

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



Pacific Gas & Electric Company
ELC (Corp ID 39)
Status of Advice Letter 6743E
As of December 1, 2022

Subject: 2022 Tree Mortality Non-Bypassable Charge (TM NBC) Bundled Renewable Portfolio Standard (RPS) Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and San Diego Community

Division Assigned: Energy

Date Filed: 10-21-2022

Date to Calendar: 10-28-2022

Authorizing Documents: D1812003

Disposition:	Accepted
Effective Date:	10-21-2022

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

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AL Certificate Contact Information:

Stuart Rubio

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



To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

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

The AL status certificate indicates:

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- Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)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

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

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

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

October 21, 2022

Advice 6743-E

(Pacific Gas and Electric Company U 39 E)

Public Utilities Commission of the State of California

Subject: 2022 Tree Mortality Non-Bypassable Charge (TM NBC) Bundled Renewable Portfolio Standard (RPS) Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and San Diego Community Power for product from Burney Forest Products; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and East Bay Community Energy for product from Wheelabrator Shasta

I. Introduction**A. Identify the Purpose of the Advice Letter**

Pursuant to Decision 18-12-003 (D.18-12-003 or Decision), Pacific Gas and Electric Company (PG&E) hereby submits this advice letter to seek approval from California Public Utilities Commission (Commission or CPUC) of two power purchase and sale agreements (PPSAs or Transactions) to sell bundled Renewables Portfolio Standard (RPS)-eligible energy and associated Renewable Energy Credits (RECs).

One Transaction is for RPS energy and RECs generated by PG&E's existing tree mortality power purchase agreement (TM PPA) with Burney Forest Products to San Diego Community Power (SDCP). The second Transaction is for RPS energy and RECs generated by PG&E's TM PPA with Wheelabrator Shasta to East Bay Community Energy (EBCE). Both Transactions result from PG&E's July 29, 2022 TM NBC Bundled RPS Energy Sale Solicitation (Solicitation).

B. Solicitation Product and Results

Through the Solicitation, PG&E made available for sale bundled RPS-energy and associated RECs generated from its existing TM PPAs listed in Table 1 below.

Table 1: PG&E's Existing TM PPAs

Facility Name	Contract Capacity (MW)	Initial Energy Delivery Date	Expected Delivery End Date
Burney Forest Products	29	11/1/2022	10/31/2027
Wheelabrator Shasta	34	12/2/2022	12/1/2027

1. Burney Forest Products

The Solicitation resulted in a PPSA with SDGP for the TM Bundled RPS products generated by PG&E's TM PPA with Burney Forest Products. This Transaction is for the sale of the bundled energy and associated REC output of PG&E's TM PPA with Burney Forest Products for the TM PPA term, which has an expected delivery end date of October 31, 2027. The Transaction is consistent with the TM NBC sales strategy approved as part of Appendix J in PG&E's 2021 RPS Plan (the TM NBC Sales Framework).¹

2. Wheelabrator Shasta

The Solicitation resulted in a PPSA with EBCE for the TM Bundled RPS products generated by PG&E's TM PPA with Wheelabrator Shasta. This Transaction is for the sale of the bundled energy and associated REC output of PG&E's TM PPA with Wheelabrator Shasta for the TM PPA term, which has an expected delivery end date of December 1, 2027. The Transaction is consistent with the TM NBC sales strategy approved as part of Appendix J in the TM NBC Sales Framework.²

C. Background

To comply with the Commission D.18-12-003, PG&E made available for sale the TM RECs for its existing Tree Mortality power purchase agreements (TM PPAs) with Burney Forest Products and Wheelabrator Shasta on July 29, 2022, after the Final, Conforming Version of PG&E's 2021 RPS Procurement Plan (2021 RPS Plan) was submitted. D. 18-12-003 established a non-bypassable charge for costs associated with tree mortality procurement required by Resolution E-4770 and Resolution E-4805 procurement. As stated in D. 18-12-003, the non-bypassable charge will recover the net costs of the tree-mortality biomass energy procurement, and will exclude revenue received through sales of energy and ancillary services, the value of RECs as determined by the sale in the market place, and the value of resource adequacy in the market place. As such, the Transactions that result from the Solicitation are considered as part of the TM NBC charge.

Pursuant to Senate Bill (SB) 901, PG&E will seek to amend contracts to procure electricity generated from biomass to include, or seek approval for new contracts that include, an expiration date 5 years later than the expiration date in the contracts that were operative in 2022 and expire on or before December 31, 2027, so long as the extensions follow the feedstock requirement.³ As approved in Appendix J of PG&E's 2021 RPS Plan, PG&E will hold a second TM NBC solicitation to make available for sale any TM RECs resulting from the SB 901 extensions, if needed. For clarity, the TM RECs made available for sale in this Solicitation do not include TM RECs that may result in the SB 901 extensions.

¹ PG&E's Final, Conforming 2021 RPS Plan was filed on February 17, 2022 in R.18-07-003.

² Id.

³ SB 901, Stats. 2018, Ch. 626 (codified in relevant part at Cal. Pub. Util. Code § 8388).

D. Transaction Summary:**1. Project Name**

The PPSAs allow PG&E to deliver bundled renewable products from the facilities listed in Table 2 below (the Projects), which are currently under contract with PG&E. The facility is certified as RPS-eligible by the California Energy Commission (CEC).

Table 2: Facility list for PPSAs

Name of Facility	Resource	Location	CEC RPS ID	Host Balancing Authority	Delivery Point
Burney Forest Products	Biomass	Burney, CA	60073A	CAISO	BRNYFRST_7_B1
Wheelabrator Shasta	Biomass	City – Anderson County – Shasta Address – 20811 Industry Road, Anderson, CA 96007	60094	CAISO	WHEELBR1_7_B1

2. Technology (including level of maturity)

Burney Forest Products and Wheelabrator Shasta are facilities using biomass technology, a commercially-available technology.

3. General Location and Interconnection Point

The Projects listed in Table 1 are located in California and are interconnected with the California Independent System Operator Corporation (CAISO)-controlled grid.

4. Owner(s) / Developer(s)**a. Name(s)**

The names of the Projects are listed in Table 2 above.

b. Type of Entity(ies) (e.g., LLC, partnership)

Ownership of Project:

- Burney Forest Products is owned by a General Partnership.
- Wheelabrator Shasta is owned by a corporation.

Ownership of Buyer under the PPSA:

- SDCP is a Community Choice Aggregation (CCA) serving residential and business customers in San Diego County.
- EBCE is a Community Choice Aggregation (CCA) serving residential and business customers in Alameda County and the City of Tracy.

c. Business Relationship (if applicable, between seller/owner/developer)

PG&E is not aware of any corporate affiliations between the Projects, PG&E, and the PPSA Buyers.

5. Project Background, e.g., Expiring QF Contract, Phased Project, Previous Power Purchase Agreement, Contract Amendment

The Projects that are expected to deliver volumes pursuant to the PPSA are existing and operating facilities under current RPS-eligible contracts to deliver output of tree-mortality related biomass energy to PG&E.

TM RECs associated with a contract amendment or new contract that may result from SB 901 extensions will not be included in this Transaction.

6. Source of Agreement, i.e., RPS Solicitation Year or Bilateral Negotiation

The PPSAs resulted from the Solicitation and were evaluated and executed in accordance with the TM NBC Sales Framework approved in Appendix J of PG&E's 2021 RPS Plan. PG&E notified RPS-obligated entities likely to have an interest in the products and, to ensure a robust response, sent a market notice to PG&E's Wholesale Electric Power Procurement distribution list containing almost 2,400 contacts.

PG&E released the Solicitation on July 29, 2022, seeking bids for bundled RPS energy from its existing TM NBC contracts. PG&E identified price as the sole quantitative evaluation criterion and identified credit, agreement modifications, previous commercial experience with the counterparty, and counterparty concentration as the qualitative evaluation criteria. Bids were received on August 22, 2022, and were evaluated using the evaluation criteria outlined above.

Further information regarding the Solicitation results is included in Confidential Appendix A. Relevant solicitation materials provided to bidders are provided in public Appendix G.

E. General Project Description

The Projects are described in Section B. above. The terms of the Transaction are summarized as follows:

Buyer	Technology	Contract Quantity	Date Contract Delivery Term Begins	Delivery Term (Months)
SDCP	Biomass	Buyer receives full energy and REC output from PG&E's existing TM PPA with Burney Forest Products	Upon final CPUC Approval of Tier 1 Advice Letter	Residual delivery term of PG&E's exiting TM PPA with Burney Forest Products (expected to be through 10/31/2027 or approximately 60 months)
EBCE	Biomass	Buyer receives full energy and REC output from PG&E's existing TM PPA with Wheelabrator Shasta	Upon final CPUC Approval of Tier 1 Advice Letter	Residual delivery term of PG&E's exiting TM PPA with Wheelabrator Shasta (expected to be through 12/1/2027 or approximately 60 months)

F. Project Location

Burney Forest Products and Wheelabrator Shasta are located in California and interconnected to the CAISO.

