STATE OF CALIFORNIA GAVIN NEWSOM, *Governor*

PUBLIC UTILITIES COMMISSION

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November 7, 2022

Advice Letter 6729-E, 6729-E-A

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SUBJECT: Summer 2022 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and Multiple Buyers

Dear Mr. Dietz:

PG&E Advice Letter 6729-E, 6729-E-A is effective as of October 7, 2022.

Sincerely,

Leuwam Tesfai

Leuwam Tesfai
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division
California Public Utilities Commission

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October 28, 2022

Advice 6729-E-A
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

<u>Subject</u> **Supplemental - Summer 2022 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and Multiple Buyers**

I. Introduction

A. Identify the Purpose of the Advice Letter

Pacific Gas and Electric Company (PG&E) is submitting this supplemental advice letter to replace the confidential declaration and martrix originally submitted in advice 6729-E. This supplemental advice letter partially replaces original advice letter 6729-E. While the confidential declaration and matrix are being replaced, the advice letter and its appendices submitted in original advice letter 6729-E remains unchanged.

Pacific Gas and Electric Company ("PG&E") seeks California Public Utilities Commission ("Commission" or "CPUC") approval of eight (8) power purchase and sale agreements ("PPSAs" or "Transactions") that seek to sell Renewables Portfolio Standard ("RPS")-eligible products from PG&E's existing procured energy portfolio to five counterparties.

These Transactions are consistent with the sales strategy approved as part of PG&E's 2021 RPS Procurement Plan ("2021 RPS Plan"), and is consistent with PG&E's ongoing management of its RPS portfolio in light of recent and forecasted bundled electric load departures resulting from the growth of Community Choice Aggregators ("CCA") and behind-the-meter distributed generation.[1] This Advice Letter includes eight Transactions resulting from PG&E's Summer 2022 Bundled RPS Energy Sale Solicitation ("Solicitation").

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1 Final 2021 PG&E Renewable Energy Procurement Plan, filed in R.18-07-003 on February 17, 2022.

B. Identify the Subject of the Advice Letter, including contract summary as follows:

<u>General Deal Structure</u>

Describe general characteristics of contract: Contract Summary

PG&E will sell bundled energy and renewable energy credits ("RECs") under the PPSAs. PG&E either owns or purchases the bundled product under contracts that PG&E expects would qualify as Portfolio Content Category ("PCC") 0 or 1 to PG&E and PCC 1 upon resale.[2] The Transaction must receive final, nonappealable Commission approval before energy deliveries and the transfer of RECs to Buyers may begin under the PPSAs.

1. Counterparty(s) / Buyer(s)

The counterparties associated with sales resulting from the Solicitation include:

- City of San Jose ("San Jose")
  - The City of San Jose is a California municipality that, through its electricity supplier San Jose Clean Energy ("SJCE"), provides electricity to customers in the city of San Jose.
- East Bay Community Energy Authority or "EBCE" with two PPSAs ("EBCE 1" and "EBCE 2")
  - EBCE is a CCA that provides electricity to customers across 14 East Bay Area communities and unincorporated areas of Alameda County.
- City Of Lancaster ("Lancaster")
  - The City of Lancaster is a California municipality that, through its electricity supplier Lancaster Energy, provides electricity to customers in the city of Lancaster.
- Clean Energy Alliance ("CEA")
  - CEA is a Community Choice Aggregator ("CCA") that provides electricity to customers for the cities of Carlsbad, Del Mar and Solana Beach.

[2] PCC 1 products are defined in California Public Utilities Code Section 399.16(b)(1).

- Constellation Energy Generation,LLC
  - Headquartered in Baltimore, Constellation's generation fleet powers more than 20 million homes and is helping to accelerate the nation's transition to clean energy with more than 32,400 megawatts of capacity and annual output that is 90 percent carbon-free.
- San Diego Community Power ("SDCP"), with two PPSAs ("SDCP 1" and "SDCP 2")
  - SDCP is a Community Choice Aggregator (CCA) serving residential and business customers in the Cities of Chula Vista, Encinitas, Imperial Beach, La Mesa and San Diego starting in 2022, with the unincorporated communities of the County of San Diego and the City of National City served in 2023.

2. Business Relationship (if applicable, between seller / owner / buyer)

PG&E is not aware of any corporate affiliations between PG&E and the PPSA Buyers. PG&E is aware that EBCE, and SJCE are members of California Community Power, a Joint Powers Agency comprised of ten CCAs. PG&E is not aware of any corporate affiliations between the non-PG&E owned Projects and the PPSA Buyers.

3. Contract Volume (MWh)

Counterparty(s)	**Contract Volume (MWh)**
City of San Jose("San Jose")	215,000
East Bay Community Energy Authority ("EBCE 1") and ("EBCE 2")	100,000; 150,000[3]
City of Lancaster ("Lancaster")	75,000
Clean Energy Alliance ("CEA")	30,000
Constellation Energy Generation, LLC ("Constellation")	150,000
San Diego Community Power ("SDCP 1") and ("SDCP 2")	125,000; 75,000[3]
Total	**920,000**

4. Facility Size (MW)

See Appendix H1 and H2 – Facility List for the Facility Size (MW) of PG&E's Facility List.

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[3] Counterparties awarded Bundled RPS-eligible energy and associated RECs from facilities in PG&E's portfolio representing two different portfolios. See Appendices H1 and H2 for facility lists.

5. Term of existing contract with the owner / developer (date of contract execution and expiration)

See Appendix H1 and H2 – Facility List for the term of existing contract with the owner / developer of the Projects expected to deliver volumes under the PPSAs (i.e., date of contract execution and expiration).

6. Project background, e.g., expiring QF contract, phased project previous power purchase agreement, contract amendment

All of the Projects that are expected to deliver volumes pursuant to the PPSAs are existing and operating facilities that are either utility owned generation or are under current RPS contracts to deliver output to PG&E.

7. Source of agreement, i.e., RPS solicitation year or bilateral negotiation

The PPSAs resulted from PG&E's Summer 2022 Bundled RPS Energy Sale Solicitation. The solicitation bids were evaluated and executed in accordance with the RPS Sales Framework ("Sales Framework") approved as Appendix H to PG&E's 2021 RPS Plan.

8. If an amendment, describe contract terms being amended and reason for amendment

Not applicable.

General Project(s) Description

Project Name	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)
Buyer / Counterparty	San Jose	EBCE 1	EBCE 2	Lancaster
Technology	solar photovoltaic ("PV"), solar thermal, wind, small hydro, biomass, and biomethane renewable technologies	solar PV, solar thermal, wind, small hydro, biomass, and biomethane renewable technologies	solar PV, wind, and small hydro renewable technologies	solar PV, solar thermal, wind, small hydro, biomass, and biomethane renewable technologies
Capacity (MW)[4]	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)
Expected Generation (MWh/Year)	PG&E will sell 215,000 MWh in 2022 to be filled from multiple projects on Appendix H1 – Facility List	PG&E will sell 100,00 MWh in 2022 to be filled from multiple projects on Appendix H1 – Facility List	PG&E will sell 150,000 MWh in 2022 to be filled from multiple projects on Appendix H2 – Facility List	PG&E will sell 75,000 MWh in 2022 to be filled from multiple projects on Appendix H1 – Facility List
Delivery Term (Years)	2022	2022	2022	2022
Location (city and state)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)

4 The capacity for the multiple projects (facilities) associated with the Transactions are listed in Appendix H1 and H2. However, the Transactions are for bundled RPS (i.e., energy and RECs) sales and do not include a capacity product.

General Project(s) Description (continued)

Project Name	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)
Buyer / Counterparty	CEA	Constellation	SDCP 1	SDCP 2
Technology	solar PV, wind, and small hydro renewable technologies	solar PV, solar thermal, wind, small hydro, biomass, and biomethane renewable technologies	solar PV, solar thermal, wind, small hydro, biomass, and biomethane renewable technologies	solar PV, wind, and small hydro renewable technologies
Capacity (MW)[5]	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)
Expected Generation (MWh/Year)	PG&E will sell 30,000 MWh in 2022 to be filled from multiple projects on Appendix H2 – Facility List	PG&E will sell 150,000 MWh in 2022 to be filled from multiple projects on Appendix H1 – Facility List	PG&E will sell 125,000 MWh in 2022 to be filled from multiple projects on Appendix H1 – Facility List	PG&E will sell 75,000 MWh in 2022 to be filled from multiple projects on Appendix H2 – Facility List
Delivery Term (Years)	2022	2022	2022	2022
Location (city and state)	Multiple Projects (See Appendix H2 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H1 – Facility List)	Multiple Projects (See Appendix H2 – Facility List)

5 The capacity for the multiple projects (facilities) associated with the Transactions are listed in Appendix H1 and H2. However, the Transactions are for bundled RPS (i.e., energy and RECs) sales and do not include a capacity product.

C. RPS Statutory Goals and Requirements

1. **Briefly describe the Project's consistency with and contribution towards the RPS program's statutory goals set forth in Public Utilities Code §399.11. These goals include displacing fossil fuel consumption within the state; adding new electrical generating facilities within WECC; reducing air pollution in the state; meeting the state's climate change goals by reducing emissions of greenhouse gases associated with electrical generation; promoting stable retail rates for electric service; a diversified and balanced energy generation portfolio; meeting the state's resource adequacy requirements; safe and reliable operation of the electrical grid; and implementing the state's transmission and land use planning activities.**

The Transactions contribute to the optimization of PG&E's portfolio of RPS-eligible resources, thereby promoting the stability and reasonableness of the impact on customer rates of that portfolio.

2. **Describe how procurement pursuant to the contract will meet IOU's specific RPS compliance period needs. Include Renewable Net Short calculation as part of response. Also, describe, in detail, how these sales will not inhibit the ability for the IOU to meet its RPS targets in all future compliance periods.**

As illustrated in PG&E's Renewable Net Short ("RNS") appended to its 2021 RPS Plan that is in effect,[6] PG&E's existing RPS portfolio is expected to provide sufficient RPS-eligible deliveries to meet PG&E's RPS compliance requirements through 2030, prior to consideration of the Transactions. The combination of these calculations demonstrates that the Transactions will not create any material risk of near-term RPS noncompliance for PG&E.

D. Confidentiality

Explain if confidential treatment of specific material is requested. Describe the information and reason(s) for confidential treatment consistent with the showing required by Decision ("D.") 06-06-066, as modified by D.08-04-023.

In support of this Advice Letter, PG&E provides the confidential information listed below. This information includes the PPSAs and other information that more specifically describes the rights and obligations of the parties involved. 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 either the terms of the Investor Owned Utility Matrix, Appendix 1 of D.06-06-066 and Appendix C of D.08-04-023, or Public Utilities Code

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[6] See Appendix G1 and G2: PG&E's Renewable Net Short Calculation.

section 454.5(g). A separate Declaration Seeking Confidential Treatment is being submitted concurrently with this Advice Letter.

Table of Appendices

Appendix	Description	Public or Confidential?
A	Consistency with Commission Decisions and Rules	Confidential
B1	Solicitation Overview and Results	Confidential
B2	Solicitation Overview and Results (Excel Spreadsheet)	Confidential
C1	Final RPS Project-Specific Independent Evaluator Report	Confidential
C2	Final RPS Project-Specific Independent Evaluator Report (Redacted)	Public
D1	Contract Summary: San Jose	Confidential
D2	Contract Summary: EBCE 1	Confidential
D3	Contract Summary: EBCE 2	Confidential
D4	Contract Summary: Lancaster	Confidential
D5	Contract Summary: CEA	Confidential
D6	Contract Summary: Constellation	Confidential
D7	Contract Summary: SDCP 1	Confidential
D8	Contract Summary: SDCP 2	Confidential
E1	Comparison of Contract with Utility's Pro Forma Agreement: San Jose	Confidential
E2	Comparison of Contract with Utility's Pro Forma Agreement: EBCE 1	Confidential
E3	Comparison of Contract with Utility's Pro Forma Agreement: EBCE 2	Confidential
E4	Comparison of Contract with Utility's Pro Forma Agreement: Lancaster	Confidential
E5	Comparison of Contract with Utility's Pro Forma Agreement: CEA	Confidential
E6	Comparison of Contract with Utility's Pro Forma Agreement: Constellation	Confidential
E7	Comparison of Contract with Utility's Pro Forma Agreement: SDCP 1	Confidential
E8	Comparison of Contract with Utility's Pro Forma Agreement: SDCP 2	Confidential
F1	Sales Agreement: San Jose	Confidential
F2	Sales Agreement: EBCE 1	Confidential
F3	Sales Agreement: EBCE 2	Confidential
F4	Sales Agreement: Lancaster	Confidential
F5	Sales Agreement: CEA	Confidential
F6	Sales Agreement: Constellation	Confidential
F7	Sales Agreement: SDCP 1	Confidential
F8	Sales Agreement: SDCP 2	Confidential
G1	PG&E's Renewable Net Short Calculation	Confidential
G2	PG&E's Renewable Net Short Calculation (Redacted)	Public
H1	Facility List: San Jose, EBCE 1, Lancaster, Constellation, SDCP 1	Public
H2	Facility List: EBCE 2, CEA, SDCP 2	Public

II. Consistency With Commission Decisions

A. RPS Procurement Plan

1. Identify the Commission decision that approved the utility's RPS Procurement Plan. Did the utility adhere to Commission guidelines for filing and revisions?

PG&E's 2021 RPS Plan was approved in D.22-01-004 on January 13, 2022, and the final, conforming version of the 2021 RPS Plan was filed in Rulemaking 18-17-003 on February 17, 2022. PG&E complied with all procedural requirements with regard to the submittal of its 2021 RPS Plan.

2. Describe the Procurement Plan's assessment of portfolio needs as well as how these sales are consistent with the Commission decision for sale of RECs.

In PG&E's 2021 RPS Plan, PG&E demonstrated that it was well-positioned to meet its RPS compliance requirements through Compliance Period 6 (2028-2030). PG&E also demonstrated that its existing portfolio of executed RPDS contracts, its owned RPS-eligible generation, and its expected balances of surplus RPS generation from prior compliance periods would be adequate to ensure compliance with near-term RPS requirements. In PG&E's RNS position, presented in Appendix G1 and G2, PG&E demonstrates that it doesn't expect to have an incremental RPS physical need until after 2030. These calculations demonstrate that the Transactions will not create any material risk of near-term RPS noncompliance for PG&E.

3. Discuss how the Transactions are consistent with the utility's Procurement Plan and meet utility procurement and portfolio needs (e.g., capacity, electrical energy, resource adequacy, or any other product resulting from the Transactions).

The proposed PPSAs are for the sale of bundled energy and associated RECs generated in 2022. As described above, PG&E's 2021 RPS Plan concluded that PG&E is well-positioned to meet its near-term RPS compliance requirements until after 2030. In light of its long position with respect to RPS targets, PG&E developed the Sales Framework, filed as Appendix H in the approved 2021 RPS Plan, to assess whether to hold or sell surplus RPS volumes. Based on its then-current forecast of bundled retail sales and RPS volumes in its portfolio, PG&E explained in the 2021 RPS Plan that it expected to sell short-term, bundled RPS volumes in 2022.

As further described in Confidential Appendix A, the Transactions are consistent with the 2021 RPS Plan because the total quantity considered for sale and the prices of the Transactions align with what is described in the Sales Framework filed in the 2021 RPS Plan. As a result, the Transactions will benefit PG&E's RPS portfolio by reducing customer costs while maintaining compliance with RPS targets, as intended by the Sales Framework approved by D.22-02-004.

The Transactions are also consistent with the approval granted by the Commission in D.22-01-004, Ordering Paragraph 3, which states in relevant part:

> . . .PG&E may hold up to three Renewable Energy Credit sales solicitations in 2022 for short-term deliveries and is authorized to modify its RPS sales framework and price floor to sell short-term contracts solely for deliveries in 2022. Deliveries may commence at any time after the Commission approves the contract and continue until the contract's term expiration. PG&E must seek Commission approval of short-term sales resulting from a solicitation or any bilateral transaction that both utilizes the pro forma sales agreement submitted with its 2021 RPS Procurement Plan, showing any necessary modifications, and is executed after PG&E receives bids for a sales solicitation resulting from its 2021 RPS Procurement Plan. Executions and requests for approval must be consistent with Decision (D.) 14-11-042's rules for expedited approval of short-term contracts and D.09-06-050's rules regarding bilateral contracts. . .

The Transactions are consistent with Ordering Paragraph 3. First, the Transactions are short-term, meaning five years or less. Second, PG&E initiated each Transaction during the timeframe covered by the 2021 RPS Plan, which remains in effect. Third, the deliveries under the Transaction may commence after the Commission's approval of the PPSAs. Fourth, as required, PG&E is submitting this Tier 1 Advice Letter for Commission approval of the Transactions.

Consistent with the 2021 RPS Plan, the Transactions used PG&E's pro forma Sales Agreement and PG&E is providing comparisons of each executed Transaction against the approved pro forma short-term sales confirmation. The adherence to PG&E's pre-approved Sales Framework and the use of the approved pro forma short-term sales confirmation allows for the submittal of the Transaction through this Tier 1 advice letter, which is consistent with the 2021 RPS Plan and D.22-01-004.

4. Sales

a. Briefly describe IOU's approved sales framework and how the sales contract(s) are consistent with the framework

The Transactions are consistent with PG&E's Annual and Solicitation Limits and methodology, described in its pre-approved Sales Framework. PG&E selected qualifying bids based on the price offered as the sole quantitative criterion.

