

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

ENERGY DIVISION

RESOLUTION E-4594  
September 5, 2013

**REDACTED**  
**RESOLUTION**

Resolution E-4594. Pacific Gas & Electric Company ("PG&E") requests approval of a power purchase agreement with Kern River Cogeneration Company ("KRCC") for procurement of Combined Heat and Power energy and capacity.

PROPOSED OUTCOME: This Resolution approves the power purchase agreement between Pacific Gas & Electric and KRCC pursuant to the terms of the Qualifying Facility and Combined Heat and Power Program Settlement Agreement, without modification.

SAFETY CONSIDERATIONS: The Agreement is between Pacific Gas and Electric Company and KRCC. The Commission's general jurisdiction extends only over PG&E, but not KRCC. Based on the information before us, this Agreement does not appear to result in any adverse safety impacts on the facilities or operations of PG&E.

ESTIMATED COST: Capacity, energy, and variable cost components of the Power Purchase Agreement are confidential at this time due to its selection through the CHP Request For Offers process, which is a competitive solicitation process.

By Advice Letter 4190-E Filed on February 6, 2013.

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**SUMMARY**

**Pacific Gas and Electric Company's ("PG&E's") modified CHP Tolling Power Purchase Agreement ("PPA") with Kern River Cogeneration Company ("KRCC" or "Seller") is the result of a successful bid, Short Listing, evaluation, and selection through the 2011 PG&E CHP RFO process. This PPA complies with the requirements of Decision ("D.") 10-12-035, in which the Commission adopted the Commission-approved Qualifying Facility and**



**Combined Heat and Power Program Settlement Agreement (“Settlement”) and the CHP Program Request For Offers process under it, and is approved.**

On February 6, 2013, PG&E filed Advice Letter (“AL”) 4190-E requesting Commission approval of a modified tolling power purchase agreement with KRCC for the period between January 1, 2014 to December 31, 2020.

KRCC owns an existing natural gas-fired combined cycle topping-cycle qualifying cogeneration facility in Bakersfield, California. The facility has four combustion turbines with a maximum operating capacity of 317 MW. Southern California Edison (“SCE”) and KRCC executed an initial contract on January 16, 1984, for 20 years. Under an agreement executed with SCE on December 15, 2005, KRCC operated two units as baseload and two units as dispatchable for a five year term. On June 28, 2011, SCE and KRCC entered into a letter agreement that extended the term of the 2005 agreement pursuant to the pricing established in D.07-09-040. On May 23, 2013, Commission Resolution E-4571 approved an amended Transition PPA between SCE and KRCC for baseload energy and additional dispatchable capacity (“Transition Agreements”). The KRCC Transition Agreements with SCE will terminate upon KRCC’s election, prior to the start date of the KRCC CHP RFO PPA with PG&E, anticipated to be December 31, 2013.

KRCC’s operations under SCE’s Transition Agreements and PG&E’s KRCC Agreement are predicated upon the anticipated (but unknown) declining steam requirements of their thermal host, Chevron U.S.A, for enhanced oil recovery operations in the Kern River oil field. Upon this basis KRCC provided a competitive offer to the CHP RFO. PG&E’s CHP RFO was robust and KRCC’s offer was one of the most cost effective in terms of value to PG&E ratepayers and contribution to the Settlement Targets. The executed agreement is comprised of a materially modified Tolling Agreement. This Agreement provides reliability, performance, and operational flexibility benefits to PG&E.

The PPA will count toward the Settlement MW and GHG Targets as the RFO is an eligible procurement process per Section 4 of the Settlement Term Sheet. As an Existing CHP Facility<sup>1</sup> converting to a Utility Prescheduled Facility (“UPF”),<sup>2</sup>

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<sup>1</sup> Sections 5.2.3.1 and 6.4.1 of the Term Sheet defines “Existing CHP Facilities” are gas-fired Topping Cycle CHP Facilities that exported and delivered electric power to an IOU as listed by QF ID number in each IOU’s July 2010 Semi-Annual Report – as “Contract Nameplate.”

KRCC's capacity of 296 MW will count toward PG&E's 1,387 MW procurement Target at the end of the Initial Program Period. The UPF conversion will count as a 148,171 MT GHG Credit toward PG&E's GHG Emissions Reduction Target at the end of the Second Program Period.

## **BACKGROUND**

On December 16, 2010, the Commission adopted the Qualifying Facility and Combined Heat and Power Program Settlement Agreement ("Settlement") with the issuance of D.10-12-035. The Settlement resolves a number of longstanding issues regarding the contractual obligations and procurement options for facilities operating under legacy and new qualifying facility ("QF") contracts.

The QF/CHP Settlement establishes Megawatt ("MW") procurement targets and Greenhouse Gas ("GHG") Emissions Reduction Targets the investor-owned utilities ("IOUs") are required to meet by entering into contracts with eligible CHP Facilities, as defined in the Settlement. Pursuant to D.10-12-035, the three large electric IOUs must procure a minimum of 3,000 MW of CHP and reduce GHG emissions consistent with the California Air Resources Board ("CARB") Scoping Plan, currently set at 4.8 million metric tonnes ("MMT") by the end of 2020.

