PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Item 16
Agenda ID 13246

ENERGY DIVISION **RESOLUTION E-4661(Rev. 1)**
September 11, 2014

R E D A C T E D
R E S O L U T I O N

Resolution E-4661. Pacific Gas and Electric Company requests approval of a power purchase agreement with Midway Sunset Cogeneration Company for procurement of combined heat and power energy and capacity.

PROPOSED OUTCOME:

- Approve without modification the power purchase agreement (PPA) between Pacific Gas and Electric Company and Midway Sunset Cogeneration Company.

SAFETY CONSIDERATIONS:

- This Resolution approves a PPA for an existing combined heat and power (CHP) facility. Because facility operations will either remain unchanged or scale back, there are no new safety risks associated with the approval of this contract.

ESTIMATED COST:

- Cost components of the Midway Sunset PPA 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 4377-E Filed on March 18, 2014.

SUMMARY

This Resolution approves, without modification, the Power Purchase Agreement (PPA) that Pacific Gas and Electric Company (PG&E) executed with Midway Sunset Cogeneration Company. PG&E received this Tolling PPA through its second combined heat and power (CHP) request for offers.

Midway Sunset is currently under contract with PG&E to deliver baseload power. Its three units currently deliver up to 151 MW of capacity to PG&E. Under the new Tolling PPA, the facility will change its operations to become a mixture of baseload and dispatchable capacity. The thermal host's steam needs are declining: it currently takes steam produced from two of the facility's units, but under the Tolling PPA, it will require steam from only one unit. When the other two units are not needed for baseload operations, they will be available for dispatch. The facility's change in operations will result in 160,642 MT of emissions reductions.

The Tolling PPA will contribute an incremental 79 MW towards PG&E's MW target. While the Tolling PPA counts as 230 MW toward the MW target, PG&E has already counted 151 MW from this facility based on its existing QF Agreement with Midway Sunset. With the approval of the Tolling PPA, PG&E will count the incremental 79 MW towards its goal.

This Resolution finds that the costs of the PPA are reasonable, and PG&E is authorized to recover these costs.

BACKGROUND

Background on Relevant terms of the CHP/QF Settlement

On December 16, 2010, the Commission adopted the Qualifying Facility and Combined Heat and Power Program Settlement Agreement (Settlement) with the issuance of Decision (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 qualifying facility contracts.

The Settlement establishes 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 combined heat and power (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 Scoping Plan,[1] currently set at 4.8 million metric tonnes (MMT) by the end of 2020. For the initial program period, the Settlement allocates to PG&E 1,387 MW of the procurement target.

Per Section 4.2.1 of the Settlement, the Commission directs the IOUs to conduct Requests for Offers (RFOs) exclusively for CHP resources 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. The maximum contract term for new facilities selected in an RFO is twelve years, while the maximum term for existing facilities is seven years.[2] Any CHP Facility with a nameplate larger than 5 MW may bid into the CHP RFO, including CHP Facilities seeking firm and as-available capacity.

Background on the Power Purchase Agreement and Facility Operations

On February 20, 2013, PG&E initiated its second CHP RFO for existing, new, repowered and expanded CHP facilities, Utility Prescheduled Facilities, and CHP capacity-only products. The RFO contained three contract options: (1) CHP RFO Pro forma PPA, (2) Utility Tolling PPA, and (3) CHP Capacity-only (RA) Confirmation Agreement.[3]

After receiving offers, PG&E compiled a shortlist of the most attractive offers. On July 2, 2013, PG&E informed Midway Sunset Cogeneration Company (MSCC) that its offer had been shortlisted. After a period of negotiation, PG&E and MSCC executed the agreement on January 31, 2014. The contract has a 65-month delivery term beginning on August 1, 2015. Additional information about the RFO process is provided in Confidential Appendix A.

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[1] Initial AB 32 Climate Change Scoping Plan Document. 2009. http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm.

[2] Settlement Term Sheet, Section 4.2.3.

[3] PG&E CHP RFO Protocol for Second Solicitation. 2013. http://www.pge.com/includes/docs/word_xls/b2b/wholesaleelectricsuppliersolicitation/CHP2/01%20%20CHPRFO_Protocol%20.pdf.

MSCC is a cogeneration facility in Kern County, California. The facility consists of three General Electric Frame 7E gas turbines each nominally rated at 78 MW and equipped with once-through heat recovery steam generators. While 234 MW is the nominal nameplate capacity of the three turbines, actual output may be as high as 270 MW under favorable ambient conditions. The maximum capacity MSCC has agreed to deliver to PG&E under the Agreement is 248 MW.

The facility's steam host, Aera Energy LLC, owns 50 percent of the facility, and San Joaquin Energy Company owns the other 50 percent. MSCC has delivered steam and electricity to Aera Energy for enhanced oil recovery in the Midway Sunset oil field.