5. Portfolio Optimization Strategy

b. Describe how the proposed procurement (or sale) optimizes IOU's RPS portfolio (or entire energy portfolio). Specifically, a response should include:

i. Identification of IOU's portfolio optimization strategy objectives that the proposed procurement (or sale) are consistent with.

See Section II.A.3, above.

ii. Identification of metrics within portfolio optimization methodology or model (e.g., PPA costs, energy value, capacity value, interest costs, carrying costs, transaction costs, etc.) that are increased/ decreased as a result of the proposed transaction.

PG&E utilized its pre-approved Sales Framework for assessing whether to hold or sell surplus RPS volumes, as described in further detail in Section I.A. of Confidential Appendix A.

iii. Identification of risks (e.g., non-compliance with RPS requirements, regulatory risk, over-procurement of non-bankable RPS-eligible products, safety, etc.) and constraints included in optimization strategy that may be decreased or increased due to proposed procurement (or sale).

The Transactions are consistent with PG&E's objective of minimizing customer costs while achieving and maintaining RPS compliance. Through the timely sale of surplus RPS-eligible energy at competitive prices, the PPSAs reduce the total cost impact of the RPS program to customers. Given PG&E's current long RPS position, it is highly unlikely that the PPSAs will jeopardize PG&E's ability to meet RPS requirements.

c. Description of how proposed procurement (or sale) is consistent with IOUs overall planned activities and range of Transactions planned to optimize portfolio.

PG&E filed its Sales Framework as part of its approved 2021 RPS Plan in order to guide its overall sales activities and to optimize its portfolio by addressing PG&E's growing bank of RPS compliance products. Each Transaction was conducted within the guidelines outlined in the Sales Framework.

B. Bilateral Contracting – If Applicable

Not applicable.

C. Solicitation Methodology and Evaluation

1. Briefly describe IOU's Least Cost Best Fit ("LCBF") Methodology (or other evaluation methodology) and how the Project compared relative to other offers available to the IOU at the time of evaluation.

Not applicable, because the Transactions are sales rather than procurement. PG&E has used its approved Sales Framework to evaluate the offers rather than the procurement LCBF evaluation methodology.

D. Compliance With Standard Terms and Conditions ("STCs")

1. Do the proposed Transactions comply with D.08-04-009, D.08-08-028, and D.10-03-021, as modified by D.11-01-025?

The non-modifiable STCs in the PPSAs conform exactly to the "non-modifiable" terms set forth in Attachment A of D.08-04-009, as modified by D.08-08-028 and D.13-11-024 and by Appendix C of D.10-03-021, as modified by D.11-01-025.

2. Using the tabular format, provide the specific page and section number where the RPS non-modifiable STCs are located in the contract.

Counterparty		San Jose		EBCE 1		EBCE 2		Lancaster	
Contract Reference		*Section*	*Page Number*	*Section*	*Page Number*	*Section*	*Page Number*	*Section*	*Page Number*
Non-Modifiable Term	**STC 1: CPUC Approval**	2.12	6	2.12	6	2.12	6	2.12	6
	STC 2: Seller's Representations, Warranties, and Covenants	6.1 (a)(b)(c)	12	6.1 (a)(b)(c)	12 - 13	6.1 (a)(b)(c)	12 - 13	6.1 (a)(b)(c)	12
	STC 3: Governing Law	8.3(b)	15	8.3(b)	15	8.3(b)	15	8.3(b)	15

Counterparty		CEA		Constellation		SDCP 1		SDCP2	
Contract Reference		*Section*	*Page Number*	*Section*	*Page Number*	*Section*	*Page Number*	*Section*	*Page Number*
Non-Modifiable Term	**STC 1: CPUC Approval**	2.12	6	2.12	6	2.12	6	2.12	6
	STC 2: Seller's Representations, Warranties, and Covenants	6.1 (a)(b)(c)	12	6.1 (a)(b)(c)	12 - 13	6.1 (a)(b)(c)	12 - 13	6.1 (a)(b)(c)	12 - 13
	STC 3: Governing Law	8.3(b)	15	8.3(b)	15	8.3(b)	15	8.3(b)	15

3. **Provide a redline of the contract against the utility's Commission-approved pro forma RPS contract as Confidential Appendix E to the filed advice letter. Highlight modifiable terms in one color and non-modifiable terms in another.**

Redlines comparing each of the executed PPSAs to the form of Short-Term Sales Confirmation included as Attachment G.3 to PG&E's 2021 RPS Plan are included in Confidential Appendix E. The non-modifiable terms have been highlighted in each redlined comparison.

E. Solicitation Process

1. Process Overview

PG&E used the pre-approved Sales Framework to establish which bids to execute in its Summer 2022 Bundled RPS Energy Sale Solicitation, governed by the 2021 RPS Plan.

2. Sales solicitation process and schedule

PG&E's solicitation process and schedule is summarized below.

Event	**Date/Time**
PG&E issues solicitation	July 29, 2022
Participants' Webinar	August 8, 2022 at 10:00 AM
Deadline for Participants to submit bids through Power Advocate	August 22, 2022 at 1 PM
PG&E notifies qualified bidders	August 29, 2022
Execution date	Late-September to Early-October 2022
PG&E submits Agreements for CPUC approval via Tier 1 Advice Letter	No later than 60-days after execution

3. Solicitation Design

An overview of the product attributes PG&E solicited is summarized below.

Product	• Bundled Renewable Energy Standard (RPS)-eligible energy and associated Renewable Energy Credits (RECs) from resources in PG&E's portfolio
Pricing	• Energy – settled at the day-ahead NP15, ZP26 and/or SP15 Index (Trading Hub Price) • REC – fixed price
Location	• NP15, SP15, and/or ZP26 Trading Hub at Seller's Discretion
Delivery Term	• 2022
Agreement	• Confirmation under an EEI Master Agreement

4. Table of Key Terms of REC sales confirmation

Scheduling Obligations	Seller, or a qualified third party designated by Seller, shall act as Scheduling Coordinator for the Project. Buyer hereby authorizes Seller, or its third party Scheduling Coordinator designee, to deliver the Electric Energy to the CAISO at the Delivery Point.
Seller's Representations, Warranties, and Covenants	Seller, and, if applicable, its successors, represents and warrants that throughout the Delivery Term of this Agreement that: (i) the Project qualifies and is certified by the CEC as an Eligible Renewable Energy Resource ("ERR") as such term is defined in Public Utilities Code Section 399.12 or Section 399.16; and (ii) the Project's output delivered to Buyer qualifies under the requirements of the California Renewables Portfolio Standard. To the extent a change in law occurs after execution of this Agreement that causes this representation and warranty to be materially false or misleading, it shall not be an Event of Default if Seller has used commercially reasonable efforts to comply with such change in law. Seller, and, if applicable, its successors, represents and warrants that throughout the Delivery Term of this Agreement that: (i) the Project qualifies and is certified by the CEC as an Eligible Renewable Energy Resource ("ERR") as such term is defined in Public Utilities Code Section 399.12 or Section 399.16; and (ii) the Project's output delivered to Buyer qualifies under the requirements of the California Renewables Portfolio Standard. To the extent a change in law occurs after execution of this Agreement that causes this representation and warranty to be materially false or misleading, it shall not be an Event of Default if Seller has used commercially reasonable efforts to comply with such change in law. Seller warrants that all necessary steps to allow the Renewable Energy Credits transferred to Buyer to be tracked in the Western Renewable Energy Generation Information System will be taken prior to the first delivery under the contract.
Seller's Conveyance of Green Attributes	The Green Attributes in the amount of the Total Quantity shall be deemed to be conveyed to and received by Buyer under this Confirmation as set forth herein. During the Green Attributes Delivery Period, Seller shall convey to Buyer the Green Attributes associated with the Delivered Energy within: twenty-five (25) Business Days following the occurrence of both (i) the deposit into Seller's WREGIS account of the WREGIS Certificates for the Green Attributes for the applicable Calculation Period and (ii) Buyer's payment of the Monthly Cash Settlement Amount in accordance with Article 5 herein. Seller shall transfer such WREGIS Certificates in an amount equivalent to the Total Quantity to Buyer's WREGIS account such that all right, title and interest in and to the WREGIS Certificates shall transfer from Seller to Buyer.

F. Valuation Process: Quantitative and Qualitative Analysis

1. For Sales contracts, provide a quantitative analysis that evaluates selling the proposed contracted amount vs. banking the RECs towards future RPS compliance requirements (or any reasonable other options).

See Section I.A.i. in Confidential Appendix A.

2. Explain the process used to determine price reasonableness, with maximum benefit to ratepayers.

See Section I.A.ii. in Confidential Appendix A.

3. Provide the notional value of each contract, as well as the total of all selected contracts.

See Confidential Appendix B2 – Solicitation Overview and Results (Excel Spreadsheet).

4. Explain any quantitative and qualitative criteria used to rank bids.

Per PG&E's Solicitation Protocol, PG&E considered price as the sole quantitative criterion. PG&E did not disqualify any qualifying bids due to quantitative criteria considerations.

G. Discussion of Outcome of Solicitation

1. For Sales contracts, provide the overall bid solicitation results and the shortlisted bids

a. Quantitative information to include total number of overall and shortlisted responses for solicitation, price per bid, contract term of bids, bid quantity, total forecasted revenues per bid, and expected PCC classification of bid.

See Confidential Appendix B2 – Solicitation Overview and Results (Excel Spreadsheet).

H. Procurement Review Group ("PRG") Participation

1. List PRG participants (by organization/company).

The PRG for PG&E includes the Commission's Energy Division, the Public Advocate's Office, the Union of Concerned Scientists, The Utility Reform Network, the Coalition of California Utility Employees, and Coast Economic Consulting.

2. **Describe the utility's consultation with the PRG, including when information about the contract was provided to the PRG, whether the information was provided in meetings or other correspondence, and the steps of the procurement process where the PRG was consulted.**

On August 30, 2022, PG&E provided an update via email to the PRG regarding the bids received and an intent to execute list. PG&E then provided an update to the PRG via presentation at the September 20, 2022 PRG Meeting.

3. **For short-term contracts, if the PRG was not able to be informed prior to filing, explain why the PRG could not be informed.**

This is not applicable as the PRG was notified in advance of execution.

I. Independent Evaluator ("IE")

The use of an IE is required by D.04-12-048, D.06-05-039, 07-12-052, and D.09-06-050.

1. **Provide name of IE.**

The IE is Lewis Hashimoto of Arroyo Seco Consulting.

2. **Describe the oversight provided by the IE.**

The IE provided active oversight of the Solicitation beginning prior to issuance and continuing through contract execution. The IE provided input in advance of the Solicitation's launch with the goal of maximizing the effectiveness of PG&E's outreach. During the Solicitation, the IE reviewed e-mails exchanged between PG&E and the bidders and participated on phone calls between PG&E and the bidders.

3. **List when the IE made any findings to the Procurement Review Group regarding the applicable solicitation, the project/bid, and/or contract negotiations.**

The IE provided commentary to the PRG related to the robustness of the solicitation and PG&E's intent to execute the PPSAs on August 30, 2022 and September 20, 2022. The IE concludes in the IE report that the Transactions merit Commission approval.

4. **Insert the public version of the project-specific IE Report.**

The public and confidential versions of the IE report are attached to this Advice Letter as Appendices C1 and C2.

III. Safety Considerations

A. What has the IOU done to ensure that the contract and the facility's (or facilities') operation are: consistent with Public Utilities Code Section 451; do not interfere with the IOU's safe operation of its utility operations and facilities; and will not adversely affect the public health and safety?

The Transactions cover the resale of energy and RECs purchased under existing PPAs. The Projects are existing resources currently performing under existing PPAs with PG&E and therefore raise no incremental safety matters related to the generation of the energy.

B. Will the contract lead to any changes in the structure or operations of the underlying facility (or facilities)? Any change in the safety practices at the facility (or facilities)? If so, with what federal, state and local agencies did the seller or facility owner confer or seek permits or permit amendments for these changes?

The Transactions that are the subject of this Advice Letter have no impact on the underlying PPAs and therefore raise no incremental safety matters related to the generation of the energy.

IV. Request for Commission Disposition

PG&E requests that the Energy Division issue a disposition making this advice letter effective no later than 30 days after submittal. Any such disposition that makes this advice letter effective shall be deemed to constitute the following:

1. Approval of the PPSAs in their entirety, including payments to be received by PG&E, subject to CPUC review of PG&E's administration of the PPSAs;

2. A finding that the PPSAs are consistent with the Sales Framework approved as part of PG&E's 2021 RPS Plan and is consistent with Ordering Paragraph 3 of D. 22-01-004, and that the sale of the bundled renewable electricity and green attributes under each of the PPSAs are reasonable and in the public interest;

3. A finding that all costs of the PPSAs are fully recoverable in rates over the life of the PPSAs, subject to CPUC review of PG&E's administration of the PPSAs; and

4. A finding that the payments received by PG&E pursuant to the San Jose, EBCE 1, EBCE 2, Lancaster, CEA, Consetllation, SDCP 1, and SDCP 2 PPSAs shall be credited against costs recorded to the Portfolio Allocation Balancing Account ("PABA") on a pro-rata basis.

Protests

Pursuant to GO 96-B, General Rule 7.5.1, PG&E requests to maintain the original protest and comment period designated in Advice 6279-E and not reopen the protest period.

Effective Date

PG&E requests that this Tier 1 advice letter become effective concurrent with original Advice Letter 6729-E-A, which is October 7, 2022.

Notice

In accordance with General Order 96-B, Section IV, a copy of this Advice Letter excluding the confidential appendices is being sent electronically to parties shown on the list shown below, including the service lists for R.18-07-003 and R.15-02-020. Non-market participants who are members of PG&E's PRG and have signed appropriate Non-Disclosure Certificates will also receive the Advice Letter and accompanying confidential attachments by overnight mail. Address changes to the General Order 96-B service list 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 submittals can also be accessed electronically at http://www.pge.com/tariffs.

/S/

Sidney Bob Dietz II
Director, Regulatory Relations

cc: Service List for R.18-07-003 and R.15-02-020
Cheryl Lee – Energy Division

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. This material is protected from public disclosure because it consists of, among other items, the PPSAs themselves, price information, and analysis of the PPSAs, which is protected pursuant to D.06-06-066 and D.08-04-023. A separate Declaration Seeking Confidential Treatment regarding the confidential information is filed concurrently herewith.

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 (U 39 E)

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

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

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6729-E-A

Tier Designation: 1

Subject of AL: Supplemental - Summer 2022 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and Multiple Buyers

Keywords (choose from CPUC listing): Compliance, Agreement

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

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

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: N/A

Confidential treatment requested? [x] Yes [ ] No

If yes, specification of confidential information: see confidential declaration and matrix
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: Brendan Lucker, Brendan.lucker@pge.com

Resolution required? [ ] Yes [x] No

Requested effective date: 10/7/22

No. of tariff sheets: 0

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

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

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

Tariff schedules affected: N/A

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

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

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

Clear Form

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

California Public Utilities Commission Energy Division Tariff Unit Email: EDTariffUnit@cpuc.ca.gov	Contact Name: Sidney Bob Dietz II, c/o Megan Lawson Title: Director, Regulatory Relations Utility/Entity Name: Pacific Gas and Electric Company Telephone (xxx) xxx-xxxx: (415)973-2093 Facsimile (xxx) xxx-xxxx: Email: PGETariffs@pge.com
	Contact Name: Title: Utility/Entity Name: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:

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

Clear Form

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

PACIFIC GAS AND ELECTRIC COMPANY

DECLARATION OF BRENDAN LUCKER SEEKING CONFIDENTIAL TREATMENT FOR CERTAIN DATA AND INFORMATION CONTAINED IN ADVICE LETTER 6729-E-A

I, Brendan Lucker, declare:

1. I am a Senior Manager of Energy Transactions and Solicitations within the Energy Policy and Procurement organization at Pacific Gas and Electric Company (PG&E). In this position, my responsibilities include overseeing the negotiations for the purchase and sale of Renewables Portfolio Standard (RPS) energy as well as designing and administering solicitations for the purchase and sale of energy and energy-related products. 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 information.

2. Based on my knowledge and experience, and in accordance with Decisions 06-06-066, 08-04-023, 21-11-029, and relevant Commission rules, I make this declaration seeking confidential treatment for certain data and information contained in the attachments to Advice Letter 6729-E-A.

3. Attached to this declaration is an updated matrix dated October 28, 2022 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 Public Utilities Code section 454.5(g), D.06-06-066, D.08-04-023, D.21-11-029, and/or relevant Commission rules. 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 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 October 27, 2022 at Danville, California.

