

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE



July 15, 2019

Advice Letter 5554-E

Erik Jacobson
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Pacific Gas and Electric Company
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P.O. Box 770000
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SUBJECT: 2019 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreements Between Pacific Gas and Electric Company and Multiple Buyers

Dear Mr. Jacobson:

Advice Letter 5554-E is effective as of June 4, 2019.

Sincerely,

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

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division

June 4, 2019

Advice 5554-E

(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

Subject: 2019 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreements Between Pacific Gas and Electric Company and Multiple Buyers

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

Pacific Gas and Electric Company (“PG&E”) seeks California Public Utilities Commission (“Commission” or “CPUC”) approval of power purchase and sale agreements (together, the “PPSAs” or “Transactions”) that seek to sell Renewables Portfolio Standard (“RPS”)–eligible products from PG&E’s existing procured energy portfolio to other load-serving entities (“LSEs”) or energy marketers. The purpose of these Transactions is to improve the net value of PG&E’s RPS portfolio in light of realized and anticipated load departure resulting from the growth of Community Choice Aggregators (“CCA”) and behind-the-meter distributed generation. These Transactions are consistent with the sales strategy approved as part of PG&E’s 2018 RPS Procurement Plan (“2018 RPS Plan”)¹. This Advice Letter includes twelve Transactions resulting from PG&E’s 2019 RPS Bundled Energy Sale Solicitation (“Solicitation”).

¹ Final, Conforming 2018 PG&E Renewable Energy Procurement Plan, Appendix G (RPS Sales Strategy), filed in R.18-07-003 on March 15, 2019. PG&E’s 2018 RPS Plan was approved by the Commission in Decision (“D.”) 19-02-007.

The counterparties and associated sale volumes resulting from the Solicitation are as follows:

Counterparty	Contract Volume (MWh)	Delivery Term
Avangrid Renewables, LLC (“Avangrid”)	100,000	2019
Shell Energy North America (US), L.P. (“Shell”)	800,000	2019 - 2020
Powerex Corp (“Powerex”)	450,000	2019 - 2020
City of San José (“San José”)	510,000	2019 - 2020
Clean Power Alliance of Southern California (“CPA”)	500,000	2020
East Bay Community Energy (“East Bay”)	1,100,000	2019 - 2020
Exelon Generation Company, LLC (“Exelon”)	800,000	2019 - 2020
Direct Energy Business Marketing, LLC (“Direct”)	200,000	2019 - 2020
Marin Clean Energy (“MCE”)	500,000	2019 - 2020
Silicon Valley Clean Energy Authority (“SVCEA”)	200,000	2020
Monterey Bay Community Power Authority (“Monterey”)	85,000	2020
Peninsula Clean Energy Authority (“PCE”)	250,000	2019 - 2020
Total Sale Volume	5,495,000	

These short-term Transactions are for the sale of bundled energy and associated Renewable Energy Credits (“RECs”) generated in 2019-2020, and all energy delivery periods will conclude on December 31 of the last year of the energy delivery term.² The bundled renewable product will be provided from operating RPS-eligible generation resources currently under contract to PG&E (collectively, the “Projects”).

B. Identify the Subject of the Advice Letter, Including:

1. Project Name

A list of facilities from which PG&E may currently deliver the bundled RPS products sold in the Transactions is included as Appendix K (the “Preferred Projects”), although PG&E has the ability under the Transactions to update this list with notice to its counterparties. PG&E’s methodology for filling contract volumes from the Projects is described in Confidential Appendix D.

2. Technology (including level of maturity)

The technologies of the Preferred Projects are listed in Appendix K.

² Each contract’s green attribute delivery period will end on the date PG&E has transferred the total volume of green attributes to the counterparty.

3. General Location and Interconnection Point

The Preferred Projects are located in California, Arizona, or Nevada, 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 Preferred Projects are listed in Appendix K.

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

In past RPS advice letters seeking approval of PG&E’s purchase of RPS-eligible products, PG&E has described in this section the business organization of the generator and selling counterparty. In the present context, there are two categories of entities that may be of interest: (1) the generating entity selling the RPS-eligible products to PG&E; and (2) the current counterparty, to whom PG&E is reselling the RPS-eligible products.

With regard to the types of entities that own the Preferred Projects, to PG&E’s actual knowledge, given the information PG&E has in its possession, all of the Preferred Projects are owned by limited liability companies, or through limited partnerships or trusts.

The following information applies to the Buyers under the PPSAs:

- East Bay is a CCA serving residential and business customers in Alameda County.
- CPA is a CCA serving residential and business customers in unincorporated areas of Los Angeles County and the Cities of Rolling Hills Estates and South Pasadena.
- Direct Energy has operations and business activities throughout the United States and serves residential and business customers in five states with electricity and natural gas. In California, Direct Energy acts as an energy service provider (“ESP”) working with CCAs and commercial and industrial customers.
- Monterey is a CCA serving residential and business customers in Monterey, San Benito and Santa Cruz Counties.
- Powerex is the wholly-owned energy marketing subsidiary of BC Hydro. Powerex buys and sells wholesome electricity, natural gas, and environmental energy products and services in Western North America.
- Shell is a wholesale energy marketer and trader in North America and provides energy-related products and services to public and private utilities, commercial and industrial companies, retail aggregators, and energy producers.
- SVCEA is a CCA serving residential and business customers in Santa Clara County.
- San Jose is a CCA serving residential and business customers in the City of San Jose.

- Peninsula is a CCA serving residential and business customers in San Mateo County.
- Avangrid develops, builds, generates, and operates renewable wind energy and was formerly known as Iberdrola Renewables, LLC. Avangrid Renewables LLC operates as a subsidiary of Avangrid, Inc.
- Exelon is an energy generation, transmission and distribution company with operations and business activities in 47 states. In California, Exelon owns generating resources and acts as an ESP through its ownership of Constellation NewEnergy, Inc.
- MCE is a CCA that serves residential and commercial power users in Marin County and the city of Richmond.

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

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

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

All of the Projects that are expected to deliver volumes pursuant to the PPSAs are existing and operating facilities under current RPS contracts to deliver output to PG&E. None of the Preferred Projects is selling its RPS-eligible products to PG&E under a contract executed pursuant to the federal Public Utility Regulatory Policies Act.

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

The PPSAs resulted from PG&E's 2019 Bundled RPS Energy Sale Solicitation (the "Solicitation") released on March 29, 2019, in which PG&E sought bids for delivery years 2019 and 2020. All bids were evaluated and executed in accordance with the RPS Sales Framework ("Sales Framework") approved as Appendix G to PG&E's 2018 RPS Plan.³ PG&E consulted with the Independent Evaluator ("IE") assigned to the Solicitation to develop a list of entities to include in market outreach. 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 over 2,000 contacts.

³ The Sales Framework is discussed more fully below and in Confidential Appendix A.

Further information regarding Solicitation results is included in Confidential Appendices A and B. Relevant solicitation materials provided to bidders are provided in public Appendices G and H.

C. General Project(s) Description

The Preferred Projects are described in Appendix K. The terms of the Transactions are summarized as follows:⁴

⁴ PG&E has modified the table from the standard Advice Letter template to remove rows that are not directly applicable to the PPSAs, since they are not tied to a specific generation facility. (i.e., Capacity, Capacity Factor, Initial Commercial Operation Date, Vintage, Location, Competitive Renewable Energy Zone, Control Area, Type of Cooling).

	Technology	Contract Quantity (MWh/Year)	Date Contract Delivery Term Begins	Delivery Term (Months) ⁵
Avangrid	Complete information about the Projects, including the technology of each is displayed in Appendix K.	100,000 - 2019	2019 deliveries will begin upon CPUC Approval. 2020 deliveries will begin on 01/01/2020.	From date contract delivery term begins to no later than December 31, 2019 (expected to be approximately 5 months)
Shell		300,000 - 2019 500,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
Powerex		350,000 - 2019 100,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
San José		10,000 - 2019 500,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
CPA		500,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 12 months)
East Bay Community Energy		100,000 - 2019 1,000,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
Exelon Generation Company, LLC		400,000 - 2019 400,000 - 2020		From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)

⁵ The green attribute delivery period will end on the date PG&E has transferred the total volume of green attributes to the Buyer.

Direct		80,000 - 2019 120,000 - 2020	From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
MCE		300,000 - 2019 200,000 - 2020	From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)
SVCEA		200,000 - 2020	From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 12 months)
Monterey Bay		85,000 - 2020	From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 12 months)
Peninsula		50,000 - 2019 200,000 - 2020	From date contract delivery term begins to no later than December 31, 2020 (expected to be approximately 17 months)

D. Project Location

Given the nature of the Transactions and the number of locations of the generation facilities that are expected to generate the products that will be sold pursuant to the Transactions, it is not practical to include a locational map in this filing. However, all of the Preferred Projects are located in California, Arizona, or Nevada and interconnected to the CAISO.

E. 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 or PCC 0 as to PG&E.6 The Transactions must receive final, non-appealable Commission approval before energy deliveries and the transfer of RECs to Buyers may begin under the PPSAs.

2. Partial/Full Generation Output of Facility

PG&E has the right to deliver from the Preferred Projects, or from other facilities identified pursuant to the PPSAs. PG&E is obligated under the terms of each PPSA to deliver each contract’s total quantity of bundled energy and RECs during the delivery term. Deliveries pursuant to each PPSA may consist of the full or partial output from any given Project.

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

The Transactions involve only the sale of bundled energy and RECs..

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

The point of delivery under the Transactions is at NP-15, SP-15, and/or ZP-26 Trading Hubs.

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 multiple resources at the NP15, SP15, and/or ZP26 Trading Hubs.

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 each Buyer for the delivered volume of energy at the hourly NP-15, SP-15, and/or ZP-26 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 each Buyer, and each Buyer is obligated to pay the NP-15, SP-15, and/or ZP-26 Index Price for the delivered energy to PG&E. The September invoice for May energy delivery would therefore show a netting of CAISO NP-15, SP-15,

⁶ PCC 0 and PCC 1 products are defined in California Public Utilities Code Section 399.16(d) and 399.16(b)(1), respectively.

and/or ZP-26 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 as described in each respective PPSA.

6. Diagram and Explanation of Delivery Structure

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

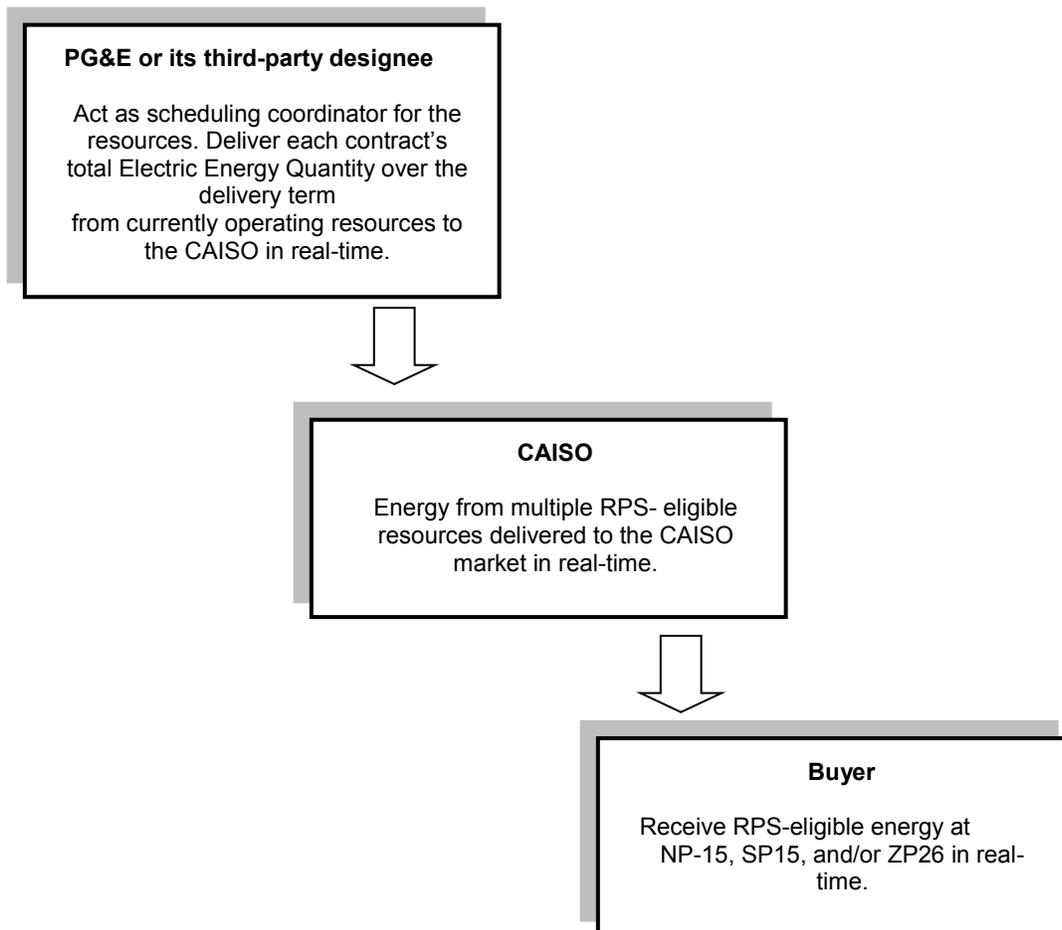
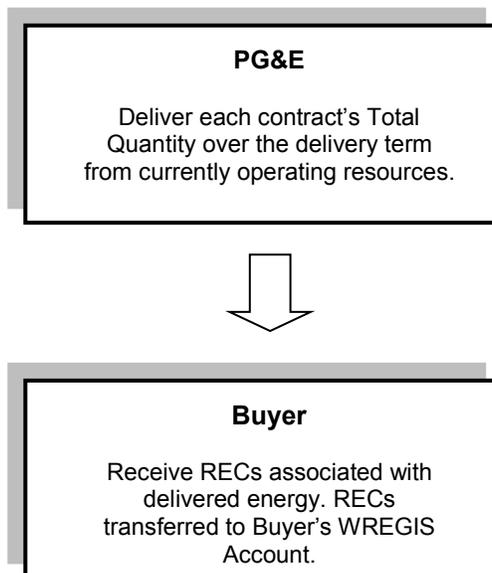


Figure 2: Delivery Structure of the RECs Portion of the PPSAs

F. RPS Statutory Goals and Requirements

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

Public Utilities Code Section 399.11 states that increasing California's reliance on eligible renewable energy resources is intended to displace fossil fuel consumption within the state, promote stable electricity prices, reduce greenhouse gas emissions, improve environmental quality and promote the goal of a diversified and balanced energy generation portfolio. The Projects are consistent with these goals because they generate clean energy and provide economic benefits to California to the extent they are in-state projects. The Transactions contribute to the optimization of PG&E's portfolio of RPS-eligible resources, thereby promoting the stability and reasonableness of the impact on customer rates of that portfolio

2. Describe how procurement pursuant to the contract will meet PG&E's specific RPS compliance period needs. Include Renewable Net Short calculation as part of response.

