

PUBLIC UTILITIES COMMISSION

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April 2, 2014

Advice Letter 4253-E

Brian K. Cherry
Vice President, Regulation and Rates
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

Subject: Approval of PG&E's Proposed Amendment of its Power Purchase Agreement with Chevron U.S.A., Inc. to Include the Cymric Demonstration Project

Dear Mr. Cherry:

Advice Letter 4253-E is effective October 3, 2013 per Resolution E-4627.

Sincerely,

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

Edward F. Randolph, Director
Energy Division

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

RESOLUTION E-4627
March 13, 2014

REDACTED
RESOLUTION

Resolution E-4627. Pacific Gas and Electric Company requests the California Public Utilities Commission to approve the proposed Fifth Amendment to the Standard Offer 1 As- delivered Capacity and Energy Power Purchase Agreement between Chevron U.S.A., Inc. and PG&E for deliveries from a 950 kW bottoming cycle demonstration project that will be added to the existing facility located in the Cymric oil field.

PROPOSED OUTCOME: This Resolution approves, without modification, the agreement between Pacific Gas and Electric and Chevron U.S.A., Inc. pursuant to the terms of the Qualifying Facility and Combined Heat and Power Program Settlement Agreement.

SAFETY CONSIDERATIONS: This project is a Demonstration Project that is being added onto an existing and operational facility, there are no incremental safety implications associated with this contract beyond the status quo.

ESTIMATED COST: The facility will be paid SRAC pricing per the Qualifying Facility and Combined Heat and Power Program Settlement Agreement.

By Advice Letter 4253-E Filed on July 16, 2013 as amended by Advice 4253-E-A filed on September 16, 2013.

SUMMARY

Pacific Gas and Electric Company (“PG&E”) seeks California Public Utilities Commission (“Commission” or “CPUC”) approval of an amendment to an as delivered capacity and an Energy Power Purchase Agreement (“PPA”), which PG&E has executed with Chevron U.S.A., Inc. (“Chevron”) for deliveries from

a new demonstration 950 kilowatt (“kW”) cogeneration facility (“Cymric”) located in Cymric oil field near Bakersfield, California. This Resolution approves, without modification, the fifth amendment (“Amendment”) to the Standard Offer 1 (“SO1”) As-delivered Capacity and Energy Power Purchase Agreement (“PPA”) between Chevron U.S.A., Inc. and PG&E.

On July 16, 2013, PG&E filed Advice Letter (“AL”) 4253-E requesting Commission approval of an amendment to an existing as-delivered capacity and energy PPA with Chevron’s Cymric cogeneration facility. The Amendment enables PG&E to procure an additional 950 kW of nameplate capacity from Chevron’s existing Cymric cogeneration facility through the addition of a bottoming-cycle waste heat recovery generator that will increase the electrical output of the plant with no additional fuel use.

The incremental CHP procurement of 950 kW would count towards the CHP megawatt target, and PG&E would be able to claim a greenhouse gas (“GHG”) emissions reduction of 2,114 metric tons per year under the terms of the QF/CHP Settlement. PG&E proposes to recover the cost of procurement from all benefiting customers pursuant to Section 13.1.2.2 of the QF/CHP Settlement Agreement Term Sheet (“Term Sheet”).

Advice 4253-E requested that the Commission find it reasonable for PG&E to recover its costs under the Amended PPA through its Energy Resource Recovery Account. However, on September 16, 2013, PG&E revised Advice 4253-E by submitting supplemental filing AL 4253-E-A, which specifies that cost recovery of the PPA shall conform with the methodology adopted in the QF/CHP Settlement Agreement adopted in Decision (“D.”) 10-12-035. In recognition that this CHP procurement is required by D. 10-12-035, the Commission authorizes PG&E to allocate the net capacity costs and associated RA benefits with new capacity to benefiting customers. Specifically PG&E will recover net capacity cost of CHP procurement from benefiting customers through the New System Generation Balancing Account (“NSGBA”).

The existing units at the Chevron Cymric facility have a total nameplate capacity of 21.04 MW. The Demonstration Project will add 0.95 MW of capacity, resulting in a new total nameplate capacity of 21.99 MW. The Demonstration Project is a bottoming-cycle, waste heat recovery facility with a nameplate capacity of 950 kW unique to enhanced oil recovery (“EOR”) cogeneration operations. It is expected to provide incremental combustion-free generation from the existing EOR steam host. This project enables Chevron to study the technical and operating feasibility of bottoming-cycle CHP technology in EOR applications,

thereby contributing to potential future GHG reductions from electric power sources within California.

As acknowledged by PG&E, the term of the PPA, which is longer than five years, would ordinarily require PG&E to seek approval by an application to the Commission. However, the Proposed Amendment provides potentially significant public benefits by advancing the technological knowledge base for California's CHP industry. Given these benefits, PG&E proactively obtained a Qualifying Facility restructuring reasonableness letter (QFRRL) from the Commission's Office of Ratepayer Advocates ("ORA") that does not oppose the Proposed Amendment.

