years or more, which require a Tier 3 advice letter, and incremental imports.[5] The Decision states that resource adequacy (RA) resources in excess of an IOU's 15 percent PRM should be charged to all benefiting customers in the IOU's service territory via the CAM, and authorizes the IOUs to acquire and pair imports with maximum import capability to be included in CAM procurement costs.[6]

Consistent with the parameters in D.21-02-028 and D.21-03-056, PG&E engaged in a series of Market Request for Proposals (RFPs), bilateral and brokered transactions to procure Resource Adequacy-only contracts, firm forward imported energy, and import allocation rights which are further described in Confidential Appendices A, B, and E of this Advice Letter.

III. Emergency Reliability Agreements

PG&E is requesting approval of ten (10) short-term Emergency Reliability Agreements resulting from PG&E's Summer 2021-2022 procurement efforts as described below. PG&E's purchases of capacity were made through competitive processes such as Market RFPs, bilateral negotiations, or via broker, in which pricing was justified as discussed in Confidential Appendix B. Pricing for bilateral transactions executed were evaluated against recent quotes received from brokers and/or pricing from other recent RA Electronic Solicitations for the same delivery periods as applicable. Additional information regarding the Emergency Reliability Agreements is included in Confidential Appendix A and B. The Emergency Reliability Agreements are included in Confidential Appendix E.

[2] D.21-03-056, p. 2.
[3] D.21-03-056, p. 46.
[4] D.21-03-056, p. 43.
[5] OP 14, D.21-03-056, p. 82.
[6] D.21-03-056, p. 47.

	Counterparty	Product Type	Used Towards PG&E's Procurement Targets	
			Volume (MW)	Delivery Term
A	Exelon	System RA	50	Jul-21
B	Conoco-Phillips	System RA	7	Sep-21
C	Dynegy Marketing and Trade	System RA	100	Sep-21
D	EDF Trading	System RA	22	Sep-21
E	Elk Hills	System RA	14	Sep-21
F	Valley Electric Association	System RA	10	Sep-21
G	Cascade Energy Storage	System RA	25	Jun-Oct 2022
H	Clean Power Alliance of Southern California	Import Allocation Rights	75	Jul-21
I	Southern California Edison	Import Allocation Rights	3	Jul-21
			10	Aug-21
J	Clean Power Alliance of Southern California	Import Allocation Rights	50	Sep-21

IV. Cost Recovery

As described above, the procurement of the ten (10) short-term agreements is to meet the near-term reliability needs for the summers of 2021 and 2022 on behalf of all customers in the PG&E distribution service territory, as authorized in D.21-02-028 and D.21-03-056. The contracts and associated costs for incremental capacity presented in this Tier 1 advice letter are eligible for cost recovery as CAM-eligible resources, which are recovered through the New System Generation Charge (NSGC). Accordingly, for the months of July 2021 through November 2022, PG&E proposes the ten (10) agreements be deemed CAM-eligible with recovery through the NSGC and count towards PG&E's emergency reliability procurement targets in D.21-03-056.[7]

V. Confidentiality Treatment

In support of this advice letter, PG&E has provided the confidential information listed below. This information is being submitted in the manner directed by D.08-04-023 and the August 22, 2006, Administrative Law Judge's Ruling Clarifying Interim Procedures for Complying with D.06-06-066 to demonstrate the confidentiality of the material and to invoke the protection of confidential utility information provided under Public Utilities Code section 454.5(g) or the Investor Owned Utility Matrix, Appendix 1 of D.06-06-066 and

[7] D.21-12-015, as modified by D.21-12-069, addressed reliability issues for 2023 and directed the IOUs to seek contracts for additional capacity for the summer of 2023 on behalf of all customers, PG&E may seek cost recovery for future CAM-eligible resources in accordance with the directives authorized in D.21-12-015, as modified by D.21-12-069.

Appendix C of D.08-04-023. A separate Declaration Seeking Confidential Treatment is being submitted concurrently with this advice letter.