G. General Deal Structure

Describe general characteristics of contract, for example:

1. Required or Expected Portfolio Content Category of the Proposed Contract

PG&E will sell bundled energy and RECs under the PPSAs. PG&E presently purchases the bundled product under contracts that PG&E expects would qualify as Portfolio Content Category (PCC) 1 as to PG&E. The Transactions must receive final, non-appealable Commission approval before energy deliveries and the transfer of RECs to Buyer may begin under the PPSAs.

2. Full Generation Output of Facility

PG&E will deliver from the Projects listed in Table 1 above. PG&E is obligated under the terms of the PPSAs to deliver the contracts' Total Quantity of bundled energy and RECs during the Delivery Term. Deliveries pursuant to the PPSAs will consist of the full output of the Projects.

3. Any Additional Products, (e.g., capacity)

No.

4. Generation Delivery Point (e.g., busbar, hub, etc.)

Pricing Node (Pnode): BRNYFRST_7_B1 for Burney Forest Products and WHEELBR1_7_B1 for Wheelabrator Shasta.

5. Energy Management (e.g., firm/shape, scheduling, selling, etc.)

Under the terms of the PPSAs, PG&E or a third-party designee will act as scheduling coordinator for the resources. The scheduling coordinator is responsible for scheduling energy from the resources into the CAISO market. The Buyer will take title to the energy from the Projects listed in Table 1 above at the Pnode.

PG&E will financially settle the energy and RECs approximately four months after the energy was generated. For example, for energy generated in the month of May, the corresponding RECs will be created and deposited into PG&E's Western Renewable Energy Generation Information System (WREGIS) account at the end of August. In September, PG&E will invoice the Buyer for the delivered volume of energy at the hourly Pnode Index Price and the associated RECs at the contract price. The invoice for energy will reflect a netting of energy payments. PG&E, as scheduling coordinator, will have received CAISO revenues for the delivered energy and is obligated to remit those revenues to the Buyer, and the Buyer is obligated to pay the Pnode Index Price for the delivered energy to PG&E. The September invoice for May energy delivery would therefore show a netting of CAISO Pnode revenues received by PG&E and payment owed by each Buyer for the same energy, resulting in an invoice price of \$0 for energy. PG&E will transfer the RECs to each Buyer's WREGIS account.

6. Diagram and Explanation of Delivery Structure

Figure 1: Delivery Structure of the Energy Portion of the PPSA

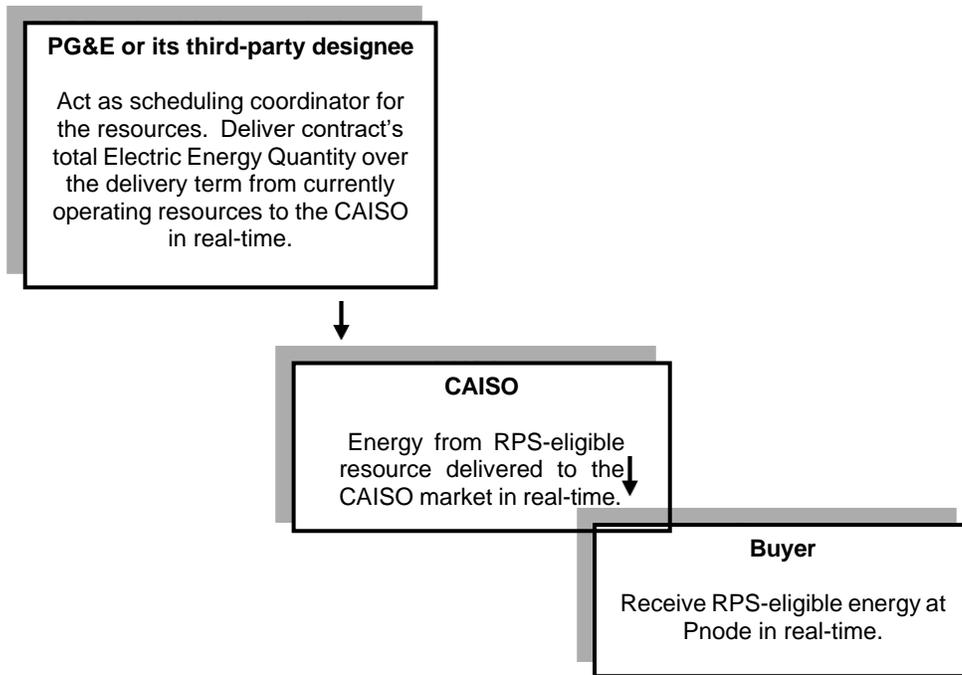
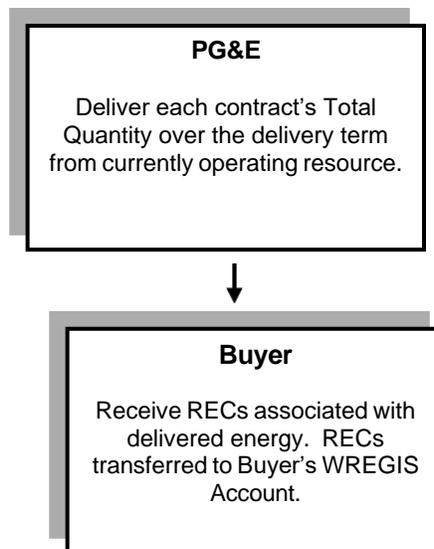


Figure 2: Delivery Structure of the RECs Portion of the PPSA



H. RPS Statutory Goals and Requirements

The Transaction does not have an impact on PG&E's RPS goals and requirements. As noted above, the Commission ordered that RECs from the TM contracts be offered for sale. Consistent with such Commission direction, PG&E's RPS Procurement Plan assumes the sale of TM NBC RECs, and does not consider the TM contracts for its own RPS compliance going forward regardless of the outcome of the Solicitation.

I. 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 D.06-06-066, as modified by D.08-04-023.

In support of this Advice Letter, PG&E has provided the confidential information listed below. This information includes the PPSA 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 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	Confidential
B2	Solicitation Overview and Results Spreadsheet	Confidential
C1	Final RPS Project-Specific Independent Evaluator Report(Redacted)	Public
C2	Final RPS Project-Specific Independent Evaluator Report	Confidential
D1	Contract Summary with SDCP	Confidential
D2	Contract Summary with EBCE	Confidential
E1	Comparison of Contract with Utility's Pro Forma Agreement: EBCE	Confidential
E2	Comparison of Contract with Utility's Pro Forma Agreement: SDCP	Confidential
F1	Sales Agreement with EBCE	Confidential
F2	Sales Agreement with SDCP	Confidential

G	PG&E Notification of Solicitation Issuance	Public
H1	PG&E's Renewable Net Short Calculation (Redacted)	Public
H2	PG&E's Renewable Net Short Calculation	Confidential

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 18-07-003 on February 17, 2022. PG&E complied with all procedural requirements with regard to the filing of its 2021 RPS Plan.

2. 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).

Pursuant to D. 18-12-003, PG&E developed the TM NBC Sales Framework, filed as Appendix J in the approved 2021 RPS Plan, to make available for sale the bundled RPS energy from its existing TM NBC contracts. The proposed PPSAs are for the sale of bundled energy and associated RECs generated for the TM PPA term of PG&E's existing TM PPAs with Burney Forest Products and Wheelabrator Shasta.

Consistent with the 2021 RPS Plan, the Transactions used PG&E's pro forma Sales Agreement and PG&E is providing comparisons of the executed Transactions against the approved pro forma short-term sales confirmation. The adherence to PG&E's pre-approved TM NBC Sales Framework, the use of the approved pro forma short-term sales confirmation, and the execution of the Transaction through the TM NBC Bundled RPS Energy Solicitation allows for the filing of the Transactions through this Tier 1 advice letter, which is consistent with the 2021 RPS Plan and D.18-12-003.

3. Describe the project characteristics set forth in the solicitation, including the required deliverability characteristics, online dates, locational preferences, etc., and how the Transactions meet those requirements.

Required deliverability characteristics, online dates, and location preferences do not apply to PG&E's approach to TM NBC bundled RPS sales.

4. Sales

- a. 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).**

D.18-12-003 required PG&E to make available for sale bundled energy and associated RECs from its existing TM PPAs. As the Commission clarified in D.19-02-007, an IOU must sell the bundled product to determine its value, or count its value at \$0 if it cannot be sold. D.19-02-027 further clarified that IOUs may not set a reservation price for such sales, and if an IOU is not able to sell the product, the REC would not count toward the RPS compliance requirements of any load serving entity. Therefore, PG&E will value unsold products at zero and the associated RECs that PG&E values at zero may not be used by PG&E or any load serving entity for RPS compliance requirements.

