

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Item 17 (Rev.1)

AGENDA ID 15261

RESOLUTION E-4800

November 10, 2016

ENERGY DIVISION

REDACTED
RESOLUTION

Resolution E-4800. Southern California Edison requests approval of a power purchase agreement with Tesoro Refining & Marketing Company LLC for procurement of combined heat and power energy and capacity.

PROPOSED OUTCOME:

- This resolution approves the Power Purchase Agreement (PPA) between Southern California Edison (SCE) and Tesoro Refining & Marketing (Tesoro) pursuant to the terms of the Qualifying Facility and Combined Heat and Power Program Settlement Agreement.

SAFETY CONSIDERATIONS:

- This Resolution approves a PPA for an existing combined heat and power (CHP) facility. SCE submitted a safety plan for the facility that was certified by a licensed California engineer.

ESTIMATED COST:

- Cost components of the Tesoro PPA are confidential at this time. More details regarding the PPA's cost may be found in the Confidential Appendix.

By Advice Letter 3372-E, filed on February 29, 2016.

SUMMARY

This Resolution approves a materially-modified Combined Heat and Power Request for Offers (CHP RFO) Pro Forma Power Purchase Agreement (PPA) that

Southern California Edison (SCE) executed with Tesoro Refining for energy and capacity from its cogeneration facility on December 30, 2015. This offer was bilaterally negotiated.

The start date for the agreement is January 1, 2017, for a period of one or four years. After one year, Tesoro will re-evaluate whether they want to continue with the contract for another three years. More information on why Tesoro wants the one year option is in the Confidential Appendix.

According to the CHP Settlement Term Sheet Section 4.12, the Greenhouse Gas (GHG) and megawatt (MW) benefits of this agreement will still count towards SCE's targets even if the agreement only lasts one year, unless any conditions described in the Settlement Term Sheet Section 7.3.2.2 regarding GHG debits occur.

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 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 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.

Per Section 4.2 of the Settlement Term Sheet, the IOUs are directed to conduct Requests for Offers (RFO) exclusively for CHP resources as a means of achieving their MW and GHG Emissions Reduction Targets. In addition, per Section 4.3 of

the Settlement Term Sheet, bilaterally negotiated and executed CHP PPAs are included among the procurement options in the CHP Program. Pricing, terms, and conditions will be determined according to the executed and approved PPA. The use of an independent evaluator (IE) is required for bilateral negotiations between an IOU and its affiliate.

Under D. 15-06-028, the Settlement revised Greenhouse Gas Emissions Reduction Targets to collectively achieve 2.72 MMT of emissions reductions from CHP facilities by 2020. The agreement also established a schedule of four competitive solicitations for CHP facilities during the Second Program Period, which began on November 23, 2015.

The goal of the CHP Agreement is to reduce utility GHG emissions and to procure a certain amount of power from CHP facilities. Before counting the Tesoro PPA, SCE has a remainder of .559 remaining MMT of GHG they need to reduce through the CHP program and 27 MW they still need to procure from CHP facilities. After this project is approved, SCE will have met their CHP MW requirement and will still need to procure an additional .454 MMTs of GHG reduced under the CHP program.

Background on the Power Purchase Agreement and Facility Operations

The Wilmington CHP Facility is owned by Tesoro, which purchased it from British Petroleum in 2013. Tesoro also acquired the Carson oil refinery as part of the transaction and is seeking to consolidate it with the Wilmington refinery, which Tesoro had previously owned, in the Los Angeles Refinery Integration and Compliance (LARIC) project. While they are both named Wilmington, the CHP facility is on land that is located several miles from the Wilmington refinery and therefore, will not be affected by the refinery consolidation.

The facility features the Wilmington Calciner, which uses petroleum coke and natural gas to produce calcined coke used in the manufacturing of aluminum. The waste heat from this Calciner powers the cogeneration facility. The facility operates through bottoming cycle cogeneration which produces zero emissions because it uses waste heat from the Calciner to make electricity. The waste heat generates 35 MW of power. Only 4 MW of this power is used by the facility, and

the rest is sold to the California Independent System Operator (CAISO) power grid.