/s/ Brendan Lucker

Brendan Lucker

Senior Manager, Energy Transactions and Solicitations

Pacific Gas & Electric Company

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 6729-E-A
Submitted OCTOBER 7, 2022, as supplemented OCTOBER 28, 2022

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, as modified by D. 21-11-029, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendix A, Consistency with Commission Decisions and Rules and Project Development Status	Item VII(F): Renewable Resource Contracts under RPS program Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects Item V(C)(1): LSE Total Energy Forecast -- Bundled Customer (MWh) VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh) May 21, 2014 *Administrative Law Judge's Ruling on Renewable Net Short* issued in Rulemaking 11-05-005 ("May 21, 2014 ALJ Ruling") Item VIII(A): Bid Information Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of	This appendix contains information regarding the confidential terms and conditions of the power purchase and sale agreements ("PPSAs") that seek to sell RPS-eligible products. Disclosure of this information would provide valuable market sensitive information to market participants regarding the contracts and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential. This appendix also contains details regarding PG&E's confidential RPS Sales Framework, its Alternative Renewable Net Short ("RNS") calculation, and the impact of the sales under the PPSAs on PG&E's RPS compliance position. This information is expressly deemed confidential by the May 21, 2014 ALJ Ruling. Additionally, this information could be used to determine PG&E's net open position for RPS-eligible products and its internal and proprietary forecast of its bundled customer total energy requirements, and also constitutes analysis and evaluation of proposed RPS projects, including sales or transactions intended to create or manage a compliance bank. In addition, if other market participants learned of market sensitive information concerning PG&E's sales strategy, they could change their bidding behavior and affect market pricing. This could detrimentally impact PG&E's customers. This appendix contains confidential bid information and specific bid evaluations from PG&E's solicitation. If released publicly, this information would provide valuable market sensitive information to market participants; therefore, this information should remain confidential.	For Item VII(F): the contract is public 30 days after commercial operation date (energy deliveries begin) or 18 months from Commission approval, whichever comes first. For Item VII (un-numbered category following VII(G)): Three years For Item V(C)(1) front two years of forecast data and the year of filing may be kept confidential. The front two years of a retail seller's RPS net short position and the year of filing may be kept confidential For VI(B): Front two years of forecast data May 21, 2014 ALJ Ruling: Indefinite For Items VIII(A) and VIII(B): Three years after winning bidders selected

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 6729-E-A
Submitted OCTOBER 7, 2022, as supplemented OCTOBER 28, 2022

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, as modified by D. 21-11-029, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
	participating bids Public Utilities Code § 454.5(g)		Public Utilities Code § 454.5(g): Three years
Appendices B1 & B2, Solicitation Overview	Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects Item VIII(A): Bid Information Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids Public Utilities Code section 454.5(g) May 21, 2014 ALJ Ruling	This appendix contains confidential bid information and bid evaluations from PG&E's solicitation and discusses confidential negotiations between PG&E and counterparties. If released publicly, this information would provide valuable market sensitive information to market participants, could be damaging to future PG&E contract negotiations and ultimately detrimental to PG&E's customers, and could create a disincentive to do business with PG&E and other regulated utilities. Therefore, this information should remain confidential. This appendix also contains information relating to PG&E's confidential RPS Sales Framework, which is deemed confidential by the May 21, 2014 ALJ Ruling. In addition, if other market participants learned of market sensitive information concerning PG&E's sales strategy, they could change their bidding behavior and affect market pricing. This could detrimentally impact PG&E's customers.	For Item VII (un-numbered category following VII(G)): Three years For Items VIII(A) and VIII(B): Three years after winning bidders selected Public Utilities Code § 454.5(g): Three years May 21, 2014 ALJ Ruling: Indefinite

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Advice Letter 6729-E-A
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Appendix C1, Independent Evaluator Report – grey shaded sections	Item VII(G): Renewable Resource Contracts under RPS program Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects Item VIII(A): Bid Information Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids Public Utilities Code section 454.5(g) May 21, 2014 ALJ Ruling	This appendix contains the IE report, which includes confidential bid information and bid evaluations from PG&E's solicitation. The confidential IE report also discusses, analyzes and/or evaluates the terms of the PPSAs and confidential negotiations between PG&E and counterparties. If released publicly, this information would provide valuable market sensitive information to market participants, could be damaging to future PG&E contract negotiations and ultimately detrimental to PG&E's customers, and could create a disincentive to do business with PG&E and other regulated utilities. Therefore, this information should remain confidential. This appendix also contains information relating to PG&E's confidential RPS Sales Framework, which is deemed confidential by the May 21, 2014 ALJ Ruling. In addition, if other market participants learned of market sensitive information concerning PG&E's sales strategy, they could change their bidding behavior and affect market pricing. This could detrimentally impact PG&E's customers.	For Item VII(F): the contract is public 30 days after commercial operation date (energy deliveries begin) or 18 months from Commission approval, whichever comes first. For Item VII (un-numbered category following VII(G)): Three years For Items VIII(A) and VIII(B): Three years after winning bidders selected Public Utilities Code § 454.5(g): Three years May 21, 2014 ALJ Ruling: Indefinite

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 6729-E-A
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IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	**Category from D.06-06-066, Appendix 1, as modified by D. 21-11-029, or Separate Confidentiality Order That Data Corresponds To**	**Justification for Confidential Treatment**	**Length of Time**
Appendices D1, D2, D3, D4, D5, D6, D7, & D8 Summary of Contracts	Item VII(F): Renewable Resource Contracts under RPS program Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids	This appendix summarizes and analyzes the PPSAs, and contains bid evaluation information. If released publicly, this information would provide valuable market sensitive information to market participants and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential. Following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Energy Regulatory Commission.	For Item VII(F): The contract is public 30 days after commercial operation date (energy deliveries begin) or 18 months from Commission approval, whichever comes first For Item VII (un-numbered category following VII(G)): Three years For Item VIII(B): Three years after winning bidders selected
Appendices E1, E2, E3, E4, E5, E6, E7, & E8 Comparison of PPSAs with PG&E's 2021 Pro Forma RPS Short-Term Sales Confirmation	Item VII(F): Renewable Resource Contracts under RPS program - Contracts without SEPs	These appendices contain each of the PPSAs for which PG&E seeks approval in this Advice Letter filing. Public disclosure of the terms of the PPSAs would provide valuable market sensitive information to market participants and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential. Following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Energy Regulatory Commission.	For Item VII(F): The contract is public 30 days after commercial operation date (energy deliveries begin) or 18 months from Commission approval, whichever comes first.

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 6729-E-A
Submitted OCTOBER 7, 2022, as supplemented OCTOBER 28, 2022

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, as modified by D. 21-11-029, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendices F1, F2, F3, F4, F5, F6, F7, & F8 Power Purchase and Sale Agreement	Item VII(F): Renewable Resource Contracts under RPS program	These appendices contain each of the PPSAs for which PG&E seeks approval in this Advice Letter filing. Public disclosure of the terms of the PPSAs would provide valuable market sensitive information to market participants and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential.	For Item VII(F): The contract is public 30 days after commercial operation date (energy deliveries begin) or 18 months from Commission approval, whichever comes first.
Appendix G1, PG&E's Renewable Net Short Calculation – grey shaded sections	Item V(C) (1): LSE Total Energy Forecast -- Bundled Customer (MWh) VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh) May 21, 2014 ALJ Ruling Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects	For Table 1: For rows A, C, E, Ga and Gb, this information shows PG&E's net position for RPS-eligible energy in the periods within the front two years of the forecast. The redacted information in Rows A, C, E, Ga, and Gb could also be manipulated in conjunction with publicly-available information to determine PG&E's internal and proprietary forecast of its bundled customer total energy requirements. The redacted information for rows Ia, Ib, J, J0, J1, J2, La and Lb relates to PG&E's optimized RNS, including: PG&E's assumptions for its overall portfolio optimization strategy; any plans to sell forecast RECs above the PQR; application of forecast RECs above the PQR towards a future RPS compliance requirement; and any plan to procure RECs above the PQR in future years. This information is expressly deemed confidential by the May 21, 2014 ALJ Ruling. Additionally, this information could be used to determine PG&E's net open position for RPS-eligible products and constitutes analysis and evaluation of proposed RPS projects, including sales or transactions intended to create or manage a compliance bank. For Table 2: For rows A, C, E, Ga and Gb, this information shows PG&E's net position for RPS-eligible energy in the periods within the front three years of the forecast.	For Item V(C)(1) Front two years of forecast data and the year of filing may be kept confidential. The front two years of a retail seller's RPS net short position and the year of filing may be kept confidential May 21, 2014 ALJ Ruling: Indefinite For Item VII (un-numbered category following VII(G)): Three years

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, as modified by D. 21-11-029, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
		The redacted information in Rows A, C, E, Ga, and Gb could also be manipulated in conjunction with publicly-available information to determine PG&E's internal and proprietary forecast of its bundled customer total energy requirements. The redacted information for rows Gd, Ge, Ha, Hb, H, Ia, Ib, J, J0, J1, J2, La and Lb relates to PG&E’s optimized RNS, including: PG&E’s assumptions for its overall portfolio optimization strategy; any plans to sell forecast RECs above the PQR; application of forecast RECs above the PQR towards a future RPS compliance requirement; and any plan to procure RECs above the PQR in future years. This information is expressly deemed confidential by the May 21, 2014 ALJ Ruling. Additionally, this information could be used to determine PG&E’s net open position for RPS-eligible products and constitutes analysis and evaluation of proposed RPS projects, including sales or transactions intended to create or manage a compliance bank.	

PACIFIC GAS AND ELECTRIC COMPANY

Appendix A

Consistency with Commission Decisions and Rules

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix B1

Solicitation Overview and Results

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix B2

Solicitation Overview and Results
(Excel Spreadsheet)

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix C1

Final RPS Project-Specific Independent Evaluator Report

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix C2

Final RPS Project-Specific Independent Evaluator Report

(Redacted)

PACIFIC GAS AND ELECTRIC COMPANY: SUMMER 2022 BUNDLED RPS ENERGY SALE SOLICITATION

REPORT OF THE INDEPENDENT EVALUATOR ON CONTRACTS FOR SALE OF RENEWABLE ENERGY TO CLEAN ENERGY ALLIANCE, CONSTELLATION ENERGY GENERATION LLC, EAST BAY COMMUNITY ENERGY AUTHORITY, CITY OF LANCASTER, SAN DIEGO COMMUNITY POWER, AND CITY OF SAN JOSĖ

OCTOBER 4, 2022

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

This report provides a review of eight sale agreements executed by Pacific Gas and Electric Company ("PG&E"), for renewable energy to be delivered from PG&E's supply portfolio to six buyers:

- Clean Energy Alliance ("CEA"), a joint powers authority ("JPA") and community choice aggregator ("CCA") that commenced retail energy service in 2021, now serving customers in Carlsbad, Del Mar, and Solana Beach, and expected to expand service to Escondido and San Marcos in 2023;

- Constellation Energy Generation, LLC ("Constellation"), formerly Exelon Generation Company, LLC, a wholesale electric generation company and Energy Service Provider ("ESP") serving direct access customers with retail energy and one of the top sellers of energy to CCAs, a subsidiary of Constellation Energy Corp.;

- East Bay Community Energy Authority ("EBCE"), a JPA and CCA that serves retail customers in Alameda County;

- The City of Lancaster, a municipality that operates a CCA program branded as "Lancaster Energy" (formerly "Lancaster Choice Energy") that began serving retail customers within the city in 2015;

- San Diego Community Power ("SDCP"), a JPA and CCA that began serving retail energy to municipal and commercial accounts within Chula Vista, Encinitas, Imperial Beach, La Mesa, and San Diego in 2021, residential accounts in 2022, and expects to expand to National City and unincorporated San Diego County in 2023; and

- The City of San José, that serves customers within the municipality with retail energy through a CCA program branded as San José Clean Energy ("SJCE").

The transactions originated from PG&E's Summer 2022 Bundled Renewables Portfolio Standard ("RPS") Energy Sale solicitation. An independent evaluator ("IE"), Arroyo Seco Consulting ("Arroyo"), conducted various activities to observe, test, and check PG&E's processes as participants sought to negotiate contracts. This report discusses:

- The role of the Independent Evaluator,
- The adequacy of PG&E's outreach to potential buyers and the robustness of the solicitation,
- The degree to which the design of PG&E's methodology provided for fair evaluation of bids,
- The fairness with which PG&E's bid evaluation and selection process was administered,
- The fairness of contract-specific negotiations, and

- Merit of the executed contracts for approval by the California Public Utilities Commission ("CPUC").

Arroyo's opinion is that PG&E's outreach to potential buyers was adequate, the solicitation was moderately robust, and PG&E's methodology was designed fairly and administered fairly. Arroyo's opinion is that contract negotiations were conducted in a manner that was, overall, fair to competing buyers and to ratepayers. In Arroyo's opinion, PG&E fully complied with the CCA Code of Conduct in its administration of the solicitation.

Arroyo believes that the prices of the contracts are reasonable, although the California market for Portfolio Content Category 1 ("PCC1") RPS-eligible energy is illiquid and not transparent so that obtaining fresh and publicly available comparable pricing information with which to assess price reasonableness is challenging. The transactions are fully consistent with the sales framework that was approved by the CPUC as part of PG&E's 2021 RPS procurement plan. The portfolio fit of the contracts ranks high. Based on these observations, Arroyo's opinion is that the executed agreements with CEA, Constellation, EBCE, Lancaster, SDCP, and San José merit CPUC approval.

2. ROLE OF THE INDEPENDENT EVALUATOR

This chapter describes key roles of the IE and summarizes activities undertaken to fulfill them in PG&E's process of seeking bids for short-term sales of bundled renewable energy.

A. KEY INDEPENDENT EVALUATOR ROLES

The CPUC stated its intent for participation of an IE in competitive procurement solicitations to "separately evaluate and report on the investor-owned utility's ("IOU's") entire solicitation, evaluation and selection process", in order to "serve as an independent check on the process and final selections."[1] The CPUC's Energy Division has provided IEs with a standard template for use in reporting about RPS transactions for which utilities seek approval through advice letters, specifying that such a report should cover topics including:

- Describe the IE's role.
- How did the IOU conduct outreach to bidders, and was the solicitation robust?
- Was the IOU's methodology designed such that proposals were fairly evaluated?
- Was the evaluation process fairly administered?
- Were contract-specific negotiations fair?
- Do the contracts merit Commission approval?

The structure of this report is organized around these major topics.

B. IE ACTIVITIES

To fulfill the role of evaluating the renewable energy contracts between PG&E and the six buyers, Arroyo performed various tasks:

- Reviewed the solicitation protocol, PG&E's analyses and plans, and CPUC guidance;
- Discussed with the PG&E team its plan to pursue sales of bundled renewable energy and analyzed its outreach efforts;
- Observed negotiations between PG&E and the six counterparties;
- Reviewed marked-up drafts of confirmation agreements and master agreements as parties discussed edits to PG&E's initial draft form confirmation agreement;
- Researched recent comparable transactions of PCC1 renewable energy for publicly available market pricing data to serve as benchmarks for price reasonableness; and
- Provided independent commentary about the solicitation to PG&E's Procurement Review Group ("PRG").

[1] CPUC Decision 06-05-039, May 25, 2006, "Opinion Conditionally Approving Procurement Plans for 2006 RPS Solicitations, Addressing TOD Benchmarking Methodology", page 46.

3. PG&E'S OUTREACH EFFORTS AND THE ROBUSTNESS OF THE RESPONSE

On July 29, 2022, PG&E distributed a market notice announcing the issuance of the solicitation, and sent another notice on August 5 announcing the date and time of the participants' webinar. PG&E provided a link to its public webpage for the solicitation that provided two versions of an Edison Electric Institute ("EEI") short-form confirmation agreement (which also served as a bid form), a pro forma EEI master agreement, a public solicitation protocol, a form for participant attestations, and a non-disclosure agreement. The webpage also included information for the participants' webinar. PG&E received [redacted] conforming bid packages, timely submitted prior to the deadline, and [redacted] The fairness with how PG&E dealt with non-conforming proposals is discussed below.

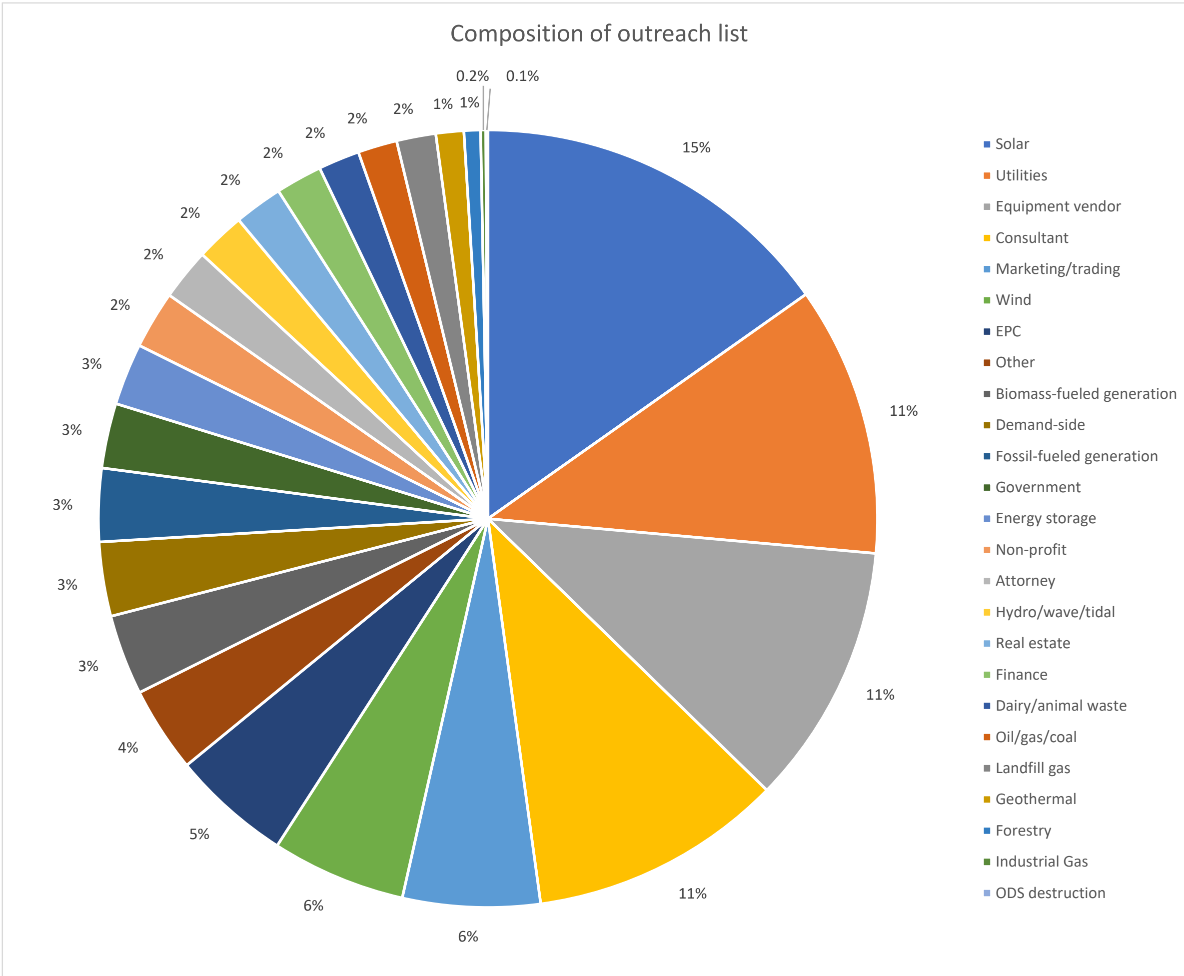
A. ADEQUACY OF SOLICITATION OUTREACH

PGE e-mailed the market notice to its standing Request for Offers ("RFO") contact list, which it uses for outreach for procurement solicitations for purchasing energy and capacity products. This large list (about 2,400 contacts) is mainly composed of generation developers or businesses that service their needs, and therefore does not focus on the likeliest candidates to seek to buy RPS-eligible energy, as opposed to those likely to sell it. Figure 1 displays the composition of this RFO contact list. Among the sectors likeliest to participate in this specific solicitation to sell energy, wholesale marketers, direct access energy services providers ("ESPs"), utilities, and CCAs were included.