Senate Bill ("SB") 2 1X was enacted in 2011 and was implemented by the Commission in Decision ("D.") 11-12-020 to require retail sellers of electricity to meet the following RPS procurement quantity requirements beginning on January 1, 2011:

- An average of twenty percent of the combined bundled retail sales during the first compliance period (2011-2013).
- Sufficient procurement during the second compliance period ("CP 2") (2014-2016) that is consistent with the following formula: $(.217 * 2014 \text{ retail sales}) + (.233 * 2015 \text{ retail sales}) + (.25 * 2016 \text{ retail sales})$.
- Sufficient procurement during the third compliance period ("CP 3") (2017-2020) that is consistent with the following formula: $(.27 * 2017 \text{ retail sales}) + (.29 * 2018 \text{ retail sales}) + (.31 * 2019 \text{ retail sales}) + (.33 * 2020 \text{ retail sales})$.
- Thirty-three percent of bundled retail sales in 2021 and all years thereafter.

SB 350, enacted in 2015, extended the RPS statutory target to 50% by 2030 with interim requirements in 2024 and 2027. On December 20, 2016, the Commission issued D.16-12-040 implementing the following compliance periods and procurement targets as mandated by SB 350:

- Sufficient procurement during a fourth compliance period ("CP 4") (2021-2024) that is consistent with the following formula: $(.348 * 2021 \text{ retail sales}) + (.365 * 2022 \text{ retail sales}) + (.383 * 2023 \text{ retail sales}) + (.40 * 2024 \text{ retail sales})$.
- Sufficient procurement during a fifth compliance period ("CP 5") (2025-2027) that is consistent with the following formula: $(.417 * 2025 \text{ retail sales}) + (.433 * 2026 \text{ retail sales}) + (.45 * 2027 \text{ retail sales})$.
- Sufficient procurement during a sixth compliance period ("CP 6") (2028-2030) that is consistent with the following formula: $(.467 * 2028 \text{ retail sales}) + (.483 * 2029 \text{ retail sales}) + (.50 * 2030 \text{ retail sales})$.

SB 100, enacted in 2018, changed the RPS statutory target to 60% by 2030, with updated interim requirements of 44% by 2024 and 52% by 2027. The Commission has proposed a decision that would implement SB 100 using the new interim and final targets and the same straight-line methodology adopted by the Commission in the past to determine total Compliance Period Requirements. PG&E's assumptions in its Renewable Net Short ("RNS") calculations, described more fully below, are consistent with the pending proposed decision.

By ruling, the Commission has adopted a methodology for calculating a retail seller's renewable net short ("RNS") position relative to the RPS procurement targets adopted by SB 2 1X and implemented in D.11-12-020.7 PG&E is providing an RNS calculation in Appendix I that extends to 2036 and that is consistent in all other respects with the Commission's adopted RNS methodology. PG&E is also providing an Alternative RNS calculation (the "Alternative RNS") in Appendix J.

There are two main differences between the RNS and the Alternative RNS. First, the Alternative RNS utilizes PG&E's internal Bundled Retail Sales Forecast for years 2018-2036. Second, the Alternative RNS presents a modified display of PG&E's RNS in order to adequately show the results from PG&E's stochastic optimization of its RPS position. Further details on PG&E's stochastic optimization approach can be found in PG&E's 2018 RPS Plan.

As illustrated in PG&E's Alternative RNS, PG&E's existing RPS portfolio is expected to provide sufficient RPS-eligible deliveries to meet PG&E's RPS compliance requirements through 2030 and beyond, prior to consideration of the Transactions. Appendix A further quantifies the impact of the Transactions on PG&E's near-term RPS compliance position. The combination of these calculations demonstrates that the Transactions will not create any material risk of near-term RPS noncompliance for PG&E.

G. 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 PPSAs and other information that more specifically describes the rights and obligations of the parties involved. This information is being submitted in the manner directed by D.08-04-023 and the August 22, 2006, Administrative Law Judge's Ruling Clarifying Interim Procedures for Complying with D.06-06-066 to demonstrate the confidentiality of the material and to invoke the protection of confidential utility information provided under either the terms of the Investor Owned Utility Matrix, Appendix 1 of D.06-06-066 and Appendix C of D.08-04-023, or Public Utilities Code section 454.5(g). A separate Declaration Seeking Confidential Treatment is being submitted concurrently with this Advice Letter.

⁷ See Administrative Law Judge's Ruling on Renewable Net Short issued on May 21, 2014, including subsequent changes to the RNS reporting template per direction from the Energy Division on May 29, 2014.

Confidential Attachments:

- Appendix A – Consistency with Commission Decisions and Rules and Project Development Status
- Appendix B – Solicitation Overview
- Appendix C1 – Independent Evaluator Report (Confidential)
- Appendix D – Summary of Contracts
- Appendix E1 – Comparison of PPSA of Avangrid Renewables, LLC with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E2 – Comparison of PPSA of City of San Jose with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E3 – Comparison of PPSA of Clean Power Alliance of Southern California with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E4 – Comparison of PPSA of Direct Energy Business Marketing, LLC with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E5 – Comparison of PPSA of Silicon Valley Clean Energy with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E6 – Comparison of PPSA of Monterey Bay Community Power Authority with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E7 – Comparison of PPSA of Powerex Corp. with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E8 – Comparison of PPSA of Peninsula Clean Energy with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E9 – Comparison of PPSA of Shell Energy North America (US), L.P. with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E10 – Comparison of PPSA of Exelon Generation Company, LLC with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E11 – Comparison of PPSA of East Bay Community Energy with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation
- Appendix E12 – Comparison of PPSA of Marin Clean Energy with PG&E's 2019 Pro Forma RPS Short-Term Sales Confirmation

- Appendix F1 – Power Purchase and Sale Agreement with Avangrid Renewables, LLC
- Appendix F2 – Power Purchase and Sale Agreement with City of San Jose
- Appendix F3 – Power Purchase and Sale Agreement with Clean Power Alliance of Southern California
- Appendix F4 – Power Purchase and Sale Agreement with Direct Energy Business Marketing, LLC
- Appendix F5 – Power Purchase and Sale Agreement with Silicon Valley Clean Energy
- Appendix F6 – Power Purchase and Sale Agreement with Monterey Bay Community Power Authority
- Appendix F7 – Power Purchase and Sale Agreement with Powerex Corp.
- Appendix F8 – Power Purchase and Sale Agreement with Peninsula Clean Energy
- Appendix F9 – Power Purchase and Sale Agreement with Shell Energy North America (US) L.P.
- Appendix F10 – Power Purchase and Sale Agreement with Exelon Generation Company, LLC
- Appendix F11 – Power Purchase and Sale Agreement with East Bay Community Energy
- Appendix F12 – Power Purchase and Sale Agreement with Marin Clean Energy
- Appendix I – PG&E’s Renewable Net Short Calculation (Confidential)
- Appendix J – PG&E’s Alternative Renewable Net Short Calculation (Confidential)

Public Attachments:

- Appendix C2 – Independent Evaluator Report (Redacted)
- Appendix G – PG&E Notification of Solicitation Issuance Appendix H – PG&E Solicitation Bid Form
- Appendix I2 – PG&E’s Renewable Net Short Calculation (Redacted)
- Appendix J2 – PG&E’s Alternative Renewable Net Short Calculation (Redacted)
- Appendix K – Preferred Project List

Appendix L – Confidentiality Declaration and Matrix

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 2018 RPS Plan was approved in D.19-02-007 on Feb. 28, 2019, and the final, conforming version of the 2018 RPS Plan was filed in Rulemaking 18-07-003 on March 15, 2019. PG&E complied with all procedural requirements with regard to the filing of its 2018 RPS Plan.

2. Describe the Procurement Plan's assessment of portfolio needs.

In PG&E's 2018 RPS Plan, PG&E demonstrated that under the 33% RPS by 2020 target, and a "straight-line" trajectory implementing the SB 350 target of 50% RPS by 2030, PG&E was well-positioned to meet its RPS compliance requirements through CP 5 (2025-2027) and would not have incremental RPS physical need until at least 2029. PG&E believes that its existing portfolio of executed RPS contracts, its owned RPS-eligible generation, and its expected balances of surplus RPS generation from prior compliance periods will be adequate to ensure compliance with near-term RPS requirements and through at least 2033.

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

The proposed PPSAs are for the sale of bundled energy and associated RECs generated in 2019-2020. As described above, PG&E's 2018 RPS Plan concluded that PG&E is well-positioned to meet its near-term RPS compliance requirements until at least 2033. In light of its long position with respect to RPS targets, PG&E developed the Sales Framework, filed as Appendix G in the approved 2018 RPS Plan, to assess whether to hold or sell surplus RPS volumes. Based on its then-current forecast of bundled retail sales and RPS volumes in its portfolio, PG&E explained in the 2018 RPS Plan that it expected to sell short-term, bundled RPS volumes in 2019.

As further described in Confidential Appendix A, the Transactions are consistent with the 2018 RPS Plan because the total quantity considered for sale and the prices of the Transactions align with what is described in the Sales Framework filed in the 2018 RPS Plan. As a result, the Transactions will benefit PG&E's RPS portfolio by reducing

customer costs while maintaining compliance with RPS targets, as intended by the Sales Framework.

The Transactions are also consistent with the approval granted by the Commission in D.19-02-007, Ordering Paragraph 9, which provides in relevant part:

PG&E is authorized to conduct solicitations for short-term sales of 5 years or less, of sales of RPS volumes if the sales agreement for any such sale is executed during the period after the Commission's adoption of this decision and prior to adoption of a subsequent RPS Plan. Deliveries may commence at any time after the Commission's approval of the contract, and continue until the expiration of the contract's term. PG&E must seek Commission approval of short-term and long-term sales resulting from a solicitation or any bilateral transaction that both utilizes the pro forma sales agreement submitted with its 2018 RPS Procurement Plan, showing any necessary modifications, and is executed after PG&E receives bids for a sales solicitation resulting from its 2018 RPS Procurement Plan.

All of the Transactions are consistent with Ordering Paragraph 9. First, the Transactions are short-term, meaning five years or less. Second, PG&E executed the Transactions during the timeframe covered by the 2018 RPS Plan and prior to the Commission issuing a decision on the 2019 RPS Procurement Plans. Third, the deliveries under the Transactions may commence before or after the Commission issuing a decision on the 2019 RPS Procurement Plans. Fourth, as required, PG&E is submitting this Tier 1 Advice Letter for Commission approval of these Transactions.

Consistent with the 2018 RPS Plan, each of 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 Sales Framework and the use of the approved pro forma short-term sales confirmation allows for the filing of the Transactions through this Tier 1 advice letter, which is consistent with the 2018 RPS Plan and D.19-02-007.

4. 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 bundled RPS sales.

5. 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).

Assessing the current or future value of a banked REC requires incorporating a range of highly uncertain policy and market assumptions. Given that PG&E's current net short position is significantly far into the future, there are too many future uncertainties to determine an appropriate banked REC value. Any attempt at producing a value would be misleading. Furthermore, PG&E notes that any price comparison analysis is not part of the Commission-approved Sales Framework and does not impact PG&E approach to executing volumes.

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

PG&E followed the approved Sales Framework to evaluate bids received in the Solicitation and to maximize benefit to customers. The 2019 Bundled RPS Energy Sale Solicitation Protocol described the approach that would be used to evaluate bids for each delivery year independently and identified total revenue as the sole quantitative evaluation criterion.

6. Portfolio Optimization Strategy

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

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

See Section II.A.3, above.

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

See Sections B and F.9 of Confidential Appendix D.

iii. Identification of risks (e.g., non-compliance with RPS requirements, regulatory risk, over- procurement of non-bankable RPS-eligible products, safety, etc.) and constraints included in optimization strategy that

may be decreased or increased due to proposed procurement (or sale).

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

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

PG&E filed its Sales Framework as part of its approved 2018 RPS Plan in order to guide its overall activities and the range of transactions it would undertake to reduce the overall cost of its portfolio by addressing PG&E's growing bank of RPS compliance products. These transactions were conducted within the guidelines outlined in the Sales Framework.

B. Least-Cost, Best-Fit (LCBF) Methodology and Evaluation

1. Briefly describe IOU's LCBF Methodology and how the Project compared relative to other offers available to the IOU at the time of evaluation.

Because the Transactions are sales rather than procurement, PG&E has used its approved Sales Framework to evaluate the offers rather than the procurement LCBF evaluation methodology. Nonetheless, PG&E has provided LCBF values in Confidential Appendix A.

2. Indicate when the IOU's Shortlist Report was approved by Energy Division.

The qualified bids received pursuant to the Solicitation were shared with PG&E's Procurement Review Group ("PRG"), which includes Commission Energy Division staff, on April 19, 2019. On April 25, 2019, the PRG was also notified of the quantities that PG&E proposed to execute as a result of the Solicitation. Because the Solicitation was pursuant to the approved Sales Framework and because the Commission's decision adopting the 2018 RPS Plan did not require submission of a formal shortlist report as part of the 2018 RPS Plan procurement cycle, PG&E did not submit a formal shortlist report for Energy Division approval.