Because PG&E cannot use or bank RECs that were offered for sale, even if those RECs remained unsold, PG&E did not analyze the value of the contracts against the value of banking the RECs from the TM contracts.

- b. Explain the process used to determine price reasonableness, with maximum benefit to ratepayers.**

PG&E followed the approved Sales Framework to evaluate bids resulting from the Solicitation. The Solicitation Protocol described the approach that would be used to evaluate bids and identified sales price as the sole quantitative evaluation criterion. The Transaction will benefit all ratepayers by reducing customer costs using the market value of the TM NBC RECs, as derived from the Solicitation, to reduce the total costs of the TM contracts incorporated in the NBC.

C. 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.**

The locations of non-modifiable terms in the PPSA is indicated in the table below:

Counterparty	Contract Reference	Non-Modifiable Term				
		STC 1: CPUC Approval	STC 6: Eligibility	STC 17: Applicable Law	STC REC 1: Transfer of RECs	STC REC 2: WREGIS Tracking of RECs
SDCP	Section	2.12	6.1(a)	8.2(b)	6.1(b)	6.1(c)
	Page Number	6	12	15	13	13
EBCE	Section	2.12	6.1(a)	8.2(b)	6.1(b)	6.1(c)
	Page Number	6	12	15	13	13

- 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 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 and modifiable terms have been highlighted in each redlined comparison.

D. Portfolio Content Category Claim and Upfront Showing (D.11-12-052, Ordering Paragraph 9)

- 1. Describe the contract's claimed portfolio content category.**

PG&E makes no representation about the compliance value to other LSEs, such as the Buyer, of the RPS-eligible product that will be sold pursuant to the PPSA, if approved. However, as stated above, PG&E presently purchases the bundled product under contract that PG&E expects would qualify as PCC 1 as to PG&E.

- 2. Explain how the procurement pursuant to the contract is consistent with the criteria of the claimed portfolio content category as adopted in D.11-12-052.**

PG&E will sell energy and associated RECs generated from California-based, CEC-certified eligible renewable energy resources that have their first point of interconnection within a California balancing authority. Accordingly, deliveries to PG&E under the original TM PPA between PG&E and the respective generators would generate a PCC 1 product as defined in California Public Utilities Code Section 399.16(b)(1) if used by PG&E for RPS compliance. Furthermore, as defined under D.10-03-021, as modified by D.11-01-025, the proposed PPSA transfers a bundled product since both renewable energy and its associated RECs are being sold together.

3. Describe the risks that the procurement will not be classified in the claimed portfolio content category.

There is no known risk that the products conveyed by the PPSA would not be categorized as PCC 1 if used by PG&E for RPS compliance.

4. Describe the value of the contract to ratepayers if:

- 1. Contract is classified as claimed**
- 2. Contract is not classified as claimed**

The value to PG&E's customers of the Transaction does not depend on the ultimate categorization of the transferred RPS products by the verifying regulatory agencies, since PG&E has not assumed compliance value risk under the Transaction. For the counterparty or the LSE to which the product is ultimately sold, the value to the customers of those entities would be less if the products are not classified as a PCC 1 product.

F. Interim Emissions Performance Standard

Pursuant to D.07-01-039, the proposed PPSA is not subject to the EPS because its delivery term is for less than five years.

G. Procurement Review Group (PRG) Participation

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

The PRG for PG&E includes the Commission's Energy Division, the Office of Ratepayer Advocates, 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. PG&E provided email responses to questions from the PRG at the meeting on September 20, 2022.

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.

H. 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 PG&E's communication within 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 counterparties and participated on phone calls between PG&E and the counterparties.

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 did not provide any findings to the PRG related to the PPSAs. 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 Appendix C.

III. Project Development Status

Since the Projects are operating facilities, this section is not applicable.

IV. Contingencies and/or Milestones

Describe major performance criteria and guaranteed milestones, including those outside the control of the parties, including transmission upgrades, financing, and permitting issues.

Absent the delivery of the energy and corresponding quantities of RECs, the short-term Transactions have no guaranteed milestones. The Transactions are conditioned upon CPUC Approval, as defined in the proposed PPSAs.

V. Safety Considerations

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. 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.

VI. 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 filing. 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 PPSA is consistent with the TM NBC Sales Framework approved as part of PG&E's 2021 RPS Plan and is consistent with Ordering Paragraph 3 of Decision 18-12-003, and that the sale of the bundled renewable electricity and green attributes under the PPSAs is 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 PPSAs shall be credited to all benefitting customers through the Tree Mortality Non-Bypassable Charge Balancing Account (TMNBCBA) over the life of the PPSAs;

Protests

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than November 10, 2022, which is 20 days after the date of this submittal. Protests must be submitted to:

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

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

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

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

Effective Date

Consistent with its approved 2021 RPS Plan, PG&E is filing this advice letter with a Tier 1 designation to be effective upon date of submittal, which is October 21, 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 and via U.S. mail to parties shown on the list shown below, including the service list for R.15-02-020 and R. 18-07-003. 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 filings can also be accessed electronically at <http://www.pge.com/tariffs>.

cc: Service List for R.18-07-003
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 PPSA itself, price information, and analysis of the PPSA, which is protected pursuant to D.06-06-066, D.08-04-023, and 21-11-029. 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:

- ELC GAS WATER
 PLC HEAT

Contact Person: Stuart Rubio

Phone #: (415) 973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: SHR8@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) #: 6743-E

Tier Designation: 1

Subject of AL: 2022 Tree Mortality Non-Bypassable Charge (TM NBC) Bundled Renewable Portfolio Standard (RPS) Energy Sale Solicitation; Power Purchase and Sale Agreement Between Pacific Gas and Electric Company and San Diego Community Power for product from Burney Forest Products; Power Purchase and Sale...

Keywords (choose from CPUC listing): Compliance, Portfolio

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.18-12-003

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? 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 No

Requested effective date: 10/21/22

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 proposed¹: N/A

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

¹Discuss in AL if more space is needed.

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: Sidnev 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 6743-E**

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 6743-E.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes confidential market sensitive data and information covered by 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 21, 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)
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October 21, 2022

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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
<p>Appendix A, Consistency with Commission Decisions and Rules and Project Development Status</p>	<p>Item VII(F): Renewable Resource Contracts under RPS program</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item V(C)(1): RPS Compliance Reporting Load Forecast – Bundled Customer (MWh)</p> <p>VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh)</p> <p>May 21, 2014 <i>Administrative Law Judge’s Ruling on Renewable Net Short</i> issued in Rulemaking 11-05-005 (“May 21, 2014 ALJ Ruling”)</p> <p>Item VIII(A): Bid Information</p>	<p>This appendix contains information regarding the confidential terms and conditions of the power purchase and sale agreement (“PPSA”) 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.</p> <p>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.</p> <p>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.</p> <p>Finally, following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Electric Regulatory Commission.</p>	<p>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.</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p> <p>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</p> <p>For VI(B): Front two years of forecast data</p> <p>May 21, 2014 ALJ Ruling: Indefinite</p> <p>For Items VIII(A) and</p>

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	<p>Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids</p> <p>Public Utilities Code § 454.5(g)</p>		<p>VIII(B): Three years after winning bidders selected</p> <p>Public Utilities Code § 454.5(g): Three years</p>
<p>Appendices B1 and B2, Solicitation Overview</p>	<p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item VIII(A): Bid Information</p> <p>Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids</p> <p>Public Utilities Code section 454.5(g)</p> <p>May 21, 2014 ALJ Ruling</p>	<p>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.</p> <p>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.</p>	<p>For Item VII (un-numbered category following VII(G)): Three years</p> <p>For Items VIII(A) and VIII(B): Three years after winning bidders selected</p> <p>Public Utilities Code § 454.5(g): Three years</p> <p>May 21, 2014 ALJ Ruling: Indefinite</p>
<p>Appendix C1, Independent Evaluator Report – grey shaded sections</p>	<p>Item VII(F): Renewable Resource Contracts under RPS program</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item VIII(A): Bid Information</p> <p>Item VIII(B): Specific</p>	<p>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.</p> <p>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</p>	<p>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.</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p>

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	<p>quantitative analysis involved in scoring and evaluation of participating bids</p> <p>Public Utilities Code section 454.5(g)</p> <p>May 21, 2014 ALJ Ruling</p>	<p>detrimentally impact PG&E's customers.</p> <p>Finally, following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Electric Regulatory Commission.</p>	<p>For Items VIII(A) and VIII(B): Three years after winning bidders selected</p> <p>Public Utilities Code § 454.5(g): Three years</p> <p>May 21, 2014 ALJ Ruling: Indefinite</p>
<p>Appendix D1 & D2 Summary of Contracts</p>	<p>Item VII(F): Renewable Resource Contracts under RPS program -</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids</p>	<p>This appendix summarizes and analyzes the PPSA, 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.</p> <p>Following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Electric Regulatory Commission.</p>	<p>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.</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p> <p>For Item VIII(B): Three years after winning bidders selected</p>
<p>Appendix E1 & E2 Comparison of PPSAs with PG&E's 2021 Pro Forma RPS Short-Term Sales Confirmation</p>	<p>Item VII(F): Renewable Resource Contracts under RPS program - Contracts without SEPs</p>	<p>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.</p> <p>Following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Electric Regulatory Commission.</p>	<p>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.</p>