Among other things, D.10-12-035 updates methodologies and formulas for calculating the Short Run Avoided Cost ("SRAC") energy price for QFs to be used in the Standard Contract for QFs with a Power Rating that is Less than or Equal to 20MW ( the "QF Standard Offer Contract"), Transition PPAs, amendments to existing QF PPAs, and Optional As-Available PPAs. The SRAC methodology under the QF/CHP Settlement includes:

- (1) By January 1, 2015, transitioning SRAC pricing from a formula that is based in part on administratively-determined heat rates to a formula that solely uses market heat rates;
- (2) IOU-specific time-of-use ("TOU") factors to be applied to energy prices to encourage energy deliveries during the times when the energy is most needed by customers;

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<sup>2</sup> Settlement Term Sheet at p. 76 define a Utility Prescheduled Facility as an Existing CHP Facility that has changed operation to a utility controlled scheduled dispatchable generation facility.

- (3) A locational adjustment based on California Independent System Operator (“CAISO”) nodal prices; and,
- (4) Pricing options based on whether a cap-and-trade program or other form of GHG regulation is developed in California or nationally.

In addition, the Commission defined several procurement processes for the IOUs within the Settlement. Per Section 4.2.1, the Commission directs the three IOUs to conduct Requests For Offers exclusively for CHP resources (“CHP RFOs”) as a means of achieving the MW Targets and GHG Emissions Reduction Targets. The Settlement Term Sheet establishes terms and conditions regarding eligibility, contract length, pricing, evaluation and selection and other terms and conditions of the RFOs.

Per Section 5.1.4, the IOUs will conduct three CHP RFOs during the Initial Program Period scheduled at regular intervals, with the first initiated no later than 90 days after the Settlement Effective Date, February 21, 2012. The three RFOs shall solicit CHP resources for an amount no less than the Net MW Target (the MW Target A, B, or C<sup>3</sup> not otherwise procured by the Section 4 procurement processes) for each IOU.

Under the QF/CHP Settlement’s purview, PG&E will need to acquire a minimum of 1,387 MW of CHP capacity<sup>4</sup> under power purchase agreements through three RFOs and other procurement alternatives during the Initial Program Period, as defined by the Term Sheet. On December 7, 2011, PG&E issued its first CHP RFO to procure resources counting toward its MW procurement target and to address its GHG Emissions Reduction Target.

In its first CHP RFO solicitation, PG&E requested offers for existing, new, repowered and expanded CHP facilities, Utility Prescheduled Facilities and CHP capacity-only products. Based on comments received following its CHP RFO Bidders’ Conference, PG&E revised its CHP RFO Protocol to accept offers for capacity-only products, provided such capacity comes from an eligible CHP Facility, or from a portion of an eligible CHP Facility. PG&E made it a mandatory

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<sup>3</sup> Per Settlement Term Sheet Section 5.1.2, each IOU allocation of the total 3,000 MW Target is divided into interval MW Targets that correspond to the three RFOs: “A,” “B,” and “C.” PG&E’s 1,387 MW Target is split into 630, 376, and 381 MW for these interval Targets, respectively.

<sup>4</sup> QF/CHP Settlement Term Sheet Section 5.1.

requirement for the participants submitting a capacity-only offer to have, or need, an Edison Electric Institute (“EEI”) Master Agreement with PG&E and would use a form of the standard Confirmation under an EEI Master Agreement that PG&E had adapted and posted to its CHP solicitation website.

In its RFO, PG&E stated a strong preference for offers that are low cost and that are from facilities with efficient operations and either have low associated GHG emissions or provide GHG emissions reductions through changes in operations or technology. In response to PG&E’s CHP RFO, KRCC submitted an offer for generation from its four-unit generation facility, with Units 1-3 providing dispatchable capacity and Unit 4 providing baseload capacity. PG&E reviewed the merits of each offer received in the CHP RFO and compiled a shortlist of the most attractive offers. On April 30, 2012, PG&E informed KRCC that their offer was shortlisted and the parties engaged in negotiations over the terms of the offer. On December 19, 2012, PG&E and KRCC executed Tolling Agreement.

Table 1: Contract Term Periods for KRCC

| Utility | Type                             | Start     | Termination       |
|---------|----------------------------------|-----------|-------------------|
| SCE     | Legacy PPA                       | 1/16/1984 | Extended          |
| SCE     | Letter Agreement ext. Legacy PPA | 6/28/2011 | 5/23/2013         |
| SCE     | Transition Agreements            | 5/23/2013 | Seller’s Election |
| PG&E    | CHP RFO Tolling PPA              | 1/1/2014  | 12/31/2020        |

As shown below, Unit 2 will convert from baseload to dispatchable operations. For the first five years, KRCC will provide Chevron a constant amount of steam from the baseload operations of Unit 4. For the last two years, steam requirements are unknown. For the length of the term Unit 4 is able to operate as baseload CHP if steam is needed, or if not, per market dispatch by CAISO for economic or reliability reasons. While operating as baseload, PG&E maintains curtailment rights.