Confidential Appendices

Appendix A: Summary of Emergency Reliability Agreements (Confidential)
Appendix B: Cost Competitiveness (Confidential)
Appendix C: Independent Evaluator (IE) Report – Cascade Energy Storage RA-Only Agreement (Confidential)
Appendix D: Independent Evaluator (IE) Report – Cascade Energy Storage RA-Only Agreement (Public)
Appendix E: Emergency Reliability Agreements (Confidential)

VI. Protests

*****Due to the COVID-19 pandemic, PG&E is currently unable to receive protests or comments to this advice letter via U.S. mail or fax. Please submit protests or comments to this advice letter to EDTariffUnit@cpuc.ca.gov and PGETariffs@pge.com*****

Pursuant to D.21-02-028, the protest period for Tier 1 advice letters is 10 days after submission. Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile, or E-mail, no later than January 31, 2022. Protests must be submitted to:

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

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

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

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

Sidney Bob Dietz II
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
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

Pursuant to D.21-02-028, this advice letter is submitted with a Tier 1 designation and will be effective no sooner than 5 days after submission. PG&E requests that this advice letter be effective on January 24, 2022.

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 parties on the service lists R.20-11-003, R.19-11-009, and R.20-05-003. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: http://www.pge.com/tariffs/.

/S/
Sidney Bob Dietz II
Director, Regulatory Relations

cc: Service Lists R.20-11-003, R.19-11-009, and R.20-05-003

California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

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

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

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

Contact Person: Annie Ho
Phone #: (415) 973-8794
E-mail: PGETariffs@pge.com
E-mail Disposition Notice to: AMHP@pge.com

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6469-E

Tier Designation: 1

Subject of AL: Procurement for Summers 2021 & 2022 Under Decision 21-02-028 and Decision 21-03-056

Keywords (choose from CPUC listing): Compilance

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

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:
D.21-02-028 and Decision 21-03-056

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

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

Confidential treatment requested? [x] Yes [ ] No

If yes, specification of confidential information: See Confidential Declaration & Matrix Attachment
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information: Scott Ranzal, (415) 264-3638

Resolution required? [ ] Yes [x] No

Requested effective date: 1/24/22

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[1]: N/A

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

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

Clear Form

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

CPUC, Energy Division Attention: Tariff Unit 505 Van Ness Avenue San Francisco, CA 94102 Email: EDTariffUnit@cpuc.ca.gov	Name: Sidney Bob Dietz II, c/o Megan Lawson Title: Director, Regulatory Relations Utility Name: Pacific Gas and Electric Company Address: 77 Beale Street, Mail Code B13U City: San Francisco, CA 94177 State: California Zip: 94177 Telephone (xxx) xxx-xxxx: (415)973-2093 Facsimile (xxx) xxx-xxxx: (415)973-3582 Email: PGETariffs@pge.com
	Name: Title: Utility Name: Address: City: State: District of Columbia Zip: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:

Clear Form

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFIC GAS AND ELECTRIC COMPANY
RULEMAKING 20-11-003

DECLARATION OF SCOTT RANZAL SEEKING CONFIDENTIAL TREATMENT FOR CERTAIN DATA AND INFORMATION CONTAINED IN PG&E'S ADVICE LETTER FOR APPROVAL OF CONTRACTS RESULTING FROM ITS EXPEDITED PROCUREMENT PURSUANT TO DECISION 21-02-028

I, Scott Ranzal, declare:

1. I am a Director of Portfolio Management in the Energy Procurement and Policy Organization at Pacific Gas and Electric Company (PG&E). In this position, my responsibilities include oversight of commercial activities and interactions with market participants related to Resource Adequacy. This declaration is based on my personal knowledge of PG&E's practices and my understanding of the Commission's decisions protecting the confidentiality of market-sensitive procurement and bid-related information.

2. Based on my knowledge and experience, and in accordance with the Decisions 06-06-066, 08-04-023, and relevant Commission rules, I make this declaration seeking confidential treatment for certain procurement and bid-related data and information contained in PG&E's Advice Letter for Procurement for Summers 2021 & 2022 Under Decision 21-02-028 and Decision 21-03-056.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes confidential market sensitive procurement and bid-related data and information covered by D.06-06-066. The matrix also specifies why confidential protection is justified. Further, the data and information: (1) is not already public; and (2) cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this reference, I am incorporating into this declaration all of the explanatory text that is pertinent to my testimony in the attached matrix.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct. Executed on January 19, 2022 at San Francisco, California.