For this solicitation, PG&E did not employ its separately developed customized contact list of potential renewable energy buyers, that focuses on load-serving entities, as it had done in prior Bundled RPS Energy Sale solicitations. As a consequence, about fifteen entities that PG&E had contacted in the past with its REC sale solicitation market notices were skipped in this solicitation. Most of these were public-owned utilities, others included wholesale energy brokers and an investor-owned utility. Arroyo cannot judge the extent to which the robustness of the solicitation might have been diminished by dropping these contacts from PG&E's outreach for the solicitation.

In the actual event, all of the participants in the solicitation were contacted directly through the RFO contact list with the exception of [redacted], that was not included in the e-mail distribution of the market notice because it was not on the contact list; however, a technical consultant to this participant was included in the distribution.

Figure 1.



For this effort, focused on the small universe of RPS compliance entities and on those who serve their wholesale power needs, the utility did not pursue broad outreach through public media such as the electricity trade press or media releases. Arroyo's opinion is that PG&E adequately distributed notices of this solicitation.

For future sales solicitations, PG&E might benefit from adding to its outreach contact list some CCAs that are phasing in retail energy service or expanding their customer base to new municipalities, but that may not yet have been positioned to respond directly to the current solicitation, or have not yet engaged with PG&E as a counterparty. For example, California Choice Energy Authority has been procuring RPS-eligible on behalf of Apple Valley Choice Energy, Pico Rivera Innovative Municipal Energy, Rancho Mirage Energy Authority, and Santa Barbara Clean Energy, but was not contacted with a market notice. Additional potential participants that have not been contacted include Baldwin Park Resident Owned Utility District, Desert Community Energy, Pioneer Community Energy, Pomona Choice Energy, San Jacinto Power, and other CCAs outside the PG&E service territory. Also, when PG&E dropped the used of its focused contact list targeted on load-serving entities, it stopped contacting a number of publicly-owned utilities such as those of Banning, Biggs, Burbank, Corona, Glendale, Healdsburg, and Lodi; these might usefully be added to the general RFO contact list.

B. CLARITY AND CONCISION OF SOLICITATION MATERIALS

PG&E published on its website a written public protocol to document the solicitation's requirements and to communicate the evaluation criteria that the utility would use to make its selection decisions. The protocol was ten pages long, which is concise for a California IOUs' solicitations, for which protocols can run to dozens of pages. In comparison, San Diego Gas & Electric Company's ("SDG&E's") protocol for its 2022 Tree Mortality Non-Bypassable Charge RPS REC Sale Request for Offers is 16 pages long. PG&E's market notice e-mail was also succinct, relying on a link to the solicitation website for participants to obtain details. PG&E's slide presentation for the participants' webinar was 36 pages long, which was more concise than SDG&E's analogous 2020 bidder's conference presentation for its RPS REC Sale Request for Proposals ("RFP") of 42 pages.

Arroyo's opinion is that solicitation materials were likely to have been generally clear to most potential bidders.

One indicator of clarity is that of [redacted] that registered for the solicitation on the on-line platform, [redacted] submitted proposals, suggesting that solicitation materials were on point for only some of the entities that actively responded to the outreach notices. The other registrants included [redacted] The first of these seem appropriately positioned to participate as buyers of renewable energy but chose not to submit bid packages; the latter appear to have registered for the webinar under a misapprehension that the solicitation is for PG&E to buy renewable energy from generators. Arroyo's inference is that some registrants lacked clarity about PG&E's intent for this energy sale solicitation.

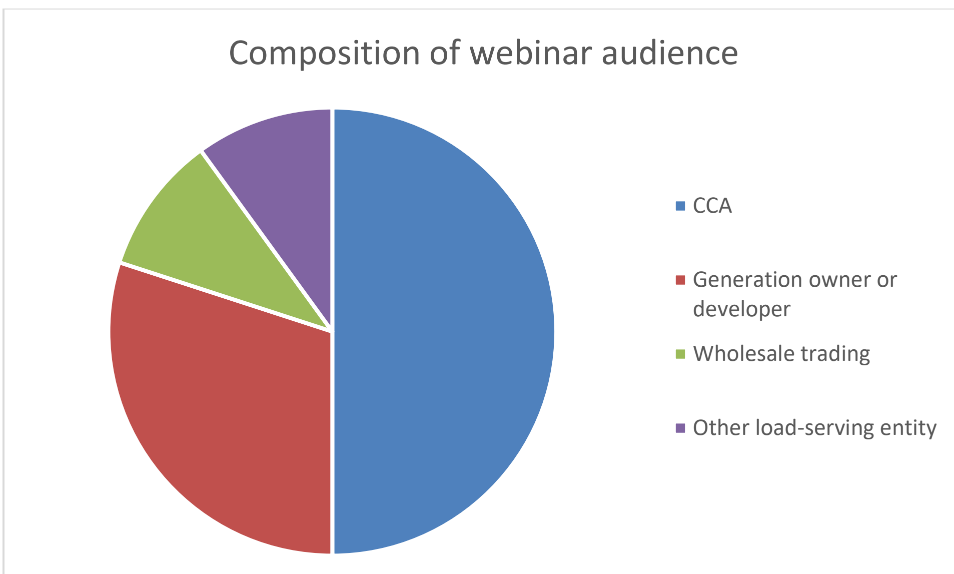
PG&E's public webpage for the solicitation provided two versions of the bid form, one standard confirmation agreement that had previously been approved by the CPUC as part of the utility's 2021 RPS procurement plan, and a Supplemental Bid Form. The latter served as the basis for transactions in which the bundled RPS energy sold to winning bidders will be sourced solely from projects employing solar photovoltaic, wind, or small hydroelectric generation, in other words generation that is free of greenhouse gas ("GHG") emissions. Appendix A to the standard confirmation agreement shows a facilities list from which deliveries can be sourced, which includes biomass-fueled, geothermal, and solar thermal resources and one large hydro facility. Appendix A to the Supplemental Bid Form excludes these latter sources; this difference in facilities lists is the primary distinction between the bid forms and they do not differ otherwise in contract terms and conditions. Past feedback to PG&E included a concern that purchasing biomass-fueled, geothermal, and solar thermal generation could require a buyer that is a compliance entity to post a Power Source Disclosure showing GHG emissions from these latter technologies. (The large hydro facility is not considered to emit GHG.) To the extent that some compliance entities market their premium products as 100% free of GHG emissions this would be inconsistent with their mission and marketing strategy; the Supplemental Bid Form allows them to take deliveries only from small hydro, solar photovoltaic, and wind resources, that are not deemed by the CEC to emit GHGs.

Arroyo believes that participants in this solicitation understood the function of this Supplemental Bid Form.

C. BIDDERS' CONFERENCE

PG&E convened a participants' webinar on August 8, 2022 to provide information to potential participants; this webinar combined briefings for this solicitation and the 2022 Tree Mortality Non-Bypassable Charge (TMNBC) Bundled RPS Sale Solicitation, which PG&E ran concurrently. The presentation covered an overview of the solicitation's product, delivery term, and schedule, a review of the pro forma confirmation agreement, a discussion of the evaluation criteria, and details of the logistics of submitting bid packages. At the end of the webinar PG&E asked for questions from the audience and received none.

Figure 2.



The webinar was modestly attended. Figure 2 displays the composition of the audience. Most attendees would be logical participants in the solicitation. Exceptions were companies that own generation or develop new generation projects, for whom it would make more sense to attempt to sell RPS-eligible energy to PG&E rather than to buy it from PG&E.

D. ROBUSTNESS OF THE SOLICITATION

PG&E did not publicly state a quantitative target for this solicitation. In its CPUC-approved 2021 renewable energy procurement plan filing it provided a confidential framework for sales of excess RPS volumes. [redacted]

[redacted]. This was not explicitly stated as a target [redacted]

Bids were received from [redacted]. The total volume of the initial bids including non-conforming proposals [redacted]. This was a modestly robust response. PG&E received a greater volume of conforming bids for 2022 deliveries than its three most recent bundled RPS sale solicitations, [redacted]

There may be several factors, mostly beyond PG&E's control, at work to limit the robustness of a market response to such a request for bids for renewable energy:

- Only a modest number of California load-serving entities ("LSEs") appear to hold net short RPS compliance positions for the fourth compliance period. The IOUs hold long positions, leaving some but not all publicly-owned utilities, CCAs (or their wholesale marketing agents), and direct access providers as likeliest potential buyers. Some CCAs have reported publicly that they have fulfilled their near-term compliance needs. There seems to be no appetite for California RPS-eligible energy among out-of-state utilities.
- Other compliance entities may lack interest in procuring renewable energy through short-term purchases of energy produced in existing facilities, as opposed to long-term contracts with proposed new projects that would bring additional renewable generation into the market, given their compliance and procurement strategies. Some CCAs have faced criticism from stakeholders for purchasing RECs originating from existing facilities as opposed to creating additional renewable energy supply. Because there is a compliance requirement for long-term contracts beginning in 2021 anyway, some compliance entities appear to prefer to seek deliveries from new facilities starting operations after 2022, or long-term contracts for delivery from existing facilities, instead of making short-term purchases. This is evidenced by CCAs' issuance of requests for proposals for long-term purchases in 2021 and 2022, including Orange County Power Authority's August 2022 RFP for long-term renewable energy contracts.
- Some CCAs and POUs have stated a preference for local generation; Valley Clean Energy, for example, conducted a competitive solicitation in May 2020 for new renewable energy projects to be sited only in Yolo County or in six adjacent counties. San Diego Community Power issued a 2021 Request for Information for new renewable energy projects sited solely in San Diego or Imperial Counties. Sacramento Municipal Utility District has contemplated a new green power product

for retail customers that would be sourced entirely from Sacramento area solar and wind resources and priced $10 to $15/month above standard service. A few CCAs have demonstrated their willingness to enter into Power Purchase Agreements ("PPAs") to buy uncompetitively high-priced RPS-eligible energy from facilities sited within their service territories. This choice is consistent with the high priority placed by some of these entities on supporting local economic development. PG&E's list of facilities that will produce the volumes is largely made up of projects sited outside any existing CCAs' and POUs' territories, which simply reflects the geography of existing renewable resources in its portfolio.

- Some CCAs seem to prefer to procure new RPS-eligible energy through their own RFOs rather than responding to PG&E's solicitations. It lets them design specific contract terms, which differ in details from what PG&E's form agreement provides. For example, Clean Power Alliance of Southern California issued an RFP in October 2020 seeking long-term PPAs with RPS-eligible resources. In prior surveys, some parties have reported that they chose not to bid because of PG&E's contract terms.

The response to this solicitation was modestly robust. Arroyo speculates that a few CCAs still needed to fulfill their procurement targets for the remainder of 2022. Much of the bid volume submitted to this solicitation was from CCAs that have been rolling out retail energy service to new municipalities or are launching retail offerings to residential accounts this year.

E. PARTICIPANTS' FEEDBACK ABOUT THE PROCESS

PG&E intends to circulate a survey to seek feedback about the solicitation from both participants and from non-participants on its focused sale-specific contacts list. The results of this survey had not been received and compiled by the time this report was finalized.

There were a few high-level findings from the survey that PG&E conducted following its previous Winter 2021 Bundled RPS Energy Sale solicitation:

- Respondents agreed that
  - Instructions for the solicitation were clear,
  - The on-line bid submission process was easy to use, and
  - There were no difficulties using the bid form or other parts of the bid package.
- Most respondents expressed a willingness to participate in PG&E's future short-term bundled RPS energy sale solicitations.
- A respondent indicated that it chose not to participate in the solicitation because of the agreement's terms and conditions.
- A respondent indicated that it viewed PG&E's categories for evaluation criteria as too broad.

4. FAIRNESS OF PG&E'S BID EVALUATION METHODOLOGY

This section describes PG&E's methodology for evaluating bids and selecting proposals in this solicitation and assesses its fairness to ratepayers and participants.

A. PRINCIPLES TO EVALUATE PG&E'S BID EVALUATION METHODOLOGY

The Energy Division of the CPUC has suggested a set of principles for evaluating the process used by IOUs for selecting proposals in competitive renewable solicitations, within the template intended for use by IEs in reporting:

- There should be no consideration of any information that might indicate whether the participant is an affiliate.
- Procurement targets, objectives, and preferences were clearly defined in the IOU's solicitation materials.
- The IOU's methodology should identify quantitative and qualitative criteria and describe how they will be used to rank bids. These criteria should be applied consistently to all bids.
- The Least-Cost, Best-Fit ("LCBF") methodology should evaluate proposals in a technology-neutral manner.
- The LCBF methodology should allow for consistent evaluation and comparison of proposals of different sizes, in-service dates, and contract length.

Some additional considerations appear relevant to PG&E's specific situation.

- The methodology should identify how non-valuation measures will be considered; all non-valuation criteria used in selecting bids should be transparent to participants.
- The logic of how non-valuation criteria or preferences are used to reject higher-value bids and select lower-value bids should be applied consistently and without bias.
- The valuation methodology should be reasonably consistent with industry practices.
- CCAs should not be systematically disadvantaged by using neutral-appearing criteria that discriminate against the entire class of CCAs.

B. PG&E'S METHODOLOGY

PG&E's public solicitation protocol stated just one quantitative evaluation criterion and a few qualitative criteria:

Quantitative criterion. In this solicitation, PG&E sought to maximize the price received from RPS energy sales; this is consistent with PG&E's approved 2021 RPS procurement plan. This criterion differs from some of PG&E's prior Bundled RPS Energy Sale solicitations, in which the quantitative criterion was to maximize revenue. In Arroyo's opinion, seeking maximum sales prices rather than maximum sales revenue is more consistent with PG&E's Portfolio-Adjusted Value metric approved by the CPUC as its LCBF methodology. While maximizing price and maximizing revenue should generally result in the same selection of bids, there are scenarios in which selections would differ.

Financial strength. PG&E stated that it could consider the financial strength of bidders, focusing on their ability to fulfill obligations, and on whether entering new agreements may cause excess credit concentration in the utility's exposure to participants or banks. The solicitation protocol does not refer to credit rating or other explicit measures of creditworthiness, which hypothetically might be used to distinguish between CCAs (some of which do not yet have investment-grade credit ratings) vs. corporations with large wholesale trading and marketing functions (which generally do).

Agreement Modifications. PG&E stated its intent to evaluate the materiality and cost of any modifications that a participant proposes to alter PG&E's CPUC-approved pro forma confirmation agreement. The solicitation protocol acknowledged that the utility would consider bidders' proposed edits to terms involving price, quantity, and credit terms.

Other criteria. In its protocol, PG&E left open its discretion to employ other qualitative criteria in evaluating bids. These included but were not limited to consideration of past adverse commercial experience doing business with any specific participant, counterparty diversity, bid completeness, and whether or not PG&E has already negotiated and executed an EEI master agreement with a participant. Having executed a master agreement would facilitate use of a short-form confirmation agreement, as opposed to the potentially more challenging or time-consuming negotiation of a new long-form confirmation agreement or a new EEI master agreement.

PG&E did not explicitly propose to employ other evaluation criteria that it has employed in prior solicitations, such as supply chain responsibility, supplier diversity, RPS goals, etc.

C. STRENGTHS AND WEAKNESSES OF PG&E'S METHODOLOGY

This section summarizes some of the attributes of PG&E's approach to evaluating bids for 2022 deliveries of bundled renewable energy from the utility's supply portfolio.