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<p>Appendices F1 & F2 Power Purchase and Sale Agreements</p>	<p>Item VII(F): Renewable Resource Contracts under RPS program</p>	<p>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.</p> <p>Following deliveries of products pursuant to the PPSAs, PG&E is obligated to report delivered price information to the Federal Electric Regulatory Commission.</p>	<p>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.</p>
<p>Appendix H2 PG&E's Renewable Net Short Calculation – grey shaded sections</p>	<p>Item V(C)(1): RPS Compliance Reporting Load Forecast – Bundled Customer (MWh)</p> <p>VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh)</p> <p>May 21, 2014 ALJ Ruling</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p>	<p>For Table 1:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>For Table 2:</p> <p>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.</p> <p>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.</p>	<p>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</p> <p>For VI(B): Front two years of forecast data May 21, 2014 ALJ Ruling: Indefinite</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p>

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		<p>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.</p>	
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Appendix C1

Final RPS Project-Specific Independent Evaluator Report

(Redacted)

ARROYO SECO CONSULTING

PACIFIC GAS AND
ELECTRIC COMPANY
2022 TREE MORTALITY
NON-BYPASSABLE
CHARGE BUNDLED RPS
ENERGY SALE
SOLICITATION

REPORT OF THE INDEPENDENT
EVALUATOR ON CONTRACTS TO SELL
RENEWABLES PORTFOLIO STANDARD (RPS)
ENERGY FROM BIOMASS-FUELED
GENERATORS TO EAST BAY COMMUNITY
ENERGY AUTHORITY AND SAN DIEGO
COMMUNITY POWER

OCTOBER 20, 2022

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1. EXECUTIVE SUMMARY

This report provides a review of Pacific Gas and Electric Company's (PG&E's) 2022 Tree Mortality Non-Bypassable Charge (TMNBC) 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 the utility sought buyers for contracts to sell the RPS-eligible energy output of two biomass-fueled facilities that primarily burn fuel from High Hazard Zones (HHZs), one owned by Burney Forest Products (Burney) and the other owned by Wheelabrator Shasta Energy Company, Inc. (Wheelabrator), whose generation outputs are in the utility's supply portfolio.

The solicitation resulted in PG&E's execution of two power purchase agreements (PPAs), one to sell output from Burney's facility to San Diego Community Power (SDCP), the other to sell output from Wheelabrator's facility to East Bay Community Energy (EBCE). EBCE and SDCP are both Joint Powers Authorities (JPAs) and Community Choice Aggregators (CCAs), that serve retail customers in Alameda County and in some jurisdictions in San Diego County, respectively.

This report includes discussions of:

- The role of the Independent Evaluator,
- The adequacy of PG&E's outreach to potential buyers and 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 (but could have been more comprehensive), the solicitation was not robust, and PG&E's methodology was designed fairly and administered fairly. Arroyo's opinion is that, with one minor exception, contract negotiations were conducted in a manner that was fair to competing buyers and to ratepayers. In Arroyo's opinion, PG&E complied with the CCA Code of Conduct in its administration of the solicitation.

Arroyo believes that the prices of the contracts may likely be fair and reasonable, although the California market for Portfolio Content Category 1 ("PCC1") energy is illiquid and not transparent so that obtaining fresh and publicly available comparable pricing information with which to assess price reasonableness is challenging. Also, recent transactions that would be most comparable for providing price benchmarks for these TMNBC contracts do not have publicly available pricing information. The portfolio fit of the contracts ranks high. Based on these observations, Arroyo's opinion is that the executed agreements with EBCE and SDCP merit CPUC approval.

2. ROLE OF THE INDEPENDENT EVALUATOR

This chapter describes key roles of the IE and summarizes activities undertaken to fulfill those roles as PG&E sought to sell bundled renewable energy from the two facilities fueled primarily by HHZ-derived biomass.

A. KEY INDEPENDENT EVALUATOR ROLES

The California Public Utilities Commission (CPUC) stated its intent for participation of an IE in competitive procurement solicitations to “separately evaluate and report on the IOU’s entire solicitation, evaluation and selection process”, in order to “serve as an independent check on the process and final selections.”¹ CPUC staff 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 Investor-Owned Utility (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, setting out detailed findings for each of these issues, is organized around these topics.

B. IE ACTIVITIES

Arroyo performed various key tasks to fulfill the role of IE in this solicitation:

- Reviewed the solicitation protocol, PG&E’s analyses and plans, and CPUC guidance;
- Discussed with the PG&E team its plan to sell renewable energy from Bioenergy Renewable Auction Mechanism (BioRAM) projects and analyzed its outreach efforts;
- Observed most but not all negotiations between PG&E and the two counterparties;
- Reviewed marked-up drafts of confirmation agreements and master agreements as parties discussed edits to PG&E’s pro forma contracts;
- 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 e-mailed a market notice for the solicitation to a version of the utility’s solicitation contact list of more than 2,400 individuals. The market notice included a link to PG&E’s public webpage for the TMNBC solicitation that provided two versions of an Edison Electric Institute (EEI) short-form confirmation agreement customized to sell the outputs of the Burney and Wheelabrator facilities (these served as bid forms), a solicitation protocol, a solicitation attestation form, a confidentiality agreement, and instructions for completing the forms. The webpage also included registration information for a participants’ webinar, which in this instance covered both the TMNBC Bundled RPS Energy Sale Solicitation and PG&E’s concurrent Summer 2022 Bundled RPS Energy Sale Solicitation. The latter solicitation sought buyers for calendar-year 2022 delivery of PCC1 RPS energy derived from PG&E’s overall supply portfolio, rather than for five years of delivery from specific individual generating stations.

A. BACKGROUND INFORMATION

In 2015, the Governor issued an Emergency Proclamation to respond to widespread drought and tree mortality in forests across California which heightened risks of wildfire and hazards to public safety from falling trees. It included directives to the CPUC to ensure that then-existing contracts with forest bioenergy facilities could be extended and new contracts could be executed. It directed the Department of Forestry and Fire Protection (“CalFire”) and other state agencies to identify High Hazard Zones. The CPUC issued Resolution E-4770 on March 17, 2016, which directed the three IOUs to conduct solicitations for energy purchases from generation facilities using biofuel sourced from HHZs, using the Renewable Auction Mechanism (“RAM”) mechanism and standard contract.

PG&E conducted such a Bioenergy Renewable Auction Mechanism solicitation in 2016. Based on evaluation of the offers and selection of the highest-valued one, PG&E and Burney Forest Products executed a five-year RAM PPA and BioRAM rider for delivery of RPS-eligible energy from Burney’s biomass-fueled generation facility. Energy deliveries began in November 2017.

The CPUC subsequently issued Resolution E-4805, which implemented biomass provisions of Senate Bill 859 that was signed into law in September 2016. Among SB 859’s directives was a requirement for IOUs and large public utilities to enter contracts for more deliveries of biomass-fueled energy sourced from HHZ-derived fuels than required previously by Resolution E-4770. PG&E did not conduct an entire new solicitation but requested refreshed price offers from the participants in its BioRAM RFO and from eligible non-participants. Based on evaluating those offers, and on subsequent bilateral negotiations,

it executed a five-year RAM PPA and BioRAM rider with Wheelabrator Shasta Energy Company, Inc.²; energy deliveries began in December 2017.

Resolution E-4805 also required a non-bypassable charge as the vehicle to allocate costs of tree mortality-related biomass procurement to unbundled customers, such as retail customers of CCAs and direct-access energy service providers. In December 2018, the CPUC's Decision 18-12-003 directed the IOUs to offer for sale the future deliveries of bundled energy and renewable energy credits ("RECs") from each BioRAM contract, with energy settled at market index price. The resulting REC sales price from these bundled RPS energy sales will serve as part of the calculation of net costs of the BioRAM contracts to be allocated to unbundled customers in ratemaking.

The utility ran a TMNBC competitive solicitation in the spring of 2019 to resell the output of the Burney and Wheelabrator facilities. This was only partly successful; a contract was executed in May 2019 to sell the output of the Wheelabrator project to Peninsula Clean Energy Authority (PCE), but no buyer was secured to take the output of the Burney facility. The contract with Peninsula Clean Energy has a delivery term that will end at the same date as the end of the first BioRAM PPA between Wheelabrator and PG&E, December 1, 2022.