/s/

Scott Ranzal
Director, Portfolio Management
Pacific Gas and Electric Company

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

ADVICE LETTER FOR PROCUREMENT FOR SUMMERS 2021 & 2022
UNDER DECISION 21-02-028 AND DECISION 21-03-056
JANUARY 19, 2022

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	PG&E's Justification for Confidential Treatment	Length of Time
Confidential Appendices			
Appendix A: Summary of Emergency Reliability Agreements	Item VII.B (Contracts and Power Purchase Agreements between utilities and non-Affiliated Third Parties (except RPS)).	The terms of the executed Emergency Reliability Agreements presented in this appendix are generally confidential. The terms of the executed Emergency Reliability Agreements that are public pursuant to Item VII. B. are publicly disclosed in Section III. Emergency Reliability Agreements.	Contract documents and terms of contracts are confidential for three years from the date that the contract states that deliveries are to begin, or until one year following expiration, whichever comes first.
Appendix B: Cost Competitiveness	Item VII.B (Contracts and Power Purchase Agreements between utilities and non-Affiliated Third Parties (except RPS)).	The terms of the executed Emergency Reliability Agreements presented in this appendix are generally confidential. The terms of the executed Emergency Reliability Agreements that are public pursuant to Item VII. B. are publicly disclosed in Section III. Emergency Reliability Agreements.	Contract documents and terms of contracts are confidential for three years from the date that the contract states that deliveries are to begin, or until one year following expiration, whichever comes first.
Appendix C: Independent Evaluator (IE) Report – Cascade Energy Storage RA-Only Agreement	Item VII.B (Contracts and Power Purchase Agreements between utilities and non-Affiliated Third Parties (except RPS)); Item VIII. B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	The IE Report contains extensive discussion of the specific terms of the letter agreements and discussions with counterparties. The IE Report also contains information on the evaluation framework and price caps, which constitutes the confidential results of bid scoring and evaluation.	Contract documents and terms of contracts are confidential for three years from the date that the contract states that deliveries are to begin, or until one year following expiration, whichever

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)

ADVICE LETTER FOR PROCUREMENT FOR SUMMERS 2021 & 2022
UNDER DECISION 21-02-028 AND DECISION 21-03-056
JANUARY 19, 2022

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	PG&E's Justification for Confidential Treatment	Length of Time
			comes first. Information under Item VIII. B is confidential for three years from the date winning contracts are submitted for CPUC approval.
Appendix E: Emergency Reliability Agreements	Item VII.B (Contracts and Power Purchase Agreements between utilities and non-Affiliated Third Parties (except RPS)).	The terms of the executed Emergency Reliability Agreements presented in this appendix are generally confidential. The terms of the executed Emergency Reliability Agreements that are public pursuant to Item VII. B. are publicly disclosed in Section III. Emergency Reliability Agreements.	Contract documents and terms of contracts are confidential for three years from the date that the contract states that deliveries are to begin, or until one year following expiration, whichever comes first.

Confidential Market Sensitive Information Protected Under
Public Utilities Code Section 454.5(g) and D.06-06-066

PACIFIC GAS AND ELECTRIC COMPANY

Appendix A

Summary of Emergency Reliability Agreements

(Confidential)

Confidential Market Sensitive Information Protected Under
Public Utilities Code Section 454.5(g) and D.06-06-066

PACIFIC GAS AND ELECTRIC COMPANY

Appendix B

Cost Competitiveness

(Confidential)

Confidential Market Sensitive Information Protected Under
Public Utilities Code Section 454.5(g) and D.06-06-066

PACIFIC GAS AND ELECTRIC COMPANY

Appendix C

Independent Evaluator (IE) Report – Cascade Energy Storage RA-Only Agreement

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D

Independent Evaluator (IE) Report – Cascade Energy Storage RA-Only Agreement (Public)

(Public)

December 23, 2021

Don Howerton
Director
Structured Energy Transactions
Pacific Gas & Electric Company
77 Beale Street
San Francisco, CA 94105

Subject: DRAFT Letter Report of Merrimack Energy Group, Inc. ("Merrimack Energy") Regarding Master Power Purchase and Sale Agreement Resource Adequacy ("RA") Confirmation Letter Between Cascade Energy Storage, LLC and Pacific Gas & Electric Company

Dear Mr. Howerton:

Pacific Gas & Electric ("PG&E") seeks approval for a Master Power Purchase and Sale Agreement Resource Adequacy Confirmation Letter Between Cascade Energy Storage, LLC and Pacific Gas & Electric Company. Under this Agreement, Cascade Energy Storage, LLC will provide 25 MW of RA from July 2022 through November 2022, prior to the start date of the existing Agreement between Cascade Energy Storage, LLC and PG&E for 25 MW of a battery energy storage system ("BESS"), which has an initial delivery date under the existing agreement of December 1, 2022.