Table 2: Operational Arrangements of KRCC

| Calendar Year | KRCC Generating Unit (Pmax)                      |                                       |  |   |
|---------------|--|---------------------------------------|--|---|
|               | 1 (85 MW)  | 2 (85 MW)                             | 3 (85 MW)  | 4 (85 MW)   |
| 2013          | <u>SCE RA &amp; Toll Confirm</u><br>Dispatchable | <u>SCE Transition PPA</u><br>Baseload | <u>SCE RA &amp; Toll Confirm</u><br>Dispatchable | <u>SCE Transition PPA</u><br>Baseload                       |
| 2014          | <u>PG&amp;E RFO Tolling PPA</u><br>Dispatchable  |                                       |  | <u>PG&amp;E RFO Tolling PPA</u><br>Baseload or Dispatchable |
| 2015          |  |                                       |  |   |
| 2016          |  |                                       |  |   |
| 2017          |  |                                       |  |   |
| 2018          |  |                                       |  |   |
| 2019          |  |                                       |  |   |
| 2020          |  |                                       |  |   |

A summary of the modifications to the terms and conditions included in the KRCC Agreement and analysis of the benefits are included within the Confidential Appendix A of this Resolution.

**NOTICE**

Notice of AL 4190-E was published in the Commission’s Daily Calendar. Pacific Gas and Electric states that a copy of the Advice Letter was mailed and distributed in accordance with Section 3.14 of the Commission’s General Order 96-B. AL 4190-E was served to the service list of R.12-03-014 regarding the Long Term Procurement Plans.

**PROTESTS**

Advice Letter 4190-E was not protested.

**DISCUSSION**

On February 6, 2013, PG&E filed Advice Letter AL 4190-E which requests Commission approval of a power purchase agreement with Kern River Cogeneration Company. On March 12, 2013, PG&E filed substitute sheets to the Advice Letter correcting KRCC’s 2010 Contract Capacity and Portfolio Adjusted Value.

Specifically, PG&E requests that the Commission:

1. Approves the KRCC Agreement in its entirety, including payments to be made thereunder, subject only to Commission review of the reasonableness of PG&E's administration of the contract.
2. Determines that the rates and other terms and conditions set forth in the KRCC Agreement are reasonable.
3. Finds that the 296 megawatts ("MW") associated with the KRCC Agreement apply toward PG&E's procurement target of 1,387 MW of CHP capacity in the Initial Program Period, as established by the QF/CHP Settlement.
4. Finds that the 148,171 MT per year of GHG emissions reduction resulting from the KRCC Agreement applies toward PG&E's GHG Emissions Reduction Target as established by the QF/CHP Settlement.
5. Finds that PG&E's costs under the KRCC Agreement shall be recovered through PG&E's ERRA.
6. Adopts the following finding of fact and conclusions of law in support of cost recovery for the KRCC Agreement:
  - a. PG&E shall be entitled to allocate the net capacity costs and associated RA benefits to bundled, DA, CCA, and departing load (to the extent not exempted) customers consistent with D.10-12-035, as modified by D.11-07-010, and PG&E's Advice 3922-E, approved December 19, 2011.
  - b. The costs of the KRCC Agreement are recoverable through ERRA less the net capacity costs, which are recovered through PG&E's NSGBA.
7. Find that because the expected annualized capacity factor of KRCC Units 1-3 is below 60 percent and because the net emissions rate of Unit 4 is below 1,100 lbs/MWh, the KRCC Agreement is compliant with the EPS adopted in D.07-01-039.

**Energy Division evaluated the CHP PPA based on the following criteria:**

- Consistency with D.10-12-035, which approved the QF/CHP Program Settlement including:
  - Consistency with Definition of CHP Facility and Qualifying Cogeneration Facility
  - Consistency with CHP Requests For Offers ("RFOs")
  - Consistency with MW Counting Rules

- Consistency with GHG Accounting Methodology
- Consistency with Cost Recovery Requirements
- Need for Procurement
- Cost Reasonableness
- Public Safety
- Project Viability
- Consistency with the Emissions Performance Standard
- Consistency with D.02-08-071 and D.07-12-052, which require Procurement Review Group (“PRG”) and Cost Allocation Mechanism (“CAM”) Group participation

In considering these factors, Energy Division also considers the analysis and recommendations of an Independent Evaluator as is required for the CHP RFOs per Section 4.2.5.7 of the Settlement Term Sheet.<sup>5</sup>