Consistency with RPS Procurement Plan. In PG&E's 2021 RPS procurement plan, accepted with modifications in CPUC Decision 22-01-004, the utility sought and received approval for a confidential framework "for assessing whether to hold or sell excess RPS volumes". PG&E views the volumes to be sold in the contracts to be surplus to its compliance needs. The current solicitation was anticipated within the 2021 plan, that stated that PG&E intended to issue a minimum of one short-term sales solicitations in 2022 and would target issuing three, of which this is the first. The CPUC found PG&E's proposed framework, after modifications that it required, to be reasonable and authorized the utility to conduct solicitations to sell excess RPS volumes for sales agreements of five years or less; this solicitation was for sales for a delivery term of less than one year. In approving the RPS procurement plan the CPUC also approved the evaluation criteria for the selection of bids.

Note that in issuing a Supplemental Bid Form and using it as an option for contracting, PG&E modified the confirmation agreement's attached facilities list from the pro forma version approved by the CPUC when it approved the RPS procurement plan. Ordering Paragraph 3 of Decision 22-01-004 approving the plan accommodates "necessary modifications" of the pro forma sales agreement. In July 2021, the CPUC accepted the sales transactions that resulted from PG&E's Spring 2021 Bundled RPS Energy Sales solicitation that were filed by the utility in Advice Letter 6276-E. As these included agreements based on the Supplemental Bid Form, that excluded all resource types but solar photovoltaic, wind, and small hydro from the facilities list, it can be concluded that the CPUC viewed the edits that resulted in the Supplemental Bid Form as acceptable necessary modifications.

Market Valuation. PG&E did not calculate Portfolio-Adjusted Value ("PAV") for the bids for these renewable energy volumes. Directly using the PAV metric would have been consistent with its past practice in renewable energy procurement and with the 2021 RPS procurement plan's statement that the use of PAV ensures procurement providing the best fit for PG&Es portfolio at the least cost. PG&E instead chose to use maximizing price as the metric for evaluating bids in its recent short-term bundled RPS energy sale solicitations.

The generation resources from which sales volumes will be sourced will be selected during the delivery term by PG&E from lists of projects identified in an appendix to the contract. Specific generators that actually produce the delivered RPS-eligible energy will not be chosen far in advance of delivery. As the valuation method directly followed PG&E's framework detailed in its Appendix H of the 2021 RPS procurement plan, bid rankings were calculated in a manner consistent with the protocol and with CPUC Decision 12-02-007. PG&E did not include any costs or benefits that should not have been included. In practice, Arroyo does not expect a ranking of bids by price to differ from a ranking by PAV, the CPUC-approved LCBF evaluation criterion, in a REC sale solicitation.

[redacted]

Other criteria. Because projects from which sales volumes will be delivered are already constructed and operating, transmission network upgrade costs are sunk costs and do not factor into bid selection decisions. Similarly, all the projects are viable by virtue of achieving commercial operation and delivering energy on an ongoing basis, so that project viability is not a consideration. In a sense, the question of the viability of individual buyers to make payments to PG&E is taken into account in the creditworthiness evaluation criterion.

In this solicitation, PG&E made it clear to participants that it strongly preferred standard agreements rather than accommodating requested contract modifications, both in the written solicitation and in other party-to-party dialogues.

5. FAIRNESS OF PG&E'S BID EVALUATION AND SELECTION PROCESS

This section provides a narrative of how PG&E administered its evaluation and selection methodology to choose bids for contracting in its Spring 2021 Bundled RPS Energy Sale solicitation. Arroyo's opinion is that the bid evaluation process was fairly administered.

A. GUIDELINES TO DETERMINE FAIRNESS OF EVALUATION PROCESS

The Energy Division has suggested a set of principles to guide IEs in determining whether an IOU's administration of its evaluation and selection process was fair:

- Were all proposals treated the same regardless of the identity of the bidder?
- Were participants' questions answered fairly and consistently and the answers made available to all participants?
- Did the utility ask for "clarifications" that provided one participant an advantage over others?
- Was the economic evaluation of the proposals fair and consistent?
- Was there a reasonable justification for any fixed parameters that were a part of the IOU's LCBF methodology?
- Were the qualitative and quantitative factors used to evaluate bids fair to all bids?

Other considerations relevant to reviewing PG&E's administration of its methodology:

- Were any decisions to reject higher-value proposals because of preferences other than market valuation applied consistently across all proposals? Were selections of lower-value proposals in preference to higher-valued ones based on their superior attributes in non-valuation criteria made consistently, or were high-value proposals skipped over unfairly?
- If PG&E chose to contract for a different volume or pricing of sales than strictly based on the approved framework, was the decision made fairly in how it affected bidders, and based on factors stated in Appendix H of the 2021 RPS procurement plan that detailed the framework applicable to 2022 solicitations?
- Were the judgments used to make a selection based on evaluation criteria and preferences that were publicly disseminated to participants prior to bid submittal?
- Did PG&E disadvantage any class of participants (such as CCAs) in its administration of the selection methodology?

B. PG&E'S EVALUATION OF BIDS AGAINST CRITERIA

PG&E used the sole quantitative criterion of price to rank and select bids. [redacted] passed a review for the qualitative criteria of financial strength and modifications. PG&E did not identify deficiencies in the selected bids, having already rejected [redacted] bid package for failure to conform to the requirements of the solicitation.

Market Valuation. Bid packages were submitted timely [redacted] before the deadline. Figure 3 displays the bid supply curves for 2021 deliveries that show how the conforming bid prices compared to the [redacted]

Figure 3.

[redacted]

Note that most of the bids were submitted for the standard confirmation agreement for deliveries of energy that may include RPS-eligible generation sourced from solar thermal, biomass-fueled, geothermal, and large hydro generators. The exceptions were [redacted]

PG&E used the framework specified in confidential Appendix H of its 2021 RPS procurement plan to evaluate these proposals. [redacted]

[redacted] This evaluation was, in Arroyo's opinion, fully consistent with the approved methodology in PG&E's approved 2021 RPS procurement plan, which applies to REC sale solicitations throughout 2022.

Non-conforming proposal. All bid packages were submitted prior to the deadline set in the solicitation protocol. As described, [redacted] proposal packages failed to conform to the requirements of the solicitation protocol. [redacted] Upon notification of its proposal's non-conformance, [redacted] adjusted its bid packages. In contrast, [redacted]

Credit. PG&E deemed all participants to be sufficiently creditworthy for bids to be evaluated for pricing. EBCE obtained an A credit rating from S&P in 2021. Constellation Energy Generation, LLC, which was divested by its former parent Exelon Corporation in early 2022, has a Moody's rating of Baa2 and an S&P rating of BBB-. CEA and SDCP are unrated. While the City of San José has an Aa1 rating from Moody's, [redacted] The City of Lancaster is the counterparty for the sale of RECs for use for compliance by its CCA program, branded as Lancaster Energy. S&P has assigned an underlying credit rating of A to bonds issued by Lancaster's redevelopment agency, financing authority, and by Lancaster Power Authority (used to finance several solar PV arrays erected and owned by SolarCity on city property).

[redacted]

Other. PG&E did not apply other evaluation criteria in making its short list selection. [redacted]

C. RESULTS ANALYSIS

Arroyo agreed with PG&E's decisions regarding selection and rejection of bids. Observations regarding PG&E's administration of its evaluation methodology in this Summer 2022 Bundled RPS Energy sale solicitation include:

- There were no instances in which Arroyo and PG&E disagreed about the utility's administration of the evaluation and selection process. Arroyo agreed with PG&E's disqualification of a non-conforming bid from a participant that failed to adhere to the requirements of the solicitation protocol even after notification of its deficiency.

- PG&E evaluated bids without involving any third party or the Independent Evaluator to conduct any portion of its analysis.

- Arroyo did not observe PG&E treating participants in disparate ways; Arroyo did not, for example, observe PG&E treating participants differently based on prior commercial relationships or on their status as a CCA.

- The economic evaluation of bids was fair and consistent.

- The judgments that served as the basis for selecting bids were based solely on evaluation criteria that were stated publicly in the solicitation protocol.

- The key parameter used in the evaluation was [redacted]

- Because PG&E used price as its quantitative evaluation criterion, it did not consider transmission costs or integration adders in selection. Without knowing in advance which specific resources in PG&E's supply portfolio will serve which contract, there is no basis for distinguishing between bids using transmission costs or integration adders; it would be inappropriate to involve transmission and integration costs in bid evaluation. The key attributes that distinguished bids were the participants' proposed pricing for green attributes and requested volumes, and whether the participant bid for the standard agreement or the Supplemental Bid Form with a different facilities list, not energy pricing.

- Arroyo believes that PG&E's conduct of the Summer 2022 Bundled RPS Energy Sale solicitation was consistent with its approved 2021 RPS procurement plan.

[redacted]

- Arroyo agrees that, based on PG&E's 2021 framework for evaluating bids to sell renewable energy, the utility made reasonable and justifiable decisions to select and reject bids.

Arroyo's opinion is that PG&E's evaluation and selection process was fairly administered.

6. FAIRNESS OF CONTRACT-SPECIFIC NEGOTIATIONS

This chapter provides an independent review of the extent to which PG&E's negotiations with bidders were conducted fairly with respect to competitors. PG&E notified participants that proposals had been selected or rejected as qualified bids on August 29, 2022. PG&E began discussions with counterparties shortly after each party accepted the award, resulting in execution of confirmation agreements with CEA, EBCE, and Lancaster on September 30, and Constellation, San José, and SDCP on October 4.

Arroyo telephonically observed some but not all of the discussion sessions between the commercial teams of PG&E and the six counterparties. Arroyo also reviewed marked-up draft contracts in an effort to identify specific proposals and counterproposals made by the parties. The starting point for negotiations was either the pro forma EEI short-form confirmation agreement that was included in PG&E's 2021 RPS procurement plan, or the Supplemental Bid Form, with a shorter list of facilities limited to solar PV, wind, and small hydroelectric resources, that was made publicly available on the utility's website.

Arroyo's opinion is that PG&E's negotiations were conducted in a manner that was fair to counterparties and to their competitors. The last chapter of this report describes the degree to which the pricing of the resulting contracts is fair to ratepayers.

A. PRINCIPLES FOR EVALUATING THE FAIRNESS OF NEGOTIATIONS

Arroyo employed specific principles to evaluate the degree of fairness with which PG&E handled negotiations to sell renewable energy to CEA, Constellation, EBCE, Lancaster, San José, and SDCP.

- Were bidders treated fairly and consistently by PG&E during negotiations? Were all bidders given equitable opportunities to advance proposals towards final agreements? Were individual bidders given unique opportunities to move their proposals forward or concessions to improve their contracts' commercial value, opportunities not provided to others?

- Was the distribution of risk between seller and buyer in the agreements distributed equitably across contracts? Did PG&E's ratepayers take on a materially disproportionate share of risks in some contracts and not others? Were individual buyers given opportunities to shift their commercial risks towards ratepayers, opportunities that were not provided to others?

- Was non-public information provided by PG&E shared fairly with all buyers? Were individual buyers uniquely given information that advantaged them in securing contracts or realizing commercial value from those contracts?

- If any individual buyer was given preferential treatment by PG&E in the course of negotiations, is there evidence that other buyers were disadvantaged by that treatment? Were other proposals of comparable value to ratepayers assigned lower priority?

B. NEGOTIATIONS BETWEEN PG&E AND COUNTERPARTIES

Terms and conditions in the agreements for sales of bundled RPS energy were not significantly altered from the pro forma after bids were selected. Discussions focused on:

- Credit Requirements. PG&E's pro forma confirmation agreement, that had been approved by the CPUC and was shared with potential participants, stated a collateral posting requirement of 15% times the volume of as-yet-undelivered RECs times the $/MWh contract price of RECs. [redacted]

  [redacted][2][redacted]

  [redacted]

  [redacted]

[2] Note that in the case of the bankruptcy and failure of Western Community Energy, that CCA's customers were returned to retail service from Southern California Edison as provider of last resort.

[redacted]

[redacted]

[redacted]

- Termination right. [redacted]

[redacted]

- Other modifications. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- EEI master agreements. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted][3] [redacted]

[redacted]

[redacted] The master agreement and collateral annex were executed on September 30.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[3] [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted] The master agreement and collateral annex were executed on September 23.

- Delays. [redacted]

[redacted]; the exceptions were [redacted]

C. FAIRNESS OF NEGOTIATIONS

Arroyo's opinion is that negotiations with buyers were, overall, conducted fairly. Each participant was given an equitable opportunity to advance its proposals towards execution. The distribution of risk between buyer and seller is generally the same in these contracts as in prior agreements PG&E has negotiated with northern California, southern California CCAs, and ESPs. Arroyo did not observe PG&E providing any individual participant with any non-public information that materially advantaged a buyer against ratepayers or competitors.

Credit requirements. [redacted] Arroyo's opinion is that PG&E's specific treatment of buyers [redacted] was based on [redacted], rather than on any unfairly favorable treatment of familiar counterparties or discrimination against any class of counterparty.

CCA Code of Conduct. The CPUC adopted a code of conduct for IOUs' interactions with CCAs in Decision 12-02-009. Most of the elements of the code govern IOU marketing and lobbying activities, but rule 20 (which restates ordering paragraph 5 from Resolution E-4250) applies to PG&E's conduct of its efforts to make renewable energy sales:

> "Electrical corporations may not refuse to make economic sales of excess electricity to a community choice aggregation program, nor refuse in advance to deal with any community choice aggregation program in selling electricity because it is a community choice aggregation program."

In Arroyo's opinion, PG&E did not refuse to make economic sales of surplus RPS-eligible energy to any CCAs involved in this solicitation, nor did it refuse in advance to deal with any CCAs. It performed outreach to numerous CCAs in an effort to obtain their participation. [redacted] Arroyo's opinion is that PG&E complied with the requirements of the CCA code of conduct in how it handled its solicitation.

EEI master agreements. Arroyo notes the disparity between PG&E's treatment of [redacted] Arroyo does not consider this to be a material fairness issue.

Summary. Arroyo's opinion is that PG&E's negotiations with buyers were, overall, handled fairly with respect to competitors. Bids were accepted or rejected based on PG&E's CPUC-approved 2021 framework for short-term RPS energy sales and on evaluation criteria and solicitation requirements that were stated in the public protocol. Arroyo believes that PG&E's conduct was consistent with the requirements of the CCA Code of Conduct.

7. MERIT FOR CPUC APPROVAL

This chapter provides an independent opinion on whether PG&E's contracts with CEA, Constellation, EBCE, Lancaster, San José, and SDCP merit approval by the CPUC. It also addresses other required topics identified in the Energy Division's template for Independent Evaluators for use in reporting.

A. FAIRNESS OF SOLICITATION

PG&E solicited bids in order to sell RPS-eligible energy for delivery in calendar 2022. It provided public solicitation materials that clearly stated the evaluation criteria; in the actual administration of the evaluation and selection process it adhered to the use of those stated criteria and adhered to its protocol and to its CPUC-approved 2021 renewable energy procurement plan.

The utility did not specifically use its CPUC-approved least-cost, best fit methodology of Portfolio-Adjusted Value as the metric for evaluation; however, Arroyo believes that use of the evaluation criterion of maximum price aligns very closely with the approved LCBF methodology. The methodology used for evaluating and selecting bids was consistent with the framework laid out in confidential Appendix H of PG&E's 2021 procurement plan that was approved by the CPUC. PG&E's negotiations with participants were, overall, handled fairly with respect to competitors and to ratepayers, and PG&E adhered to the evaluation criteria stated in its public protocol to select and reject proposals. Arroyo's opinion is that PG&E's handling of the solicitation complied fully with the CPUC's CCA Code of Conduct.

Arroyo believes that PG&E ran a solicitation that was consistent with its solicitation protocol and with the 2021 RPS procurement plan approved by CPUC Decision 22-01-004.

B. BIDS WITH BEST OVERALL VALUE TO RATEPAYERS

PG&E selected the best proposals among conforming bid packages received, best in terms of maximizing contract pricing by using the approved sales framework. [redacted]

C. CONSISTENCY WITH PROTOCOL AND PROCUREMENT PLAN

PG&E's sale of bundled energy in these contracts conforms to its 2021 RPS procurement plan, in which the utility states its intent to sell RPS volumes, and more specifically conforms to the detailed framework for excess sales provided within the plan. PG&E chose to provide participants with a supplemental version of the original CPUC-approved confirmation agreement. This supplemental version was edited to alter the list of projects from which RPS energy deliveries can be sourced. Arroyo notes that the changes from the previously filed version do not involve any material changes other than to the facilities list, and that there have been precedents in which PG&E has altered its project list in negotiating confirmation agreements from the version approved by the CPUC with its applicable procurement plan. The CPUC accepted Advice 6276-E from PG&E's Spring 2021 Bundled RPS Energy Sale solicitation that included transactions based on the Supplemental Bid Form.

The sale conforms to the needs of PG&E's portfolio and its RPS requirements, because it reduces PG&E's excess REC bank by selling now for ratepayer benefits instead of carrying RECs forward to future periods. The process of selecting bids was consistent with the solicitation protocol, and Arroyo's opinion is that the selection of bids was reasonable.

D. MERIT FOR CPUC APPROVAL

This section reports on the merits of the sales contracts.