As explained in detail in the later sections of this resolution, due to the Restructuring Advice Letter Filing ("RALF") process, the Cymric Demonstration Project will be added on to the existing Cymric PPA and as a result the Demonstration Project being approved in this resolution does not have an expiration date.

The pricing, terms, and conditions were executed according to Section 4.3.3 of the Settlement Term Sheet. Staff reviewed the pricing, terms and conditions of the contract and found them just and reasonable per the QF/CHP Settlement agreement. Further discussion on the confidential pricing, terms, and conditions of the Chevron Cymric Demonstration Project PPA can be found in the confidential appendix of this resolution.

Staff finds that the Cymric Agreement contributes to the goals of the QF/CHP Settlement through reasonable terms and conditions and merits Commission approval.

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;
- (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 4.3, the three IOUs have the procurement option to bilaterally negotiate power purchase agreements with potential sellers. The results from such bilaterally negotiated contracts are subject to CPUC deliberation and will be disposed of with CPUC resolutions, voted out by the five CPUC commissioners on pre-determined date at a CPUC Commission meeting. Section 4.3.2 of the term sheet requires the use of independent evaluators for any negotiations between an IOU and its affiliate and may be used, at the election of either the Buyer or the Seller, in other negotiations.

On July 13, 1982 and July 22, 1982, Seller and Buyer, respectively, executed the Standard Offer No. 1 Power Purchase Agreement entitled "As-Delivered Capacity and Energy Power Purchase Agreement Between Chevron U.S.A. Inc. and Pacific Gas and Electric Company , the Chevron Cymric Facility ("the original Cymric PPA") for up to 10,000 kW of as-delivered capacity and surplus energy output from a 10,000 kW generator nameplate, natural gas-fueled cogeneration Facility located at Section 36, Township 29 South, Range 21 East, Mount Diablo Base and Meridian, Kern County, California. The original Cymric

PPA was to remain in effect for two years from the date of execution. After four amendments that took place in 1984, 1986, 1987 and 2012 respectively the original Cymric PPA is undergoing the fifth amendment ("agreement") which is before the Commission for deliberation and resolution.

NOTICE

Notice of AL 4253-E and AL 4253-E-A was made by publication 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 IV of General Order 96-B. Both the Advice Letter 4253-E and the amendment to Advice Letter 4253-E-A was served to the service list of R.12-03-014.

PROTESTS

Advice Letter 4253-E was timely protested by the Marin Energy Authority ("MEA") on August 5, 2013. PG&E filed a response to MEA's protests on August 12, 2013. MEA's protested PG&E's Advice 4253-E for three reasons: (1) MEA suggested that PG&E file an application instead of an advice letter due to the complexity the Cymric agreement entails; (2) the QFRRL is an antiquated mechanism that does not reflect the current retail Energy Markets and the present regulatory environment; (3) Further evaluation of costs and benefits attributable to the proposed amendments must be considered, and additional issues with the CAM treatment of the Cymric amendment.

MEA suggested that PG&E file an application instead of an advice letter due to the complexity the Cymric agreement entails

In its protest, MEA explained that PG&E proposed to expand the nameplate capacity of the existing Cymric facility that is on an evergreen contract and pointed out that there was no specified end date to the agreement. MEA also commented on PG&E's proposal for shifting the cost recovery of the agreement from Competition Transition Charge ("CTC") to PG&E's Energy Resource Recover Account ("ERRA"), while requesting Cost Allocation Mechanism ("CAM") treatment under the QF/CHP Settlement.

In its reply comments PG&E claimed that none of the terms of the Fifth Amendment criticized by MEA were relevant to the availability of the RALF process and that the RALF process, as long as supported or not opposed by ORA, allowed PG&E to submit an advice letter for the Commission to deliberate

upon. PG&E also correctly stated that the Energy Division did not exercise its discretion to advise PG&E that the contract amendment was too complex and should be filed as an application. Additionally, PG&E reiterated that the RALF process was the proper procedure for seeking Commission approval of the Fifth Amendment to the Cymric PPA due to its clear benefits to PG&E's customers. PG&E also stated that the marginal increase to a legacy QF PPA nameplate (950 kilowatts), while significant, was not complex enough to mandate using the application process.

The RALF process allows an IOU to seek expedited Commission review and approval of beneficial restructured QF contracts. In Decision D.98-12-066, the Commission adopted the RALF process, whereby the IOUs could submit a PPA amendment for Commission approval by advice letter, instead of by application, conditioned upon the review and statement of support or neutrality of the Commission's ratepayer advocacy staff. In D.99-02-085, the Commission confirmed that a RALF advice letter must be supported by a staff letter stating that the proposed amendment is reasonable and that payments under the restructured contract should be recovered in rates, subject only to the utility's prudent administration of the contract.