**Consistency with D.10-12-035 which approved the QF/CHP Program Settlement including:**

On December 16, 2010, the Commission adopted the QF/CHP Program Settlement with the issuance of D.10-12-035. The Settlement resolves a number of longstanding issues regarding the contractual obligations and procurement options for facilities operating under legacy and new QF contracts. Among other things, it establishes methodologies and formulas for calculating SRAC to be used in the new QF Standard Offer Contract. Furthermore, the Settlement allows for bilaterally negotiated contracts with CHP QFs to determine energy and capacity payments mutually agreeable by relevant parties and subject to CPUC approval. Finally, the Settlement establishes a MW and GHG target for the IOUs. The IOUs must procure a minimum of 3,000 MW of CHP. The IOUs must reduce greenhouse gas emissions consistent with their allocation of the CARB Scoping Plan CHP Recommended Reduction Measure in proportion to the IOUs’ and Energy Service Providers’/Community Choice Aggregators’ current share of statewide retail electricity load. The QF/CHP Settlement became effective on November 23, 2011. The Settlement Term Sheet establishes criteria for contracts with Facilities including:

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<sup>5</sup> Per Settlement Term Sheet 4.2.5.7: “Each IOU shall use an Independent Evaluator (IE) similar to that used in other IOU RFO processes. It is preferable that the IE have CHP expertise and financial modeling experience.”



*Consistency with Definition of CHP Facility and Qualifying Cogeneration Facility*

To be eligible to count towards Settlement MW and GHG goals, all CHP Facilities, excluding those that convert to Utility Prescheduled Facilities, must meet the federal definition of a qualifying cogeneration facility under 18 C.F.R. § 292.205 by the term start date and through the duration of the proposed PPA, and must also maintain QF certification. With reference to the federal regulations, the Settlement establishes minimum operating and efficiency requirements for topping-cycle facilities, establishes efficiency standards for bottoming-cycle facilities, and, for certain new facilities, mandates compliance with a fundamental use test.

Topping-cycle CHP Facilities must demonstrate that their useful thermal energy output is no less than 5 percent of the total annual energy output. Additionally, any topping-cycle CHP Facility installed on or after March 13, 1980, that is fueled by natural gas or oil must operate at an annual efficiency of at least 42.5 percent, or, if the useful thermal energy output is less than 15 percent of the total energy output of the facility, the efficiency must be no less than 45 percent.<sup>6</sup> Bottoming-cycle CHP Facilities installed on or after March 13, 1980, must meet an annual efficiency requirement of at least 45 percent.<sup>7</sup>

Per Section 4.8.1.1 of the Settlement Term Sheet, KRCC is an Existing CHP Facility that is qualified to convert to a Utility Prescheduled Facility. It operated as a Qualifying Cogeneration Facility and met the definition of “cogeneration” under the Public Utilities Code Section 216.6 as of September 20, 2007.

KRCC meets the definition of a Utility Prescheduled Facility, consistent with the eligibility requirements of the QF/CHP Settlement.

*Consistency with Eligibility Requirements for CHP Requests for Offers (“CHP RFOs”)*

Per Section 4.2 of the Settlement Term Sheet, the IOUs are directed to conduct Requests for Offers exclusively for CHP resources as a means of achieving their MW and GHG Emissions Reduction Targets. Per Section 4.2.2, CHP Facilities with a nameplate Power Rating greater than 5 MW may bid into the CHP RFOs.

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<sup>6</sup> See 18 C.F.R. § 292.205(a). Efficiency is based on useful power output plus one-half of the useful thermal energy output, divided by the total energy input of natural gas and oil to the facility.

<sup>7</sup> 18 C.F.R. § 292.205(b).

The CHP Facility must meet the State and Federal (PURPA) requirements<sup>8</sup> for cogeneration and the Emissions Performance Standard (“EPS”). A CHP Facility that has met the PURPA efficiency requirements as of September 20, 2007 and that converts to a Utility Prescheduled Facility is eligible to participate in the CHP RFOs whether it is a Qualifying Facility or Exempt Wholesale Generator.

KRCC is converting from an Existing CHP Facility to a Utility Prescheduled Facility. As required by Section 4.2.2.2 of the Settlement Term Sheet, KRCC met the efficiency requirements as of September 20, 2007. PG&E states that KRCC met the PURPA efficiency requirements in 2007 based on compliance reports while operating under a Legacy PPA with SCE. KRCC has a nameplate Power Rating of greater than 5 MW, meets the State and Federal requirements for cogeneration, and as discussed later in the Consistency with the Emissions Performance Standard section of this Resolution, is compliant with the EPS.

KRCC meets the eligibility requirements to bid into the PG&E CHP RFO consistent with Sections 4.2.2.1 and 4.2.2.2 of the Settlement Term Sheet.

#### *Consistency with Settlement MW Counting Rules*

Per Settlement Term Sheet Section 4.8.1.2, a New PPA with a UPF counts toward the MW Targets if the existing QF PPA expires before the end of the Transition Period. Per E-4571, KRCC was eligible for a Transition PPA with SCE because it was operating under an extension of a Legacy PPA that was expiring during the Transition Period.