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 PPSAs are 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
Exelon	Section	2.17	6.1(a)	9.3(b)	6.1(b)	6(c)
	Page #	15	21	24	21-22	22
CPA	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	5	12	15	12	12
Direct Energy	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	11	14	11	12
Monterey	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12	13
Powerex	Section	2.10	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	5 - 6	10	13	10 – 11	11
San Jose	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12	13
Shell	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12	13
SVCEA	Section	2.17	6.1(a)	9.3(b)	6.1(b)	6(c)
	Page #	15	21	24	21	21
Avangrid	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12	12
Peninsula	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12-13	13
MCE	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6	12	15	12-13	13
East Bay	Section	2.12	6.1(a)	8.3(b)	6.1(b)	6(c)
	Page #	6-7	13	16	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 each of the executed PPSAs to the form of Short-Term Sales Confirmation included as Attachment I.3 to PG&E's 2018 RPS Plan are included in Confidential Appendices E1-E12. The non-modifiable terms have been highlighted in each redlined comparison. PG&E has not highlighted the modifiable standard terms and conditions because these terms were originally adopted without the anticipation of the type of index-plus-REC price sales transactions that are submitted with this Advice Letter. Attempting to identify how the concepts included in the modifiable standard terms and conditions have either been removed because they do not apply or have evolved over many years into the terms and conditions in PG&E's approved pro forma RPS Sales Confirm makes the process of highlighting terms somewhat subjective and speculative. To avoid unintentionally omitting terms and conditions that might be reasonably argued to be related to the original modifiable standard terms and conditions, or identifying terms and conditions that might be reasonably argued not to relate to those modifiable terms, PG&E submits that the better approach in this instance is to not highlight these terms. This approach is reasonable in light of the fact that the standard terms and conditions are, in any case, able to be modified and because the pro forma Sales Agreement has been subject to review in the RPS Plan proceeding and approved by the Commission in D.19-02-007.

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 Buyers, of the RPS-eligible products that will be sold pursuant to the PPSAs, if approved. However, PG&E presently purchases the bundled product under contracts that PG&E expects would qualify as Portfolio Content Category ("PCC") 1 or PCC 0 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 CEC-certified eligible renewable energy resources that have their first point of interconnection within a California Balancing Authority. Accordingly, deliveries to PG&E under some of the original PPAs 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 PPSAs transfer 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 PPSAs would not be categorized as PCC 1 or PCC 0 if used by PG&E for RPS compliance.

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

a. Contract is classified as claimed

b. Contract is not classified as claimed

The value to PG&E's customers of the Transactions 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 Transactions. For the counterparties or the LSEs to which the products are ultimately sold, the value to the customers of those entities would be less if the products are not classified as PCC 1 products.

5. Use the table below to report how the procurement pursuant to the contract, if classified as claimed, will affect the IOU's portfolio balance requirements, established in D.11-12-052.

PG&E's current Portfolio Balance Requirements are listed in the table below. As the generation that may be sold pursuant to the PPSAs may be a combination of PCC 0 and PCC 1 volumes if used for compliance by PG&E, PG&E will not know the exact allocation between the categories until the RECs have been transferred to the counterparties. PG&E estimates that the quantity of any PCC 1 reduction to PG&E's portfolio resulting from the PPSAs could be as high as 5,295 GWh, as reflected in the following table. Given that PG&E's currently delivering RPS procurement portfolio is made up entirely of products expected to qualify as PCC 1 or PCC 0, as shown below, PG&E expects to be able to meet its Compliance Period 3 portfolio balance requirements notwithstanding the Transactions.

Forecast of Portfolio Balance Requirements (GWh)	Compliance Period 3 (2017-2020)
PCC 1 Balance Requirement <i>CP 3 = 75% of RECs applied to procurement quantity requirement</i>	
Quantity of PCC 0 and 1 RECs (under PG&E contract, not including proposed contracts)	69,932
Quantity of PCC 0 and/or PCC 1 RECs* from proposed contracts	5,495
Quantity of PCC 2 RECs	0
Quantity of PCC 2 RECs (under PG&E contract, not including proposed contracts)	0
Quantity of PCC 2 RECs from proposed contracts	0
PCC 3 Balance Limitation <i>CP 3 = 10% of RECs applied to procurement quantity requirement</i>	
Quantity of PCC 3 RECs (under PG&E contract, not including proposed contracts)	0
Quantity of PCC 3 RECs from proposed contracts	0

*RECs to be sold are a combination of PCC0 and PCC1 volumes as to PG&E. PG&E will not know the exact allocation between the categories until after the RECs have been transferred to the counterparties.

E. Long-Term Contracting Requirement

In D.12-06-038, the Commission adopted a threshold standard pursuant to SB 2 (1X) that requires LSEs to sign long-term contracts in each compliance period equal to at least 0.25 percent of their expected retail sales over that same compliance period. Senate Bill 350 established a new long-term contracting requirement for procurement used for RPS compliance. Specifically, Public Utilities Code section 399.13(b) requires that beginning in January 2021 (or January 2017 for retail sellers, like PG&E, that elect early compliance), at least 65 percent of procurement counted toward the RPS procurement requirement of each compliance period must be from contracts of 10 years or more in duration or in ownership or ownership agreements for RPS resources. Procurement from RPS contracts signed prior to June 1, 2010 that meets the requirements set forth in

California Public Utilities Code section 399.16(d) is counted as long-term for the purposes of SB 350's long-term contracting requirement. Although the proposed PPSAs will draw from PG&E's portfolio of long-term contracts, the absence of this generation will not materially impact PG&E's ability to comply with either the SB 2 (1X) or the SB 350 long-term contracting requirements given the predominance of long-term contracts in PG&E's RPS portfolio.

F. Interim Emissions Performance Standard

In D.07-01-039, the Commission adopted a greenhouse gas Emissions Performance Standard (EPS) which is applicable to electricity contract for baseload generation, as defined, having a delivery term of five years or more.

1. Explain whether or not the contract is subject to the EPS.

Pursuant to D.07-01-039, the proposed PPSAs are not subject to the EPS as they are not long-term commitments to procure baseload generation. Rather, the PPSAs are contracts for the sale of RPS-eligible products from PG&E's existing procured energy portfolio with delivery terms that are less than five years.

2. If the contract is subject to the EPS, discuss how the contract is in compliance with D.07-01-039.

See Section II.F.1 above.

3. If the contract is not subject to EPS, but delivery will be firmed/shaped with specified baseload generation for a term of five or more years, explain how the energy used to firm/shape meets EPS requirements.

No firming or shaping will occur under the PPSAs.

4. If the contract term is five or more years and will be firmed/shaped with unspecified power, provide a showing that the utility will ensure that the amount of substitute energy purchases from unspecified resources is limited such that total purchases under the contract (renewable and non-renewable) will not exceed the total expected output from the renewable energy source over the term of the contract.

See Sections II.F.1 and II.F.3 above.

5. If substitute system energy from unspecified sources will be used, provide a showing that:

- a. **the unspecified energy is only to be used on a short- term basis; and**
- b. **the unspecified energy is only used for operational or efficiency reasons; and**
- c. **the unspecified energy is only used when the renewable energy source is unavailable due to a forced outage, scheduled maintenance, or other temporary unavailability for operational or efficiency reasons; or**
- d. **the unspecified energy is only used to meet operating conditions required under the contract, such as provisions for number of start-ups, ramp rates, minimum number of operating hours.**

See Sections II.F.1 and F.3 above.

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.

At the February 26, 2019 conference call-based PRG meeting, PG&E updated the PRG regarding PG&E's intent to issue the Solicitation to sell bundled energy and RECs associated with 2019 and 2020 deliveries.

On April 19, 2019, PG&E provided an update via email to the PRG regarding the qualified bid list for delivery years 2019 and 2020.

On April 25, 2019, PG&E provided a summary of the quantities that PG&E expected to execute via email to the PRG.

PG&E received questions from the PRG on the updates provided by PG&E on April 25, 2019 regarding the qualified bids in the Solicitation and PG&E's intent to execute the PPSAs. Due to their confidential nature, the questions and responses provided by PG&E to the PRG are detailed in Confidential Appendix A.

On May 15, 2019, PG&E provided an update to the qualified bid list via email to the PRG.

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 provided an update to the PRG on May 6, 2019. The IE concluded in this update as well as in the IE report that the Transactions merited 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 contract quantities of energy and corresponding quantities of RECs, these 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 each PPSA in its 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 each PPSA is consistent with the Sales Framework approved as part of PG&E's 2018 RPS Plan and is consistent with Ordering Paragraph 9 of Decision 19-02-007, and that the sale of the bundled renewable electricity and green attributes under each of 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 against costs recorded to the Portfolio Allocation Balancing Account ("PABA") on a pro-rata basis, or in accordance with any Commission decision issued in the future in Phase 2, Track 1 of R.17-06-026.

Protests

Anyone wishing to protest this Advice Letter may do so by letter sent via U.S. mail, facsimile or E-mail, no later than June 24, 2019, which is 20 days after the date of this filing. Protests must be submitted to:

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

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

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

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

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

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

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

Effective Date

Consistent with its approved 2018 RPS Plan, PG&E is submitting this advice letter with a Tier 1 designation to be effective upon submittal.

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. 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>.

/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

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 PPSAs themselves, price information, and analysis of the PPSAs, which are protected pursuant to D.06-06-066 and D.08-04-023. A separate Declaration Seeking Confidential Treatment regarding the confidential information is filed concurrently herewith.



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39E)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Yvonne Yang

Phone #: (415)973-2094

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: Yvonne.Yang@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) #: 5554-E

Tier Designation: 1

Subject of AL: 2019 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreements Between Pacific Gas and Electric Company and Multiple Buyers

Keywords (choose from CPUC listing): Agreements

AL Type: Monthly Quarterly Annual One-Time Other:

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

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

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

Confidential treatment requested? Yes No

If yes, specification of confidential information: See Confidentiality 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, BSLF@pge.com, 1(415)973-7108

Resolution required? Yes No

Requested effective date: 6/4/19

No. of tariff sheets: N/A

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

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

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

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

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

¹Discuss in AL if more space is needed.

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

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Erik Jacobson, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

PACIFIC GAS AND ELECTRIC COMPANY

Appendix A

**Consistency with Commission Decisions
and Rules and Project Development
Status**

(CONFIDENTIAL IN ITS ENTIRETY)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix B

Solicitation Overview

(CONFIDENTIAL IN ITS ENTIRETY)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix C2

Independent Evaluator Report

(REDACTED)

PACIFIC GAS AND
ELECTRIC COMPANY
2019 BUNDLED RPS
ENERGY SALE
SOLICITATION

REPORT OF THE INDEPENDENT
EVALUATOR ON CONTRACTS FOR SALE OF
RENEWABLE ENERGY TO TWELVE BUYERS

MAY 28, 2019

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1. EXECUTIVE SUMMARY

This report provides a review of agreements between the Pacific Gas and Electric Company (“PG&E”) and twelve buyers of renewable energy to be delivered from PG&E’s supply portfolio. These transactions originated from PG&E’s 2019 Bundled 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 parties negotiated agreements. The buyers include:

- Avangrid Renewables, LLC, a subsidiary of Iberdrola, S.A., the Spanish integrated electric utility company, a developer and operator of renewable generation which in the U.S. is primarily wind generation; it participates in wholesale energy marketing and trading related to that business;
- Clean Power Alliance of Southern California (CPA), formerly Los Angeles County Clean Energy, a joint powers authority and community choice aggregator (CCA) currently ramping up retail energy supply operations for customers in several municipalities and unincorporated territory in Los Angeles and Ventura Counties;
- Direct Energy Business Marketing, LLC, a subsidiary of Centrica (parent company of British Gas) that provides retail gas and electricity in north America and serves as energy services provider (“ESP”) to the CCA Lancaster Choice Energy;
- East Bay Community Energy Authority (“EBCE”), a joint powers authority and CCA that serves customers in unincorporated Alameda County and most cities there (excluding Alameda, Newark, and Pleasanton);
- Exelon Generation Company, LLC, a subsidiary of Exelon Corp. (holding company for Commonwealth Edison, Baltimore Gas & Electric, and Philadelphia Electric) that houses the parent company’s power production activities including nuclear generation; another subsidiary, Constellation Energy Resources, LLC, serves retail customers as a direct access ESP;
- Marin Clean Energy (“MCE”), a joint powers authority and CCA serving retail customers in Marin and Napa counties, the city of Benicia, and Contra Costa county excluding Antioch, Brentwood, Clayton, Hercules, Orinda, and Pleasant Hill;
- Monterey Bay Community Power Authority (“MBCP”), a joint powers authority and CCA serving retail customers in Monterey, San Benito, and Santa Cruz counties (excluding King City and Del Rey Oaks);
- Peninsula Clean Energy Authority (“PCE”), a joint powers authority and CCA serving retail customers in San Mateo county;

- Powerex Corp., the wholesale energy trading and marketing subsidiary of the Canadian provincial utility BC Hydro, doing business in California as Powerex Energy Corp.;
- The city of San Jose, whose Community Energy Department operates San Jose Clean Energy (“SJCE”) as a CCA serving retail customers within the city;
- Shell Energy North America (US), L.P. (“SENA”), a U.S. subsidiary of the oil major Royal Dutch Shell plc, involved in wholesale marketing and trading of energy commodities, including provision of energy services and scheduling coordinator services to various public entities, direct access retail customers, and previously to MCE;
- Silicon Valley Clean Energy Authority, a joint powers authority and CCA that serves customers in Santa Clara county, excluding Palo Alto, San Jose, and Santa Clara.

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, the solicitation was robust, and PG&E’s methodology was designed fairly and administered fairly. Arroyo’s opinion is that the twelve sets of contract negotiations were conducted in a manner that was, overall, fair to competing buyers and to ratepayers.

Arroyo believes that the prices and market values of these contracts are reasonable, although the market for Portfolio Content Category 1 (PCC1) energy is illiquid and not transparent so that comparable pricing information is scarce. The transactions are consistent with the sales framework that was approved with PG&E’s CPUC-approved 2018 RPS procurement plan. The portfolio fit of these contracts ranks high. Based on these observations, Arroyo’s opinion is that the twelve executed contracts 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 in PG&E's process of seeking bids for the sale of bundled renewable energy.

A. KEY INDEPENDENT EVALUATOR ROLES

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

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

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

B. IE ACTIVITIES

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

- Reviewed the solicitation protocol and other materials;
- Discussed with the PG&E team its plan to pursue sales of bundled renewable energy;
- Observed (telephonically) negotiations between the parties;
- Participated in a meeting of PG&E’s Procurement Review Group in which the solicitation was discussed;
- Reviewed marked-up drafts of confirmation agreements as parties proposed changes to PG&E’s initial draft form confirmation agreement; and
- Researched recent comparable transactions of PCC1 renewable energy for publicly available market pricing data to serve as benchmarks for price reasonableness.