As required by the RALF procedure, PG&E requested the ORA provide a QFRRL. ORA Program Manager provided a letter dated July 11, 2013, which finds the Proposed Amendment to be consistent with Commission guidelines on restructuring QF contracts and states: "ORA has reviewed the amendment and has verified the benefit to PG&E's customers. As a result of this analysis and review, ORA does not oppose the approval of the proposed Amendment 5 between PG&E and Chevron, USA."

Understanding MEA's concerns with regards to the agreement's complexities, staff agrees with PG&E that while the agreement can be construed as being complex it does not inhibit the Energy Division from resolving the advice letter through a resolution instead of a Commission decision. As detailed in the confidential appendix of this resolution, the pricing for this as-available CHP resource is competitive, is on par with the industry standard and does not have a negative impact on the ratepayers. Although not a determining factor, the small size (<1MW) of the as-available facility also benefits from the disposition with a Commission resolution rather than a Commission decision. Furthermore, as stated above, PG&E successfully obtained a QFFRL letter from ORA and therefore can submit this agreement for Energy Division review via an advice letter instead of an application. Because of the reasonable, competitive pricing of

the as-available Demonstration Project that is being added onto the original Cymric SO1 PPA, staff does not share MEA's concern with regards to the length of the contract. The original Cymric PPA is an evergreen PPA that will be operational for as long as the original PPA is not terminated by Chevron and plant operations continue.

MEA states that the QFRRL is an antiquated mechanism that does not reflect the current retail Energy Markets and the present regulatory environment.

MEA claims that due to the changes in the retail energy market and regulatory environment, the RALF process is antiquated and no longer appropriate. Specifically MEA argues that the QFFRL is an archaic system as it provides high cost of service and perpetuates the amendments of QF agreement through Advice Letter filings instead of streamlining the restructuring through application filings. MEA also commented that the ORA is no longer the only party protesting the QF contract amendments and that the competitors of the IOU's such as Community Choice Aggregations ("CCAs") and Direct Access ("DA") providers complicate the procurement mechanism due to the newly enacted statutes. For these reasons MEA asks that the Commission find it inappropriate to review PG&E's proposed amendments and reject the advice letter filing.

PGE claims that MEA misconstrued the Commission's intention in the initial RALF Decision. PG&E explained that the Commission did not premise eligibility for the RALF process on the assumption that the transaction would not be protested by parties other than ORA, but rather that the Commission would rely on its advocacy staff to provide a benchmark for determining whether to require an application or use a streamlined advice letter process for approval.

The RALF process is an ongoing mechanism as a result of D.98-12-066, which adopted the RALF process and D.99-02-085, which requires the QFRRL. While staff recognizes that ORA is not the only party protesting the QF contract amendments, MEA being a CCA was able to file comments to PG&E Advice Letter 4253-E and staff reviewed each of MEA's concerns and deliberated on them. Because PG&E consulted with ORA and received a QFRRL, and since the Commission has not modified or rescinded its orders authoring the utilities to use the RALF process, the Commission is bound by the previous decisions and law to deliberate the outcome of amendments like the Cymric Demonstration Project. For the reasons explained above, the Commission does not find the

advice letter filing inappropriate and approves the agreement without modification.

MEA argues that further evaluation of costs and benefits attributable to the proposed amendments must be considered and additional issues with the CAM treatment of the Cymric amendment.

MEA stated that all benefits relating to the proposed Demonstration Project are qualitative in nature and implies that there will be no changes in costs faced by ratepayers and therefore, questions the cost benefit analysis of this agreement. MEA further argues that by shifting the cost recovery for this agreement from the CTC to CAM, there will be substantial changes to how the costs of this project are allocated to both bundled and unbundled customers.

In its response PG&E pointed to its Advice letter filing and stated that the payments to the generator would increase to the extent that additional generation deliveries occur, but the actual amount of delivery cannot be predicted because the new bottoming cycle facility is essentially a small-scale prototype of a new energy recovery technology. PG&E distinguished that the energy deliveries would be purchased by PG&E's bundled customers. Unbundled customers, who do not purchase energy from PG&E, would not pay for any incremental deliveries under the Fifth Amendment. PG&E stated its additional interest in the amendment's contributions towards its MW and GHG reduction targets per the QF/CHP Settlement. PG&E also explained that the costs and the methodology for allocating the above-market cost of CHP procurement were determined by the decision approving the QF/CHP Settlement.

Staff reviewed the Cymric agreement as compared to other facilities procured through the QF/CHP Settlement and found the as-available price of the agreement to be just and reasonable. Staff would also note that in its amendment, PG&E would specifically procure new CHP capacity on behalf of Benefiting Customers (CCA's and DA's included) in accordance with the QF/CHP Settlement Agreement. The QF/CHP Settlement contemplated the IOU cost recovery for CHP Program PPA's such as the Cymric agreement in Section 13 of the Settlement Term Sheet, specifically section 13.1.2.2, which reads:

"13.1.2.2: If the CPUC determines that the IOUs should purchase CHP generation on behalf of DA and CCA customers, then the D.06-07-029 (and D.08-09-012 if necessary) shall be superseded to the extent necessary to

authorize the IOUs to recover the net capacity costs associated with the CHP Program from all bundled service, DA and CCA customers and all Departing Load Customers except for CHP Departing Load Customers, on a non-bypassable basis. The net capacity costs of the CHP Program shall be defined as the total costs paid by the IOU under the CHP Program less the value of the energy and any ancillary services supplied to the IOU under the CHP Program. No energy auction shall be required to value such energy and ancillary services. In exchange for paying a share of the net costs of the CHP Program, the LSEs serving DA and CCA customers will receive a pro-rata share of the RA credits procured via the CHP Program.”