Per Settlement Term Sheet Section 5.2.3.1, KRCC is an Existing CHP Facility. KRCC is a gas-fired Topping Cycle CHP Facility that exported and delivered electric power to SCE listed by QF ID 2801 in SCE’s July 2010 Qualifying Facilities Semi-Annual Status Report. The MWs counted for the CHP PPA executed with KRCC will be the published Contract Nameplate value of 296 MW. This is appropriately reflected in the substitute sheets to the Advice Letter.

The 296 MW Contract Nameplate value for KRCC will count toward PG&E’s MW procurement Target.

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<sup>8</sup> State definition of cogeneration per Public Utilities Code Section 216.6. Federal definition of cogeneration per 18 C.F.R. §292.205 implementing the Public Utility Regulatory Policies Act (“PURPA”).

*Consistency with Settlement Greenhouse Gas Accounting Methodology*

Per Settlement Term Sheet Section 7.3.1.3, a CHP Facility Change in Operations or Conversion to a Utility Prescheduled Facility counts as a GHG credit for the IOUs' GHG Emissions Reduction Targets. Measurement is based on the baseline year emissions (the average of the previous two years of operational data) minus the projected PPA emissions and emissions associated with replacing 100% of the decreased electric generation at a time differentiated heat rate.

For example, the GHG Credit is calculated by first subtracting the expected emissions from operations in the Agreement from the baseline emissions from years 2010-2011. The GHG Credit deducts from this difference the emissions resulting from "replacement" electric generation. Replacement (or "backfill") electricity accounts for the market electricity required to compensate for the decreased operations from the conversion to a UPF.

The PPA provides PG&E rights as the Scheduling Coordinator for KRCC. PG&E anticipates that generating operations will be reduced compared to previous operations. Units 1, 2, and 3 will operate as dispatchable. Unit 4 may become dispatchable if baseload operations cannot be supported due to a lack of steam requirements. This change in the facility's operating schedule reduces its greenhouse gas emissions proportionately. Per Section 7.3.1.3 of the Settlement Term Sheet, the UPF conversion accounts as a GHG Credit of 148,171 metric tonnes (MT) toward the GHG Emissions Reductions Target. This is appropriately reflected in the Advice Letter.

Additional information about the GHG emissions accounting is included in Confidential Appendix A.

KRCC's operations under the Agreement as a Utility Prescheduled Facility will be reduced compared to the prior two years of operations, yielding a GHG Credit of 148,171 MT toward the GHG Emissions Reduction Target.

*Consistency with Cost Recovery Requirements*

Ordering Paragraph 5 of D.10-12-035 orders the three large electric IOUs to recover the net capacity costs from CHP Program contracts on a non-bypassable basis from all bundled service, Direct Access ("DA") and Community Choice Aggregator ("CCA"), and Departing Load Customers ("DLC"), except for CHP DLC. With this authorization, the Settlement supersedes to the extent necessary D.06-07-029 and D.08-09-012, which established and modified the Cost Allocation Mechanism, respectively. Section 13.1.2.2 of the Settlement Term Sheet requires that the IOU recover CHP contract costs, net of the value of energy and ancillary

services provided to the IOU. Non-IOU load-serving entities (“LSEs”) receive Resource Adequacy (“RA”) credits in proportion to the allocation of the net capacity costs that they pay.

On December 19, 2011 the Commission made effective AL 3922-E as of November 23, 2011, which authorized PG&E to establish the New System Generation Balancing Account to recover the net capacity costs of CHP contracts as it was directed by D.10-12-035. AL 3922-E determines the net capacity costs as the result of a debit and credit, where:<sup>9</sup>

- Debit: NCC recovery-eligible capacity and energy costs for QF/CHP Program contracts.
- Credit: NCC recovery-eligible energy revenues, the product of energy assumed to be dispatched under the Energy Auction PPA and the CAISO hourly day-ahead nodal price for the PPA’s injection point.

Resource adequacy benefits are to be allocated according to the share of the net capacity costs paid by load-serving entities serving direct access and community choice aggregation customers as prescribed in Section 13.1.2.2 of the QF/CHP Settlement Term Sheet.

PG&E is authorized to recover costs in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 3922-E, consistent with the directives of the QF/CHP Settlement. The costs of the KRCC Agreement are recoverable through the Energy Resource Recovery Account, less the net capacity costs, which are recovered through the New System Generation Balancing Account.

### **Need for Procurement**

PG&E’s total MW procurement goal for the CHP Program is 1,387 MW, with 630 MW allocated to Target A. PG&E’s 2020 GHG Emissions Reduction Target is 2.17 MMT. As of the April 1, 2013 CHP Semi-Annual Report, PG&E has executed contracts contributing 1,163 MW and 1.11 MT toward these goals. The MWs accounted toward the MW Target may be revised based on PG&E AL 4275-E, submitted per the order of Resolution E-4529.