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 February 27, 2019, PG&E directly emailed a pre-issuance market notice for the solicitation to a focused contact list of 109 individuals representing 71 entities. This was followed by an e-mail on March 23 announcing the issuance of the solicitation. In the e-mail, PG&E provided a link to its public webpage for the solicitation that provided a CPUC-approved version of an Edison Electric Institute (EEI) short-form confirmation agreement, a bid form composed as a spreadsheet, a solicitation protocol, and a non-disclosure agreement. The notice also included registration information for a participants' webinar. PG&E received fourteen bid packages,² timely submitted prior to the deadline, though some were non-conforming.

A. ADEQUACY OF SOLICITATION OUTREACH

PG&E previously held solicitations to sell RPS-eligible energy in 2016³, 2017, and 2018 and had developed a customized contact list of potential renewable energy buyers for those efforts. For the current solicitation, PG&E augmented the prior list with additional contacts. This list does not represent a thoroughly comprehensive list of all parties that might ever have an interest and capability of buying bundled renewable energy, but it represents a solid list of leads and shows continued enhancement over prior lists; the universe of potential or likely buyers has expanded as existing CCAs have ramped up the scope of their activities and new CCAs have formed. Figure 1 displays the composition of the focused contact outreach list used for the market notice for the issuance of the solicitation by type of entity; "other" includes IOUs, a solar developer, and a solo consultant.

Additionally, PGE e-mailed the market notice to its standing RFO contact list, which the utility uses for outreach for most energy procurement solicitations for buying products. This much larger list (about 2,400 contacts) is primarily composed of generation developers and businesses that service their needs, and therefore does not focus on the likeliest candidates to seek to buy RPS-eligible energy rather than to sell it. Figure 2 displays the composition of this RFO contact list. Among the sectors likeliest to participate in this specific solicitation, wholesale marketers and ESPs and utilities including CCAs featured prominently in the list.

In the actual event, all the participants in the solicitation except one (██████████) were contacted through the energy sale-specific contact list, though CPA was contacted through its energy procurement consultant. All of the participants including that

² PG&E was authorized by the CPUC in Decision 19-02-007 to conduct solicitations to sell RPS volumes for five years or less. PG&E chose in this solicitation to seek separate bids for energy delivery in either or both of the two calendar years 2019 and 2020.

³ The 2016 effort was an informal "e-solicitation" using e-mail to contact a list of potential participants rather than broad public outreach: it did not use a formal solicitation protocol.

Arroyo's opinion is that PG&E adequately distributed notices of this solicitation. For future energy sales solicitations, PG&E might benefit by adding to its outreach contacts CCAs that are just now ramping up their start-up activities but may not yet have been positioned to respond directly to the current solicitation, such as Solana Energy Alliance, Desert Community Energy, San Jacinto Power, King City Community Power, and other emergent CCAs outside the PG&E service territory.

B. CLARITY AND CONCISION OF SOLICITATION MATERIALS

PG&E published on its website a written public 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 ten 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 2018 RPS Renewable Energy Credit (REC) Sale RFP was 19 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.

Arroyo's opinion is that solicitation materials were generally clear to most potential bidders. Questions posed by potential participants prior to the due date mostly concerned technical issues regarding visibility into monthly volumes of deliveries, the treatment of PG&E's bankruptcy as an issue in the confirmation agreement, fixed-price contracting, advance scheduling of monthly volumes, and the monthly logistics of day-ahead scheduling. These queries had the nature of seeking more detail on mechanics rather than expressing concern or confusion about the solicitation's basics. Of the fourteen bidders, [REDACTED] failed to submit conforming bid packages as described in Chapter 4.

One indicator of clarity is that of [REDACTED] that registered for the solicitation on the PowerAdvocate platform, fourteen submitted proposals, suggesting that solicitation materials were on point for most of the entities that actively responded to the outreach notices. The other [REDACTED] registrants included [REDACTED] that did not submit a proposal by the deadline. It would generally be illogical for generators to participate in a solicitation for buyers of energy from PG&E's portfolio unless they pursued a wholesale energy marketing and trading business that would profit from buying and selling RECs. Arroyo's inference is that the developer, who has previously submitted offers for proposed wind farms to PG&E's RPS Requests for Offers, might have lacked clarity about what PG&E's intent for this energy sale solicitation was.

C. BIDDERS' CONFERENCE

PG&E convened a participants' webinar on April 9 to provide information to potential participants. The presentation covered an overview of the solicitation's product, delivery term, and schedule, a review of the confirmation agreement, a discussion of the evaluation criteria, and detail of the logistics of submitting bid packages. At the end of the webinar PG&E took questions from the audience and provided answers. Both questions and answers were posted on the utility's public website along with the presentation package, an

audio file, and a transcript in order that potential participants that did not attend the live webinar could benefit from the discussion.

The queries posed in the webinar tended to focus on the logistics of the scheduling of energy deliveries, the firmness of deliveries and visibility into volumes, and the pricing mechanism. There was one question about PG&E's bankruptcy status as it affects the contract.

D. ROBUSTNESS OF THE SOLICITATION

PG&E did not publicly state a quantitative target for this solicitation. In its 2018 renewable energy procurement plan filing it provided a confidential framework for sales of excess RPS volumes. [REDACTED]

[REDACTED]. These amounts were not explicitly stated as goals [REDACTED]

Bids were received from fourteen entities. Two of the bid packages failed to conform to PG&E's stated requirements, so the utility asked those participants to revise them, and then accepted the revised packages. The total volume of the bids including these initial revisions [REDACTED]

[REDACTED] This was a much more robust response than that of PG&E's autumn 2018 solicitation that sought sales for delivery in 2019 and 2020. [REDACTED]

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

- Only a modest number of California retail energy providers appear to hold net short RPS compliance positions for the third and fourth compliance periods. The IOUs hold long positions, leaving some but not all 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 short-term purchases of energy produced in existing facilities, as opposed to long-term contracts with proposed new projects that would bring additional renewable generation into the market, given their compliance and procurement strategies. Some CCAs have faced criticism from stakeholders for purchasing RECs originating from existing facilities as opposed to creating additional renewable energy supply.
- 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. PG&E's list of facilities that will produce the volumes is

largely made up of projects sited outside any existing CCAs' and POU's territories, which simply reflects the geography of solar, wind, and other renewable resources.

- Some CCAs 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 impending obligation for 65% of retail sellers' RPS procurement to be made up of long-term contracts by the beginning of the fourth compliance period.
- Some CCAs seem to prefer to procure new RPS-eligible energy through their own Requests for Offers rather than responding to sellers' solicitations to sell.

The solicitation was robust. Arroyo speculates that CCAs in particular are currently in need of fulfilling their procurement targets for the remainder of this year and for 2020 as the size of their retail load following phase-in and their customers' preferences for high or medium-green products becomes clearer. Some CCAs are adding new cities to their service territories or adding different customer classes, and may be planning to fulfil their increasing compliance obligations through the IOUs' current round of sales solicitations.

E. PARTICIPANTS' FEEDBACK ABOUT THE PROCESS

PG&E intends to seek feedback about the solicitation from both participants and from non-participants on its focused sale-specific contacts list. Systematic feedback had not yet been solicited nor received at the time this report was finalized.

PG&E circulated a survey to participants and non-participants following its autumn 2018 solicitation that closely resembled the current request for proposals; observations from the feedback to that prior survey included:

- Some non-participants stated that they did not submit bids because of the bid submission deadline or the limitations on the delivery term.
- More than 80% of respondents agreed that PG&E's instructions for submitting bids were clear.
- More than 80% of respondents agreed that PG&E clearly identified the evaluation criteria for the solicitation.
- Only one respondent believed that the on-line platform was difficult to use or that the bid form was difficult to fill out.
- Qualitative feedback included:
 - A preference for PG&E to allow bid curves, e.g. tiered bids, which were prohibited in this solicitation; and
 - A request to more clearly define the evaluation criteria.
- One non-participant appeared to have missed the bid deadline by admitted lack of vigilance. (In the current solicitation, PG&E allowed considerably more time between market notice and bid due date than in the autumn 2018 solicitation, in order to increase the likelihood that bids could be prepared and submitted timely.)

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:

Quantitative criterion. In this sale solicitation, PG&E sought to maximize the revenue from bids received. This criterion differs from PG&E's prior Bundled RPS Energy Sales solicitations, in which the sole quantitative criterion was price. These two criteria would

generally be expected to lead to identical or similar selection results, however there may be bidding situations in which selections would differ. One example would be when a participant bids both for 2019 and 2020 separately and also for the 2019-20 strip, if the separate bid for calendar 2019 proposes a much smaller volume than the strip bid but at a slightly higher price. (Under the rules in the protocol, the volumes for 2019 and 2020 delivery in a strip bid must be identical.) Accepting the strip bid provides larger revenue than accepting the two calendar-year bids, but accepting the two separate calendar year bids is consistent with preferring higher-priced bids over lower-priced bids. In the 2019 solicitation the strip bid would be selected, while in prior solicitations the separate calendar-year bids would be selected.

In the example provided above, PG&E's approved least-cost/best-fit PAV methodology would lead to a selection that differs from one based on maximum revenue. This is because the PAV methodology ranks based on an intrinsic variable, just as price is an intrinsic variable, rather than on an extrinsic variable like revenue. The difference between using price and using total revenue as criterion is subtle, so Arroyo doubts that using total revenue will frequently result in bid selections that differ from those that would be made using the LCBF methodology. However, the criterion of maximum total revenue was stated clearly within PG&E's 2018 RPS procurement plan that received CPUC approval in Decision 19-02-007, whether it is inconsistent with the utility's approved LCBF methodology or not.

Credit. PG&E stated it could consider the creditworthiness of bidders, focusing on their ability to fulfill obligations, and on whether entering new agreements may cause excess credit concentration in the utility's exposure to participants or banks. The solicitation protocol does not refer to credit rating or other explicit measures of creditworthiness, which might have been used to distinguish between CCAs, which largely 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 quantity, delivery period, and credit terms.

Other criteria. In its protocol, PG&E left open its discretion to employ other qualitative criteria in evaluating bids. These included but were not limited to consideration of past adverse commercial experience doing business with any specific participant, 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-firm confirmation agreement.

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

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

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

Consistency with RPS Procurement Plan. In PG&E's 2018 RPS procurement plan, accepted in CPUC Decision 19-02-007, the utility sought and received approval for a framework "to assess whether to hold or sell excess RPS volumes". PG&E views the volumes to be sold in these contracts to be surplus to its compliance needs. The current solicitation is clearly anticipated by the plan, that stated "PG&E proposes to pursue short-term RPS sales in 2019" and that PG&E "intends to use the revised RPS Sales Framework, if approved, in 2019 to target issuing three, with a minimum of two, sales solicitations". The CPUC found PG&E's proposed sales framework to be reasonable and authorized the utility to conduct solicitations to sell excess RPS volumes for sales agreements of five years or less. Such contracts are allowed if they use the pro forma sales agreement included in PG&E's 2018 RPS procurement plan and are executed during the period covered by the 2018 RPS procurement plan or prior to CPUC approval of the 2019 RPS procurement plan.

The process for evaluation and selection of bids for short-term sales was consistent with PG&E's CPUC-approved sales framework as laid out in confidential Appendix G of the approved 2018 RPS procurement plan.

Market Valuation. PG&E did not calculate Portfolio-Adjusted Values for the bids for these renewable energy volumes. Directly using the PAV metric would have been consistent with its past practice in renewable energy procurement and with the 2018 RPS procurement plan's statement that the use of PAV ensures procurement providing the best fit for PG&E's portfolio at the least cost.

[REDACTED]

As the valuation method directly followed PG&E's framework detailed in its Appendix G of the approved procurement plan, bid rankings were calculated in a manner consistent with the approved protocol and with CPUC direction. PG&E did not include any costs or benefits that should not have been included.

Arroyo notes that [REDACTED]

[REDACTED]



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

In this solicitation, PG&E made it clear to participants that it intended to accommodate no material changes to its short-form or long-form confirmation agreements.

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 process to choose bids for contracting in its 2019 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?

Some other considerations appear relevant to reviewing PG&E's administration of its methodology.

- Were the decisions to reject higher-valued proposals from the short list because of low scores in criteria or preferences other than market valuation applied consistently across all proposals? Were the selections of lower-valued proposals in preference to higher-valued ones based on their superior attributes in non-valuation criteria made consistently, or were high-valued proposals skipped over unfairly?
- If PG&E chose to contract for a different volume or pricing of sales than strictly based on the approved framework, was the decision made fairly in how it affected bidders, and based on factors stated in Appendix G that detailed the framework?
- 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 criterion of maximum total revenue to rank bids. [REDACTED] passed a review for the qualitative criteria of creditworthiness and modifications.

Market Valuation. Fourteen bid forms were submitted timely before the deadline. [REDACTED]

[REDACTED] Figures 3 and 4 display, for each of the two delivery years, bid supply curves that show how the bid prices compared to the [REDACTED] ⁴ PG&E rejected [REDACTED]

Figure 3.