In its Advice Letter 4253-E-A filing PG&E clarifies that it will continue to procure the existing Cymric capacity pursuant to the legacy SO1 PPA; any stranded procurement costs associated with the existing facility will continue to be collected under the Competition Transition Charge. Any above-market costs associated with the Cymric Addition, which is being procured under the CHP Program, will be recovered in accordance with Term Sheet Section 13.1.2.2.

DISCUSSION

On July 16, 2013, PG&E filed Advice Letter AL 4253-E which requests Commission approval of “Cymric Agreement” with Cymric Cogeneration Company.

Specifically, PG&E requests that the Commission:

1. Find that PG&E has met the requirements of the Restructuring Advice Letter Filing procedure adopted in D.98-12-066;
2. Find that PG&E discussed the Proposed Amendment with its Procurement Review Group pursuant to D.02-08-071;
3. Find PG&E’s execution of the Amendment to be reasonable and approve the Amendment in its entirety, including payments to be made by PG&E pursuant to the Amended PPA, subject only to the Commission’s review of the prudence of PG&E’s administration of the Amended PPA;
4. Find and conclude that it is reasonable for PG&E to recover its costs under the Amended PPA through its Energy Resource Recovery Account.

5. Find that the 950 kW associated with the Amendment apply towards PG&E's procurement target of 1,387 MW of CHP capacity in the Initial Program Period, as established by the QF/CHP Settlement.
6. Find that the 2,114 metric tonnes per year of GHG emissions reduction resulting from the Amendment counts towards PG&E's GHG emissions reduction target, as established by the QF/CHP Settlement.
7. Grant PG&E such other relief as the Commission finds to be just and reasonable.

Energy Division evaluated the Cymric as-available CHP agreement 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 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 respectively require Procurement Review Group ("PRG") 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.¹

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

On December 16, 2010, the Commission adopted the QF/CHP Program Settlement with the issuance of D.10-12-035. The Settlement, among other things, established 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:

Consistency with Definition of CHP Facility and Qualifying Cogeneration Facility

The Settlement defines a "CHP Facility" as a facility that meets the definition of a qualifying cogeneration facility under 18 C.F.R. Section 292.205². FERC regulates the certification of Qualifying Facilities and registers a certified facility by granting it a Docket ID number. Per Section 4.2 of the Settlement Term Sheet, a CHP facility must meet the State and Federal definitions³ for cogeneration and the Emissions Performance Standard.

¹ 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."

² Settlement Term Sheet Section 17: Glossary of Defined Terms, pp 65, 67, and 62.

³ State definition of cogeneration per Public Utilities Code Section 216.6. Federal definition of qualifying cogeneration per 18 C.F.R. §292.205 implementing PURPA.

As a cogeneration facility that meets the state's definition of a CHP facility and a self-certified QF with a QF Docket ID⁴, the Cymric Agreement is consistent with the states definition of a CHP Facility and meets the FERC Qualifying Cogeneration Facility certification requirement per the Settlement.

Consistency with Settlement MW Counting Rules

The Cymric Demonstration Project is a bottoming-cycle, waste heat recovery facility with a nameplate capacity of 950 kW. The Cymric agreement is eligible to be counted towards PG&E's MW targets as it meets the definition of a new "CHP Facility" that is being added to the larger existing Cymric CHP Facility. Term Sheet Section 2.2.2.2 directs PG&E to "enter into new PPAs with CHP Facilities" to procure 1,387 MW of CHP resources. Additionally, Term Sheet Section 4.3.1 states that bilaterally negotiated and executed CHP PPAs or Utility Prescheduled Facilities are part of the CHP Program procurement options. Furthermore, Term Sheet Section 4.6.1 states that as-available CHP facilities, such as the existing Cymric facility, are eligible for different procurement alternatives under the CHP Program, including bilaterally negotiated PPAs.

Per section 4.6.11.2.2 of the Settlement term sheet, the Cymric Agreement counts as a credit (.95 MWs) towards PG&E's MW procurement Target.

Consistency with Settlement Greenhouse Gas Accounting Methodology

Section 7 of the Settlement Term Sheet specifies accounting principles for all CHP facilities. Specifically, Term Sheet Section 7.3.1.2 states that the MW Expansion due to a physical change to an existing CHP Facility will count as a GHG Credit. The credit is measured as the difference between: a) the previous two calendar years of operational data compared to the Double Benchmark in place at the time of PPA execution and; b) the anticipated change in operations as identified in the PPA compared to the Double Benchmark. The formula results in a GHG credit in this case. The Cymric Demonstration Project GHG calculation methodology has been demonstrated in the semi-annual reporting template as required by the Settlement per Section 8 of the Term Sheet.