Under the CHP Agreement, SCE launched a third RFO on November 13, 2014, and was unable to meet its CHP MW requirement due to a counterparty default, leaving SCE short of its 1,402 MW target. After initiating the RFO, SCE used Tesoro's offer, submitted in response to the RFO, to begin bilateral negotiations with Tesoro for adding the Wilmington facility to its list of CHP resources. SCE's intent was to use the Tesoro PPA to meet its CHP MW procurement target. Negotiations were completed December 30, 2015, and an Advice Letter asking the CPUC to approve this PPA was sent to the Commission on February 29, 2016.

While negotiating this agreement with Tesoro, SCE did not need the Tesoro-Wilmington PPA to meet its CHP MW target because it planned to use a PPA with Coalinga Cogeneration Facility, to count towards the target. However, the PPA with Coalinga was not executed. In its Advice Letter, SCE asked that if the Coalinga PPA fell through, the Commission count the Tesoro-Wilmington PPA toward SCE's CHP MW Target. Therefore, this PPA will now contribute 34 MW toward meeting SCE's CHP MW target of 1,402, thereby increasing SCE's total procured CHP MWs to 1,409 MWs.

In addition to the MW target, SCE needs to reduce 454,000 MT of emissions to meet its GHG target. Since the facility uses waste heat as its sole input and electricity generated is its sole output, it does not produce GHG emissions.

Because negotiations were completed in the Second Program Period, this type of bottoming cycle¹ facility is treated as a "new" facility for GHG accounting so SCE may use Tesoro to reduce its GHG emissions even though it is an existing facility.

Under new rules adopted in the Second CHP Program Period, the Wilmington facility, as an existing bottoming cycle facility, can provide GHG reductions. The

¹ A bottoming cycle facility is one in which waste heat from an existing process is used to generate electricity. A topping cycle facility is one that uses a fuel, like natural gas, to power electric generation and uses the excess energy produced for heating and cooling.

Second Program Period began November 23, 2015 and the Tesoro PPA was signed on December 30, 2015 making the Tesoro-Wilmington eligible for GHG reductions. According to the CHP Settlement Agreement, "Renewable fueled and bottoming cycle CHPs reduce GHG against the double benchmark in far greater magnitude than traditional topping cycle CHP." A facility meets the double benchmark by using a boiler that is at least 80% efficient and operating at a heat rate of 8,300 Btu/kWh.

Under the terms of the CHP Agreement, SCE's GHG reduction target is 1.23 MMT and this agreement reduces the target by .105 MMT GHG emissions. This reduction occurs because the facility produces electricity, 238,090 MWh annually, without any emissions and without using natural gas as fuel. According to the PPA's Independent Evaluator, Merrimack Energy Group, "To produce the same amount of electricity at an 8,300 BUT/KWh heat rate using natural gas as a fuel would result in GHG emissions of 104,875 MT of GHG emissions in a year." This amount of GHG reduced is the number SCE seeks to count against its GHG reduction target under the CHP Agreement.

To date, SCE has reduced its emissions target by .76 MMT of GHG through other CHP Agreements, including the .105 MMT in the Tesoro-Wilmington PPA, and would need to reduce an additional .454 MMT to meet SCE's CHP requirement for GHG reductions. SCE is currently in negotiation with CHP facilities that could meet that target of GHG reductions.

Because SCE can use this PPA to reduce GHG emissions, the costs and GHG reduction benefits compared favorably with other offers from the third CHP RFO. Other offers in the RFO would be considerably more expensive regarding the cost of GHG reduced. Details of this RFO can be found in the Confidential Appendix.

Lastly, SCE claims the Tesoro facility will provide critical resource adequacy because it is located in the Los Angeles basin where there is high demand for electricity.

NOTICE

Notice of AL 3372-E was made by publication in the Commission's Daily Calendar. Southern California Edison states that a copy of the Advice Letter was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

There were no protests filed on Advice Letter AL 3372-E.

DISCUSSION

On February 29, 2016, SCE filed Advice Letter 3372, which requests Commission approval of a PPA with the Tesoro Wilmington Facility.