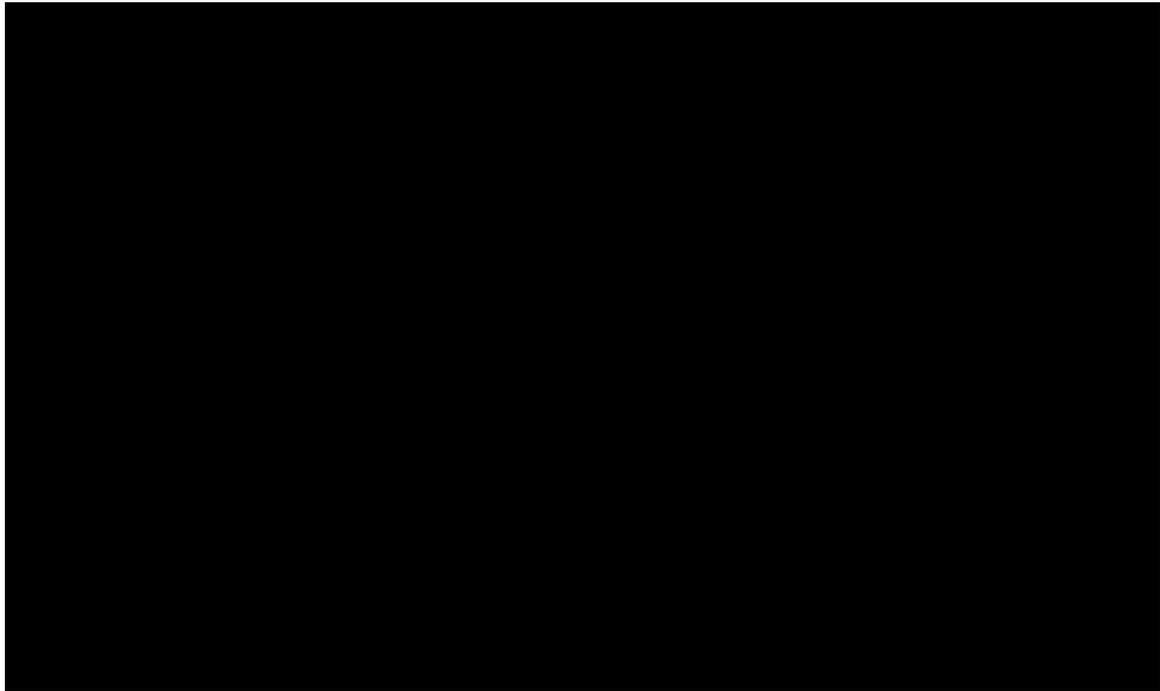
PG&E used the framework specified in confidential Appendix G of its 2018 RPS procurement plan to evaluate these proposals. [REDACTED]

⁴ [REDACTED]

[REDACTED]

This evaluation was in Arroyo's opinion fully consistent with the sales framework laid out in Appendix G using PG&E's currently assumed input parameters.

Figure 4.⁵



Credit. [REDACTED]

[REDACTED]

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

[REDACTED]

[REDACTED]

⁵ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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

[REDACTED]

C. RESULTS ANALYSIS

Arroyo agreed with PG&E's selection of a short list. Arroyo agrees that PG&E made reasonable and justifiable decision to shortlist bids and to exclude bids, consistent with the CPUC-approved framework outlined in PG&E's 2018 RPS procurement plan. Arroyo independently performed a separate bid ranking and selection process and arrived at the same selection as PG&E.

Non-conforming bid packages. Some participants submitted non-confirming bid packages before the April 18 deadline. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Summary. Observations regarding PG&E's administration of the evaluation methodology include:

- There were no instances in which Arroyo and PG&E disagreed about the utility's handling 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 that submitted conforming bids in disparate ways; for example, its evaluation of bids from CCAs did not differ from that of bids from energy service providers.
- The economic evaluation of bids was fair and consistent.
- Questions from participants were answered fairly and consistently.
- The judgments that served as the basis for selecting bids for execution were based solely on evaluation criteria that were stated publicly in the solicitation protocol.
- The key parameters used in the quantitative evaluation were [REDACTED]
- Because PG&E used maximizing revenue as its sole quantitative evaluation criterion, it did not consider transmission costs or integration adders in selection. However, without knowing in advance which specific resources in PG&E's supply portfolio would be used to serve which sales contract, there is no basis for distinguishing between bids using transmission costs or integration adders, and it would seem inappropriate to involve such transmission and integration costs in bid evaluation. The key attributes that distinguished bids was the bidders' proposed pricing for green attributes and volume, not energy pricing.
- [REDACTED]
- Arroyo agrees that based on PG&E's framework for evaluating bids to sell renewable energy, the utility made reasonable and justifiable decisions to select bids for negotiation.

Arroyo's opinion is that, overall, PG&E's evaluation of bids 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 their bids had been selected, rejected, or waitlisted on April 19, 2019. PG&E began negotiations with counterparties the next business day, concluding with execution of most of the twelve agreements from the solicitation in the period of May 6 through May 17. Contracts with Exelon and MCE were signed on May 21 and 24.

Arroyo telephonically observed negotiation sessions between commercial teams of PG&E and the individual buyers. Arroyo also reviewed marked-up draft contracts to identify specific proposals and counterproposals parties made during discussions. The starting point for negotiations with parties that already had in place EEI master agreements with PG&E was the EEI short-form confirmation agreement that was posted publicly with solicitation materials.

Among the changes in this contract version from the version of the confirmation agreement that was appended to the final 2018 RPS procurement plan as Appendix F.3 was the deletion of a negative declaration (6.1(e)) that PG&E makes no representation or warranty about any portfolio content category designation for its deliveries. Also, PG&E's bankruptcy counsel had drafted a new provision 6.4 regarding the utility's status in Chapter 11 proceedings to ensure that that status did not constitute an event of default or entitle a buyer to terminate the transaction. This provision also ensured that certain sections of the parties' EEI master agreement relating to bankruptcy would not be applicable to the confirmation agreement.

Arroyo's opinion is that PG&E's individual negotiations with the twelve counterparties were conducted in a manner that was fair to competitors. The last chapter of this report describes how the contracts that resulted from negotiations also meet the requirements of the approved framework for surplus energy sales and are fair to ratepayers.

A. PRINCIPLES FOR EVALUATING THE FAIRNESS OF NEGOTIATIONS

Arroyo employed some principles to evaluate the degree of fairness with which PG&E handled negotiations to sell renewable energy to the nine successful bidders and to SJCE.

- 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 AVANGRID RENEWABLES, LLC

Avangrid Renewables, LLC (formerly Iberdrola Renewables) develops, owns, and operates a large portfolio of renewable energy generators in the U.S., primarily wind generation but also some solar photovoltaic, fossil-fueled, and biomass-fueled facilities. Avangrid has launched its own balancing area authority, and also engages in wholesale energy marketing and providing other energy services.

[REDACTED]

The parties executed an agreement on May 14, 2019.

C. NEGOTIATIONS BETWEEN PG&E AND CLEAN POWER ALLIANCE OF SOUTHERN CALIFORNIA

Clean Power Alliance of Southern California is a joint powers authority and CCA currently in the process of ramping up retail energy supply operations. It began deliveries to municipal accounts of unincorporated Los Angeles County in February 2018, and to commercial and industrial accounts in South Pasadena and Rolling Hills Estates and in unincorporated Los Angeles County territory in June 2018. At full phase-in it will serve all retail customers in unincorporated Los Angeles and Ventura Counties and in more than two dozen municipalities within Edison's distribution and transmission service territory; in May 2019 it will begin service to commercial and industrial customers. It began procuring power supply in mid-2017.

In early 2018 PG&E and CPA executed a sale agreement for RPS-eligible energy for 2019 and 2020 deliveries as a result of CPA's 2018 Short-Term Request for Offers. The two parties also negotiated and executed an EEI master agreement as part of that process. PG&E and CPA also executed an agreement for deliveries of RPS-eligible energy in 2019 and 2020 based on PG&E's September 2018 Bundled RPS Sale solicitation.

Issues addressed in discussions between the parties included:

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The agreement was executed on May 13.

D. NEGOTIATIONS BETWEEN PG&E AND DIRECT ENERGY

Direct Energy Business Marketing, LLC is a Houston-based subsidiary of Centrica, the parent corporation of British Gas. It provides natural gas and electricity to retail customers in several jurisdictions in the U.S. The CCAs Lancaster Choice Energy and Peninsula Clean Energy have entered into contracts with Direct Energy for energy supply and scheduling services. PG&E and Direct Energy previously executed energy sales transactions for deliveries in 2017 and 2019 based on the utility's sales solicitations in 2017 and 2018; more recently the parties also bilaterally negotiated a sales transaction for 2018 delivery. PG&E and Direct Energy negotiated and executed an EEI master agreement and collateral annex in August 2018; this allows the parties to employ the short-form version of the confirmation.

PG&E and Direct Energy's negotiations were [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

The agreement was executed on May 6, 2019.

E. NEGOTIATIONS BETWEEN PG&E AND EAST BAY COMMUNITY ENERGY AUTHORITY

East Bay Community Energy Authority, a California joint powers authority, is a CCA serving customers in most but not all communities of Alameda County. It phased in retail service to most customer classes in 2018. PG&E and EBCE had previously executed a sales agreement arising from the utility's September 2018 Bundled RPS Energy Sale solicitation. Negotiations between PG&E and EBCE included discussions of:

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

[REDACTED]

[REDACTED]; the agreement was signed on May 6.

F. NEGOTIATIONS BETWEEN PG&E AND EXELON GENERATION COMPANY, LLC

Exelon Generation Company, LLC is a subsidiary of Exelon Corporation, the parent corporation of Commonwealth Edison, Philadelphia Electric Company, Baltimore Gas & Electric, and other utilities. It owns regulated and unregulated generation facilities including Exelon’s nuclear fleet; it provides natural gas and power wholesale marketing and trading services. An affiliate, Constellation Energy, is a direct access retail energy provider in California. Exelon Generation Company has previously been contracted to deliver energy to MCE from wind generation in the Northwest. Exelon previously served Sonoma Clean Power as energy service provider including renewables and continues to provide that CCA with conventional generation. Exelon was selected to serve as an ESP to CPA for Phase 1 energy deliveries starting February 2018. PG&E and Exelon previously executed sales agreements for RPS-eligible energy in 2016, 2017, and early 2018 based on solicitations.

Because Exelon and PG&E do not have an executed EEI master agreement, the parties started discussions from their previously negotiated long-form confirmation agreement. Negotiation issues included:

- [REDACTED]

⁶ The reader may notice that [REDACTED] Arroyo believes that this is likely because CPA, EBCE, MBCP, MCE, SVCE, and the city of San Jose have engaged the same outside counsel. [REDACTED]

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

[REDACTED] The contract was executed on May 21.

G. NEGOTIATIONS BETWEEN PG&E AND MARIN CLEAN ENERGY

Marin Clean Energy is a joint powers authority and CCA that serves retail customers in Marin and Napa counties, in unincorporated Contra Costa county and several of the cities there, and the city of Benicia. It has not previously executed a bundled RPS energy sale transaction with PG&E. Negotiations covered topics including:

- [REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED] The contract was signed on May 24.

H. NEGOTIATIONS BETWEEN PG&E AND MONTEREY BAY COMMUNITY POWER

Monterey Bay Community Power Authority is a joint powers authority and CCA that is has phased in energy service in 2018 to retail customers in most of its three-county territory (excluding Del Rey Oaks and King City) and will be expanding its service to Morro Bay and San Luis Obispo in 2020. All of MBCP's customers for retail energy are also customers of PG&E's transmission and distribution business. PG&E and MBCP had previously executed an EEI master agreement in early 2018 to facilitate transactions for various products including Resource Adequacy. In 2018 PG&E and MBCP executed two confirmation agreement sales for RPS-eligible energy, one based upon PG&E's participation in MBCP's competitive RFP and the other on PG&E's September 2018 Bundled RPS Energy Sale solicitation. Issues discussed by PG&E and MBCP for the present transaction included:

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

[REDACTED]

[REDACTED]

[REDACTED]; the contract was executed on May 6.

I. NEGOTIATIONS BETWEEN PG&E AND PENINSULA CLEAN ENERGY AUTHORITY

Peninsula Clean Energy Authority is a CCA and joint powers authority organized by San Mateo County and all twenty cities in the county, that began serving some retail customers in October 2016 and phased in the rest in 2017. It previously contracted with Direct Energy as energy service provider and has also begun signing long-term contracts directly with generators for supply. PG&E and PCE previously executed a sales transaction that arose from the utility's February 2018 Bundled RPS Energy Sales solicitation. Issues discussed by PG&E and PCE included:

- [REDACTED]

[REDACTED]

[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

[Redacted]

[REDACTED]

[REDACTED] the contract was executed on May 17.

J. NEGOTIATIONS BETWEEN PG&E AND POWEREX CORP.

Powerex Corp. is the wholesale energy marketing and trading subsidiary of BC Hydro and Power Authority, the government-owned crown corporation that serves as vertically integrated monopoly electric utility for most of the province of British Columbia. Powerex Corp. does business in California as Powerex Energy Corp. It has previously sold renewable energy products to CCAs, including sales of PCC2 energy to Sonoma Clean Power and apparently of PCC1 energy to Marin Clean Energy. PG&E and Powerex previously executed a sale agreement based on the utility's September 2018 Bundled RPS Energy Sale solicitation. Issues discussed by PG&E and Powerex included:

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

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]. The agreement was executed on May 17.

K. NEGOTIATIONS BETWEEN PG&E AND THE CITY OF SAN JOSE

The Community Energy Department of the city of San Jose operates a CCA that has phased in energy service to retail customers within the city in 2019. The city and PG&E executed an RPS energy sale transaction in late 2018 that resulted from the city's request for proposals held in August 2018. Issues discussed by the parties in negotiations included:

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

[REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. The agreement was executed on May 14.

L. NEGOTIATIONS BETWEEN PG&E AND SHELL ENERGY NORTH AMERICA

Shell Energy North America (US), L.P. participates in a variety of wholesale energy commodity markets as an intermediary and has served California CCAs and public agencies with energy services. In 2018 PG&E and SENA executed two sales contracts for 2019 and 2020 deliveries of RPS-eligible energy as a result of PG&E's bundled renewable energy solicitations. Issues discussed by PG&E and SENA in the present negotiation included:

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] the contract was signed on May 6.

M. NEGOTIATIONS BETWEEN PG&E AND SILICON VALLEY CLEAN ENERGY AUTHORITY

Silicon Valley Clean Energy Authority is a joint powers authority and CCA organized by Santa Clara County that began serving retail customers in April 2017. Its territory includes unincorporated Santa Clara County and most municipalities in the county except San Jose (which has its own CCA), Palo Alto, and Santa Clara (which have municipal utilities). PG&E an SVCE previously executed a sale transaction resulting from the utility's spring 2018 solicitation. Issues discussed by PG&E and SVCE included:

- [REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]; the contract was executed on May 6.

N. FAIRNESS OF NEGOTIATIONS

In Arroyo's opinion, negotiations between PG&E and each of the twelve buyers were conducted fairly, overall. PG&E endeavored to avoid any significant modifications of the confirmation agreements from the CPUC-approved version in its 2018 RPS procurement plan, and generally succeeded. Each of the twelve buyers was given an equitable opportunity to advance its proposals towards execution. The distribution of risk between buyers and seller is distributed equitably across these contracts. Arroyo did not observe PG&E providing any individual buyer with any non-public information that materially advantaged a buyer against ratepayers or competitors.