⁴ Cymric Cogen was self-certified as a QF in Federal Energy Regulatory Commission ("FERC") Docket No. 25C003 on October 15, 1982 and is an existing CHP QF.
<http://www.pge.com/includes/docs/pdfs/b2b/qualifyingfacilities/cogeneration/2013july.pdf>

As demonstrated in the Semi Annual CHP Report⁵ , per Section 7.3.1.2 of the Settlement term sheet the Cymric Agreement will count, 2,114 MTCO_{2e} towards PG&E's 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 January 17, 2012, the Commission made effective PG&E AL 2645-E as of November 23, 2011, which authorized PG&E to revise its New System Generation Balancing Account to recover the net capacity costs of CHP contracts as it was directed by D.10-12-035. AL 2645-E determines the net capacity costs as the result of a debit and credit, where:⁶

- Debits include: Capacity and energy costs, including QF/CHP Program contracts that are eligible for net capacity cost recovery
- Credits include: Energy revenues for QF/CHP Program contracts that are eligible for net capacity cost recovery

PG&E is authorized to recover costs associated with the Cymric Agreement in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 2645-E as amended by AL 2645-E-A, consistent with the directives of the QF/CHP Settlement.

⁵ Refer to Row 70 of the "Public Facility Data" tab in the October 16, 2013 CHP Semi Annual Public Reporting Template xls. (Link: <http://www.cpuc.ca.gov/PUC/energy/CHP/settlement.htm>)

⁶ PG&E Advice Letter 2645-E. <http://www.PG&E.com/NR/sc3/tm2/pdf/2645-E.pdf>.

Need for Procurement

PG&E's total MW procurement target for the CHP Program is 1,387 MW, with 1,025 MW allocated to Target B. PG&E's estimated 2020 GHG Emissions Reduction Target is 2.17 MMT. As of the October 1, 2013 CHP Semi-Annual Report, PG&E has executed⁷ 59 contracts proposed to contribute 1,025 MW and 1,118,885 MT of GHG reductions toward these goals.

Procurement Need to Meet the MW Target and GHG Emissions Reduction Target

Since the Cymric Demonstration Project will contribute .95 MWs towards PG&E's MW targets, it will help PG&E reach its CHP MW targets by the end of the initial program period. The procurement need for the Cymric agreement can be justified through its MW contributions to the Settlement targets. However, since the Cymric project will also provide 2,114 MTCO₂e reductions towards PG&E's GHG Emissions Reduction Target the procurement need can be further justified given PG&E's GHG target of 2.17 MMT of GHG emissions reductions to come from CHP procurement.

The need for procurement of the Cymric Demonstration Project can be justified through the projects contributions to PG&E MW and GHG reductions targets per the Settlement.

Cost Reasonableness

The Cymric Amendment was negotiated bilaterally between Chevron U.S.A., Inc. and PG&E. Since the Cymric Amendment is amending an evergreen contract it will not be limited to the maximum 7 to 12 year (existing CHP and new CHP respectively) purview of the Settlement. As a result staff reviewed the overall cost reasonableness of the plant with a "no end date" in mind. Still, staff found that the costs associated with the Cymric agreement are just and reasonable.

Through the Cymric Demonstration Project agreement, Chevron will study the unit's use of waste heat to determine the technical, economic, and commercial feasibility of using the Organic Rankine Cycle to harness the waste heat from the enhanced oil recovery process to generate electricity. The nameplate capacity of the demonstration unit is only 4 percent of the total nameplate capacity of the enlarged Cymric facility. The actual output of this experimental demonstration unit cannot be predicted with certainty. The Commission should confirm that

⁷ Some of the executed contracts have not yet been approved by the Commission.

the addition of a new CHP unit to an existing CHP Facility will count toward the IOU's CHP Program targets and thereby provide incentives for IOUs to facilitate the type of efficient CHP development needed to advance the use of CHP. Only the deliveries actually provided to the grid will be compensated, reducing the risk and complexity associated with this agreement.

A detailed explanation of the actual price of the contract can be seen in the confidential appendix of the confidential version of this resolution.

The costs associated with the Cymric Optional Amendment are just and reasonable.

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 Cymric Agreement is between Pacific Gas and Electric Company and Chevron. The Commission's jurisdiction extends only over PG&E, not Chevron. Based on the information before the Commission and given that the Cymric Cogen is an existing facility and the new experimental project will be a Demonstration Project; the Cymric Agreement does not appear to result in any adverse safety impacts on the facilities or operations of PG&E.