MSCC came online in 1989, delivering electricity to Southern California Edison (SCE) and PG&E. Through October of 2010, all three units operated and served steam simultaneously; MSCC sold 200 MW of firm capacity to SCE and 30 MW of as-available capacity to PG&E under Legacy Qualifying Facility (QF) Agreements.

MSCC secured a contract with PG&E through PG&E's 2008 solicitation for long-term offers.[4] On November 1, 2010, MSCC began deliveries to PG&E under a new QF agreement for must-take, baseload energy that replaced the previous legacy QF agreements with SCE and PG&E. Historically, MSCC only generated electricity to match steam needs, however the new QF agreement gives MSCC the right to deliver up to 151 MW of CHP capacity to PG&E.

Table 1: History of MSCC Agreements

Utility	Type	Start
SCE, PG&E	Legacy QF Agreements	May 1989
PG&E	QF Agreement	November 2010
PG&E	Utility Tolling PPA	August 2015 (pending Commission approval)

[4] D.10-07-045 approved the QF Agreement between PG&E and MSCC.

Under the recently-executed Tolling PPA, MSCC will change from a baseload facility to a mixture of baseload and dispatchable energy. The thermal host's steam needs are declining: Aera Energy currently takes steam produced from two of the facility's units, but under the Tolling PPA, it will require steam from only one unit. If the other two units are not needed for baseload operations, they will be available for dispatch. The facility will continue to deliver steam and electricity to the site host load, allowing baseload industrial operations to continue 24 hours per day.

NOTICE

Notice of Advice Letter 4377-E was made by publication in the Commission's Daily Calendar. Pacific Gas and Electric Company states that a copy of the Advice Letter was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

Advice Letter 4377-E was not protested.

DISCUSSION

On March 18, 2014, PG&E filed Advice Letter 4377-E which requests Commission approval of a power purchase agreement with Midway Sunset Cogeneration Company.

PG&E requests a Commission resolution no later than August 14, 2014 that:

1) Approves the MSCC 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 MSCC Agreement are reasonable.
3) Finds that 230 MW from the MSCC Agreement, which is 79 MW incremental to the counting of the existing New QF Agreement, applies 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 160,642 MT per year of GHG Emissions Reductions resulting from the MSCC Agreement applies toward PG&E's GHG Emissions Reduction Target as established by the QF/CHP Settlement.
5) Finds that PG&E's shall recover the costs incurred pursuant to the MSCC Agreement in rates.
6) Adopts the following findings of fact and conclusions of law in support of cost recovery for the MSCC 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 Letter No. 3922-E, approved December 19, 2011.
    b. The costs of the MSCC Agreement are recoverable through PG&E's ERRA.
7) Find that because the expected annualized capacity factor of Midway Sunset is below 60 percent, the MSCC Agreement is compliant with the EPS adopted in D.07-01-039.

Energy Division evaluated the Midway Sunset PPA based on the following criteria:

- Consistency with D.10-12-035, which approved the QF/CHP Program Settlement including:
    - Consistency with Eligibility Requirements for CHP Requests for Offers
    - 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 and Cost Allocation Mechanism group participation

In considering these factors, Energy Division also considered 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.[5]

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 Term Sheet establishes criteria for contracts with CHP Facilities including:

Consistency with Eligibility Requirements for CHP Requests for Offers

Per Section 4.2 of the Settlement Term Sheet, the IOUs are directed to conduct Requests for Offers (RFOs) exclusively for CHP resources as a means of achieving their MW and GHG Emissions Reduction Targets. Per Section 4.2.2, eligible CHP Facilities with a nameplate greater than 5 MW may bid into the CHP RFOs. To be eligible, a CHP facility must meet State and Federal definitions of cogeneration[6] and the State Emissions Performance Standard.

MSCC has a nameplate capacity of 234 MW, which is greater than the 5 MW minimum. As shown in the confidential appendix, MSCC meets State and Federal efficiency requirements for cogeneration. As discussed later in the "Consistency with the Emissions Performance Standard" section of this Resolution, the Emissions Performance Standard is not applicable to MSCC under the Tolling Agreement. Midway Sunset was eligible to participate in the PG&E CHP Request for Offers.

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[5] 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."

[6] On the State level, the definition of cogeneration is defined in Public Utilities Code §216.6. On the Federal level, a facility must meet the definition under 18 CFR § 292.205 implementing the Public Utilities Regulatory Policy Act (PURPA) of 1978.

Consistency with Settlement MW Counting Rules

Per Settlement Term Sheet Section 5.2.3.1, the MWs counted for New PPAs with Existing CHP Facilities will be the published Contract Nameplate value as listed in each IOU's July 2010 Semi-Annual Report. Per the definition in this section of the Term Sheet, MSCC is an Existing CHP Facility. It is a gas-fired topping-cycle CHP Facility that exported and delivered electric power to PG&E and SCE.