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<sup>9</sup> PG&E Advice Letter 3922-E  
[http://www.pge.com/nots/rates/tariffs/tm2/pdf/ELEC\\_3922-E.pdf](http://www.pge.com/nots/rates/tariffs/tm2/pdf/ELEC_3922-E.pdf)

### **Cost Reasonableness**

Upon the approval of this resolution, PG&E will receive and purchase the Capacity, Energy, and all Other Products that are available from KRCC. The KRCC offer was one of the most competitive offers among a robust response to the solicitation in terms of meeting the needs of PG&E's CHP RFO while ensuring the greatest ratepayer benefit. Based on this comparison, the KRCC Agreement costs are determined to be reasonable. However, we have reviewed all the offers that PG&E received in their first CHP RFO and found the costs of the KRCC Agreement to be reasonable. In addition, the modifications to the Tolling Agreement are reasonable.

The IE concludes that the evaluation methodology used to evaluate the cost and benefits of the KRCC Agreement is reasonable for this type of analysis and effectively evaluates offers with different products, terms, and contract structures. The IE found no evidence of bias in the evaluation methodology as a result of review of the model operation.<sup>10</sup>

The PG&E CHP RFO Solicitation Protocol identifies and describes the procedures for evaluation of offers. To evaluate offers, PG&E considered the factors including:

- Market Valuation
- Portfolio Fit
- CHP MW
- GHG Emissions
- Project Viability
- Project Technical Reliability
- Adherence to Applicable Form PPA
- Credit
- Supplier Diversity

The protocol states that in its evaluation of offers, PG&E may combine Market Value, Portfolio Fit, and other evaluation criteria to determine a Portfolio Adjusted Value ("PAV"). PG&E also considered the debt equivalence costs of an offer in its evaluation.

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<sup>10</sup> PG&E CHP RFO First Solicitation 2011-2012 Redacted Version Independent Evaluator Final Report on the KRCC Contract ("IE Report"), January 20, 2013, p. 55.

Upon receiving the bids in its CHP RFO, PG&E completes a Market Valuation assessment, which considers the 2012 present value difference of an offer's costs and benefits from a market perspective. PG&E normalizes this Net Market Value ("NMV") by contract capacity and length, which results in units: (\$NMV/kW-yr). Components to this calculation include:

- Costs: Fixed and variable components of significant and relevant costs, including transmission cost adders.
- Benefits: mark-to market value of energy, RA capacity, ancillary services, curtailment value.

PG&E uses specific methodologies to calculate NMV for eligible offers including: Pro Forma PPA Offers, Utility Prescheduled Offers, Offers involving the termination of an Existing QF contract, Hybrid Offers, and RA-only offers.

NMV assessment is augmented by a Portfolio Adjusted Value ("PAV") evaluation methodology, which represents the value of an offer in the context of PG&E's portfolio. Components augmenting NMV in the PAV include:

- GHG reductions
- Location (adjustment for areas in or external to CAISO)
- Portfolio (adjustment for RPS-eligible energy)
- Curtailment (physical and economic)
- Energy Delivery Pattern
- Flexibility (in providing regulation or ramping)
- Adjusted Transmission Cost Adder

PG&E ranked the values based on its specific evaluation metrics. Based on their relative ranking, selected offers were shortlisted, and offers were awarded to the facilities as a result of the competitive solicitation.

The IE states that the KRCC contract provides an excellent balance in risk between the counterparties and provides relative value for PG&E and its consumers. Both parties negotiated diligently and methodologically to complete a complex and creative contract favorable to both parties.

After reviewing and evaluating all the bids that entered into PG&E's CHP RFO, we agree with PG&E's selection of KRCC. Given the MW and GHG Targets set forth by the QF/CHP Settlement, PG&E's agreement with KRCC was one of the best offers for the ratepayers out of all the bids that participated in PG&E's competitive solicitation. For additional information on the contract cost reasonableness, please refer to Confidential Appendix A.

Given the robust response to PG&E's CHP RFO, and the relative cost effectiveness of the KRCC offer as compared to other offers, KRCC's procurement is of reasonable cost.

### **Public Safety**

California Public Utilities Code Section 451 requires that every public utility maintain adequate, efficient, just, and reasonable service, instrumentalities, equipment and facilities to ensure the safety, health, and comfort of the public.

The Agreement is between Pacific Gas and Electric and KRCC. The Commission's general jurisdiction extends only over PG&E, not KRCC. Based on the information before us, this PPA does not appear to result in any adverse safety impacts on the facilities or operations of PG&E.

### **Project Viability**

KRCC owns an existing qualifying cogeneration facility. KRCC has been contracted with SCE since 1984 and began deliveries to SCE in 1985. Under Transition PPA Agreements amended to incorporate Additional Dispatchable Capacity executed in 2012, KRCC was expected to reduce electricity deliveries due to the decreasing enhanced oil recovery requirements of their steam host. KRCC's reduction in electricity deliveries continues through the PPA, which enable increasingly dispatchable operations as a Utility Prescheduled Facility. As an existing CHP Facility, the project faces minimal project development risk.