Pricing and market value. PG&E will sell bundled RPS-eligible renewable energy ([redacted] in 2022 to:

- CEA at market index plus a green attributes price [redacted];
- EBCE at market index plus [redacted];
- SDCP at market index plus [redacted];

PG&E will sell bundled RPS-eligible renewable energy [redacted] in 2022 to:

- Constellation at market index plus [redacted];
- EBCE at market index plus [redacted];
- Lancaster at market index plus [redacted];
- SDCP at market index plus [redacted]; and
- San José at market index plus [redacted].

[redacted] There are relatively few public benchmarks available to ascertain whether these are reasonable prices, given the illiquidity and opacity of the market for California RPS-eligible energy. Arroyo does not participate in REC markets and cannot directly monitor non-public commercial transactions other than a subset of PG&E's.

PG&E's most recent prior competitive solicitation in the winter of 2021 to sell renewable energy elicited initial bids for 2022 deliveries priced at [redacted]

[redacted] The CPUC accepted PG&E's advice letter 6544-E for these transactions in March 2022. [redacted]

There are some pricing data for recent renewable energy sales to or from publicly-owned utilities and CCAs for deliveries in 2022 that have been made public:

- At the beginning of 2016, Silicon Valley Power (the municipal utility of the city of Santa Clara) offered a ten-year agreement to sell 36.3 GWh/year of PCC1 energy to Alameda Municipal Power for the 2018 – 2027 period at market index + $15/MWh. The latter opted instead to execute a fixed price contract but the indicative pricing demonstrates the seller's view of an acceptable sale price.

- The city of Pasadena contracted with Powerex in April 2018 for deliveries of PCC1 and PCC2 energy. The PCC1 deliveries will be made from 2020 to 2030, at 70 GWh/year, and are priced at market index + $16.30/MWh.

- In December 2017, the Southern California Public Power Authority, acting as agent on behalf of the cities of Anaheim, Burbank, and Vernon, entered a 25-year PPA with the Desert Harvest II solar facility for deliveries of PCC1 energy at a price of market index + $15.25/MWh. Deliveries commenced upon commercial operation in January 2021.

- In July 2019, the City of Santa Clara executed a five-year PPA for RPS energy deliveries starting in September 2019 from the Olcese Water District. The energy is generated by the Rio Bravo hydroelectric plant on the lower Kern River. Deliveries are priced at market index + $17/MWh.

- In April 2021 the city of Riverside entered a Green Power Purchase Agreement with the California Air Resources Board, under which the municipal utility will provide 100% RPS-eligible deliveries to CARB's new facility for twenty years, priced at the applicable tariff rate plus a premium of $17.9/MWh. The utility's staff estimated the cost premium for RPS energy provided by the city over non-renewable energy would average $16.1/MWh over the first decade, based on the utility's long-term supply portfolio. This implies that the staff expected a long-term average market price of $16.1/REC for 2021-31.

- Redwood Coast Energy Authority ("RCEA") has had a PPA with Humboldt Sawmill Company since 2017 for delivery of RPS-eligible energy from a biomass-fueled cogeneration unit sited with the sawmill in the town of Scotia. While most of the energy deliveries are sold at a base price that has been as high as $83/MWh and as low as $63/MWh, if the annual production exceeds 116% of contract quantity the "surplus delivered energy" is sold at hourly market price plus a green attribute price.

  The contractual green attribute price had been $14.50/REC from the beginning of the delivery term. In the spring of 2021, RCEA and Humboldt Sawmill

Company negotiated an extension of the delivery term of the PPA to 2031. The extension reduced the green attribute price to $11/REC from $14.50, and the staff report to RCEA's board stated that this was "in keeping with current market pricing for renewable energy attributes." This suggests that RCEA perceived a decline in PCC1 REC market prices from 2017 to 2021.

- The city of Moreno Valley executed two short-term purchase agreements for RPS energy deliveries. One, signed in mid-2019, was with Tenaska Power services for deliveries in calendar 2019 from the Coso geothermal projects sited on the China Lake Naval Weapons Center near Ridgecrest. The PCC1 RECs were priced at $17.75/REC. An earlier, separate agreement was signed with TGP Energy Management (a subsidiary of Terra-Gen Power) for deliveries from 2017-2020 from a pooled set of resources. These PCC1 RECs were priced at $16/REC.

- In August 2020 the city of Palo Alto embarked on a program to sell PCC1 RECs from its supply portfolio and to use the proceeds to buy greater volumes of PCC3 RECs in order to maintain compliance with its RPS obligations while reducing its compliance costs (while relying more on out-of-state resources than it had previously). In March 2022, the utilities department staff reported to the city council that the average actual sales price of the PCC1 RECs for calendar 2021 was $13.97/REC. It also provided a projection for calendar 2022 of average purchase price of $12.25/REC. This suggests that the active trading desk for the city perceived a decline in market pricing for PCC1 RECs.

- In January 2022, Northern California Power Agency adopted a fiscal year 2023 budget (July 2022 – June 2023) for its geothermal facilities that assumed a PCC1 REC price of $12.75/REC.

- In March 2022, the staff of Northern California Power Agency reported to its board that Clearway Renew LLC had proposed a 20-year PPA for its Victory Pass and Arica Solar projects, sited in the Sonoran Desert east of Desert Center. The reported proposed pricing for the solar PV + energy storage facilities was market index for energy plus $11/REC and $5/kW-month for Resource Adequacy.

- In March 2022, the cities of Vernon and Cerritos entered 20-year PPAs with Daggett Solar Power 2 Project, a solar PV + energy storage facility sited in the Mojave Desert. Among the provisions of the contracts, the buyers have the right to withhold a portion of payments if the seller is tardy in crediting WREGIS certificates for green attributes to the buyers' accounts. The pricing of the withholding is $20/REC, which in some sense is a measure of the economic value of the green attributes to the buyers.

- Turlock Irrigation District's posted rate schedule for the first half of 2022 assigns a short-run marginal cost of environmental attributes to be $12.75/REC.

- In March 2022, Imperial Irrigation District extended an existing ten-year PPA with Desert View Power, a biomass-fueled facility sited in Mecca in the Coachella Valley, by five years. The contract price of the extension is $108/MWh escalating at 2% per annum, of which $98/MWh is for energy and the other $10/REC is for green attributes. Deliveries from the extension began in April 2022, so the contract price for late 2022 deliveries (analogous to when EBCE and SDCP will take delivery) is $10/REC.

- In 2022, the city of Redding entered a ten-year confirmation agreement with Shell Energy North America for delivery of PCC1 RECs beginning in 2025, sourced from various wind and solar facilities. The green attributes are priced at $15.50/REC.

Other older transactions for PCC1 energy are also publicly visible, but these may be poorer benchmarks for the current transactions for 2022 deliveries.

Contract deliveries from the agreements [redacted]

[redacted]

Arroyo's inference from this mix of scant data is that the prices of most of PG&E's contracts are likely fair and reasonable. There will always be some uncertainty about such judgments when dealing with a market that is illiquid and opaque, as the California market for PCC1 RPS-eligible energy is.

[redacted]

Portfolio fit. The RECs intended for use in the sales contracts are expected to be surplus to PG&E's compliance needs. Arroyo believes that it is advantageous to ratepayers for PG&E to sell surplus RECs at or above market price now rather than to bank them for RPS compliance needs later. PG&E's estimates indicate that its RPS net position in the fourth compliance period are long, so the sales contracts fit with the utility's portfolio strategy of reducing the surplus REC position in 2022 through short-term sales and monetizing part of the surplus for near-term value for ratepayer benefit.

Summary. The sales transactions were consummated at prices that fall [redacted]

[redacted] and on [redacted]. All of the contracts are consistent with PG&E's 2021 RPS procurement plan and its framework for sales of surplus RPS-eligible energy, and fit well with PG&E's strategy for RPS portfolio management. Arroyo's opinion is that the methodology for evaluating and selecting a short list and the administration of that methodology were fair.

Arroyo's opinion is that PG&E's negotiations with participants were, overall, handled fairly with respect to competitors and ratepayers. In Arroyo's opinion, the allocation of costs and risks between ratepayers and buyers that resulted from negotiations was, overall, consistent with PG&E's past practices. Arroyo believes that PG&E's actions in negotiating and transacting or not transacting with CCAs were compliant with the CCA Code of Conduct.

On that basis, Arroyo's opinion is that the contracts with Clean Energy Alliance, Constellation Energy Generation, LLC, East Bay Community Energy Authority, the City of Lancaster, San Diego Community Power, and the City of San José merit CPUC approval.

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D1

Contract Summary: San Jose

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D2

Contract Summary: EBCE 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D3

Contract Summary: EBCE 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D4

Contract Summary: Lancaster

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D5

Contract Summary: CEA

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D6

Contract Summary: Constellation

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D7

Contract Summary: SDCP 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix D8

Contract Summary: SDCP 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E1

Comparison of Contract with Utility's Pro Forma Agreement: San Jose

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E2

Comparison of Contract with Utility's Pro Forma Agreement: EBCE 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E3

Comparison of Contract with Utility's Pro Forma Agreement: EBCE 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E4

Comparison of Contract with Utility’s Pro Forma Agreement: Lancaster

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E5

Comparison of Contract with Utility’s Pro Forma Agreement: CEA

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E6

Comparison of Contract with Utility's Pro Forma Agreement: Constellation

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E7

Comparison of Contract with Utility’s Pro Forma Agreement: SDCP 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix E8

Comparison of Contract with Utility's Pro Forma Agreement: SDCP 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F1

Sales Agreement: San Jose

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F2

Sales Agreement: EBCE 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F3

Sales Agreement: EBCE 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F4

Sales Agreement: Lancaster

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F5

Sales Agreement: CEA

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F6

Sales Agreement: Constellation

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F7

Sales Agreement: SDCP 1

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix F8

Sales Agreement: SDCP 2

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix G1

PG&E’s Renewable Net Short Calculation

(Confidential)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix G2

PG&E's Renewable Net Short Calculation

(Redacted)

CALIFORNIA'S RENEWABLES PORTFOLIO STANDARD PROGRAM

RPS Procurement Plan: Renewable Net Short Quantitative Response

Renewable Net Short calculations are to be submitted by all retail sellers each year with their RPS Procurement Plans, as required by the Public Utilities Code 399.13 and Commission decisions, notably, Decision (D.) 11-12-020, D.11-12-052, D.12-06-038, D.14-12-023, and D.16-12-040. Any questions concerning the contents or formulas within this spreadsheet should be directed to the Energy Division RPS team at rpscompliance@cpuc.ca.gov.

Procedural Guidelines

1) Public Utilities Code 399.13(a)(1) requires Investor-Owned Utilities (IOUs), Small and Multi-Jurisdictional Utilities (SMJUs), Electric Service Providers (ESPs), and Community Choice Aggregators (CCAs) to submit an RPS Procurement Plan each year to the CPUC to demonstrate that a sufficient amount of renewable energy has been procured to meet the obligations of the California RPS Program requirements.

2) Quantitative Responses must be submitted as part of a retail seller's RPS Procurement Plan to the Commission as specified in the Assigned Commissioner Ruling directing filing of RPS Procurement Plans, and the May 21, 2014 Ruling, Administrative Law Judge's Ruling on Renewable Net Short, issued in R.11-05-005, (http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M091/K331/91331194.PDF)

a) **If a PDF version (vs. Excel file) is included in retail seller's RPS Plan, then all pages must be legible.** If a retail sellers seeks confidentiality of any portion of the data, the retail seller is responsible for maintaining confidentiality when

b) **Submit a confidential Excel version of this spreadsheet to the Energy Division via the CPUC Secure FTP site (https://kwftp.cpuc.ca.gov)**. Please only submit this file in .xls or .xlsx format to the FTP site and contact rpscompliance@cpuc.ca.gov with any questions.

Renewable Net Short Calculations - 2021 RPS Procurement Plans

LSE Name:	Pacific Gas and Electric	
Date Filed:	July 1, 2021	

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Table 1: Renewable Net Short Calculation as of May 2021

Net Short Calculation Using PG&E Bundled Retail Sales Forecast (2021 - 2030)

Variable	Calculation in Energy Division RNS Calculation Template	Revised Calculation Correcting Apparent Errors in Energy Division Template	Item	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017-2020	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030
			Forecast Year					CP3	1	2	3	4	CP4	5	6	7	CP5	8	9	10	CP6
			Annual RPS Requirement																		
A			**Total Retail Sales (MWh)**	61,397,214	48,832,111	35,956,100	35,838,070	182,023,495	[redacted]	27,683,731	[redacted]	28,006,589	114,688,692	27,194,100	26,367,066	26,404,833	79,965,998	26,897,185	27,684,093	28,590,108	83,171,386
B			RPS Procurement Quantity Requirement (%)	27.0%	29.0%	31.0%	33.0%	29.5%	35.8%	38.5%	41.3%	44.0%	39.8%	46.7%	49.3%	52.0%	49.3%	54.7%	57.3%	60.0%	57.4%
C	A*B		**Gross RPS Procurement Quantity Requirement (MWh)**	16,577,248	14,161,312	11,146,391	11,826,563	53,711,514.1	[redacted]	10,658,236	[redacted]	12,322,899	45,625,993.4	12,691,486	13,006,873	13,730,513	39,428,872.8	14,704,691	15,871,291	17,154,065	47,730,046.4
D			Voluntary Margin of Over-procurement (MWh)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
E	C+D		**Net RPS Procurement Need (MWh)**	16,577,248	14,161,312	11,146,391	11,826,563	53,711,514	[redacted]	10,658,236	[redacted]	12,322,899	45,625,993	12,691,486	13,006,873	13,730,513	39,428,873	14,704,691	15,871,291	17,154,065	47,730,046
			RPS-Eligible Procurement																		
Fa			**Risk-Adjusted RECs from Online Generation (MWh)**	22,335,589	20,385,398	20,299,675	20,075,469	83,096,131	20,190,134	17,752,241	17,529,685	17,247,228	72,719,288	17,076,802	16,542,057	16,221,788	49,840,647	16,156,316	15,525,532	15,444,740	47,126,588
Faa			Forecast Failure Rate for Online Generation (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fb			**Risk-Adjusted RECs from RPS Facilities in Development (MWh)**	-	-	-	-	-	35,743	163,600	464,906	496,719	1,160,968	494,498	493,050	491,609	1,479,157	491,312	488,747	487,327	1,467,386
Fbb			Forecast Failure Rate for RPS Facilities in Development (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fc			**Pre-Approved Generic RECs (MWh)**	-	-	-	-	-	-	36,369	64,187	881,036	981,592	2,869,995	4,421,361	4,696,012	11,987,368	4,920,558	5,138,575	5,316,178	15,375,310
Fd			**Executed REC Sales (MWh)**	2,069,230	1,451,000	9,744,419	7,445,056	20,709,705	1,947,495	-	-	-	1,947,495	-	-	-	-	-	-	-	-
F	Fa+Fb+Fc-Fd		**Total RPS Eligible Procurement (MWh)**	20,266,359	18,934,398	10,555,256	12,630,413	62,386,426	18,278,381	17,952,210	18,058,778	18,624,983	72,914,353	20,441,295	21,456,468	21,409,409	63,307,172	21,568,185	21,152,854	21,248,245	63,969,284
F0			Category 0 RECs	16,659,366	14,103,286	10,555,256	12,630,413	53,948,322	13,297,131	11,001,834	10,870,837	10,640,344	45,810,146	10,513,613	10,003,052	9,727,589	30,244,254	9,670,976	9,084,354	9,031,656	27,786,985
F1			Category 1 RECs	3,606,993	4,831,112	-	-	8,438,104	4,981,250	6,950,376	7,187,942	7,984,639	27,104,207	9,927,682	11,453,417	11,681,820	33,062,918	11,897,210	12,068,500	12,216,589	36,182,299
F2			Category 2 RECs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F3			Category 3 RECs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Gross RPS Position (Physical Net Short)																		
Ga	F-E		**Annual Gross RPS Position (MWh)**	3,689,111	4,773,086	(591,135)	803,850	8,674,912	[redacted]	7,293,974	[redacted]	6,302,084	27,288,359	7,749,809	8,449,595	7,678,896	23,878,299	6,863,494	5,281,563	4,094,180	16,239,238
Gb	F/A		Annual Gross RPS Position (%)	33.0%	38.8%	29.4%	35.2%	34.3%	[redacted]	64.8%	[redacted]	66.5%	63.6%	75.2%	81.4%	81.1%	79.2%	80.2%	76.4%	74.3%	76.9%

PG&E's RNS Table - Stochastic-Adjustment (2021-2030)

Variable	Calculation in Energy Division RNS Calculation Template	Revised Calculation Correcting Apparent Errors in Energy Division Template	Item	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017-2020	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030
				Step 2 Result: Stochastically-Adjusted Net Short (Physical Net Short + Stochastic Risk-Adjustment)[9]																	
Gc			**VAMO-Adjusted Annual Gross RPS Position (MWh)**					8,674,912	[redacted]												
Gd		(F - (Ga - Gc)) / A	VAMO-Adjusted Annual Gross RPS Position (%)					34.3%													
Ge			**Stochastically-Adjusted Annual Gross RPS Position (MWh)**	3,665,687	4,730,505	(656,309)	734,659	8,474,542													
Gf		(F - (Ga - Ge)) / A	Stochastically-Adjusted Annual Gross RPS Position (%)	33.0%	38.7%	29.2%	35.0%	34%													
			Application of Bank																		
Ha	J-Hc (from previous CP)		**Existing Banked RECs above the PQR**	12,819,087	16,484,774	21,215,279	20,558,970	12,819,087	21,162,032	[redacted]											
Hb			RECs above the PQR added to Bank	3,665,687	4,730,505	(656,309)	734,659	8,474,542	[redacted]												
Hc			Non-bankable RECs above the PQR	129,212	2,385	-	-	131,597													
H	Ha+Hb		**Gross Balance of RECs above the PQR**	16,484,774	21,215,279	20,558,970	21,293,629	21,293,629													
Ia			Planned Application of RECs above the PQR towards RPS Compliance	-	-	-	-	-													
Ib			Planned Sales of RECs above the PQR	-	-	-	-	-													
J	H-Ia-Ib		**Net Balance of RECs above the PQR**	16,484,774	21,215,279	20,558,970	21,293,629	21,293,629													
J0			Category 0 RECs	428,784	428,784	-	734,659	734,659													
J1			Category 1 RECs	16,055,990	20,786,495	20,558,970	20,558,970	20,558,970													
J2			Category 2 RECs	-	-	-	-	-													
			Expiring Contracts																		
K			RECs from Expiring RPS Contracts (MWh)					-	139,174	2,615,652	3,423,692	3,678,924	9,857,442	3,730,970	4,236,800	4,480,274	12,448,044	4,512,466	5,006,737	5,031,052	14,550,255
			Net RPS Position (Optimized Net Short)																		
La	Ga+Ia-Ib-Hc	Ge-IF(Hb>0, Hb-Ia, IF(|Hb|<Ha, Hb, IF(Ha<0, 0,-Ha)))	**Annual Net RPS Position after Bank Optimization (MWh)**	-	-	-	-	-	[redacted]												
Lb	(F+Ia-Ib-Hc)/A	(C + La)/A	Annual Net RPS Position after Bank Optimization (%)	27.0%	29.0%	31.0%	33.0%	29.5%													

Note: All values are to be input in MWhs

General Table Notes: Fields in grey are protected as Confidential under CPUC Confidentiality Rules.