Project Viability

The Chevron Cymric facility has consistently delivered energy and as-available capacity. The facility primarily serves on-site load. It is economically and operationally viable and is expected to remain so. The Demonstration Project is expected to validate the feasibility, costs, and benefits of the ORC technology for EOR applications. As an existing CHP facility in operation since 1980s, Cymric Cogen is a viable CHP facility. In its review of the agreement through the QFFRL, ORA also found the project was technically and economically viable.

Based on evaluations done by PG&E and ORA, the Cymric Demonstration Project is a viable CHP 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 Cymric Agreement, the Cymric facility will operate indefinitely starting on the Commission approval date of the Cymric agreement. Therefore this procurement qualifies as a “long term financial commitment” per D.07-01-039. The annualized plant capacity factor for the Cymric facility is expected to be significantly below the 60% baseload threshold. Therefore, the EPS does not apply to the Cymric Facility.

The EPS does not apply to the Cymric Demonstration Project, whose annualized plant capacity factor is expected to be significantly less than 60 percent.

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

PG&E presented information about the Proposed Cymric Amendment to its PRG on November 9, 2012, and described the terms of the final Proposed Amendment to the PRG on June 28, 2013, as required by D.02-08-071.

PG&E has complied with the Commission’s rules for involving the PRG groups.

Independent Evaluator Review

Since the Cymric Agreement was a bilateral amendment that did not change the term of the underlying PPA and was not a result of PG&E’s CHP RFO, PG&E did not use an Independent Evaluator.

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.

On March 5, 2014, PG&E filed comments on the draft resolution. Although PG&E agrees with the outcome of the Resolution, PG&E points out that the Resolution mischaracterizes the agreement as an optional as-available PPA, when in fact the agreement is an amendment to an existing Standard Offer 1 PPA. The Resolution has been amended to correct that mistake.

FINDINGS AND CONCLUSIONS

1. The Cymric Demonstration Project is a 950 kilowatt cogeneration facility located in the Cymric oil field near Bakersfield, California.
2. The Cymric Agreement is consistent with the state's definition of a CHP Facility and meets the FERC Qualifying Cogeneration Facility certification requirement per the Settlement.
3. Per section 4.6.11.2.2 of the Settlement term sheet, the Cymric Agreement counts as a credit (".95 MWs") towards PG&E's MW procurement Target.
4. Per Section 7.3.1.2 of the Settlement term sheet the Cymric Agreement will count, 2,114 MTCO_{2e} towards PG&E's GHG Emissions Reduction Target.
5. PG&E is authorized to recover costs associated with the Cymric Agreement in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 2645-E as amended by AL 2645-E-A, consistent with the directives of the QF/CHP Settlement.
6. The need for procurement of the Cymric Demonstration Project can be justified through the project's contributions to PG&E MW and GHG reductions targets per the Settlement.
7. The costs associated with the Cymric Agreement are just and reasonable.
8. The Cymric Agreement does not appear to result in any adverse safety impacts on the facilities or operations of PG&E.
9. Based on evaluations done by PG&E, the Cymric Demonstration Project is a viable CHP project.

10. The Emissions Performance Standard does not apply to the Cymric Demonstration Project, whose annualized plant capacity factor is expected to be significantly less than 60 percent.
11. PG&E has complied with the Commission's rules for involving the PRG groups.
12. Rates and other terms and conditions set forth in the Cymric Agreement are reasonable.
13. PG&E met the requirements of the Restructuring Advice Letter Filing procedure adopted in D.98-12-066.
14. PG&E is authorized to recover its costs under the Cymric Amended PPA through its Energy Resource Recovery Account.

THEREFORE IT IS ORDERED THAT:

1. Pacific Gas and Electric Company's request through Advice Letter 4253-E, as amended by Advice Letter 4253-E-A, for approval of the Cymric Agreement with Chevron U.S.A., Inc. in its entirety, including payments to be made thereunder, is approved without modification.
2. Pacific Gas and Electric Company's costs under the Cymric Agreement shall be recovered through the net capacity cost of incremental procurement under the Amendment in accordance with Ordering Paragraph 5 of D.10-12-035 using a proportional allocation of new and legacy nameplate capacity of the generator and make appropriate entries to its New System Generation Balancing Account.

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 March 13, 2014; the following Commissioners voting favorably thereon:

/S/ PAUL CLANON
PAUL CLANON
Executive Director

MICHAEL R. PEEVEY
President
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
CARLA J. PETERMAN
MICHAEL PICKER
Commissioners

Confidential Appendix A

REDACTED

September 16, 2013

Advice 4253-E-A
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Supplemental Filing to Pacific Gas and Electric Company's Advice 4253-E (Proposed Amendment of its Power Purchase Agreement with Chevron U.S.A., Inc. to Include the Cymric Demonstration Project)

Pursuant to General Order 96-B, Section 7.5.1, Pacific Gas and Electric Company ("PG&E") hereby revises and supplements pending Advice 4253-E ("Advice Letter") to specify that PG&E's recovery of the cost of the subject procurement shall conform with the methodology adopted by Decision ("D.") 10-12-035, as modified by D.11-07-010 (the "Decision").