Credit requirements. [REDACTED]

Arroyo's opinion is that the treatment of the buyers [REDACTED] was based on [REDACTED], and on the [REDACTED], rather than on any unfairly favorable treatment of familiar counterparties or discrimination against any class of counterparty. [REDACTED]

Modifications. Most of the negotiations involved [REDACTED]

[REDACTED] most changes [REDACTED] were minor.

[REDACTED]

[REDACTED]

[REDACTED]

Failed negotiation. While PG&E selected

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[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.”

This section reviews PG&E's dealings with CCAs in the course of this solicitation.

In Arroyo's opinion, PG&E did not refuse to make economic sales of surplus RPS-eligible energy to any of the CCAs involved in this solicitation, nor did it refuse in advance to deal with any of the CCAs. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Arroyo's opinion is that PG&E complied with the requirements of the CCA code of conduct in how it handled negotiations with these counterparties.

Summary. Arroyo's opinion is that contract-specific negotiations with the participants were, overall, handled fairly with respect to competitors. Bids were accepted or rejected entirely based upon PG&E's approved framework for sales. No individual counterparty was materially disadvantaged by PG&E's more favorable treatment of its competitors. Arroyo believes that PG&E's negotiations were consistent with the requirements of the CCA Code of Conduct. Further discussion of the fairness to PG&E's ratepayers of how negotiations were handled is provided in the next chapter.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

As a result, Arroyo cannot confirm at this point in time that PG&E’s use of its approved methodology for this solicitation resulted in the best overall value for ratepayers. The distinction between the results and an outcome with “best overall value” is a subtle one.

C. CONSISTENCY WITH PROTOCOL AND PROCUREMENT PLAN

PG&E’s sale of bundled energy in these contracts conforms to its 2018 RPS procurement plan, in which the utility states its intent to sell RPS volumes, and more specifically conforms to the detailed framework for excess sales provided within the plan. The sale conforms to the needs of PG&E’s portfolio and its RPS requirements, because it reduces the excess RPS procurement level and PG&E’s excess REC bank by selling now for ratepayer benefits instead of carrying forward to future periods. The process of selecting bids was fully consistent with the solicitation protocol, and Arroyo’s opinion is that the selection of bids was reasonable.

D. MERIT FOR CPUC APPROVAL

This section reports on the IE’s view of the merits of the twelve sales contracts.

Pricing and market value. In these contracts PG&E will sell bundled RPS-eligible renewable energy at market index plus a REC price [REDACTED]

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

PG&E’s most recent competitive solicitation to sell renewable energy in late 2018 elicited bids priced at [REDACTED]

[REDACTED] The CPUC approved those transactions. [REDACTED]

There are some pricing data for recent renewable energy sales to or from publicly-owned utilities and CCAs for deliveries in 2019 and 2020 that have been made public:

- At the beginning of 2016, Silicon Valley Power (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 Roseville executed a ten-year contract in early 2015 with Powerex to provide it with 75 GWh/year of PCC1 energy. The pricing of deliveries escalates with each contract year. The contract pricing for deliveries to Roseville is market index + \$15.30 and \$16.30/MWh in 2020 and 2021.
- In summer 2016, the city of Pasadena approved a four-year contract with Powerex to buy both PCC1 and PCC2 energy in the 2017 – 2020 period. The sale includes a total of 17.5 GWh of PCC1 energy priced at market index + \$13.95/MWh.

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

- In February 2017 SVCE executed a PPA with Regenerate Power LLC, the Palo Alto-based developer of a new solar photovoltaic project in the Imperial Valley, for deliveries of PCC1 energy during the 2018 – 2021 period. The total price for bundled PCC1 energy under this contract was \$42, \$40.5, \$39.3, and \$39 per MWh for the delivery years 2018, 2019, 2020, and 2021 respectively. The fixed-price transaction differs in structure from PG&E's sale of bundled PCC1 energy, so one can only guess what REC price was implied for the transaction. Arroyo speculates that the implied REC price for the delivery period, as of spring 2017, may have been less than \$14/MWh but would depend on the parties' assumed forward energy pricing curves and their expectations for the shape of the generation profile and the hourly market pricing profile.
- In January 2018 Redwood Coast Energy Authority executed a PPA with DG Fairhaven, LLC, the owner of a biomass-fueled generator on the Samoa peninsula in Humboldt County, for deliveries of 87.6 GWh of PCC1 energy from March 2018 through February 2019, with potential for extensions. The price for the base PCC1 energy deliveries is \$65/MWh, and the contract calls for payments of market index plus a REC price of \$14.50/MWh for deliveries above the contract capacity of 10 MW in any settlement period (the generation unit has net rated capacity of 17.25 MW).

In January 2019 RCEA agreed to extend its contract with DG Fairhaven into the March – December 2019 period; deliveries would be priced again at \$65/MWh in March, but drop to \$59/MWh in the April through December period because DG Fairhaven sold the Resource Adequacy provided by the facility to another buyer. Price would increase to \$67/MWh in 2020, and will be increased in 2021 based on changes in consumer price index.

Arroyo notes that the prices for this PPA is far above market price for PCC1 energy, but this CCA counts among its objectives the development of local renewable resources and energy-related economic advancement. The pricing of surplus delivered energy, however, appears to be priced at the CCA's view of fair market price for PCC1 energy deliveries.

RCEA similarly extended its contract with Humboldt Redwood Company with pricing of PCC1 deliveries at \$67/MWh in 2020 and escalating starting in 2021 based on CPI increases.

- 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 Desert Harvest II for deliveries of PCC1 energy at a price of market index + \$15.25/MWh. Deliveries will commence upon commercial operation, which was expected to be December 2020.
- In 2018, the city of Santa Clara and 3Degrees Group, Inc. amended an existing contract to accommodate purchases of RECs for delivery to customers of the city utility Silicon Valley Power through 2021. The RECs are priced at \$15/MWh, to be matched with customer usage. However, this is not an apples-

to-apples comparison with PG&E’s bundled RPS energy sale, because 3Degrees is delivering Green-e Energy Certified RECS that may be sourced from solar projects anywhere in the WECC with a “preferred generation location of California.”

- Northern California Power Agency serves the electricity procurement function for the CCA Pioneer Community Energy. In July 2018 it reported to PCE its results for RPS-eligible energy procurement, showing actual price of \$15/MWh for PCC1 RECs for delivery in February through May 2018 and \$16.25/MWh for PCC1 RECs for delivery in June through December 2018.
- In its 2018 Integrated Resource Plan, released in September 2018, the city of Riverside stated its intent to sell excess PCC1 energy through 2020, expecting a sales price of \$16/REC. The city’s IRP is premised on market quotes it obtained in 2018.

Other older transactions for PCC1 energy are also publicly visible, but these may be poorer benchmarks for a transaction for 2019 and 2020 deliveries.

All of PG&E’s contract deliveries in 2019 from the solicitation [REDACTED]

[REDACTED] The comparison of prices to those of publicly visible transactions of the recent past supports a view that the pricing of the current sales transactions is fair and reasonable.

[REDACTED]

[REDACTED]

[REDACTED]

Portfolio fit. The RECs intended for use in these 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 rather than to hold them for RPS compliance needs later. PG&E's estimates indicate that its RPS net position in the third and fourth compliance periods is long, so the twelve sales contracts fit with the utility's portfolio strategy of reducing the surplus REC position in 2019 and 2020 and monetizing part of the surplus for near-term value through REC sales.

Summary. The twelve sales transactions were consummated at prices that appear to be near or within the range of market pricing for PCC1 RECs available for the delivery years in question, based on a very limited number of publicly visible comparable transactions and based on comparison to sales contracts that PG&E has executed with buyers previously. The contracts are consistent with PG&E's 2018 RPS procurement plan and its framework for sales of surplus RPS-eligible energy, and fit well with PG&E's strategy for RPS portfolio management. Arroyo's opinion is that the methodology for evaluating and selecting a short list and the administration of that methodology were fair.

[REDACTED]

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

On that basis, Arroyo's opinion is that the twelve contracts merit CPUC approval.

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Appendix D

Summary of Contracts

(CONFIDENTIAL IN ITS ENTIRETY)

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Appendices E1-E12

**Comparison of PPSAs with PG&E's 2019
Pro Forma RPS Short-Term Sales
Confirmation**

**(CONFIDENTIAL IN THEIR
ENTIRETY)**

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Appendices F1-F12

Power Purchase and Sale Agreements

**(CONFIDENTIAL IN THEIR
ENTIRETY)**

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Appendix G

PG&E Notification of Solicitation Issuance

Appendix G

Notification of Solicitation Issuance

As mentioned in section I.B.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 over 2,700 contacts. A sample of the electronic market notice of the 2019 Renewable Energy Sale Solicitation issuance is provided below.

Market Participants,

PG&E is pleased to announce the issuance of its 2019 Bundled RPS Energy Sale Solicitation for sales of bundled Renewable Portfolio Standard (RPS) - eligible energy and corresponding Renewable Energy Credits (RECs) generated during 2019 through 2020 pursuant to a confirmation. To be considered in this solicitation, all offers are due no later than 1:00 PM Pacific Prevailing Time (PPT) on April 18, 2019.

For parties interested in finding out more information on the REC Solicitation, all solicitation materials are available on PG&E's website at: www.pge.com/rfo under "2019 Bundled RPS Energy Sale Solicitation."

PG&E will use the Power Advocate platform for the receipt of bids in this solicitation. All participants are required to pre-register through Power Advocate in order to submit a bid. The instructions for bid submittal are available on PG&E's website at the link above.

Participants' Webinar:

- Date: April 9, 2019
- Time: 11:00 - 12:30 PM (PPT)
- Webcast Info: Please note that for optimal viewing, it is best not to use VPN, but instead to connect directly to the internet. Please disable your pop-up blockers in order to view the content in its entirety. This event is being streamed. It is recommended that you listen via your computer speakers.
 - Webinar: https://engage.vevent.com/rt/pge_-04092019
 - Additional options for audio listening: Toll-Free Attendee Dial In: 866-294-4341 / Conference ID: 6591806

Any questions regarding this solicitation may be directed to: RECSolicitations@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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Appendix H

PG&E Solicitation Bid Form

0% Complete
0 of 36 input requirements satisfied

Contact Information	
Bidder Name:	
Bidder Type:	
Email:	
Phone:	
Street:	
City:	
State:	
Zip:	
Buyer/Counterparty:	
Buyer/Counterparty Type:	
Email:	
Phone:	
Street:	
City:	
State:	
Zip:	

Product & Bid Information	
Product:	Bundled RPS-eligible energy and associated RECs
Delivery Location:	NP15, SP15, and/or ZP26
Payment Index:	Trading Hub Price

Delivery Term 1: 2019	
I am bidding into Delivery Term 1:	<Choose>

Delivery Term 2: 2020	
I am bidding into Delivery Term 2:	<Choose>

Delivery Term 3: 2019 - 2020 Strip	
I am bidding into Delivery Term 3:	<Choose>

PG&E can accept one or both of these.	But...PG&E cannot accept both.
Or PG&E can accept this.	

Participant's Non-Disclosure Agreement (NDA)	
By submitting an offer, Participant agrees to adhere and be bound by the confidentiality provisions described in the 2019 Bundled RPS Energy (REC) Sale Solicitation Protocol and the Confidentiality Agreement included as Attachment C to the Solicitation Protocol.	
Title:	
Electronic Signature:	
Select "Yes" to certify that the typed name acts as your electronic signature.	

Acknowledgement of Protocol	
By selecting "Yes" Participant hereby agrees to the terms of the Solicitation Protocol. Participant acknowledges that any costs incurred to become eligible or remain eligible for the solicitation, and any costs incurred to prepare a bid for this solicitation are solely the responsibility of Participant.	
Title:	
Electronic Signature:	
Select "Yes" to certify that the typed name acts as your electronic signature.	

Participant Authorization	
By selecting "Yes" Participant hereby confirms that they are "a duly authorized representative of Participant."	
Title:	
Electronic Signature:	
Select "Yes" to certify that the typed name acts as your electronic signature.	

Attestation	
By providing the electronic signature below Participant hereby attests that all information provided in this Bid Package and in response to this REC Solicitation is true and correct to the best of Participant's knowledge as of the date such information is provided.	
Title:	
Electronic Signature:	
Select "Yes" to certify that the typed name acts as your electronic signature.	

A File Name Must Be Generated

This offer form will not be accepted if the steps outlined below have not been followed!

A new File Name must be generated via the steps below for each offer form submitted. If submitting multiple offer forms, please repeat these steps for each offer form submitted.

These steps will create a unique, correctly formatted name that must be given to this offer form file before it is submitted. If you are submitting multiple offer forms and you employing "Save As" on a form you previously populated to create a new offer it is essential that a new/different file name be generated for each additional offer form you create.

When you are ready to submit this form...

- 1) Click this button ►
- 2) Copy this text ▼ via the button at right and use it AS IS as the name of the file you submit.

- 3) Once you have named this offer form via the steps above and submitted this form to PG&E keep it unchanged in a secure location where you can refer to it should PG&E have questions. If a PG&E representative contacts you regarding this offer form they will reference the file name.

These instructions must be exercised just prior to actual submission of the form. The file name composed above must be created after you have finalized the rest of the form.