The CPUC issued Resolution E-4977 in January 2019; this implemented legislative directives of Senate Bill 901 that addressed several issues related to wildfire risks. Among other things, the Resolution ordered the IOUs to seek and enter into new five-year contracts or contract extensions with eligible biomass-fueled facilities that could burn HHZ-derived fuels.³ As directed, PG&E bilaterally negotiated new agreements with Burney and Wheelabrator that will extend energy deliveries for an additional five years after the terminations in 2022 of their current contracts; those new contracts were executed in May and August 2020. Both new contracts were approved by the CPUC.

To carry out the directives of Resolution E-4977, PG&E also contacted other owners of biomass-fueled facilities that could be eligible for a new five-year BioRAM contract. Of these, only Woodland Biomass Power was willing to enter negotiations; it signed an agreement with PG&E in October 2020. PG&E filed a Tier 3 advice letter for CPUC approval of this contract; approval was granted and the Woodland facility commenced deliveries in March 2021 for a five-year term.

Resolution 18-12-003 included a directive that, if a BioRAM contract is extended, the IOU must repeat the process of offering for sale the bundled RPS energy produced from the extended contract. To comply with this provision, PG&E held the current TMNBC solicitation with the goal of reselling the bundled RPS energy from the Burney and

² Note that Wheelabrator Technologies sold Wheelabrator Shasta Energy Company, Inc. to Schmidbauer Lumber Company in 2021, a private company that operates mills in Eureka and Weaverville. Schmidbauer renamed the business Shasta-Sustainable Resource Management, Inc.

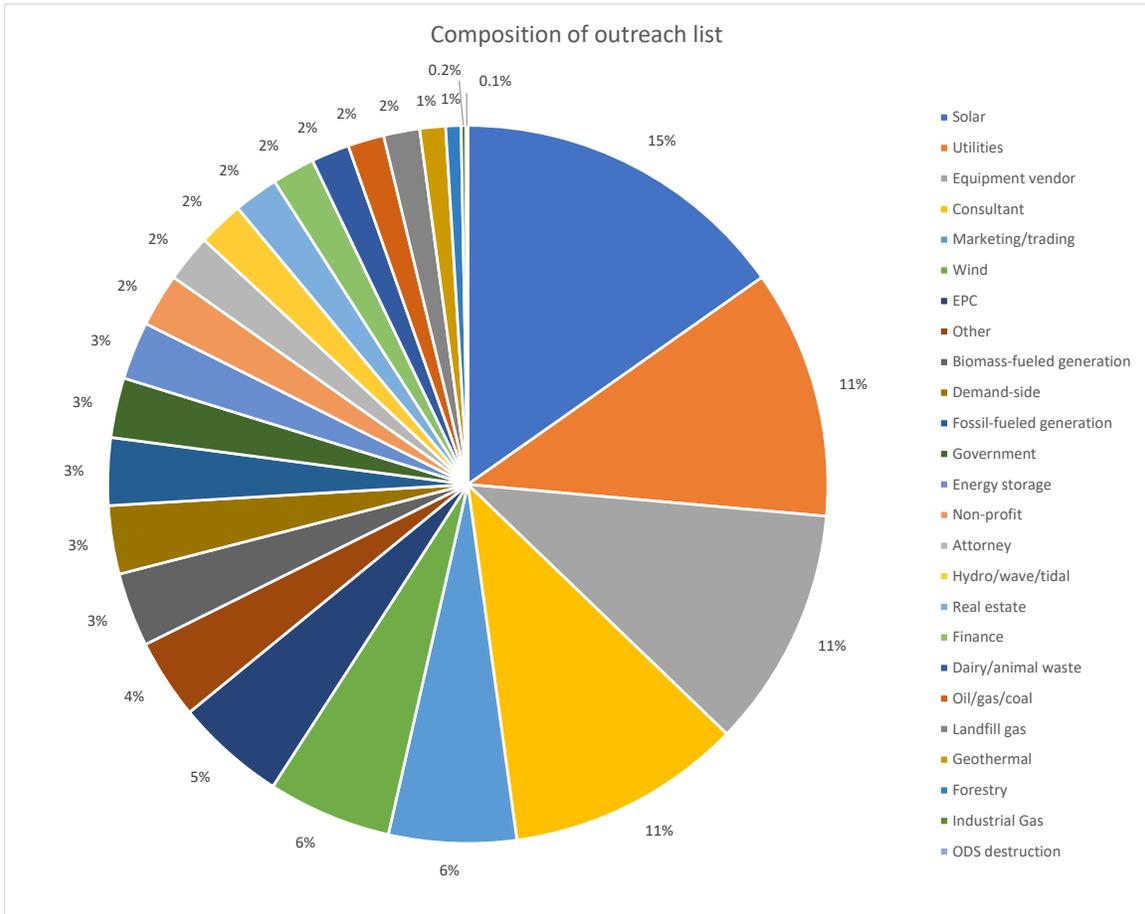
³ The direction provided in the Resolution resulted in a form PPA under which a seller can choose to opt out of compliance with the feedstock requirements to use HHZ-derived fuel, receiving a lower price in months when it invokes that option. It would be possible for such a seller to avoid using HHZ-derived fuels altogether, as long as it can operate economically at the lower price.

Wheelabrator plants for the terms of their second five-year BioRAM contracts (starting energy deliveries in November 2022 for Burney and December 2022 for Wheelabrator).

B. ADEQUACY OF SOLICITATION OUTREACH

PG&E e-mailed a market notice for the TMNBC Bundled RPS Energy sale solicitation 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 is mainly composed of generation developers or businesses that service their needs, and therefore does not focus on candidates likeliest 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 seek buyers of RPS-eligible energy are wholesale marketers, direct access energy services providers (“ESPs”), utilities, and CCAs that represent a fraction of this list.

Figure 1.



For this effort, focused on the small universe of RPS compliance entities and 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. However, 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 were not contacted include Baldwin Park Resident Owned Utility District, Desert Community Energy, Pioneer Community Energy, Pomona Choice Energy, San Jacinto Power, and other CCAs that are outside PG&E's service territory.

PG&E had previously developed and employed a highly focused contact list targeted for outreach to load-serving compliance entities that might be buyers of PCC1 RPS energy, for use in its Bundled RPS Energy Sale solicitations. However, it stopped using that focused list for its Summer 2022 Bundled RPS Energy Sale solicitation and did not employ it for outreach for this TMNBC solicitation either. When it dropped the use of that focused list, it stopped contacting a number of publicly-owned utilities such as those of Banning, Biggs, Burbank, Corona, Glendale, Healdsburg, and Lodi. These too might usefully be added to the general RFO contact list for any future TMNBC Bundled RPS Energy Sale solicitations (such as, hypothetically, a sale of Woodland Biomass Power's energy output).

In Arroyo's opinion, the outreach pursued by PG&E for this solicitation was adequate. However, given the distinct lack of robustness of its prior TMNBC energy sale solicitations, Arroyo's opinion is that the utility should have taken more comprehensive and more focused measures to seek participation, such as using the prior contact list focused on California compliance entities that included publicly-owned utilities missed in this RFO's outreach, and adding CCAs missing from its broader contact list.

C. CLARITY AND CONCISION OF SOLICITATION MATERIALS

PG&E published on its public website a written protocol to document the requirements of the request for bids and to communicate the evaluation criteria that the utility would use to make its selection decision. The protocol was 11 pages long, which is quite concise for California IOUs' solicitations, for which protocols typically run to dozens of pages. For example, San Diego Gas & Electric Company's protocol for its 2022 TMNBC RPS REC Sale RFO, to sell power from its BioRAM PPA with Honey Lake Power Company, was 16 pages in length. PG&E's market notice e-mail was also succinct; it relied 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 2020 bidder's conference presentation for its RPS REC Sale Request for Proposals ("RFP") of 42 pages. Note that PG&E's webinar presentation covered two concurrent solicitations, so one might attribute about half of the slide package, or 18 pages, to the TMNBC energy sale solicitation. SDG&E appears to not have held a participants' webinar for its own recent TMNBC energy sale solicitation held in spring 2022.

In addition to solicitation materials made available through the public solicitation webpage, PG&E was willing to make available redacted versions of the two existing BioRAM contracts and their BioRAM riders, and a record of recent monthly historical generation for the two facilities. This information was made available only to participants that executed non-disclosure agreements and registered for the solicitation on the PowerAdvocate platform, and was intended to facilitate participants' preparation of bids by providing more information to form expectations for contract performance.

Arroyo's opinion is that the solicitation materials were clear to bidders. There were no questions posed to PG&E by potential participants at the end of the participants' webinar. It is unclear whether this was due to lack of interest on the part of the audience or because the solicitation materials were entirely clear. Unlike many of PG&E's solicitations, the bids submitted met the solicitation deadline and did not contain deficiencies or errors of non-compliance that needed to be corrected, implying that the participants understood clearly how to prepare and submit proposals.