In response to California Public Utility Commission ("CPUC") Decision 21-03-056 which directed the Investor-Owned Utilities ("IOUs") to continue procurement efforts to decrease peak and net peak demand and increase peak and net peak supply during the summers of 2021 and 2022, PG&E executed a Master Power Purchase and Sale Agreement Resource Adequacy Confirmation Letter with Cascade Energy Storage, LLC on October 7, 2021. The Confirmation Letter Agreements is described below. PG&E has requested that Merrimack Energy serve as Independent Evaluator for this bilateral contract transaction. Merrimack Energy has served as Independent Evaluator for PG&E's recent 2021-2022 Emergency Summer Procurement initiatives.

As background, PG&E executed a Long-Term RA Agreement[1] in 2017 with Cascade Energy Storage, LLC emanating from PG&E's 2016 Energy Storage RFO. The Agreement with Cascade Energy Storage, LLC was executed on November 8, 2017. The facility underlying the contract has a Design Dmax of 25 MW, with storage energy of 100 MWh and Discharge duration of 4.0 hours. The facility is located in Stockton, California and is a stand-alone lithium-ion battery energy storage system. The contract is for 20 years commencing on the Initial Delivery Date ("IDD"), which was expected to be

[1] The Long-Term RA Agreement was called Capacity Storage Agreement Resource Adequacy Only ("CSA RA Only") for the 2016 Energy Storage RFO.

December 1, 2022. The Delivery Point for the project is the Weber 60 kV substation, which is the physical interconnection point to the CAISO grid. The project was originally proposed by Enel Green Power North America but is now owned by Broad Reach Power.

In response to PG&E's Summer 2021-2022 Capacity Procurement, Broad Reach Power, owner of Cascade Energy Storage, LLC submitted two options to provide resource adequacy to PG&E as part of this solicitation:

[redacted]

Broad Reach Power noted in its offer that the project has a fully executed Large Generator Interconnection Agreement ("LGIA") with PG&E and an existing RA contract with PG&E for 25 MW set to begin on December 1, 2022. The project has received all discretionary permits and has met all obligations under the LGIA. Based on the project schedule, it was expected that the project would reach commercial operations at the earliest in the summer of 2022, but no later than December 1, 2022. The project has also proposed to expand the interconnection capacity and size of the BESS through an interconnection application since the project has sufficient land under site control to allow for increased capacity.

PG&E initiated a call with Broad Reach Power on March 12, 2021 to discuss both options. Broad Reach Power stated that it intended to build the Cascade Energy Storage project for 25 MW as quickly as possible before summer of 2022, if possible. Broad Reach Power would pursue the other 10 MW depending on the interconnection status for the addition. PG&E also mentioned to Broad Reach Power that to pursue the additional 10 MW may require an amendment to the existing contract.

Broad Reach Power sent a clarifying email to PG&E on March 22, 2021 to provide more details on each project option and to clarify comments made during the March 12, 2021 call. With regard to the 25 MW earlier delivery date, Broad Reach Power stated that the Cascade Energy Storage, LLC project (Q1272 Cluster Study 9 Interconnection Request) has an LGIA that was executed in December 2018. The project will receive full capacity deliverability status (FCDS) and has retained Transmission Planning Deliverability (TPD). The project is adjacent to the PG&E POI substation (Weber 60 kV) and has a relatively simple plan of service and modest network upgrades. The project is also funding approximately [redacted] in reliability network upgrades that are on schedule. The project is not reliant on other upgrades and has not been allocated any delivery upgrades to reach FCDS.

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[2] [redacted]

PG&E and Broad Reach Power continued to negotiate regarding both options through the spring of 2021 and into the summer. For the early delivery of the 25 MW under contract, PG&E provided a Resource Adequacy Confirm to Broad Reach Power and received initial comments from Broad Reach Power in April 2021. Broad Reach Power's primary concern was Since Broad Reach Power was making a "best-efforts" to bring the project on earlier than the original contract required, The parties negotiated several pricing options.

A key issue during negotiations was the credit posting requirements required of Cascade Energy Storage, LLC as part of the initial contract provisions. Broad Reach Power had initially sought to avoid making any credit posting by negotiating a under which they would secure the obligations of their subsidiary Cascade Energy Storage, LLC. Broad Reach Power ultimately changed their view about this position and agreed to post an independent amount of collateral instead. The agreed upon amount was equal to not yet settled and is described in Section 8.1 of the Confirmation.