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Appendix I2

PG&E's Renewable Net Short Calculation

(REDACTED)

Table 1: Renewable Net Short Calculation as of Jan 2019

Net Short Calculation Using PG&E Bundled Retail Sales Forecast In Near Term (2018 - 2022) and 2017-2018 IRP Cycle Forecast (2023 - 2036)

Variable	Calculation in Energy Division RNS Calculation Template	Revised Calculation Correcting Apparent Errors in Energy Division Template	Item	Deficit from RPS prior to Reporting Year	2011 Actuals	2012 Actuals	2013 Actuals	2011-2013 CIP1	2014 Actuals	2015 Actuals	2016 Actuals	2014-2016 CIP2	2017 Actuals	2018 Actuals	2019 Forecast	2020 Forecast	2017-2020 CIP3	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024 CIP4	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027 CIP5	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030 CIP6	2031 Forecast	2032 Forecast	2033 Forecast	2031-2033 CIP7	2034 Forecast	2035 Forecast	2036 Forecast	2034-2036 CIP8		
Annual RPS Requirement																																								
A			Bundled Retail Sales Forecast (LTPP)		74,864	76,265	75,705	226,774	74,547	72,113	68,441	215,101	41,397	48,832	36,035		33,733	32,486	32,656																					
B			RPS Procurement Quantity Requirement (%)		20.0%	20.0%	20.0%	20.0%	21.7%	23.3%	25.0%	23.3%	27.0%	29.0%	31.0%		33.0%	30.0%	35.8%																					
C	A*B		Gross RPS Procurement Quantity Requirement (GWh)		14,973	15,241	15,141	45,355	16,177	16,802	17,110	50,089	16,577	14,161	11,297		12,887	13,401	14,091																					
D			Voluntary Margin of Over-procurement		-	-	-	-	-	-	-	-	-	-	-		-	-	-																					
E	C+D		Net RPS Procurement Need (GWh)		14,973	15,241	15,141	45,355	16,177	16,802	17,110	50,089	16,577	14,161	11,297		12,887	13,401	14,091																					
RPS-Eligible Procurement																																								
Fa			Risk-Adjusted RECs from Online Generation		14,699	14,513	17,212	46,424	20,207	21,285	22,551	64,042	22,345	20,453	20,682		20,451	83,932	20,246	17,777	17,027	16,751	71,800	16,589	16,058	15,800	48,447	15,748	15,173	15,101	46,023	14,338	13,794	12,558	40,689	11,286	10,187	9,506	30,990	
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%	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		-	-	-	-	-	-	-	0	-	-	-		433	642	1,075	1,081	1,060	1,087	1,085	4,543	1,078	1,073	1,069	5,220	1,066	1,059	1,055	3,180	1,050	1,047	1,040	5,138	663	595	270	1,529
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%	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		-	-	-	-	-	-	-	-	-	-	-		83	83	263	442	576	674	1,955	770	851	917	2,338	924	931	921	2,766	820	922	919	2,762	919	919	921	2,758	
Fd			Escorted REC Sales		-	-	(142)	(142)	(50)	-	669	(110)	(2,049)	(1,441)	(8,001)		(5,640)	(15,157)	(900)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
F	Fa + Fb + Fc - Fd	Fa + Fb + Fc + Fd	Total RPS Eligible Procurement (GWh)		14,699	14,513	17,069	46,281	20,157	21,285	22,491	63,932	20,276	19,012	13,115	17,529		19,308	18,690	18,530	17,798	18,437	71,800	16,589	16,058	15,796	54,205	17,788	17,154	17,077	51,869	14,308	13,763	12,514	46,589	12,878	11,701	10,697	32,277	
F0			Category 0 RECs		14,651	13,049	14,163	41,863	16,899	17,408	17,914	52,222	14,804	13,471	10,705	12,264		51,244	13,277	11,191	10,896	10,669	46,034	10,548	10,039	9,807	30,594	9,763	9,233	9,188	28,184	8,516	8,412	7,783	24,710	7,153	6,705	6,605	20,553	
F1			Category 1 RECs		48	1,464	2,906	4,418	3,257	3,876	4,577	11,710	5,471	5,542	2,410	5,265		18,688	8,013	8,118	7,840	7,840	31,764	7,889	7,943	7,979	23,811	7,975	7,921	7,889	23,785	7,792	7,351	6,735	21,879	5,725	4,996	4,003	14,724	
F2			Category 2 RECs		-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
F3			Category 3 RECs		-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gross RPS Position (Physical Net Short)																																								
Ga	F-E		Annual Gross RPS Position (GWh)		(274)	(728)	1,928	926	3,980	4,482	5,381	13,843	3,699	4,851	1,318																									
Gb	F/A		Annual Gross RPS Position (%)		19.6%	19.0%	22.5%	20.4%	27.0%	26.5%	32.9%	29.7%	33.0%	38.9%	34.5%																									
Application of Rules																																								
Ha	H - Hc (from previous year)	J - Hc (from previous year)	Planning Banked RECs above the PQR6,7		-	(274)	(1,035)	-	861	4,815	9,274	861	14,630	18,200	23,046																									
Hb			RECs above the PQR added to Bank		(274)	(728)	1,928	926	3,980	4,482	5,381	13,843	3,699	4,851	1,318																									
Hc			Non-bankable RECs above the PQR8		-	31	34	65	26	23	25	74	129	2	-																									
H	Ha+Hb		Gross Balance of RECs above the PQR		(274)	(1,002)	895	926	4,841	9,297	14,655	14,704	18,329	23,051	24,364																									
Ia			Planned Application of RECs above the PQR towards RPS Compliance		-	-	-	-	-	-	-	-	-	-	-																									
Ib			Planned Sales of RECs above the PQR8		-	-	-	-	-	-	-	-	-	-	-																									
J	Ha+Hb	Ha+Hb	Net Balance of RECs above the PQR6		(274)	(1,002)	895	926	4,841	9,297	14,655	14,704	18,329	23,048	24,364																									
J0			Category 0 RECs		-	-	-	-	657	1,207	2,019	2,067	2,067	2,067	2,067																									
J1			Category 1 RECs		-	-	895	926	4,184	8,060	12,636	12,636	16,261	20,981	22,296																									
J2			Category 2 RECs		-	-	-	-	-	-	-	-	-	-	-																									
Expiring Contracts																																								
K			RECs from Expiring RPS Contracts		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			29	432	746	1,207	1,046	3,440	4,160	4,437	13,303	4,500	4,901	5,192	14,674	5,245	5,222	5,247	16,714	6,066	6,609	7,866	20,543	9,647	10,760	11,745	32,152	
Net RPS Position (Optimized Net Short)																																								
La	Ga + Ia - Ib - Hc	Ga + Ia + Ib	Annual Net RPS Position after Bank Optimization (GWh)		(274)	(728)	1,928	926	3,980	4,482	5,381	13,843	3,699	4,851	1,318																									
Lb	(G + Ia - Ib - Hc)/A	(C + Ia) / A	Annual Net RPS Position after Bank Optimization (%)		19.6%	19.0%	22.5%	20.4%	27.0%	26.5%	32.9%	29.7%	33.0%	38.9%	34.5%																									

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

(1) (Row A) Forecasts of retail sales through 2022 are reflective of PG&E's internal bundled retail sales forecast less interdepartmental (metered usage at PG&E-owned facilities) and GTSR sales.

Forecasts post-2022 use the 2017-2018 IRP Cycle forecast (successor to LTPP proceeding planning process).

(2) (Row D) As a portion of the Bank will be used as VMOP, Row D will remain zero. See 2018 RPS Plan for a description of PG&E's VMOP.

(3) (Row Fa) "Online Generation" includes forecasted volumes from replacement contracts (i.e. REMAT contracts replacing QF contracts) for facilities that are already online.

(4) (Row Fb) "In Development" includes forecasted volumes from phase-in projects. This is consistent with labeling in the RPS Database (which labels phase-in projects as "In Development" under "Overall Project Status").

(5) (Row F) Row F has subtracted 134 GWh of RECs associated with 2011 generation from the Hay Canyon Wind Facility and the Nine Canyon Wind Phase 3. These RECs are not being used for RPS compliance because they were not retired within the RPS statute's 36-month REC retirement deadline.

(6) (Rows Ha and J) As PG&E's Alternative RNS incorporates additional risk-adjustments to the results from the Physical Net Short, the Bank sizes indicated in Rows Ha and J may differ from Rows Ha and J of the Alternative RNS, which shows the stochastically-adjusted Bank size.

(7) (Row Hb) At the beginning of each compliance period Row Hb subtracts previous compliance non-bankable volumes from the previous compliance period net balance of RECs. For example, the 2021 forecast for Row Ha is equivalent to the Row J in CP3 minus Row Hc in CP3.

(8) (Row Hc) For 2017-20

PACIFIC GAS AND ELECTRIC COMPANY

Appendix J2

**PG&E's Alternative Renewable Net Short
Calculation**

(REDACTED)

PACIFIC GAS AND ELECTRIC COMPANY

Appendix K

Preferred Project List

Appendix K: Preferred Project List

Name of Facility	Resource	Location	CEC RPS ID	Host Balancing Authority
Etiwanda - Metropolitan Water District (MWD)	Conduit Hydroelectric	Rancho Cucamonga, CA	60271A	CAISO
Kansas South	Solar PV	Lemoore, CA	61264A	CAISO
Westlands Solar Farms	Solar PV	Huron, CA	61755A	CAISO
Orion Solar	Solar PV	Unincorporated Kern County, CA	61570A	CAISO
Kent South	Solar PV	Lemoore, CA	61262A	CAISO
Algonquin SKIC 20 Solar	Solar PV	Taft, CA	61558A	CAISO
CED Corcoran Solar 3, LLC	Solar PV	Corcoran, CA	62783A	CAISO
Westside Solar, LLC	Solar PV	Unincorporated Fresno County, CA	61185A	CAISO
Aspiration Solar G LLC	Solar PV	Tranquility, CA	61486A	CAISO
Bayshore Solar A	Solar PV	Lancaster, CA	63133A	CAISO
Bayshore Solar B	Solar PV	Lancaster, CA	63134A	CAISO
Bayshore Solar C	Solar PV	Lancaster, CA	63135A	CAISO
Java Solar Project	Solar PV	Lemoore, CA	63137C	CAISO
RE Gaskell West 3	Solar PV	Rosamond, CA	63619C	CAISO
RE Gaskell West 4	Solar PV	Rosamond, CA	63617C	CAISO
RE Gaskell West 5	Solar PV	Rosamond, CA	63618C	CAISO
Mammoth G3	Geothermal	Mammoth Lakes, CA	60315A	CAISO
West Antelope	Solar PV	Lancaster, CA	61850A	CAISO
Western Antelope Blue Sky Ranch A	Solar PV	Lancaster, CA	61517A	CAISO
Wind Resource I	Wind	Tehachapi, CA	61467A	CAISO
SPS White River West	Solar PV	Alpaugh, CA	62045A	CAISO
Mammoth G1	Geothermal	Mammoth Lakes, CA	60306A	CAISO
Wind Resource II	Wind	Tehachapi, CA	61468A	CAISO

Columbia Solar Energy, LLC	Solar PV	Pittsburg, CA	62051A	CAISO
Alamo Solar, LLC	Solar PV	Oro Grande, CA	61453A	CAISO
Corcoran Solar LLC	Solar PV	Corcoran, CA	62285A	CAISO
Old River One LLC	Solar PV	Bakersfield, CA	60853A	CAISO
Shafter Solar	Solar PV	Shafter, CA	62325A	CAISO
Morelos Del Sol	Solar PV	Lost Hills, CA	62272A	CAISO
Rising Tree Wind Farm II LLC	Wind	Mojave, CA	62426A	CAISO
Kekawaka Creek Hydroelectric Facility	Small Hydro	Zenia, CA	60186A	CAISO
Woodmere Solar Farm	Solar PV	Bakersfield, CA	62429A	CAISO
Portal Ridge Solar C Project	Solar PV	Lancaster, CA	61684A	CAISO
SR Solis Oro Loma Teresina, LLC - Project A	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO
SR Solis Oro Loma Teresina, LLC - Project B	Solar PV	Unincorporated Fresno County, CA	62841A	CAISO
Sunray - 20	Solar PV	Daggett, CA	62694A	CAISO
SR Solis Rocket, LLC - Project A	Solar PV	Avenal, CA	62840A	CAISO
SR Solis Rocket, LLC - Project B	Solar PV	Avenal, CA	62840A	CAISO
San Joaquin 1A	Solar PV	San Joaquin, CA	61837A	CAISO
Montezuma Wind Energy Center	Wind	Birds Landing, CA	60543A	CAISO
Shiloh I Wind Project	Wind	Birds Landing, CA	60488A	CAISO
El Nido Biomass Facility	Biomass	Merced, CA	60473A	CAISO
Chowchilla Biomass Facility	Biomass	Chowchilla, CA	60471A	CAISO
CalRenew-1	Solar PV	Mendota, CA	60475A	CAISO
Shiloh II Wind Project	Wind	Rio Vista, CA	60639A	CAISO
High Plains Ranch II	Solar PV	California Valley, CA	60603A	CAISO
Topaz Solar Farm	Solar PV	Santa Margarita, CA	61698A	CAISO
Hatchet Ridge	Wind	Burney, CA	60741A	CAISO
CM10 (fka Sempra El Dorado Solar)	Solar PV	Boulder City, NV	60713A	CAISO
Ivanpah Unit 1	Solar Thermal	Nipton, CA	62273A	CAISO
Ivanpah Unit 3	Solar Thermal	Nipton, CA	62275A	CAISO
AV Solar Ranch One	Solar PV	Lancaster, CA	60790A	CAISO

SFWP (RPS) - Sly Creek / Kelly Ridge	Small Hydro	Oroville, CA	60266A	CAISO
Alpine Solar Project	Solar PV	Lancaster, CA	60755A	CAISO
CM48 (fka Sempra Copper Mountain 1)	Solar PV	Boulder City, NV	60786A	CAISO
Mt. Poso	Biomass	Bakersfield, CA	60695A	CAISO
Agua Caliente Solar Project	Solar PV	Roll, AZ	60894A	CAISO
High Plains Ranch III	Solar PV	California Valley, CA	60603A	CAISO
Mojave Solar Project	Solar Thermal	Hinkley, CA	60848A	CAISO
Genesis Solar Energy Project	Solar Thermal	Blythe, CA	60605A	CAISO
Calpine Geysers - Unit 5 & 6	Geothermal	Middletown, CA	60002A	CAISO
Calpine Geysers - Units 7 & 8	Geothermal	Middletown, CA	60003A	CAISO
Calpine Geysers - Unit 12	Geothermal	Middletown, CA	60004A	CAISO
Calpine Geysers - Unit 13	Geothermal	Middletown, CA	60005A	CAISO
Calpine Geysers - Unit 16	Geothermal	Middletown, CA	60006A	CAISO
Calpine Geysers - Unit 17	Geothermal	Middletown, CA	60007A	CAISO
Calpine Geysers - Unit 18	Geothermal	Middletown, CA	60008A	CAISO
Calpine Geysers - Unit 20	Geothermal	Middletown, CA	60009A	CAISO
Calpine Geysers - Sonoma	Geothermal	Middletown, CA	60010A	CAISO
Calpine Geysers - Unit 11	Geothermal	Middletown, CA	60025A	CAISO
Calpine Geysers - Unit 14	Geothermal	Middletown, CA	60026A	CAISO
Calpine Geysers - Calistoga Power Plant	Geothermal	Middletown, CA	60117A	CAISO
Calpine Geysers - Aidlin Power Plant	Geothermal	Middletown, CA	60115A	CAISO
DTE Stockton	Biomass	Stockton, CA	60964A	CAISO
Big Creek Waterworks	Small Hydro	Hyampom, CA	60900A	CAISO
Norman Ross Burgess - Three Forks Water Power Project	Small Hydro	Zenia, CA	60502A	CAISO
Alpaugh 50	Solar PV	Alpaugh, CA	60945A	CAISO
Alpaugh North	Solar PV	Alpaugh, CA	60946A	CAISO
Atwell Island	Solar PV	Alpaugh, CA	60947A	CAISO
Corcoran	Solar PV	Corcoran, CA	60948A	CAISO