I. Introduction

The Advice Letter, dated July 16, 2013, seeks the California Public Utilities Commission's ("Commission" or "CPUC") approval of the proposed Fifth Amendment ("Proposed Amendment") to the Standard Offer 1 ("SO1") As-Delivered Capacity and Energy Power Purchase Agreement ("PPA") between Chevron U.S.A., Inc. and PG&E.

As explained in the Advice Letter, the Proposed Amendment will enable PG&E to procure an additional 950 kilowatts ("kW") of nameplate capacity from Chevron's existing Cymric qualifying cogeneration facility and claim a greenhouse gas ("GHG") emission reduction credit of 2,114 metric tonnes per year.¹ This incremental combined heat and power ("CHP") procurement will count toward the CHP megawatt and GHG emissions reduction targets assumed by PG&E under the terms of the Qualifying Facility/CHP Settlement Agreement ("QF/CHP Settlement Agreement"). Accordingly, the cost of procurement under the Proposed Amendment should be recovered from all benefiting customers pursuant to Section 13.1.2.2 of the QF/CHP Settlement Agreement Term Sheet.

¹ See, PG&E Advice 4253-E, p. 7, for MW counting and Confidential Appendix C, for the calculation of GHG emissions reductions.

The Decision approves the CHP/QF Settlement Agreement and requires the investor-owned utilities (“IOUs”) to procure CHP resources on behalf of bundled service, Direct Access, Community Choice Aggregation customers, and all departing load customers (except for CHP departing load customers) (collectively, “Benefiting Customers”).² In addition, the IOUs are authorized to recover the net capacity costs of CHP resource transactions from all bundled service and specified unbundled service customers on a non-bypassable basis.³

The cost of CHP resource procurement, less the net capacity cost of the CHP resource, is recovered in PG&E’s Energy Resource Recovery Account (“ERRA”). In accordance with the Decision, PG&E recovers net capacity cost of CHP procurement from Benefiting Customers through the New System Generation Balancing Account (“NSGBA”).⁴

II. Supplemental Information

The current form of the Advice Letter requests the Commission to find that it is reasonable for PG&E to recover its costs under the Amended PPA through its Energy Resource Recovery Account. However, under the Amended PPA, PG&E would specifically procure new CHP capacity on behalf of Benefiting Customers in accordance with the QF/CHP Settlement Agreement. In recognition that this CHP procurement is required by the Decision, the Commission should explicitly authorize PG&E to allocate the net capacity costs and associated RA benefits associated with new capacity to Benefiting Customers consistent with the Decision.

Any above-market costs incurred through procurement from the existing 21,040 kW Cymric facility are currently recovered through the Competition Transition Charge (“CTC”). These costs will continue to be recovered through the CTC for the life of the SO1 PPA, as provided by QF/CHP Settlement Agreement Term Sheet Section 13.1.5. PG&E proposes to recover any net capacity costs of the incremental 950 kW procurement through the NSGBA. In order to identify the portion of above-market costs attributable to the incremental capacity, PG&E has used a proportional allocation of 4.3 percent, based on the ratio of incremental capacity to the revised total capacity. This percentage will be applied to the total cost of the Amended PPA to determine the portion of costs and generation attributable to the new CHP facility and the resulting net capacity costs to be allocated among all Benefiting Customers.

² See, D.10-12-035, Ordering Paragraph (“OP”) 5, which adopts the CHP procurement option set forth in Term Sheet Section 13.1.2.2.

³ D.10-12-035, OP 5.

⁴ PG&E Advice 3922-E, effective November 23, 2011.

Accordingly, PG&E supplements the Advice Letter with a request for a finding that PG&E shall recover the cost of incremental CHP capacity under the Proposed Amendment in accordance Section 13.1.2.2 of the QF/CHP Settlement Agreement using a proportional allocation of new and legacy nameplate capacity of the generator.

For the convenience of the reader, the original Request for Commission Approval has been reprinted below. The new request is underlined.

III. Amended Request for Commission Approval

PG&E respectfully seeks a Commission resolution no later than November 14, 2013, that includes the following (with modifications appearing as underscored text):

1. Finds that PG&E has met the requirements of the Restructuring Advice Letter Filing procedure adopted in D.98-12-066;
2. Finds that PG&E discussed the Proposed Amendment with its Procurement Review Group pursuant to D.02-08-071;
3. Finds PG&E's execution of the Amendment to be reasonable and approves the Amendment in its entirety, including payments to be made by PG&E pursuant to the Amended PPA, subject only to the Commission's review of the prudence of PG&E's administration of the Amended PPA;
4. Finds and concludes that it is reasonable for PG&E to recover its costs under the Amended PPA through its Energy Resource Recovery Account.
5. Finds and concludes that it is reasonable for PG&E to recover the net capacity cost of incremental procurement under the Amendment in accordance with Ordering Paragraph 5 of D.10-12-035 using a proportional allocation of new and legacy nameplate capacity of the generator and make appropriate entries to its New System Generation Balancing Account.
6. Finds that the 950 kW associated with the Amendment apply towards PG&E's procurement target of 1,387 MW or CHP capacity in the Initial Program Period, as established by the QF/CHP Settlement.
7. Finds that the 2,114 metric tonnes per year of GHG emissions reduction resulting from the Amendment counts towards PG&E's GHG emissions reduction target, as established by the QF/CHP Settlement.
8. Grants PG&E such other relief as the Commission finds to be just and reasonable.