(1) (Row A) Forecasts of retail sales through 2030 are reflective of PG&E's internal bundled retail sales forecast.

(2) (Row Hc) Since PG&E elected to comply early in the 2017-2020 period with the banking rules established in D.17-06-026, PG&E has modeled the new banking rules for the current and future compliance periods.

(3) (Row Ib) The annual RPS sales volume forecast assumption is based the RPS sales framework proposed in PG&E's Appendix H of its 2021 RPS Plan, and is included for RPS position planning purposes.

(4) (Row K) Row K now includes only expiring volumes from contracts as of May 2021.

(5) (Rows Gc and Gd) VAMO-Adjusted Net Short (Physical Net Short + Deterministic RPS Allocation) PG&E added rows Gc and Gd to the RNS in order to show the VAMO adjusted physical net short, which incorporates expected RPS Allocations in response to D.21-05-030.

(6) (Rows Ge and Gf) Stochastically-Adjusted Net Short (Physical Net Short + Stochastic Risk-Adjustment) PG&E added rows Gc and Gd to the RNS in order to show the stochastically-adjusted physical net short, which incorporates the risks and uncertainties addressed in the stochastic model. For more details on PG&E's stochastically modeled risks, see the 2021 RPS Plan.

(7) (Row Ge) The Stochastically-Adjusted Annual Gross Position (MWh) does not include GTSR volumes and may differ from Row Ga, the Annual Gross RPS Position (MWh)

(8) (Row La) Row La incorrectly calculates the Annual Net RPS Position after Bank Optimization when bank is being applied to fill a short position.

(9) (Row Lb) Row Lb incorrectly calculates the Annual Net RPS Position after Bank Optimization.

(10) (Rows La and Lb) Rows La and Lb incorrectly subtract the non-bankable volumes. Although these volumes can not be carried forward, per Decision 12-06-038, these volumes could be used towards meeting compliance in the current period. Therefore, the non-bankable volumes should be included in the Annual Net RPS Position after Bank Optimization.

(11) PG&E's Cost Quantification tables do not include volumes or costs associated with pre-approved generic RPS procurement, and therefore will differ from volumes in the RNS template.

PACIFIC GAS AND ELECTRIC COMPANY

Appendix H1

Facility List: San Jose, EBCE 1, Lancaster, Constellation, SDCP 1

Name of Facility	Resource	Location	CEC RPS ID	Host Balancing Authority	Facility Size (MW)	Term (Yrs)	Execution Date (MM/DD/YYYY)	Expiration Date (MM/DD/YYYY)
Kansas South	Solar PV	Lemoore, CA	61264A	CAISO	20	20	06/24/11	06/24/33
Westlands Solar Farms	Solar PV	Huron, CA	61755A	CAISO	18	20	06/24/11	04/30/34
Orion Solar	Solar PV	Unincorporated Kern County, CA	61570A	CAISO	12	20	06/24/11	06/25/34
Kent South	Solar PV	Lemoore, CA	61262A	CAISO	20	20	08/30/12	02/18/35
Algonquin SKIC 20 Solar	Solar PV	Taft, CA	61558A	CAISO	20	20	08/30/12	05/14/35
CED Corcoran Solar 3, LLC	Solar PV	Corcoran, CA	62783A	CAISO	20	20	03/23/15	11/30/36
Westside Solar, LLC	Solar PV	Unincorporated Fresno County, CA	61185A	CAISO	20	20	03/23/15	05/01/37
Aspiration Solar G LLC	Solar PV	Tranquility, CA	61486A	CAISO	9	20	03/23/15	10/26/37
Bayshore Solar A	Solar PV	Lancaster, CA	63133A	CAISO	20	20	12/18/15	01/22/38
Bayshore Solar B	Solar PV	Lancaster, CA	63134A	CAISO	20	20	12/18/15	01/22/38
Bayshore Solar C	Solar PV	Lancaster, CA	63135A	CAISO	20	20	12/17/15	01/22/38
West Antelope	Solar PV	Lancaster, CA	61850A	CAISO	20	20	02/27/12	02/08/35
Western Antelope Blue Sky Ranch A	Solar PV	Lancaster, CA	61517A	CAISO	20	20	02/27/12	02/16/35
Wind Resource I	Wind	Tehachapi, CA	61467A	CAISO	8.71	10	02/27/12	12/31/22
SPS White River West	Solar PV	Alpaugh, CA	62045A	CAISO	19.75	20	09/17/12	10/01/34
Wind Resource II	Wind	Tehachapi, CA	61468A	CAISO	19.955	10	09/17/12	09/30/23
Columbia Solar Energy, LLC	Solar PV	Pittsburg, CA	62051A	CAISO	19	20	09/17/12	12/13/35
Alamo Solar, LLC	Solar PV	Oro Grande, CA	61453A	CAISO	20	20	09/17/12	06/29/35
Corcoran Solar LLC	Solar PV	Corcoran, CA	62285A	CAISO	19.76	20	09/17/12	03/19/35
Old River One LLC	Solar PV	Bakersfield, CA	60853A	CAISO	20	20	04/10/13	02/08/35
Shafter Solar	Solar PV	Shafter, CA	62325A	CAISO	19.98	20	04/10/13	07/15/35
Morelos Del Sol	Solar PV	Lost Hills, CA	62272A	CAISO	15	20	04/10/13	02/29/36
Rising Tree Wind Farm II LLC	Wind	Mojave, CA	62426A	CAISO	19.8	20	10/25/13	08/06/35
Kekawaka Creek Hydroelectric Facility	Small Hydro	Zenia, CA	60186A	CAISO	5.5	20	10/25/13	05/31/35
Woodmere Solar Farm	Solar PV	Bakersfield, CA	62429A	CAISO	15	20	10/25/13	02/24/36
Portal Ridge Solar C Project	Solar PV	Lancaster, CA	61684A	CAISO	11.4	20	10/21/14	04/20/37
SR Solis Oro Loma Teresina, LLC - Project A	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO	10	20	11/12/14	02/23/37
SR Solis Oro Loma Teresina, LLC - Project B	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO	10	20	11/12/14	02/23/37
Sunray - 20	Solar PV	Daggett, CA	62694A	CAISO	20	20	10/21/14	08/24/37
SR Solis Rocket, LLC - Project A	Solar PV	Avenal, CA	62840A	CAISO	7.9	20	11/12/14	03/09/37
SR Solis Rocket, LLC - Project B	Solar PV	Avenal, CA	62840A	CAISO	7.9	20	11/12/14	03/09/37
San Joaquin 1A	Solar PV	San Joaquin, CA	61837A	CAISO	19.24	20	12/18/15	12/09/38
Montezuma Wind Energy Center	Wind	Birds Landing, CA	60543A	CAISO	36.8	25	06/03/10	01/27/36
CalRenew-1	Solar PV	Mendota, CA	60475A	CAISO	5	20	06/17/14	04/29/30
Shiloh II Wind Project	Wind	Rio Vista, CA	60639A	CAISO	150	20	01/09/18	01/31/29
High Plains Ranch II	Solar PV	California Valley, CA	60603A	CAISO	210	26	07/23/08	10/30/38
Topaz Solar Farm	Solar PV	Santa Margarita, CA	61698A	CAISO	550	25	07/01/08	10/26/39
Hatchet Ridge	Wind	Burney, CA	60741A	CAISO	103.2	15	08/23/17	12/13/25
CM10 (fka Sempra El Dorado Solar)	Solar PV	Boulder City, NV	60713A	CAISO	10	20	12/19/08	12/31/28
Ivanpah Unit 1	Solar Thermal	Nipton, CA	62273A	CAISO	114.46	25	04/28/09	01/20/39
Ivanpah Unit 3	Solar Thermal	Nipton, CA	62275A	CAISO	126.1	25	04/28/09	01/26/39
AV Solar Ranch One	Solar PV	Lancaster, CA	60790A	CAISO	241.5	25	05/08/09	11/20/39
Alpine Solar Project	Solar PV	Lancaster, CA	60755A	CAISO	66	20	04/21/10	01/17/33
CM48 (fka Sempra Copper Mountain 1)	Solar PV	Boulder City, NV	60786A	CAISO	48	20	06/22/09	01/31/31
Mt. Poso	Biomass	Bakersfield, CA	60695A	CAISO	44	15	03/08/10	02/20/27
Agua Caliente Solar Project	Solar PV	Roll, AZ	60894A	CAISO	290	25	09/08/09	06/22/39
High Plains Ranch III	Solar PV	California Valley, CA	60603A	CAISO	210	26	07/23/08	10/30/38
Mojave Solar Project	Solar Thermal	Hinkley, CA	60848A	CAISO	250	25	07/15/11	12/03/39
Genesis Solar Energy Project	Solar Thermal	Blythe, CA	60605A	CAISO	250	25	09/28/09	03/06/39
DTE Stockton	Biomass	Stockton, CA	60964A	CAISO	44.5	25	12/08/09	02/20/39
Big Creek Waterworks	Small Hydro	Hyampom, CA	60900A	CAISO	4.8	20	05/04/10	06/22/30
Norman Ross Burgess - Three Forks Water Power Project	Small Hydro	Zenia, CA	60502A	CAISO	1.625	20	09/22/10	10/31/31
Alpaugh 50	Solar PV	Alpaugh, CA	60945A	CAISO	50	25	01/26/10	03/07/38
Alpaugh North	Solar PV	Alpaugh, CA	60946A	CAISO	20	25	01/26/10	03/07/38
Atwell Island	Solar PV	Alpaugh, CA	60947A	CAISO	20	25	01/26/10	03/11/38
Corcoran	Solar PV	Corcoran, CA	60948A	CAISO	20	25	01/26/10	08/14/38
White River	Solar PV	Alpaugh, CA	60949A	CAISO	20	25	01/26/10	06/26/38
Avenal Park (Eurus)	Solar PV	Avenal, CA	60912A	CAISO	6	20	12/24/09	08/04/31
Sun City Project (Eurus)	Solar PV	Avenal, CA	60913A	CAISO	20	20	12/24/09	08/04/31
Sand Drag (Eurus)	Solar PV	Avenal, CA	60914A	CAISO	19	20	12/24/09	08/04/31
Desert Center Solar Farm	Solar PV	Desert Center, CA	61068A	CAISO	300	25	02/24/10	12/16/39
Coram Brodie	Wind	Tehachapi, CA	60973A	CAISO	102	20	06/02/10	06/05/32
Mesquite Solar 1	Solar PV	Tonopah, AZ	60875A	CAISO	150	20	07/29/10	03/07/33
Shiloh III Wind Project	Wind	Rio Vista, CA	61069A	CAISO	100	20	07/27/10	03/08/32
North Star Solar 1	Solar PV	Mendota, CA	61198A	CAISO	60	20	09/20/10	06/18/35
Vasco Wind Energy Center	Wind	Livermore, CA	61344A	CAISO	78.2	25	12/17/10	03/12/37
Montezuma II Wind Energy Center	Wind	Collinsville, CA	61345A	CAISO	78.2	25	12/17/10	03/13/37
North Sky River Energy Center	Wind	Tehachapi, CA	61385A	CAISO	162	25	07/15/11	12/20/37
Copper Mountain Solar 2	Solar PV	Boulder City, NV	60990A	CAISO	150	25	07/26/11	05/12/40
Shiloh IV	Wind	Rio Vista, CA	61617A	CAISO	100	25	07/28/11	01/27/38
NID (RPS) - Bowman	Small Hydro	Nevada City, CA	60171A	CAISO	42.6	20	05/09/12	06/30/33
NID (RPS) - Dutch Flat	Small Hydro	Nevada City, CA	60264A	CAISO	42.6	20	05/09/12	06/30/33
NID (RPS) - Rollins	Small Hydro	Nevada City, CA	60265A	CAISO	42.6	20	05/09/12	06/30/33
SPI Burney	Biomass	Burney, CA	60087A	CAISO	58	20	08/09/12	09/08/35
SPI Lincoln	Biomass	Lincoln, CA	60088A	CAISO	58	20	08/09/12	09/08/35
SPI Quincy	Biomass	Quincy, CA	60089A	CAISO	58	20	08/09/12	09/08/35
SPI Sonora	Biomass	Sonora, CA	60576A	CAISO	58	20	08/09/12	09/08/35
SPI Anderson II	Biomass	Anderson, CA	61146A	CAISO	58	20	08/09/12	09/08/35
Kansas	Solar PV	Stratford, CA	61263A	CAISO	20	20	08/13/12	12/31/37
Henrietta Solar	Solar PV	Lemoore, CA	61841A	CAISO	100	20	08/16/12	09/30/36
Diablo Winds (2)	Wind	Livermore, CA	60030A	CAISO	18	15	12/16/13	06/30/31
PGE Alta	Small Hydro	Placer, CA	60033A	CAISO	6.4	N/A	N/A	N/A
PGE Centerville	Small Hydro	Butte, CA	60034A	CAISO	1	N/A	N/A	N/A
PGE Coleman	Small Hydro	Shasta, CA	60037A	CAISO	13	N/A	N/A	N/A
PGE Cow Creek	Small Hydro	Shasta, CA	60038A	CAISO	1.8	N/A	N/A	N/A
PGE Crane Valley	Small Hydro	Madera, CA	60039A	CAISO	0.9	N/A	N/A	N/A
PGE Deer Creek	Small Hydro	Nevada, CA	60040A	CAISO	5.7	N/A	N/A	N/A