SCE's July 2010 Qualifying Facilities Semi-Annual Status Report[7] lists MSCC by QF ID 2076 with a Contract Nameplate of 225 MW and Operating Capacity of 200 MW.[8] PG&E's July 2010 Cogeneration and Small Power Production Semi-Annual Report lists MSCC with a QF ID of 25C321EO1 and Contract Nameplate of 30 MW.

In Advice Letter 4377-E, PG&E notes that the sum of both Contract Nameplates is 255 MW, while the sum of SCE's Operating Capacity and PG&E's Contract Nameplate is 230 MW. PG&E proposes using 230 MW as the total Contract Nameplate for the purposes of MW counting, as this is a more conservative estimate. For the Tolling PPA, it is reasonable for PG&E to use 230 MW as the total Contract Nameplate, based on the July 2010 Semi-Annual Reports.

Because PG&E previously counted 151 MW from MSCC towards its target,[9] the Tolling PPA will result in an incremental increase of 79 MW towards PG&E's MW target. Additional information about the history of PG&E's MW counting for MSCC is found in Confidential Appendix A. An incremental 79 MW will count towards PG&E's MW Target (Table 2).

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[7] https://www.sce.com/NR/rdonlyres/E4ABE892-DCEB-4788-BA19-B1047B5088C2/0/1001_QFSemiAnnualReport.pdf.

[8] SCE's report defines Contract Nameplate as total net generation output to be delivered from the generating facility to the electrical grid as specified in the contract (power purchase agreement). Net generation output is the gross generation of the generator minus auxiliary load and host load. The Contract Nameplate generation may be sold to one or more entities. Operating capacity is the total net generation output to be sold to the purchasing utility as specified in the power purchase agreement.

[9] The October 16, 2013 CHP Program Semi-Annual Report lists Midway Sunset Cogeneration Company with 151 MW towards the target. http://www.cpuc.ca.gov/PUC/energy/CHP.

Table 2: Calculation of MW

Contract Nameplate (MW)	230
Previously Counted towards PG&E Target (MW)	151
Incremental MW from Tolling PPA (MW)	79

Consistency with Settlement Greenhouse Gas Accounting Methodology

Per Settlement Term Sheet Section 7.3.1.3, a CHP Facility Change in Operations 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 percent of the decreased electric generation at a time differentiated heat rate.

PG&E anticipates that operations under the Tolling PPA will be reduced compared to current operations. This change in the facility's operating schedule reduces its greenhouse gas emissions proportionately. Additional information about the GHG emissions accounting is included in Confidential Appendix A.

MSCC's operations under the Tolling Agreement will be reduced compared to the prior two years of operations, yielding a GHG Credit of 160,642 MT toward the GHG Emissions Reduction Target.

Consistency with Cost Recovery Requirements

In D.10-12-035, the Commission determined that the utilities should procure CHP resources on behalf of non-IOU load-serving entities and allocate the net capacity costs (NCCs) and associated benefits to those entities.[10] Section 13.1.2.2 of the Settlement Term Sheet defines NCCs as the total costs paid by the utility under the CHP Program less the value of energy and ancillary services provided to the IOU. In exchange for paying a share of the net costs of the CHP Program, the load-serving serving Direct Access and Community Choice Aggregator customers will receive a pro-rata share of the RA credits procured via the CHP Program.

[10] D. 10-12-035, page 56.

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.

On December 19, 2011, the Commission approved (effective November 23, 2011) AL 3922-E, which authorized PG&E to (1) establish the New System Generation Balancing Account to recover the NCCs of CHP contracts as directed by D.10-12-035 and (2) modify the Energy Resource Recovery Account preliminary statement to record the costs associated with the QF/CHP Program, less the NCCs.

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

Need for Procurement

PG&E's total MW procurement target for the CHP Program is 1,387 MW, and PG&E's estimated 2020 GHG Emissions Reduction Target is 2.17 MMT. As of July 1, 2014, PG&E has executed[11] 67 contracts proposed to contribute 1,364 MW and 1.34 MMT of GHG reductions toward these goals. Of these totals, the Midway Sunset Tolling PPA will contribute 79 MW and 0.16 MMT of GHG reductions. After counting Midway Sunset, PG&E must still procure additional CHP to meet its MW and GHG Emissions Reduction targets (Table 3). Midway Sunset's contributions to PG&E's MW and GHG reductions targets justify its procurement.

Table 3: PG&E's Progress toward MW and GHG Targets, July 2014

	Target	Executed Contracts	Remaining
MW	1,387	1,364	23
MMT GHG Emissions Reduction	2.17	1.34	0.83

[11] Some of the executed contracts have not yet been approved by the Commission.