The Advice Letter requests the Commission:

1. Approve of this Bilateral PPA in its entirety
2. Find that the Agreement and SCE's entry in the Agreement, is reasonable and prudent for all purposes, subject to further review with respect to the reasonableness of SCE's administration of the Agreement
3. Find that the 34 MW associated with the PPA applies toward SCE's procurement target of 1,402 MW of CHP capacity
4. Find that the .104875 MMT of GHG emissions reductions with the agreement applies toward SCE's GHG target
5. Find that the Agreement is not subject to EPS compliance
6. Find that SCE's costs under the agreement shall be recovered through SCE's CAM

Energy Division evaluated the Proposed PPAs based on the following criteria:

- Consistency with D.10-12-035, which approved the QF/CHP Program Settlement, including:
- Consistency with MW Counting Rules
- Consistency with GHG Counting Rules
- 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 Cost Allocation Mechanism Group participation
- Energy Division typically considers the analysis and recommendations of an Independent Evaluator (IE), if available.
- Disadvantaged Community Designation

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

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. Tesoro's Wilmington CHP facility meets these definitions.

Consistency with MW Counting Rules

The Tesoro facility would contribute 34 MW toward SCE's CHP requirement 1,402 MW. As an existing bottoming cycle facility, Tesoro's Wilmington CHP facility counts toward SCE's CHP MW requirement. Including Tesoro in its CHP MW procurement total would enable SCE to add Wilmington's 34 MWs to SCE's existing MW total of 1,375, totaling 1,409 MW of CHP procurement, which is 7 MWs over SCE's CHP MW target of 1,402.

Consistency with GHG Counting Rules

Under the terms of the Second Program Period, stipulated in D.15-06-028, SCE can count Tesoro-Wilmington, an existing bottoming cycle facility as .105 MMT of reduced GHG emissions. Approving this PPA will leave SCE with an additional .454 MMT of GHG reduced that they will still need to procure to meet their GHG reduction target.

Need for Procurement

SCE's total MW procurement goal for the CHP Program is 1,402 MW. SCE needs to procure this CHP resource in order to meet its CHP MW target and its GHG reduction requirement under the CHP Agreement. Without Tesoro, SCE will be 27 MW short of achieving its MW procurement target and .509 MMT short of achieving its GHG target.

Cost Reasonableness

According to the Independent Evaluator, the price of the PPA is less expensive than other CHP options available to reduce GHG emissions in the most recent RFO. As part of the resolution, SCE is asking to recover the cost of this agreement under the Cost Allocation Mechanism (CAM). More information on the cost of this proposed PPA is contained in the Confidential Appendix.

Public Safety

Decision (D) 15-06-028, Ordering Paragraph 10 orders SCE to require all CHP offerers to provide a report from an independent, California-licensed professional engineer certifying that the CHP facility has a "feasible written [safety plan] for the safe construction and operation of the generating facility in accordance with existing applicable state or federal standards and in compliance with Prudent Electrical Practices." Tesoro submitted a safety plan for the facility that was certified by a California licensed engineer. Tesoro also verified that the project has a valid interconnection agreement with SCE that governs interconnection with the utility.

SCE filed the safety plan as a confidential document without further explanation, and it is currently included in Confidential Appendix B of this Resolution. Upon review, Staff was unable to identify any aspects of the safety plan which could reveal proprietary or competitive information of Tesoro. Thus, Staff believes it is in the public interest to make the safety plan public.

Energy Division staff reviewed the safety plan ordered by D.15-06-028 and requested supplemental information from SCE via a data request. SCE submitted its response to the data request on August 4, 2016. Energy Division has reviewed the safety plan and the supplemental information included in the

data request. . Additional information that should have been included in the safety plan would be at a minimum a summary of all relevant laws and regulations that the counterparty is required to comply with to ensure safe operation. We make no finding as to whether the safety plan is adequate and instead require SCE to file, via a Tier 2 Advice Letter, the foregoing additional information.

Project Viability

The Tesoro Wilmington facility is viable because it is an existing CHP facility currently selling its power directly to CAISO. More information about the long term viability of the facility is in the Confidential Appendix.

Consistency with the Emissions Performance Standard

This bottoming cycle facility only uses heat waste from an industrial process and does not have any emissions. In addition, since the agreement is less than five years, it is not covered by Emissions Performance Standard, which only covers PPAs lasting five years or longer. Therefore, the facility is consistent with the Emissions Performance Standard.

Consistency with D.02-08-071 and D.07-12-052, which respectively require Cost Allocation Mechanism (CAM) Group participation

SCE consulted with its CAM group regarding the Tesoro Agreement on December 2, 2015.