PGE De Sabla	Small Hydro	Butte, CA	60041A	CAISO	18.5	N/A	N/A	N/A
PGE Dutch Flat 1	Small Hydro	Placer, CA	60042A	CAISO	22	N/A	N/A	N/A
PGE Halsey	Small Hydro	Placer, CA	60043A	CAISO	11	N/A	N/A	N/A
PGE Hamilton Branch	Small Hydro	Lassen, CA	60044A	CAISO	4.8	N/A	N/A	N/A
PGE Hat 1	Small Hydro	Shasta, CA	60045A	CAISO	8.5	N/A	N/A	N/A
PGE Hat 2	Small Hydro	Shasta, CA	60046A	CAISO	8.5	N/A	N/A	N/A
PGE Inskip	Small Hydro	Tehama, CA	60047A	CAISO	8	N/A	N/A	N/A
PGE Kerckhoff 1	Small Hydro	Fresno, CA	62360A	CAISO	25.4	N/A	N/A	N/A
PGE Kern Canyon	Small Hydro	Kern, CA	60048A	CAISO	11.5	N/A	N/A	N/A
PGE Kilarc	Small Hydro	Shasta, CA	60049A	CAISO	1.6	N/A	N/A	N/A
PGE Lime Saddle	Small Hydro	Butte, CA	60050A	CAISO	2	N/A	N/A	N/A
PGE Newcastle	Small Hydro	Placer, CA	60053A	CAISO	11.5	N/A	N/A	N/A
PGE Oak Flat	Small Hydro	Plumas, CA	60276A	CAISO	1.3	N/A	N/A	N/A
PGE Phoenix	Small Hydro	Tuolumne, CA	60054A	CAISO	2	N/A	N/A	N/A
PGE Potter Valley	Small Hydro	Lake, CA	60055A	CAISO	9.2	N/A	N/A	N/A
PGE Rock Creek RPS	Existing Large	Plumas, CA	62269A	CAISO	126*	N/A	N/A	N/A
PGE San Joaquin 1A	Small Hydro	Madera, CA	60056A	CAISO	0.4	N/A	N/A	N/A
PGE San Joaquin 2	Small Hydro	Madera, CA	60057A	CAISO	3.2	N/A	N/A	N/A
PGE San Joaquin 3	Small Hydro	Madera, CA	60058A	CAISO	4.2	N/A	N/A	N/A
PGE South	Small Hydro	Tehama, CA	60059A	CAISO	7	N/A	N/A	N/A
PGE Spaulding 1	Small Hydro	Placer, CA	60060A	CAISO	7	N/A	N/A	N/A
PGE Spaulding 2	Small Hydro	Placer, CA	60061A	CAISO	4.4	N/A	N/A	N/A
PGE Spaulding 3	Small Hydro	Placer, CA	60062A	CAISO	5.8	N/A	N/A	N/A
PGE Spring Gap	Small Hydro	Tuolumne, CA	60063A	CAISO	7	N/A	N/A	N/A
PGE Toadtown	Small Hydro	Butte, CA	60064A	CAISO	6.4	N/A	N/A	N/A
PGE Tule River	Small Hydro	Tulare, CA	60065A	CAISO	1.5	N/A	N/A	N/A
PGE Volta 1	Small Hydro	Tehama, CA	60066A	CAISO	9	N/A	N/A	N/A
PGE Volta 2	Small Hydro	Tehama, CA	60067A	CAISO	0.9	N/A	N/A	N/A
PGE West Point	Small Hydro	Amador, CA	60068A	CAISO	14.5	N/A	N/A	N/A
PGE Wise 1	Small Hydro	Placer, CA	60069A	CAISO	14	N/A	N/A	N/A
PGE Wise 2	Small Hydro	Placer, CA	60070A	CAISO	3.2	N/A	N/A	N/A
PGE A G Wishon	Small Hydro	Madera, CA	60032A	CAISO	20	N/A	N/A	N/A
PGE Five Points	Solar PV	Five Points, CA	61432A	CAISO	15	N/A	N/A	N/A
PGE Stroud	Solar PV	Helm, CA	61434A	CAISO	20	N/A	N/A	N/A
PGE Westside	Solar PV	Five Points, CA	61433A	CAISO	15	N/A	N/A	N/A
PGE Cantua	Solar PV	Cantua Creek, CA	61823A	CAISO	20	N/A	N/A	N/A
PGE Giffen	Solar PV	Cantua Creek, CA	61822A	CAISO	10	N/A	N/A	N/A
PGE Huron	Solar PV	Huron, CA	61821A	CAISO	20	N/A	N/A	N/A
PGE Gates	Solar PV	Huron, CA	62353A	CAISO	20	N/A	N/A	N/A
PGE Guernsey	Solar PV	Hanford, CA	62354A	CAISO	20	N/A	N/A	N/A
PGE West Gates	Solar PV	Huron, CA	62352A	CAISO	10	N/A	N/A	N/A
Vaca-Dixon Solar (PG&E)	Solar PV	Vacaville, CA	60966A	CAISO	2	N/A	N/A	N/A

PACIFIC GAS AND ELECTRIC COMPANY

Appendix H2

Facility List: EBCE 2, CEA, SDCP 2

Name of Facility	Resource	Location	CEC RPS ID	Host Balancing Authority	Facility Size (MW)	Term (Yrs)	Execution Date (MM/DD/YYYY)	Expiration Date (MM/DD/YYYY)
Kansas South	Solar PV	Lemoore, CA	61264A	CAISO	20	20	06/24/11	06/24/33
Westlands Solar Farms	Solar PV	Huron, CA	61755A	CAISO	18	20	06/24/11	04/30/34
Orion Solar	Solar PV	Unincorporated Kern County, CA	61570A	CAISO	12	20	06/24/11	06/25/34
Kent South	Solar PV	Lemoore, CA	61262A	CAISO	20	20	08/30/12	02/18/35
Algonquin SKIC 20 Solar	Solar PV	Taft, CA	61558A	CAISO	20	20	08/30/12	05/14/35
CED Corcoran Solar 3, LLC	Solar PV	Corcoran, CA	62783A	CAISO	20	20	03/23/15	11/30/36
Westside Solar, LLC	Solar PV	Unincorporated Fresno County, CA	61185A	CAISO	20	20	03/23/15	05/01/37
Aspiration Solar G LLC	Solar PV	Tranquility, CA	61486A	CAISO	9	20	03/23/15	10/26/37
Bayshore Solar A	Solar PV	Lancaster, CA	63133A	CAISO	20	20	12/18/15	01/22/38
Bayshore Solar B	Solar PV	Lancaster, CA	63134A	CAISO	20	20	12/18/15	01/22/38
Bayshore Solar C	Solar PV	Lancaster, CA	63135A	CAISO	20	20	12/17/15	01/22/38
West Antelope	Solar PV	Lancaster, CA	61850A	CAISO	20	20	02/27/12	02/08/35
Western Antelope Blue Sky Ranch A	Solar PV	Lancaster, CA	61517A	CAISO	20	20	02/27/12	02/16/35
Wind Resource I	Wind	Tehachapi, CA	61467A	CAISO	8.71	10	02/27/12	12/31/22
SPS White River West	Solar PV	Alpaugh, CA	62045A	CAISO	19.75	20	09/17/12	10/01/34
Wind Resource II	Wind	Tehachapi, CA	61468A	CAISO	19.955	10	09/17/12	09/30/23
Columbia Solar Energy, LLC	Solar PV	Pittsburg, CA	62051A	CAISO	19	20	09/17/12	12/13/35
Alamo Solar, LLC	Solar PV	Oro Grande, CA	61453A	CAISO	20	20	09/17/12	06/29/35
Corcoran Solar LLC	Solar PV	Corcoran, CA	62285A	CAISO	19.76	20	09/17/12	03/19/35
Old River One LLC	Solar PV	Bakersfield, CA	60853A	CAISO	20	20	04/10/13	02/08/35
Shafter Solar	Solar PV	Shafter, CA	62325A	CAISO	19.98	20	04/10/13	07/15/35
Morelos Del Sol	Solar PV	Lost Hills, CA	62272A	CAISO	15	20	04/10/13	02/29/36
Rising Tree Wind Farm II LLC	Wind	Mojave, CA	62426A	CAISO	19.8	20	10/25/13	08/06/35
Kekawaka Creek Hydroelectric Facility	Small Hydro	Zenia, CA	60186A	CAISO	5.5	20	10/25/13	05/31/35
Woodmere Solar Farm	Solar PV	Bakersfield, CA	62429A	CAISO	15	20	10/25/13	02/24/36
Portal Ridge Solar C Project	Solar PV	Lancaster, CA	61684A	CAISO	11.4	20	10/21/14	04/20/37
SR Solis Oro Loma Teresina, LLC - Project A	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO	10	20	11/12/14	02/23/37
SR Solis Oro Loma Teresina, LLC - Project B	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO	10	20	11/12/14	02/23/37
Sunray - 20	Solar PV	Daggett, CA	62694A	CAISO	20	20	10/21/14	08/24/37
SR Solis Rocket, LLC - Project A	Solar PV	Avenal, CA	62840A	CAISO	7.9	20	11/12/14	03/09/37
SR Solis Rocket, LLC - Project B	Solar PV	Avenal, CA	62840A	CAISO	7.9	20	11/12/14	03/09/37
San Joaquin 1A	Solar PV	San Joaquin, CA	61837A	CAISO	19.24	20	12/18/15	12/09/38
Montezuma Wind Energy Center	Wind	Birds Landing, CA	60543A	CAISO	36.8	25	06/03/10	01/27/36
CalRenew-1	Solar PV	Mendota, CA	60475A	CAISO	5	20	06/17/14	04/29/30
Shiloh II Wind Project	Wind	Rio Vista, CA	60639A	CAISO	150	20	01/09/18	01/31/29
High Plains Ranch II	Solar PV	California Valley, CA	60603A	CAISO	210	26	07/23/08	10/30/38
Topaz Solar Farm	Solar PV	Santa Margarita, CA	61698A	CAISO	550	25	07/01/08	10/26/39
Hatchet Ridge	Wind	Burney, CA	60741A	CAISO	103.2	15	08/23/17	12/13/25
CM10 (fka Sempra El Dorado Solar)	Solar PV	Boulder City, NV	60713A	CAISO	10	20	12/19/08	12/31/28
AV Solar Ranch One	Solar PV	Lancaster, CA	60790A	CAISO	241.5	25	05/08/09	11/20/39
Alpine Solar Project	Solar PV	Lancaster, CA	60755A	CAISO	66	20	04/21/10	01/17/33
CM48 (fka Sempra Copper Mountain 1)	Solar PV	Boulder City, NV	60786A	CAISO	48	20	06/22/09	01/31/31
Agua Caliente Solar Project	Solar PV	Roll, AZ	60894A	CAISO	290	25	09/08/09	06/22/39
High Plains Ranch III	Solar PV	California Valley, CA	60603A	CAISO	210	26	07/23/08	10/30/38
Big Creek Waterworks	Small Hydro	Hyampom, CA	60900A	CAISO	4.8	20	05/04/10	06/22/30
Norman Ross Burgess - Three Forks Water Power Project	Small Hydro	Zenia, CA	60502A	CAISO	1.625	20	09/22/10	10/31/31
Alpaugh 50	Solar PV	Alpaugh, CA	60945A	CAISO	50	25	01/26/10	03/07/38
Alpaugh North	Solar PV	Alpaugh, CA	60946A	CAISO	20	25	01/26/10	03/07/38
Atwell Island	Solar PV	Alpaugh, CA	60947A	CAISO	20	25	01/26/10	03/11/38
Corcoran	Solar PV	Corcoran, CA	60948A	CAISO	20	25	01/26/10	08/14/38
White River	Solar PV	Alpaugh, CA	60949A	CAISO	20	25	01/26/10	06/26/38
Avenal Park (Eurus)	Solar PV	Avenal, CA	60912A	CAISO	6	20	12/24/09	08/04/31
Sun City Project (Eurus)	Solar PV	Avenal, CA	60913A	CAISO	20	20	12/24/09	08/04/31
Sand Drag (Eurus)	Solar PV	Avenal, CA	60914A	CAISO	19	20	12/24/09	08/04/31
Desert Center Solar Farm	Solar PV	Desert Center, CA	61068A	CAISO	300	25	02/24/10	12/16/39
Coram Brodie	Wind	Tehachapi, CA	60973A	CAISO	102	20	06/02/10	06/05/32
Mesquite Solar 1	Solar PV	Tonopah, AZ	60875A	CAISO	150	20	07/29/10	03/07/33
Shiloh III Wind Project	Wind	Rio Vista, CA	61069A	CAISO	100	20	07/27/10	03/08/32
North Star Solar 1	Solar PV	Mendota, CA	61198A	CAISO	60	20	09/20/10	06/18/35
Vasco Wind Energy Center	Wind	Livermore, CA	61344A	CAISO	78.2	25	12/17/10	03/12/37
Montezuma II Wind Energy Center	Wind	Collinsville, CA	61345A	CAISO	78.2	25	12/17/10	03/13/37
North Sky River Energy Center	Wind	Tehachapi, CA	61385A	CAISO	162	25	07/15/11	12/20/37
Copper Mountain Solar 2	Solar PV	Boulder City, NV	60990A	CAISO	150	25	07/26/11	05/12/40
Shiloh IV	Wind	Rio Vista, CA	61617A	CAISO	100	25	07/28/11	01/27/38
NID (RPS) - Bowman	Small Hydro	Nevada City, CA	60171A	CAISO	42.6	20	05/09/12	06/30/33
NID (RPS) - Dutch Flat	Small Hydro	Nevada City, CA	60264A	CAISO	42.6	20	05/09/12	06/30/33
NID (RPS) - Rollins	Small Hydro	Nevada City, CA	60265A	CAISO	42.6	20	05/09/12	06/30/33
Kansas	Solar PV	Stratford, CA	61263A	CAISO	20	20	08/13/12	12/31/37
Henrietta Solar	Solar PV	Lemoore, CA	61841A	CAISO	100	20	08/16/12	09/30/36
Diablo Winds (2)	Wind	Livermore, CA	60030A	CAISO	18	15	12/16/13	06/30/31
PGE Alta	Small Hydro	Placer, CA	60033A	CAISO	6.4	N/A	N/A	N/A
PGE Centerville	Small Hydro	Butte, CA	60034A	CAISO	1	N/A	N/A	N/A
PGE Coleman	Small Hydro	Shasta, CA	60037A	CAISO	13	N/A	N/A	N/A
PGE Cow Creek	Small Hydro	Shasta, CA	60038A	CAISO	1.8	N/A	N/A	N/A
PGE Crane Valley	Small Hydro	Madera, CA	60039A	CAISO	0.9	N/A	N/A	N/A
PGE Deer Creek	Small Hydro	Nevada, CA	60040A	CAISO	5.7	N/A	N/A	N/A
PGE De Sabla	Small Hydro	Butte, CA	60041A	CAISO	18.5	N/A	N/A	N/A
PGE Dutch Flat 1	Small Hydro	Placer, CA	60042A	CAISO	22	N/A	N/A	N/A
PGE Halsey	Small Hydro	Placer, CA	60043A	CAISO	11	N/A	N/A	N/A
PGE Hamilton Branch	Small Hydro	Lassen, CA	60044A	CAISO	4.8	N/A	N/A	N/A
PGE Hat 1	Small Hydro	Shasta, CA	60045A	CAISO	8.5	N/A	N/A	N/A
PGE Hat 2	Small Hydro	Shasta, CA	60046A	CAISO	8.5	N/A	N/A	N/A
PGE Inskip	Small Hydro	Tehama, CA	60047A	CAISO	8	N/A	N/A	N/A
PGE Kerckhoff 1	Small Hydro	Fresno, CA	62360A	CAISO	25.4	N/A	N/A	N/A
PGE Kern Canyon	Small Hydro	Kern, CA	60048A	CAISO	11.5	N/A	N/A	N/A
PGE Kilarc	Small Hydro	Shasta, CA	60049A	CAISO	1.6	N/A	N/A	N/A
PGE Lime Saddle	Small Hydro	Butte, CA	60050A	CAISO	2	N/A	N/A	N/A
PGE Newcastle	Small Hydro	Placer, CA	60053A	CAISO	11.5	N/A	N/A	N/A

PGE Oak Flat	Small Hydro	Plumas, CA	60276A	CAISO	1.3	N/A	N/A	N/A
PGE Phoenix	Small Hydro	Tuolumne, CA	60054A	CAISO	2	N/A	N/A	N/A
PGE Potter Valley	Small Hydro	Lake, CA	60055A	CAISO	9.2	N/A	N/A	N/A
PGE San Joaquin 1A	Small Hydro	Madera, CA	60056A	CAISO	0.4	N/A	N/A	N/A
PGE San Joaquin 2	Small Hydro	Madera, CA	60057A	CAISO	3.2	N/A	N/A	N/A
PGE San Joaquin 3	Small Hydro	Madera, CA	60058A	CAISO	4.2	N/A	N/A	N/A
PGE South	Small Hydro	Tehama, CA	60059A	CAISO	7	N/A	N/A	N/A
PGE Spaulding 1	Small Hydro	Placer, CA	60060A	CAISO	7	N/A	N/A	N/A
PGE Spaulding 2	Small Hydro	Placer, CA	60061A	CAISO	4.4	N/A	N/A	N/A
PGE Spaulding 3	Small Hydro	Placer, CA	60062A	CAISO	5.8	N/A	N/A	N/A
PGE Spring Gap	Small Hydro	Tuolumne, CA	60063A	CAISO	7	N/A	N/A	N/A
PGE Toadtown	Small Hydro	Butte, CA	60064A	CAISO	6.4	N/A	N/A	N/A
PGE Tule River	Small Hydro	Tulare, CA	60065A	CAISO	1.5	N/A	N/A	N/A
PGE Volta 1	Small Hydro	Tehama, CA	60066A	CAISO	9	N/A	N/A	N/A
PGE Volta 2	Small Hydro	Tehama, CA	60067A	CAISO	0.9	N/A	N/A	N/A
PGE West Point	Small Hydro	Amador, CA	60068A	CAISO	14.5	N/A	N/A	N/A
PGE Wise 1	Small Hydro	Placer, CA	60069A	CAISO	14	N/A	N/A	N/A
PGE Wise 2	Small Hydro	Placer, CA	60070A	CAISO	3.2	N/A	N/A	N/A
PGE A_G_Wishon	Small Hydro	Madera, CA	60032A	CAISO	20	N/A	N/A	N/A
PGE Five Points	Solar PV	Five Points, CA	61432A	CAISO	15	N/A	N/A	N/A
PGE Stroud	Solar PV	Helm, CA	61434A	CAISO	20	N/A	N/A	N/A
PGE Westside	Solar PV	Five Points, CA	61433A	CAISO	15	N/A	N/A	N/A
PGE Cantua	Solar PV	Cantua Creek, CA	61823A	CAISO	20	N/A	N/A	N/A
PGE Giffen	Solar PV	Cantua Creek, CA	61822A	CAISO	10	N/A	N/A	N/A
PGE Huron	Solar PV	Huron, CA	61821A	CAISO	20	N/A	N/A	N/A
PGE Gates	Solar PV	Huron, CA	62353A	CAISO	20	N/A	N/A	N/A
PGE Guernsey	Solar PV	Hanford, CA	62354A	CAISO	20	N/A	N/A	N/A
PGE West Gates	Solar PV	Huron, CA	62352A	CAISO	10	N/A	N/A	N/A
Vaca-Dixon Solar (PG&E)	Solar PV	Vacaville, CA	60966A	CAISO	2	N/A	N/A	N/A

PG&E Gas and Electric
Advice Submittal List
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AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
Braun Blaising Smith Wynne, P.C.
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
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
McClintock IP
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Stoel Rives LLP

Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

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