One indicator of clarity is that of [REDACTED] that registered for the participants' webinar, [REDACTED] were RPS compliance entities that would have a likely business need for bundled RPS energy, and [REDACTED] wholesale energy marketing and trading [REDACTED]. The other registrants included a biomass-fueled generator and the business development arm of a renewable generation development company. These latter firms apparently failed to achieve a clear understanding from the solicitation materials that PG&E's intent was to sell RPS-eligible energy to the selected proposers, as generators and generation developers have no need to purchase biomass-fueled energy. However, all registrants on the web-based platform for the solicitation fell into the category of RPS compliance entities.

D. BIDDERS' CONFERENCE

PG&E convened a participants' webinar on August 8 for this solicitation; this was a combined session with its participants' webinar for its concurrent Summer 2022 Bundled RPS Energy Sale Solicitation. PG&E e-mailed market notices about the webinar to the contact list on July 29. The presentation provided an orientation to the solicitation, including a description of the product to be sold, the schedule, the key elements of the confirmation agreement, the evaluation criteria, and the mechanics of submitting bids including the required bid form and attestations. The audience was invited to submit questions at the end of the presentation, but the attendees did not do so.

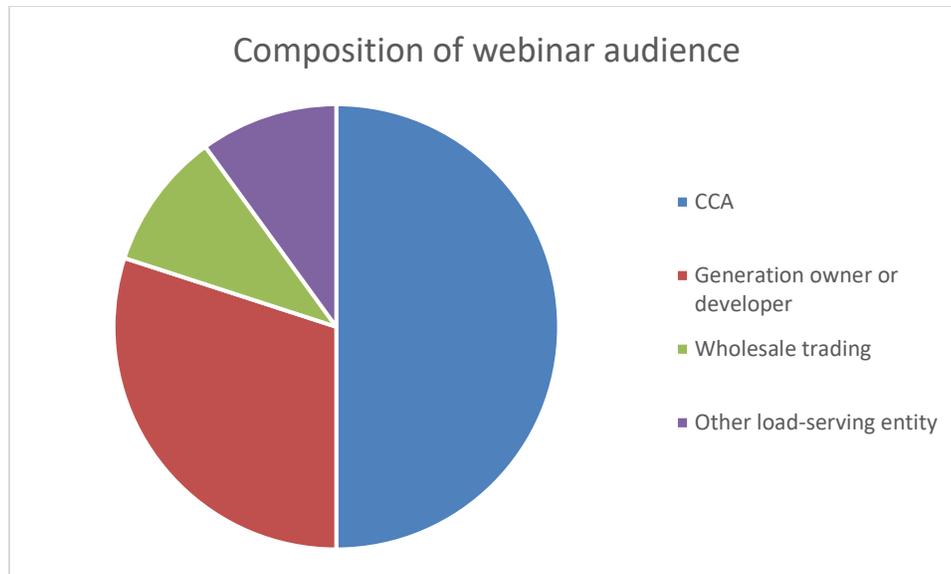
The webinar was modestly attended. Figure 2 displays the composition of its audience. Most attendees would be logical participants in the solicitation. Exceptions were companies that own generation or develop new generation projects, for whom it would make more sense to attempt to sell RPS-eligible energy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

E. ROBUSTNESS OF THE SOLICITATION

The response to this solicitation was not robust. [REDACTED]

It was clearly more robust than that for PG&E's 2019 TMNBC Bundled RPS Energy Sale Solicitation, in which only one bidder participated and one contract was awarded when the outputs of two biomass-fueled plants were offered. In that solicitation the effort to sell energy from Burney Forest Products' facility failed to elicit any proposals. Similarly, this solicitation was more robust than PG&E's 2020 TMNBC solicitation held in December 2020, which elicited no proposals at all.

Figure 2.



There may be several factors that limit the robustness of a market response to such a request for bids for renewable energy from specific biomass-fueled plants:

- The product offered by PG&E was unit-contingent delivery of energy and RECs with no contractually-specified delivery volume, which differs in key respects from what the IOUs have been offering for REC sales. For some potential buyers, this risk attribute of the product renders it inferior to contracts from Bundled RPS Energy Sale solicitations. The delivered volume from a TMNBC contract will be uncertain, subject to the availability performance of the biomass-fueled plant. Generating stations are subject to forced outages. In snowy years, some biomass-fueled facilities have been known to curtail output because of issues retrieving forest-derived woody waste. One woody biomass-fueled plant in California was reported to have abruptly suffered catastrophic turbine damage that rendered it inoperable and uneconomic to return to service. The product offered in PG&E's bundled RPS energy sale solicitations confers greater delivery volume certainty because delivery can be sourced from any of dozens of RPS contracts in the supply portfolio.
- Only a modest number of California retail energy providers appear to hold net short RPS compliance positions for the fourth and fifth compliance periods. The IOUs hold long positions, leaving some but not all in-state publicly-owned utilities, CCAs

(or their ESPs), and direct access providers as likeliest potential buyers. 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 five-year purchases of energy produced in existing facilities, as opposed to longer 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.
- Some CCAs and POUs clearly have a preference for local generation; a few have demonstrated their willingness to enter into PPAs to buy uncompetitively high-priced RPS-eligible energy from facilities sited within their service territories. This choice is consistent with the priority placed by these entities on supporting local economic development. Both the Burney and Wheelabrator facilities whose output was offered in this solicitation are more than a hundred miles from the nearest CCA. The Wheelabrator plant is less than twenty miles from the service territories of the municipal utilities of Redding and Shasta Lake, but those publicly-owned utilities have relied on Pacific Northwest wind generation to meet their RPS obligations. The city of Redding's 2021 integrated resource plan update projects a need to purchase short-term RECs in the 2022-2024 period only, not 2025 and 2026.
- Some compliance entities appear to prefer long-term contracts over purchases of one to five years, given the current state of their portfolios and bearing in mind the obligation for 65% of retail sellers' RPS procurement to be made up of long-term contracts (ten years or more) starting in the fourth compliance period.
- Some CCAs may prefer to procure new RPS-eligible energy through their own Requests for Offers and pro forma contracts rather than responding to IOUs' solicitations to sell and the IOUs' form agreements.
- Some CCAs promote their product offerings as carbon-free. While the BioRAM facilities produce RPS-eligible energy that meets the criteria to be designated as PCC1 deliveries, they are considered biogenic sources by the California Energy Commission. The CEC issued a staff paper in 2018 that proposed that retail energy sellers disclose the CO₂ emissions from biogenic sources in a footnote to the power content label. A CCA that has positioned its product as carbon-free may have some concern that carbon dioxide from biogenic sources might be counted at some point in the future as greenhouse gas emissions in its power content label, because its use of these supplies would conflict with its marketing message.

█ of the RPS compliance entities that attended the solicitation webinar chose not to submit bids. The lack of robustness of the response to the solicitation is consistent with the overall illiquidity of the market for term contracts for California RPS-eligible energy which in this case was likely exacerbated by the riskier nature of the offered product.

F. PARTICIPANTS' FEEDBACK ABOUT THE PROCESS

PG&E does not plan to seek feedback about the solicitation from participants or non-participants through a survey.

4. FAIRNESS OF PG&E'S EVALUATION METHODOLOGY

This section describes PG&E's methodology for evaluating bids and selecting a short list in this solicitation and assesses its fairness to ratepayers and bidders.

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 offers 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 offers. These criteria should be applied consistently to all offers.
- The 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 offers should be transparent to participants.
- The logic of how non-valuation criteria or preferences are used to reject higher-value offers and select lower-value offers 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:

Pricing. PG&E sought to maximize the benefit to ratepayers of selling RPS-eligible energy by preferring higher-priced bids to lower-priced bids. The utility team did not employ its Portfolio-Adjusted Value (PAV) methodology specified in its approved 2021 RPS procurement plan for analyzing proposals for value and portfolio fit. However, in this

situation where bidders pursue purchases of RPS-eligible energy for the same delivery term, priced at market index plus a fixed REC bid premium in \$/MWh, where purchases are from the same specific project, the PAV-based ranking of competing bids should be identical to the ranking by bid REC price. Ranking bids by REC price premium is far less burdensome than running PG&E's PAV algorithm.

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

Agreement Modifications. PG&E stated its intent to evaluate whether modifications that a participant proposes to alter PG&E's pro forma contract might have a material impact on the costs of entering into an agreement. The protocol acknowledged that buyers could propose edits to terms involving price and credit requirements for discussion.

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, the degree of concentration of exposure to a participant, and whether or not PG&E has already negotiated and executed an EEI master agreement with a participant, which 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.