KRCC is an existing CHP facility converting to a Utility Prescheduled Facility and therefore is a viable project.

### **Consistency with the Emissions Performance Standard**

California Public Utilities Code Sections 8340 and 8341 require that the Commission consider emissions costs associated with new long-term (five years or greater) power contracts procured on behalf of California ratepayers. D.07-01-039 adopted an interim Emissions Performance Standard ("EPS") that establishes an emission rate for obligated facilities to levels no greater than the greenhouse gas emissions of a combined-cycle gas turbine power plant.

Pursuant to Section 4.10.4.1 of the CHP Program Settlement Term Sheet, for PPAs greater than five years that are submitted to the CPUC in a Tier 2 or Tier 3 advice letter, the Commission must make a specific finding that the PPA is compliant with the EPS.

The EPS applies to all energy contracts that are at least five years in duration for baseload generation, which is defined as a power plant that is designed and intended to provide electricity at an Annualized Plant Capacity Factor (“APCF”) greater than 60 percent.

Under the PPA, KRCC will operate for seven years from January 1, 2014 until December 31, 2020. Therefore this procurement qualifies as a “long term financial commitment” per D.07-01-039. The four generating units are at the same location and use the same fuel and technology but are not operationally dependent on another. Therefore the annualized plant capacity factors for the four units are each compared against the 60% baseload threshold. The EPS applies only to Unit 4 because its capacity factor exceeds 60%. PG&E has determined that Unit 4 is compliant with the EPS because the emissions factor for the unit is less than 1,100 lbs. CO<sub>2</sub>/MWh as enumerated in Table 7 of Confidential Appendix A.

The PPA is subject to the EPS under D.07-01-039 because the term of the PPA is greater than five years. The EPS applies to generating unit 4, whose annualized plant capacity factor is greater than 60%. The EPS does not apply to generating Units 1, 2 and 3, whose annualized plant capacity factors are less than 60%. Based on data provided by PG&E, Unit 4 is EPS compliant with an emissions factor of less than 1,100 lbs. CO<sub>2</sub>/MWh.

**Consistent with D.02-08-071 and D.07-12-052, PG&E’s Procurement Review Group (“PRG”) and Cost Allocation Mechanism (“CAM”) Group were notified of the CHP PPA**

PG&E’s PRG consists of representatives from: the Division of Ratepayer Advocates, The Utility Reform Network, California Department of Water Resources, Coalition of California Utility Employees, the Union of Concerned Scientists, PG&E’s Independent Evaluators, and the Commission’s Energy and Legal Divisions. PG&E’s CAM group includes PRG participants as well as members representing direct access and community choice aggregator customers.

Negotiations on the KRCC Agreement between Seller and PG&E began in April 30, 2012, and executed a final agreement on December 19, 2012. PG&E presented its CHP RFO at four meetings: July 12, 2011 to the PRG, November 8, 2011 to the PRG and CAM Group, December 13, 2011 to the PRG, and February 28, 2012 to the PRG and CAM Group. On April 25, 2012, the KRCC transaction was presented as part of the CHP RFO shortlist to PG&E’s PRG and CAM Group. After several months of negotiations, on August 14, PG&E



presented the agreed upon terms of the Agreement to the CAM Group. On October 9, 2012, PG&E updated the CAM Group on the status of the transaction. Group members did not comment on the transaction.

PG&E has complied with the Commission's rules for involving the PRG and CAM groups.

### **Independent Evaluator Review**

PG&E retained Independent Evaluator (IE) Merrimack Energy Group, Inc. ("Merrimack Energy") to oversee the filing of AL 4190-E and to evaluate the overall merits for Commission approval of the KRCC Agreement. AL 4190-E included a public and confidential Independent Evaluator's report. In its report, the IE determined that<sup>11</sup>:

1. PG&E provided active and inclusive outreach to bidders in the RFO,
2. The CHP RFO evaluation and selection methodology was reasonable,
3. Administration of the offer evaluation process was equitable, consistent and fair,
4. Treatment of affiliate bids were handled properly,
5. The Agreement was reasonable in achieving the MW and GHG Targets

IE concludes that PG&E selected the appropriate bids from the CHP RFO and acted without prejudice and therefore, recommends Commission approval of KRCC Agreement. Additional information on the findings of the IE Report is included in Confidential Appendix A.

The Commission agrees with the independent evaluation which finds that the Agreement between PG&E and KRCC to be competitive among other offers in the RFO and of reasonable cost.

The Independent Evaluator concurs with PG&E's decision to execute the Agreement with KRCC and finds that they merit Commission approval.

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<sup>11</sup> IE Report, p. 69-71.