IV. Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than **October 7, 2013**, which is twenty 21 days after the date of this filing.⁵ Protests should be mailed 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 also should be sent via U.S. mail (and by facsimile and electronically, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-7226
E-mail: PGETariffs@pge.com

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

⁵ Consistent with Section 1.5 of General Order 96-B, PG&E requests to extend the protest period by one additional day because twenty days following the submission date of this advice letter is Sunday, October 6, 2013.

V. Effective Date

PG&E submits this supplement to the restructuring advice letter filing as a Tier 3 designation and requests that it become effective concurrently with the deposition of Advice 4253-E. PG&E hereby revises the requested effective date for Advice 4253-E to November 14, 2013 to allow the Commission additional time to consider these issues.⁶

VI. Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the parties on the service list for R.12-03-014. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>

Handwritten signature of Brian Cherry in cursive script.

Vice President, Regulatory Relations

cc: Service List for R.12-03-014
Ed Randolph, Director, Energy Division, CPUC
Damon Franz, Energy Division, CPUC
Jason Houck, Energy Division, CPUC
Cem Turhal, Energy Division, CPUC
Noel Crisostomo, Energy Division, CPUC
Karen Hieta, DRA, CPUC
Claire Eustace, DRA, CPUC
Chris Ungson, DRA, CPUC
Chloe Lukins, DRA, CPUC
Jeremy Waen, Marin Energy Authority

⁶ PG&E initially requested that the Commission approve Advice 4253-E by no later than October 3, 2013.

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

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

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: **Shirley Wong**

Phone #: **(415) 972-5505**

E-mail: **slwb@pge.com and pgetariffs@pge.com**

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **4253-E-A**

Tier: **3**

Subject of AL: **Supplemental Filing to Pacific Gas and Electric Company's Advice 4253-E (Proposed Amendment of its Power Purchase Agreement with Chevron U.S.A., Inc. to Include the Cymric Demonstration Project)**

Keywords (choose from CPUC listing): **Agreements, Portfolio**

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed 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:

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: _____

Resolution Required? Yes No

Requested effective date: **No later than November 14, 2013, and concurrently with the deposition of Advice 4253-E** 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:

Service affected and changes proposed:

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

CPUC, Energy Division
ED Tariff Unit
505 Van Ness Ave., 4th Floor
San Francisco, CA 94102
EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Brian K. Cherry, Vice President, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

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

1st Light Energy	Division of Ratepayer Advocates	Occidental Energy Marketing, Inc.
AT&T	Douglass & Liddell	OnGrid Solar
Alcantar & Kahl LLP	Downey & Brand	Pacific Gas and Electric Company
Anderson & Poole	Ellison Schneider & Harris LLP	Praxair
BART	G. A. Krause & Assoc.	Regulatory & Cogeneration Service, Inc.
Barkovich & Yap, Inc.	GenOn Energy Inc.	SCD Energy Solutions
Bartle Wells Associates	GenOn Energy, Inc.	SCE
Bear Valley Electric Service	Goodin, MacBride, Squeri, Schlotz & Ritchie	SDG&E and SoCalGas
Braun Blaising McLaughlin, P.C.	Green Power Institute	SPURR
CENERGY POWER	Hanna & Morton	San Francisco Public Utilities Commission
California Cotton Ginners & Growers Assn	In House Energy	Seattle City Light
California Energy Commission	International Power Technology	Sempra Utilities
California Public Utilities Commission	Intestate Gas Services, Inc.	SoCalGas
California State Association of Counties	Kelly Group	Southern California Edison Company
Calpine	Linde	Spark Energy
Casner, Steve	Los Angeles Dept of Water & Power	Sun Light & Power
Center for Biological Diversity	MAC Lighting Consulting	Sunshine Design
City of Palo Alto	MRW & Associates	Tecogen, Inc.
City of San Jose	Manatt Phelps Phillips	Tiger Natural Gas, Inc.
Clean Power	Marin Energy Authority	TransCanada
Coast Economic Consulting	McKenna Long & Aldridge LLP	Utility Cost Management
Commercial Energy	McKenzie & Associates	Utility Power Solutions
County of Tehama - Department of Public Works	Modesto Irrigation District	Utility Specialists
Crossborder Energy	Morgan Stanley	Verizon
Davis Wright Tremaine LLP	NLine Energy, Inc.	Water and Energy Consulting
Day Carter Murphy	NRG Solar	Wellhead Electric Company
Defense Energy Support Center	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Dept of General Services	North America Power Partners	