PG&E did not specifically propose to employ any other evaluation criteria employed in its prior solicitations, such as supply chain responsibility, supplier diversity, RPS goals, etc. The solicitation protocol did not state any preferences other than for standardized agreements, as opposed to those with extensive contract modifications.

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

This section summarizes some of the attributes of PG&E's approach to evaluating bids to purchase bundled PCC1 renewable energy from the utility's supply portfolio.

Consistency with RPS Procurement Plan. To PG&E's 2021 RPS procurement plan, accepted in CPUC Decision 21-01-004, the utility had appended its framework for the TMNBC sale solicitation. Among other things, the appendix states PG&E's intent to launch a solicitation to seek to sell bundled RPS energy from any new tree-mortality contract or new extensions of existing contracts, and lists the two five-year BioRAM PPA extensions for Burney and Wheelabrator as "not yet marketed". The CPUC found PG&E's proposed sales framework to be reasonable in approving the 2021 RPS procurement plan.

The RPS procurement plan states that qualitative criteria to be used for selection of bids for the TMNBC solicitation would be consistent with PG&E's CPUC-approved sales framework in the detailed qualitative criteria displayed in the plan's Appendix J. These are the same as those stated in the TMNBC solicitation protocol.

Market Valuation. PG&E did not propose to calculate Portfolio-Adjusted Values for the bids for these renewable energy volumes. However, in the context of this solicitation, ranking bids by highest price would be equivalent to a ranking by highest PAV. Differences in transmission costs, congestion costs, capacity value, and other PAV components are effectively rendered identical across bids for a specific biomass-fueled project's energy because they are attributes of the same energy volumes regardless of buyer.

Other criteria. Because the two biomass-fueled projects from which sales volumes would have been delivered are already constructed and have operated for decades, transmission network upgrade costs are sunk costs and do not factor into selection decisions. Similarly, both of these projects are highly viable by virtue of achieving commercial operation and having delivered energy reliably to PG&E for many years, so that project viability is not a consideration for evaluation. In a sense, the question of the viability of individual buyers to make payments to PG&E is taken into account in the creditworthiness criterion.

Arroyo's opinion is that the methodology that PG&E proposed to use to evaluate and select bids for the TMNBC solicitation was designed fairly.

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 2022 Tree Mortality Non-Bypassable Charge 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 price for 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 J of the 2021 RPS procurement plan that detailed the framework for TMNBC RPS energy sales?
- 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. All bid packages passed a review for the qualitative criteria of financial strength and modifications. PG&E did not identify any deficiencies in the submitted bids.

Market Valuation. Conforming bid packages were submitted timely [REDACTED] before the deadline. Figure 3 displays the bid prices in the initial proposals.

Figure 3.



PG&E made its selections based on these initial bids; it used the quantitative criterion of price to select EBCE's proposal for the Wheelabrator contract and SDCP's proposal for the Burney contract. PG&E notified the proposers of these selections by e-mail on August 29 and requested confirmation of acceptance of selection by close of business the following day. EBCE accepted the selection by the deadline; SDCP's acceptance was tardy by one day but was still accepted by PG&E.

PG&E's alteration of confirmation agreements. However, after the initial proposals were received and bids selected for award, PG&E decided to alter a key provision of both the Burney and Wheelabrator confirmation agreements. [REDACTED]

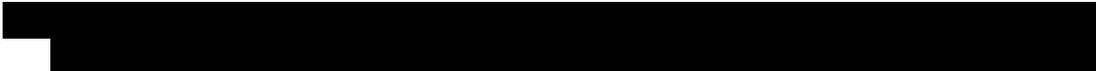
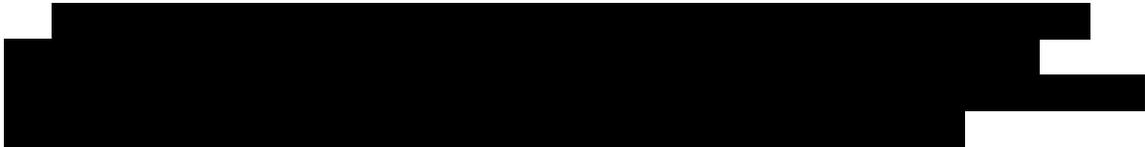
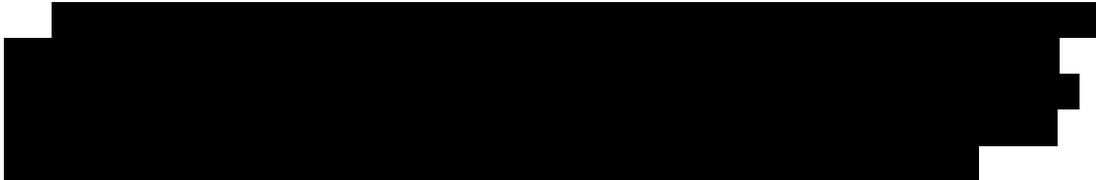
Counterparties to TMNBC sales contracts are required by PG&E to have an EEI master agreement and collateral annex in place. The confirmation agreements for the transactions make reference to the collateral annex agreed between parties, which among other things calculates any required posting based on the net credit exposures the parties have to each other in all active confirmation agreements. The Exposure Amount for a TMNBC REC sale

transaction is specified in its confirmation agreement. In the version of the contracts publicly posted on PG&E's solicitation website for use by proposers, these were:

- For Burney, 50,000 MWh times (REC sales price), minus the volume of already delivered RECs times (REC sales price) times 15%. The Exposure Amount is not allowed to drop below a floor of 10,000 MWh times (REC sales price), even in the fifth year of the delivery term;
- For Wheelabrator, 125,000 MWh * (REC sales price), minus the volume of delivered RECs * (REC sales price) * 15%, but not allowed to drop below 10,000 MWh * (REC sales price).



The pro forma agreement for a Burney sales transaction posted in PG&E's 2019 TMNBC solicitation set Exposure Amount to 100,000 MWh * (REC sales price) minus the volume of delivered RECs * (REC sales price) * 15%, not allowed to drop below 10,000 MWh * (REC sales price). No sale of the Burney facility's output was consummated in the solicitation. Note that this Exposure Amount is higher than the one posted in the Burney pro forma for the current solicitation, twice as high at the start of the delivery term. As with Wheelabrator, the 2019 Burney transaction was expected to have a delivery term of roughly two and a half years compared to five years in the current solicitation.



Other. [REDACTED]

C. RESULTS ANALYSIS

Arroyo agreed with PG&E's selection of bids. Observations regarding PG&E's administration of its evaluation methodology in this 2022 Tree Mortality Non-Bypassable Charge 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.
- 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 the current solicitation in disparate ways; Arroyo did not, for example, observe PG&E treating participants differently based on prior commercial relationships or status as CCAs.
- 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 quantitative parameter used in the evaluation was bid price.
- Because PG&E used price as its quantitative evaluation criterion, it did not consider transmission costs or integration adders in selection. There is no basis for distinguishing between bids using transmission costs or integration adders for one of the biomass-fueled facilities; 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.
- Arroyo believes that PG&E's conduct of the 2022 Tree Mortality Non-Bypassable Charge Bundled RPS Energy Sale solicitation was consistent with its approved 2021 RPS procurement plan.

- Arroyo agrees that, based on PG&E's 2021 framework for evaluating bids to sell renewable energy from these biomass-fueled facilities, the utility made reasonable and justifiable decisions to select 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. The evaluation of revised bid prices and further negotiations resulted in execution of confirmation agreements with EBCE and SDCP on October 12. PG&E and SDCP executed an EEI master agreement and collateral annex on September 30.

Arroyo telephonically observed some but not all discussion sessions between the commercial teams of PG&E and the two selected counterparties. Arroyo also reviewed marked-up draft contracts in an effort to identify specific proposals and counterproposals made by the parties. The starting points for negotiations were the two pro forma EEI short-form confirmation agreements made available from PG&E's solicitation website, one for Burney and the other for Wheelabrator. The discussions with SDCP about an EEI master agreement and collateral annex started from versions of those documents containing PG&E's preferred terms, for which links were also posted on the website.

Arroyo's opinion is that PG&E's negotiations were, overall, conducted in a manner that was fair to counterparties and to their competitors, with one minor fairness issue which in Arroyo's opinion does not rise to a level of impact to justify rejecting the contracts. 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 EBCE 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 form agreement for sales of bundled RPS energy were not significantly altered from the pro forma confirmation agreements that were posted on the solicitation webpage. Discussions focused on:

- Credit Requirements. [REDACTED]

- EEI master agreement. [Redacted]

[REDACTED] PG&E and SDCP executed a master agreement and collateral annex on September 30.