## **COMMENTS**

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on August 6, 2013. PG&E and Cogeneration Association of California (CAC) submitted timely comments on August 26, 2013. PG&E's request for additional ordering paragraphs regarding MW and GHG contributions were unnecessary, while other comments required non-substantive changes. Energy Division made additional minor modifications.

CAC requested additional clarification regarding: the availability of a "UPF Pro Forma PPA," a UPF's eligibility to bid in the RFO and to execute contracts, and KRCC's operation under the SCE Transition Agreements. First, Settlement Term Sheet Section 4.2.6 and 4.2.12 describe permitted modifications to the CHP Pro Forma PPA. Section 4.2.6 states that the Pro Forma "may be modified" bilaterally for a particular UPF PPA. Section 4.2.12 allows that the IOUs "may request offers" with voluntary curtailment and dispatchability terms that differ from the CHP Pro Forma PPA. Contrary to CAC's comment, the Commission does not find that the use of this Tolling PPA constitutes a "unilateral establishment of a 'UPF Pro Forma.'" PG&E implemented the RFO consistent with these terms. Second, it is obvious that facilities that are eligible to bid into the RFO are also eligible to execute contracts. Third, the description of KRCC's operation under the Transition Agreements as a CHP Facility that provides Additional Dispatchable Capacity is consistent with the Commission's findings in E-4571.<sup>12</sup>

## **FINDINGS AND CONCLUSIONS**

1. Pacific Gas and Electric Company ("PG&E") filed Advice Letter ("AL") 4190-E on February 6, 2013, in which it requested Commission approval of an agreement ("KRCC Agreement") with Kern River Cogeneration Company

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<sup>12</sup> E-4571, p. 19.

("KRCC") that is based on a PG&E tolling agreement. On March 12, 2013, PG&E filed substitute sheets. AL 4190-E was not protested.

2. KRCC meets the definition of a Utility Prescheduled Facility, consistent with the eligibility requirements of the QF/CHP Settlement.
3. KRCC meets the eligibility requirements to bid into the PG&E's CHP RFO consistent with Sections 4.2.2.1 and 4.2.2.2 of the Settlement Term Sheet.
4. The 296 MW Contract Nameplate value for KRCC will count toward PG&E's MW procurement Target.
5. KRCC's operations under the Agreement as a Utility Prescheduled Facility will be reduced compared to the prior two years of operations, yielding a GHG Credit of 148,171 MT toward the GHG Emissions Reduction Target.
6. Resource adequacy benefits are to be allocated according to the share of the net capacity costs paid by load-serving entities serving direct access and community choice aggregation customers as prescribed in Section 13.1.2.2 of the QF/CHP Settlement Term Sheet.
7. PG&E is authorized to recover costs in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 3922-E, consistent with the directives of the QF/CHP Settlement. The costs of the KRCC Agreement are recoverable through the Energy Resource Recovery Account, less the net capacity costs, which are recovered through the New System Generation Balancing Account.
8. Given the robust response to PG&E's CHP RFO, and the relative cost effectiveness of the KRCC offer as compared to other offers, KRCC's procurement is of reasonable cost.
9. KRCC is an existing CHP facility converting to a Utility Prescheduled Facility and therefore is a viable project.
10. The PPA is subject to the EPS under D.07-01-039 because the term of the PPA is greater than five years. The EPS applies to generating unit 4, whose annualized plant capacity factor is greater than 60%. The EPS does not apply to generating Units 1, 2 and 3, whose annualized plant capacity factors are less than 60%. Based on data provided by PG&E, Unit 4 is EPS compliant with an emissions factor of less than 1,100 lbs. CO<sub>2</sub>/MWh.
11. PG&E has complied with the Commission's rules for involving the PRG and CAM groups.
12. The Independent Evaluator concurs with PG&E's decision to execute the Agreement with KRCC and finds that they merit Commission approval.

**THEREFORE IT IS ORDERED THAT:**

1. The request of the Pacific Gas & Electric Company for the Commission to approve the Kern River Cogeneration Company Power Purchase Agreement as requested in Advice Letter AL 4190-E is approved, without modification.
2. Pacific Gas & Electric Company is authorized to recover the costs associated with the Kern River Cogeneration Company Agreement through the cost recovery mechanisms set forth in D.10-12-035 (as modified by D.11-07-010), Section 13.1.2.2 of the QF/CHP Settlement, and PG&E's Advice Letter 3922-E.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on September 5, 2013; the following Commissioners voting favorably thereon:

/s/ Paul Clanon  
Paul Clanon  
Executive Director

MICHAEL R. PEEVEY  
President  
CATHERINE J.K. SANDOVAL  
MARK J. FERRON  
CARLA J. PETERMAN  
Commissioners

Commissioner Michel Peter Florio, being necessarily absent, did not participate.

## Confidential Appendix A

### Summary of First PG&E CHP Request for Offers and Analysis of Power Purchase Agreement with Kern River Cogeneration Company

REDACTED