In considering these factors, Energy Division typically considers the analysis and recommendations of an Independent Evaluator (IE), if available

This PPA was evaluated by Merrimack Energy Group and the evaluation was completed February, 2016.

Disadvantaged Community Designation

Senate Bill 350 (de León, Chapter 547, Stats. 2015) contains disadvantaged community goals that are cross-cutting and therefore will be integrated into all

policy areas. Thus, in evaluating on the PPA at issue, the Commission will analyze its impact on such communities.

Energy Division Staff notes that these facilities, including the CHP generating unit, are physically located in a CalEnviroScreen Version 2.0 designated Disadvantaged Community.

CalEnviroScreen² indicates the surrounding Census Tract, 6037294610, is in the 95th percentile for pollution statewide. It is in the 90th percentile for diesel pollution, the 90th percentile for toxic releases and 87th percentile for groundwater threats.

However, because the CHP facility at issue is a bottoming cycle unit that uses heat waste as fuel, its operation will lessen pollution in the immediate area.

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.

All parties in the proceeding have stipulated to reduce the 30-day waiting period required by PU Code section 311(g)(1) to 15 days. Accordingly, this matter will be placed on the first Commission's agenda fifteen days following the mailing of this draft resolution. By stipulation of all parties, comments were filed 10 days following the mailing of this draft resolution.

The California Cogeneration Council (CCC) filed comments on October 31, 2016.

In their comments, CCC expressed concern that wording in the summary of the Draft Resolution imprecisely described the GHG accounting for the PPA. CCC noted that Section 7.3.2 of the Settlement identifies specific conditions that result in the debiting of GHGs. The summary was revised to reflect that the accounting of GHGs for this PPA shall follow the applicable terms in the Settlement;

² <http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-version-20>

specifically noting that the GHGs shall count as contemplated herein except if any of the Settlement conditions regarding GHG debits (Section 7.3.2) occur.

FINDINGS

1. Commission Decision 10-12-035 directed SCE to procure 1,402 MW of CHP capacity and established a 1.23 MMT GHG reduction target.
2. On February 29, 2016, SCE filed Advice Letter 3372 seeking Commission approval of a bilaterally negotiated combined heat and power purchase agreement with Tesoro Refining & Marketing.
3. The total 34 MW nameplate value for the Tesoro facility may count toward SCE's MW procurement target of 1,402 MW.
4. The Tesoro PPA will count toward GHG reductions under the CHP Settlement because the contract is a bottoming cycle facility and the contract was signed in the Second Program Period.
5. This facility is not subject to the Emissions Performance Standard because proposed PPA is for a term less than five years.
6. SCE met with the CAM group on December 2, 2015 where they presented this proposed PPA.
7. This agreement has been independently evaluated.
8. Analysis shows this PPA is with a facility in a designated Disadvantaged Community.
9. There is no competitive or proprietary information in the safety plan as submitted.
10. There is a public interest in making the safety plan public.
11. Any safety plan shall contain at a minimum the following information: a summary of all relevant laws and regulations that the counterparty is required to comply with to ensure safe operation.

THEREFORE IT IS ORDERED THAT:

1. The request of Southern California Edison for the Commission to approve the Power Purchase Agreement with Tesoro Marketing & Refining is approved and to recover costs via the cost allocation mechanism as proposed in Advice Letter 3372-E is approved.
2. The Commission has determined that the safety plan and related documents filed by SCE do not contain any competitive or proprietary information and shall be considered a public document
3. Southern California Edison shall within 30 days of the mailing of this Resolution submit a Tier 2 Advice Letter revising the submitted Safety Plan called for in OP 10 of D.15-06-028. Any revised safety plan shall contain at a minimum the following information: a summary of all relevant laws and regulations that the counterparty is required to comply with to ensure safe operation.

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 November 10, 2016; the following Commissioners voting favorably thereon:

TIMOTHY J. SULLIVAN
Executive Director

CONFIDENTIAL APPENDIX A

Analysis of the Power Purchase Agreement with
SCE & Tesoro Marketing & Refining

[Redacted]

CONFIDENTIAL APPENDIX B
Proposed Tesoro Safety Plan and Related Documents

[Redacted]