As noted, the Confirmation between Cascade Energy Storage, LLC and PG&E was executed on October 7, 2021. The contract is for RA only, with a total of 25 MW during the delivery period between June 1, 2022 and November 30, 2022 inclusive. Table 1 lists the Contract Quantity and Contract Price contained in Appendix B of the Confirmation for each showing month.

Table 1: Contract Pricing Based on Month of Delivery

Month of First Delivery	Contract Price for All Months ($/kW-month)[3]
June 2022	[redacted]
July 2022	[redacted]
August 2022	[redacted]
September 2022	[redacted]
October 2022	[redacted]
November 2022	[redacted]

Some of the key contract provisions include the following:

Section 2.1 – Contingent Firm RA Product – Seller shall provide Buyer with the Designated RA Capacity in accordance with the Capacity Attributes and Contract Quantity as set forth in Appendix B for each day included in the Delivery Period. If Seller fails to provide Buyer with the Designated RA Capacity as a result of a Non-Excusable Event, then Seller shall be liable for damages and/or required to indemnify Buyer for any resulting penalties or fines pursuant to the terms of Section 2.4;

Section 2.5 – Buyer's Re-Sale of Product – Buyer may re-sell all or a portion of the Product purchased under this Confirmation ("Resold Product") provided that such re-sell right does not include the ability to offer any portion of Product into the Competitive Solicitation Process. If Buyer resells product, Seller agrees, and agrees to cause the Unit's Scheduling Coordinator to follow Buyer's instruction;

Section 3.1 – Monthly Payment – Buyer shall make a monthly payment to Seller as follows: Monthly Payment = Q x DF x P x CF where:

Q = The Contract Quantity of Product to be delivered by Seller to Buyer pursuant to Appendix B for the Showing Month
DF – RA Derate Factor
P = Contract Price for the Showing Month ($/kW-month)
CF = Conversion Factor equal to 1,000 kW per MW

Section 8.1 – Seller Collateral Requirements – Seller shall within five business days following the Confirmation Effective Date, provide to, and maintain with, the Buyer a Fixed Independent Amount as long as Seller or its Guarantor, if any, does not maintain Credit ratings or at least BBB- from S&P and Baa3 from Moody's. The Fixed Independent Amount shall be [redacted] for all unpaid months of the Delivery Period.

[3] [redacted]

In terms of valuation, [redacted] Table 2 provides the evaluation results for each delivery month.

Table 2: Evaluation Results for Each Initial Delivery Date Option

Project Initial Delivery Date	Contract Price ($/kW-mon)	Net Market Value (Levelized $/kW-mon)
June 2022 Start Date for six months	[redacted]	[redacted]
July 2022 Start Date for five months	[redacted]	[redacted]
August 2022 Start Date for four months	[redacted]	[redacted]
September 2022 Start Date for three months	[redacted]	[redacted]
October 2022 Start Date for two months	[redacted]	[redacted]
November 2022 Start Date for one month	[redacted]	[redacted]

As noted, all delivery dates have a [redacted] Net Market Value. None of the delivery month options have a [redacted] In addition, the pricing structure should incentivize the Seller to do all it can to ensure the project is on-line during the summer of 2022, earlier than the Initial Delivery Date of December 1, 2022.

To meet summer requirements for 2022, this contract with Cascade Energy Storage, LLC offers the opportunity to expedite the in-service date of a mature project under development with the opportunity to add capacity to the market in the summer of 2022. Also, [redacted]. As a result of the factors noted above, Merrimack Energy recommends approval of the Confirmation between PG&E and Cascade Energy Storage, LLC.

Very Truly Yours,

Wayne Oliver
President
Merrimack Energy Group, Inc.
26 Shipway Place
Charlestown, Mass. 02129

[4] Net Market Value (NMV) reflects the benefits associated with an offer relative to its costs, with MNV being positive in cases where project benefits exceed bid costs. In the case of this evaluation, the benefits include System RA value, Local RA value, Flex RA value, and Energy value while costs include the offer price and transmission upgrade costs.

Confidential Market Sensitive Information Protected Under
Public Utilities Code Section 454.5(g) and D.06-06-066

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E

Emergency Reliability Agreements

(Confidential)

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

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency Financing

California Alternative Energy and Advanced Transportation Financing Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell

East Bay Community Energy Ellison Schneider & Harris LLP Energy Management Service
Engineers and Scientists of California

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
ICF
International Power Technology

Intertie

Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.
SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)
Yep Energy