C. FAIRNESS OF NEGOTIATIONS

Arroyo’s opinion is that negotiations with buyers were conducted fairly, overall, with one minor exception. Each participant was given an equitable opportunity to advance its proposals towards execution. Arroyo did not observe PG&E providing any individual participant with non-public information that materially advantaged a buyer against ratepayers or competitors. Arroyo was included by PG&E as observer in some but not all of its negotiations for SDCP’s confirmation agreement and EEI master agreement, and so cannot confirm the fairness of how those discussions were handled, so that the opinions expressed here rely instead on review of contract drafts.

Credit requirements.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EEI master agreement.

[REDACTED]

[REDACTED]

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. The individual selected bids from two CCAs that met the requirements of PG&E's approved framework for sales of RPS energy from BioRAM-contracted facilities resulted in executed sales agreements. Arroyo's opinion is that PG&E complied with the requirements of the CCA code of conduct in how it handled its solicitation. [REDACTED]

[REDACTED]

Summary. Arroyo's opinion is that PG&E's negotiations with buyers were, overall, handled fairly with respect to competitors, with one minor fairness issue. Bids were accepted or rejected based on PG&E's CPUC-approved 2021 framework for Tree Mortality Non-Bypassable Charge Bundled 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 EBCE 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, sourced from two specific biomass-fueled facilities that primarily burn fuel from High Hazard Zones, for delivery over five-year terms starting in late 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, overall, adhered to its protocol and to a framework for these sales included in 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 so that rankings using it would be identical. The methodology used for evaluating and selecting bids was consistent with the framework laid out in Appendix J 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, overall, ran a fair 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 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 from the two facilities with BioRAM PPAs, and more specifically conforms to the detailed framework for TMNBC-based RPS energy sales provided in the plan. The process of evaluating and selecting bids was conducted in a manner consistent with the solicitation protocol.

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.

D. MERIT FOR CPUC APPROVAL

This section reports on the merits of the sales contracts.

Pricing and market value. PG&E will sell to EBCE bundled RPS-eligible renewable energy at market index plus a REC price [REDACTED]. The five-year delivery term starts on the initial energy delivery date of the second BioRAM PPA with Wheelabrator, December 2, 2022. The contract with SDCP is priced at market index plus [REDACTED]. The five-year term similarly starts on the initial delivery date of the second BioRAM PPA with Burney, November 1, 2022.

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. Furthermore, there are only seven biomass-fueled facilities that operate under BioRAM contracts, burning primarily HHZ-derived fuel, and the prices of the resale of their renewable energy is confidential information held by the three IOUs, Arroyo does not participate in REC markets and cannot directly monitor non-public commercial transactions other than a subset of PG&E's. Arroyo has no access to the prices at which the RECs from BioRAM-contracted facilities have been resold by SDG&E and Edison in TMNBC solicitations, and cannot report on their most relevant comparable market prices for unit-contingent sales that bear analogous volumetric risk to the EBCE and SDCP contracts.

PG&E's concurrent competitive solicitation in the summer of 2022 to sell renewable energy elicited bids for 2022 deliveries that were priced in the range of [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 of green attributes (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 even poorer benchmarks for the current transactions for 2022 deliveries.

Contract deliveries from the agreements with the two buyers

[REDACTED]

[REDACTED]

As previously described, there may be a number of reasons why counterparties do not view a five-year TMNBC bundled REC sale as at all comparable to the agreements resulting from an IOU's Bundled RPS Energy Sale Solicitation. The market is likely even more illiquid and opaque beyond the prompt year, so uncertainty about market price in 2024-27 may deter bidders from extending their price view much beyond 2022, and motivate them to discount the value of the outer years. The unit-contingent contracts pose material volumetric risk to the buyer, since deliveries are tied to the biomass-fueled plants' output, and there is a reasonable risk that such a facility might suffer an unrecoverable failure during delivery term, exposing the buyer to recontracting risks at unknown future market prices. These same factors make it difficult to consider a comparison of the TMNBC sales prices to firm-volume transactions reported above to be fair.

As reference, the sales price that resulted from PG&E's 2019 TMNBC Bundled RPS Energy Sale solicitation was

[REDACTED]

Similarly, that prior sales price fell below the

[REDACTED]

Arroyo's inference from this mix of scant data is that the prices of the executed contracts may likely be fair and reasonable given the risks associated with the product and the

concomitant market discount it should receive, but there are not enough data available to confirm this with a high degree of confidence. 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. This is further complicated by the unique risk attributes of the unit-contingent sales from individual biomass-fueled plants.

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 positions in the fourth and fifth compliance period are long, so the sales contracts fit with the utility's portfolio strategy of reducing the net surplus REC position in 2022-27 through short-term sales and monetizing part of the surplus for near-term value for ratepayer benefit.

Summary. The two five-year unit-contingent sales transactions were consummated at prices that

[REDACTED]. In Arroyo's opinion, the pricing of the contracts may likely be fair and reasonable given the attributes of the contracts, but there is not enough market information available to fully confirm this. Both contracts are consistent with PG&E's 2021 RPS procurement plan and its framework for sales of surplus RPS-eligible energy derived from BioRAM contracts with generators that burn fuel from High Hazard Zones, and fit well with PG&E's strategy for RPS portfolio management. Arroyo's opinion is that the methodology employed for evaluating and selecting a short list and PG&E's 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, noting one minor issue. Arroyo believes that PG&E's actions in negotiating and transacting or not transacting with CCAs were fully compliant with the CCA Code of Conduct.

On that basis, Arroyo's opinion is that the contracts with East Bay Community Energy Authority and San Diego Community Power both merit CPUC approval.

Appendix G

PG&E Notification of Solicitation Issuance

Appendix G

Notification of Solicitation

As mentioned in section I.D.6. of this Advice Letter, PG&E notified previously-identified RPS-obligated entities likely to have an interest in the product and, to ensure a robust response, sent the market notice to PG&E's Wholesale Electric Power Procurement distribution list containing almost 2,500 contacts. A sample of the electronic market notice of the 2022 Tree Mortality Non-Bypassable Charge Bundled Renewable Portfolio Standard Solicitation issuance is provided below.

Market Participants,

PG&E will be hosting a **Participants' Webinar** for the 2022 REC and TMNBC RPS Energy Sale RFOs on Monday, August 8 @ 10:00 AM (PPT). Registration is not required in order to participate in the webinar. Details of the Participants' Webinar are as follows:

- **Date:** Monday, August 8, 2022
- **Time:** 10:00 AM - 10:45 AM (PPT)
- **Webinar Link:** <https://e-meetings.verizonbusiness.com/nc/join/>
- **Phone Option:** 800-988-9750
- **Conference number:** PWXW2853575
- **Audience passcode:** 7911972

Additional RFO Information & Documents:

- 2022 Summer REC Sale RFO: www.pge.com/rfo/2022-summer-rec-sales
- 2022 TMNBC RPS Energy Sale RFO: www.pge.com/rfo/2022tmnbc

Any questions regarding this solicitation may be directed to:

- 2022 Summer REC Sale RFO: ShortTermRECSales@pge.com
- 2022 TMNBC RPS Energy Sale RFO: TMNBCreccsales@pge.com

with a copy to the Independent Evaluator, Lewis Hashimoto at arroyosecoconsulting@gmail.com. We look forward to your participation.

Regards,

PG&E

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San Francisco, CA 94105

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Appendix H1

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 seller 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	

Input required

No input required

Hard-coded

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		27,683,731		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		10,658,236		12,322,899	45,625,993	12,691,486	13,006,873	13,730,513	39,428,872	14,704,691	15,871,291	17,154,065	47,730,046
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		10,658,236		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			Execute 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		7,293,974		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%		64.8%		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)																					
Gc			VAMO-Adjusted Annual Gross RPS Position (MWh)					8,674,912													
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												
Hb			RECs above the PQR added to Bank	3,665,687	4,730,505	(656,309)	734,659	8,474,542													
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	$\frac{Gc - IF(Hb > 0, Hb - Ia, IF(Hb < Ha, Hb, IF(Ha < 0, -Ha)))}{C + La}$	Annual Net RPS Position after Bank Optimization (MWh)	-	-	-	-	-													
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.
- (Row A) Forecasts of retail sales through 2030 are reflective of PG&E's internal bundled retail sales forecast.
 - (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.
 - (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.
 - (Row K) Row K now includes only expiring volumes from contracts as of May 2021.
 - (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.
 - (Rows Ge and Gf) Stochastically-Adjusted Net Short (Physical Net Short + Stochastic Risk-Adjustment) PG&E added rows Ge 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.
 - (Row Gc) The Stochastically-Adjusted Annual Gross Position (MWh) does not include GTSR volumes and may differ from Row Ga, the Annual Gross RPS Position (MWh)
 - (Row La) Row La incorrectly calculates the Annual Net RPS Position after Bank Optimization when bank is being applied to fill a short position.
 - (Row Lb) Row Lb incorrectly calculates the Annual Net RPS Position after Bank Optimization.
 - (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.
 - 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.



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

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
Braun Blasing 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