Cost Reasonableness

A detailed explanation of the contract cost is provided in Confidential Appendix A. The costs associated with the MSCC Tolling PPA 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.

Based on the information before the Commission, Midway Sunset will decrease its on-site generation and will not add any new capacity. There are no known safety concerns associated with approval of this contract.

Project Viability

MSCC is currently delivering electricity to PG&E under a QF Agreement. It began exporting electricity to both PG&E and SCE beginning in 1989. MSCC most recently self-recertified as a QF in FERC Docket Number QF86-433-005 on April 18, 2006. The steam host, Aera Energy, expects it will continue to need steam as least through 2020, which is the end of the term of the Tolling PPA. Midway Sunset is an existing CHP Qualifying Facility and therefore 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 emissions 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 Commission 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 greater than 60 percent. As described in Confidential Appendix A, the annualized plant capacity factor for MSCC is expected to be below the 60 percent baseload threshold. Therefore, the EPS does not apply to Midway Sunset.

Consistency with D.02-08-071 and D.07-12-052, which Respectively Require Procurement Review Group and Cost Allocation Mechanism Group Participation

PG&E's Procurement Review Group (PRG) consists of representatives from: the Office of Ratepayer Advocates, The Utility Reform Network, California Department of Water Resources, Coalition of California Utility Employees, the Union of Concerned Scientists, Coast Economic Consulting, and the Commission's Energy Division. PG&E's Cost Allocation Mechanism (CAM) group includes PRG participants as well as members representing Direct Access and Community Choice Aggregation customers.

PG&E presented its CHP RFO at five meetings, beginning on January 30, 2013. At the January meeting, PG&E informed the CAM group that it would launch its second CHP RFO. After performing an initial review of the submitted offers, PG&E presented the results of the RFO to the CAM group. After ranking the offers, PG&E presented the CAM with its shortlist, including MSCC. After negotiating with MSCC, PG&E presented the contract terms to the PRG.

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

COMMENTS

This is an uncontested matter in which the resolution grants the relief requested. Accordingly, pursuant to PU Code 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

FINDINGS

1. Pursuant to the QF/CHP Settlement, PG&E is permitted to enter into a Power Purchase Agreement with Midway Sunset Cogeneration Company through the CHP request for offers process, because the facility meets the efficiency requirements under the Public Utility Regulatory Policies Act of 1978 (PURPA).
2. It is reasonable for PG&E to count 230 MW as the total Contract Nameplate, based on the July 2010 Semi-Annual Reports.
3. Pursuant to the QF/CHP Settlement, an incremental 79 MW count towards PG&E's MW target.
4. Pursuant to the QF/CHP Settlement, 160,642 MT of greenhouse gas emissions reductions count towards PG&E's GHG Emissions Reduction Target.
5. Resource adequacy credits 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.
6. PG&E's request to recover costs in accordance with Section 13.1.2.2 of the QF/CHP Settlement Term Sheet and AL-3922-E is consistent with the directives of the Settlement. The costs of the MSCC Agreement are recoverable through the Energy Resource Recovery Account, less the net capacity costs, which are recoverable through the New System Generation Balancing Account.
7. Commission Decision 10-12-035 directed PG&E to procure 1,387 MW of CHP capacity by November 2015 and 2.17 MMT of GHG reductions from CHP contracts by 2020. The PPA with MSCC would help PG&E to meet both of these goals, justifying the need for the PPA.
8. The costs of the PPA are just and reasonable.
9. The change in operations will not result in any foreseeable new safety risks.
10. Midway Sunset is an existing CHP Qualifying Facility and therefore a viable project.
11. The PPA is not subject to the Emissions Performance Standard under D.07-01-039 as the facility will be operating with an annualized plant capacity factor of less than 60 percent.

12. PG&E has complied with the Commission's rules for involving the Procurement Review Group.

THEREFORE IT IS ORDERED THAT:

1. The request of Pacific Gas & Electric Company in Advice Letter AL 4377-E for the Commission to approve without modification the Power Purchase Agreement with Midway Sunset Cogeneration Company is approved.
2. PG&E is authorized to recover the costs associated with the PPA 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 Term Sheet, and PG&E's Advice Letter 3922-E.
3. PG&E is authorized to count an incremental 79 MW towards the QF/CHP Settlement MW target.
4. PG&E is authorized to count 160,642 MT of GHG emissions reductions associated with the Tolling PPA towards the GHG Emissions Reduction target included in the QF/CHP Settlement.
5. Because the annualized plant capacity factor of MSCC under the Tolling PPA is expected to be below 60 percent, the facility is not subject to the GHG Emissions Performance Standard adopted in D.07-01-039.

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 11, 2014; the following Commissioners voting favorably thereon:

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PAUL CLANON
Executive Director

Confidential Appendix A

[REDACTED]