White River	Solar PV	Alpaugh, CA	60949A	CAISO
Avenal Park (Eurus)	Solar PV	Avenal, CA	60912A	CAISO
Sun City Project (Eurus)	Solar PV	Avenal, CA	60913A	CAISO
Sand Drag (Eurus)	Solar PV	Avenal, CA	60914A	CAISO
Sunshine Landfill	Biomethane	Sylmar, CA	60815A	CAISO
Potrero Hills Landfill	Biomethane	Suisun, CA	63116A	CAISO
Desert Center Solar Farm	Solar PV	Desert Center, CA	61068A	CAISO
El Dorado Irrigation District	Small Hydro	Pollock Pines, CA	60601A	CAISO
Coram Brodie	Wind	Tehachapi, CA	60973A	CAISO
Mesquite Solar 1	Solar PV	Tonopah, AZ	60875A	CAISO
Shiloh III Wind Project	Wind	Rio Vista, CA	61069A	CAISO
North Star Solar 1	Solar PV	Mendota, CA	61198A	CAISO
Vasco Wind Energy Center	Wind	Livermore, CA	61344A	CAISO
Montezuma II Wind Energy Center	Wind	Collinsville, CA	61345A	CAISO
North Sky River Energy Center	Wind	Tehachapi, CA	61385A	CAISO
Copper Mountain Solar 2	Solar PV	Boulder City, NV	60990A	CAISO
Shiloh IV	Wind	Rio Vista, CA	61617A	CAISO
NID (RPS) - Dutch Flat / Rollins / Bowman	Small Hydro	Nevada City, CA	60171A	CAISO
SPI Burney	Biomass	Burney, CA	60087A	CAISO
SPI Lincoln	Biomass	Lincoln, CA	60088A	CAISO
SPI Quincy	Biomass	Quincy, CA	60089A	CAISO
SPI Sonora	Biomass	Sonora, CA	60576A	CAISO
SPI Anderson II	Biomass	Anderson, CA	61146A	CAISO
Kansas	Solar PV	Stratford, CA	61263A	CAISO
Lost Hills Solar	Solar PV	Lost Hills, CA	61893A	CAISO
Cuyama Solar Array	Solar PV	Cuyama, CA	61891A	CAISO
Blackwell Solar	Solar PV	Lost Hills, CA	61892A	CAISO
Henrietta Solar	Solar PV	Lemoore, CA	61841A	CAISO
ABEC Bidart-Old River LLC	Biomethane	Bakersfield, CA	62369A	CAISO
ABEC Bidart-Stockdale LLC	Biomethane	Bakersfield, CA	60886A	CAISO

Diablo Winds (2)	Wind	Livermore, CA	60030A	CAISO
RE Astoria LLC	Solar PV	Rosamond, CA	62284A	CAISO
California Flats Solar Project	Solar PV	Parkfield, CA	62552A	CAISO
PGE Alta	Small Hydro	Placer, CA	60033A	CAISO
PGE Centerville	Small Hydro	Butte, CA	60034A	CAISO
PGE Chili Bar	Small Hydro	El Dorado, CA	60035A	CAISO
PGE Coleman	Small Hydro	Shasta, CA	60037A	CAISO
PGE Cow Creek	Small Hydro	Shasta, CA	60038A	CAISO
PGE Crane Valley	Small Hydro	Madera, CA	60039A	CAISO
PGE Deer Creek	Small Hydro	Nevada, CA	60040A	CAISO
PGE De Sabla	Small Hydro	Butte, CA	60041A	CAISO
PGE Dutch Flat 1	Small Hydro	Placer, CA	60042A	CAISO
PGE Halsey	Small Hydro	Placer, CA	60043A	CAISO
PGE Hamilton Branch	Small Hydro	Lassen, CA	60044A	CAISO
PGE Hat 1	Small Hydro	Shasta, CA	60045A	CAISO
PGE Hat 2	Small Hydro	Shasta, CA	60046A	CAISO
PGE Inskip	Small Hydro	Tehama, CA	60047A	CAISO
PGE Kerckhoff 1	Small Hydro	Fresno, CA	62360A	CAISO
PGE Kern Canyon	Small Hydro	Kern, CA	60048A	CAISO
PGE Kilarc	Small Hydro	Shasta, CA	60049A	CAISO
PGE Lime Saddle	Small Hydro	Butte, CA	60050A	CAISO
PGE Narrows 1	Small Hydro	Nevada, CA	60052A	CAISO
PGE Newcastle	Small Hydro	Placer, CA	60053A	CAISO
PGE Oak Flat	Small Hydro	Plumas, CA	60276A	CAISO
PGEoenix	Small Hydro	Tuolumne, CA	60054A	CAISO
PGE Potter Valley	Small Hydro	Lake, CA	60055A	CAISO
PGE Rock Creek RPS	Existing Large Incremental Hydroelectric	Plumas, CA	62269A	CAISO
PGE San Joaquin 1A	Small Hydro	Madera, CA	60056A	CAISO
PGE San Joaquin 2	Small Hydro	Madera, CA	60057A	CAISO
PGE San Joaquin 3	Small Hydro	Madera, CA	60058A	CAISO

PGE South	Small Hydro	Tehama, CA	60059A	CAISO
PGE Spaulding 1	Small Hydro	Placer, CA	60060A	CAISO
PGE Spaulding 2	Small Hydro	Placer, CA	60061A	CAISO
PGE Spaulding 3	Small Hydro	Placer, CA	60062A	CAISO
PGE Spring Gap	Small Hydro	Tuolumne, CA	60063A	CAISO
PGE Toadtown	Small Hydro	Butte, CA	60064A	CAISO
PGE Tule River	Small Hydro	Tulare, CA	60065A	CAISO
PGE Volta 1	Small Hydro	Tehama, CA	60066A	CAISO
PGE Volta 2	Small Hydro	Tehama, CA	60067A	CAISO
PGE West Point	Small Hydro	Amador, CA	60068A	CAISO
PGE Wise 1	Small Hydro	Placer, CA	60069A	CAISO
PGE Wise 2	Small Hydro	Placer, CA	60070A	CAISO
PGE A_G_Wishon	Small Hydro	Madera, CA	60032A	CAISO
PG&E AT&T Park Solar Arrays	Solar PV	San Francisco, CA	60634A	CAISO
PG&E SF Service Center Solar Array 1	Solar PV	San Francisco, CA	60635A	CAISO
PG&E SF Service Center Solar Array 2	Solar PV	San Francisco, CA	60636A	CAISO
PGE Five Points	Solar PV	Five Points, CA	61432A	CAISO
PGE Stroud	Solar PV	Helm, CA	61434A	CAISO
PGE Westside	Solar PV	Five Points, CA	61433A	CAISO
PGE Cantua	Solar PV	Cantua Creek, CA	61823A	CAISO
PGE Giffen	Solar PV	Cantua Creek, CA	61822A	CAISO
PGE Huron	Solar PV	Huron, CA	61821A	CAISO
PGE Gates	Solar PV	Huron, CA	62353A	CAISO
PGE Guernsey	Solar PV	Hanford, CA	62354A	CAISO
PGE West Gates	Solar PV	Huron, CA	62352A	CAISO
Vaca-Dixon Solar (PG&E)	Solar PV	Vacaville, CA	60966A	CAISO

Appendix L

Confidentiality Declaration and Matrix

**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 5554-E**

I, Brendan Lucker, declare:

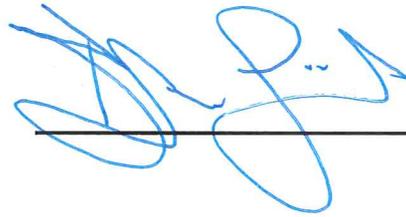
1. I am a Manager in Competitive Solicitations within the Energy Policy and Procurement organization at Pacific Gas and Electric Company (PG&E). In this position, my responsibilities include overseeing the negotiations for the purchase and sale of Renewables Portfolio Standard (RPS) energy as well as 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, and relevant Commission rules, I make this declaration seeking confidential treatment for certain data and information contained in the attachments to Advice Letter 5554-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 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 of the explanatory text that is pertinent to my testimony in the attached matrix.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct. Executed on June 3, 2019 at San Francisco, California.

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke, positioned above a solid black horizontal line.

Brendan Lucker

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 5554-E
June 4, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendix A, Consistency with Commission Decisions and Rules and Project Development Status	<p>Item VII(G): Renewable Resource Contracts under RPS program - Contracts without SEPs</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item V(C): LSE Total Energy 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>Item VIII(B): Specific quantitative analysis involved</p>	<p>This appendix contains information regarding the confidential terms and conditions of the power purchase and sale agreements ("PPSAs") that seek to sell RPS-eligible products. Disclosure of this information would provide valuable market sensitive information to market participants regarding the contracts and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential.</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>Finally, 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>For Item VII(G): Three years from date contract states deliveries to begin, or one year after expiration (whichever is sooner)</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p> <p>For Items V(C) and VI(B): Front three years of forecast data confidential</p> <p>May 21, 2014 ALJ Ruling: Indefinite</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>

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 5554-E
June 4, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
	<p>in scoring and evaluation of participating bids</p> <p>Public Utilities Code § 454.5(g)</p>		
Appendix B, Sales Overview	<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>

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 5554-E
June 4, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendix C, Independent Evaluator Report – grey shaded sections	<p>Item VII(G): Renewable Resource Contracts under RPS program - Contracts without SEPs</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 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 detrimentally impact PG&E’s customers.</p>	<p>For Item VII(G): Three years from date contract states deliveries to begin, or one year after expiration (whichever is sooner)</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>

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 5554-E
June 4, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendix D, Summary of Contracts	<p>Item VII(G): Renewable Resource Contracts under RPS program - Contracts without SEPs</p> <p>Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects</p> <p>Item V(C): LSE Total Energy Forecast – Bundled Customer (MWh)</p> <p>VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh)</p> <p>Item VIII(B): Specific quantitative analysis involved in scoring and evaluation of participating bids</p>	<p>This appendix summarizes and analyzes the PPSAs, and contains bid evaluation information. If released publicly, this information would provide valuable market sensitive information to market participants and could be damaging to PG&E’s future negotiations with other counterparties for similar products. Therefore, this information should remain confidential.</p> <p>This appendix also contains information that could be manipulated in conjunction with publicly-available information 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.</p>	<p>For Item VII(G): Three years from date contract states deliveries to begin, or one year after expiration (whichever is sooner)</p> <p>For Item VII (un-numbered category following VII(G)): Three years</p> <p>For Items V(C) and VI(B): Front three years of forecast data confidential</p> <p>For Item VIII(B): Three years after winning bidders selected</p>

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
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June 4, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order That Data Corresponds To	Justification for Confidential Treatment	Length of Time
Appendices E1-E12, Comparison of PPSAs with PG&E's 2018 Pro Forma RPS Short-Term Sales Confirmation	Item VII(G): Renewable Resource Contracts under RPS program - Contracts without SEPs	These appendices contain each of the PPSAs for which PG&E seeks approval in this Advice Letter filing. Public disclosure of the terms of the PPSAs would provide valuable market sensitive information to market participants and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential.	For Item VII(G): Three years from date contract states deliveries to begin, or one year after expiration (whichever is sooner)
Appendices F1-F12, Power Purchase and Sale Agreements	Item VII(G): Renewable Resource Contracts under RPS program - Contracts without SEPs	These appendices contain each of the PPSAs for which PG&E seeks approval in this Advice Letter filing. Public disclosure of the terms of the PPSAs would provide valuable market sensitive information to market participants and could be damaging to PG&E's future negotiations with other counterparties for similar products. Therefore, this information should remain confidential.	For Item VII(G): Three years from date contract states deliveries to begin, or one year after expiration (whichever is sooner)
Appendices I and J, PG&E's Renewable Net Short Calculations – grey shaded sections	Item V(C): LSE Total Energy Forecast -- Bundled Customer (MWh) VI(B): Utility Bundled Net Open (Long or Short) Position for Energy (MWh) May 21, 2014 ALJ Ruling Item VII (un-numbered category following VII(G)): Score sheets, analyses, evaluations of proposed RPS projects	For Table 1: For rows A, C, E, Ga and Gb, this information shows PG&E's net position for RPS-eligible energy in the periods within the front three years of the forecast. The redacted information in Rows A, C, E, Ga, and Gb could also be manipulated in conjunction with publicly-available information to determine PG&E's internal and proprietary forecast of its bundled customer total energy requirements. The redacted information for rows Ia, Ib, J, J0, J1, J2, La and Lb relates to PG&E's optimized RNS, including: PG&E's assumptions for its overall portfolio optimization strategy; any plans to sell forecast RECs above the PQR; application of forecast RECs above the PQR towards a future RPS compliance requirement; and any plan to procure RECs above the PQR in future years. This information is expressly deemed confidential by the May 21, 2014 ALJ Ruling. Additionally, this information could be used to determine	For Items V(C) and VI(B): Front three years of forecast data confidential May 21, 2014 ALJ Ruling: Indefinite For Item VII (un-numbered category following VII(G)): Three years

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
Advice Letter 5554-E
June 4, 2019

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		<p>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>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>	

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

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