

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**ENERGY DIVISION
RESOLUTION E-4800**

March 23, 2017

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

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 Company LLC (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 and Advice Letter 3372-E-A, filed on January 18, 2017.

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 & Marketing Company LLC (Tesoro) for energy and capacity from its cogeneration facility on December 30, 2015. This offer was bilaterally negotiated. A previous draft of this resolution was issued and then withdrawn by Energy Division in November of 2016.

The start date for the agreement, cited in the PPA, 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.

Based on the CHP Settlement Term Sheet Section 7.4.1, the Greenhouse Gas (GHG) and megawatt (MW) benefits of this agreement should 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 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 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 negotiating partner.

Under D.15-06-028, the Greenhouse Gas Emissions Reduction Targets were revised 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 0.559 remaining MMT of GHG emissions reductions and to procure an additional 27 MW from CHP facilities. If this project is approved, SCE will have met its CHP MW requirement and will still need to procure an additional 0.454 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 subject 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 GHG 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 Settlement, 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. SCE's intention was to add the Wilmington facility to its list of CHP resources to meet its CHP MW procurement target. Negotiations were completed December 30, 2015, and SCE submitted an Advice Letter asking the Commission to approve this PPA 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 Company, to count towards the target. SCE signed a PPA with Coalinga and submitted the PPA, Advice Letter 3254-E, for Commission approval on July 30, 2015. However, the contract was terminated prior to the completion of Commission review. As a result, on August 8, 2016, SCE withdrew Advice Letter 3254-E

In AL 3372-E, 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 Settlement GHG reduction target. Since the facility uses waste heat for fuel, it does not produce GHG emissions.

Under new rules adopted for the Second CHP Program Period, the Wilmington facility, as an existing bottoming cycle facility, can provide GHG emissions reductions.¹ The Second Program Period began November 23, 2015 and the Tesoro PPA was signed on December 30, 2015. Because negotiations were completed in the Second Program Period, this type of bottoming cycle² 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. According to the CHP Settlement, “Renewable fueled and bottoming cycle CHPs reduce GHG against the double benchmark in far greater magnitude than traditional topping cycle CHP.”³ 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 Settlement, SCE’s GHG reduction target is 1.22 MMT and this agreement reduces GHG emissions by 0.105 MMT GHG emissions. This reduction occurs because the facility produces 238,090 MWh annually without any GHG emissions and without using GHG producing fuel. According to the PPA’s Independent Evaluator, Merrimack Energy Group, “To produce the same amount of electricity at an 8,300 BTU/kWh heat rate using natural gas as a fuel would result in GHG emissions of 104,875 MT of GHG emissions in a year.”⁴ This amount of GHG reduced is the number SCE seeks to count against its GHG reduction target under the CHP Settlement.

With the approval of the Tesoro-Wilmington PPA, SCE will have achieved 0.76 MMT of GHG reductions towards its Settlement target, and would need to reduce an additional 0.454 MMT to meet its Settlement requirement for GHG reductions. SCE is currently in negotiation with CHP facilities that could meet the GHG reduction target.

¹ D.15-06-028, page 38.

² 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.

³ D.15-05-028, page 55, Finding of Fact 33.

⁴ Independent Evaluator Report from Merrimack Energy Group, page 12.

Because SCE can use this PPA to reduce GHG emissions under the Settlement, 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.

NOTICE

Notice of AL 3372-E and 3372-E-A 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 AL 3372-E.

DISCUSSION

On February 29, 2016, SCE filed Advice Letter 3372-E, 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, are 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 Emissions Performance Standard compliance;
6. Find that SCE's costs under the agreement shall be recovered through SCE's Cost Allocation Mechanism (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 and establishes efficiency standards for bottoming-cycle facilities. Tesoro's Wilmington CHP facility meets these definitions.

Consistency with MW Counting Rules

The Tesoro facility would contribute 34 MW toward SCE's CHP procurement requirement 1,402 MW. As an existing bottoming cycle facility, Tesoro's Wilmington CHP facility counts toward SCE's CHP MW requirement. Including Wilmington 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 MWs 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, revised by D.15-06-028, SCE can count Tesoro-Wilmington, an existing bottoming cycle facility as 0.105 MMT of reduced GHG emissions. Approving this PPA will leave SCE with an additional 0.454 MMT of GHG reduced that they will still need to procure to meet its 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 SCE's most recent RFO. As part of the Advice Letter, SCE is asking to recover the cost of this agreement under the CAM. More information on the cost of this proposed PPA is contained in the Confidential Appendix.

Public Safety

D.15-06-028, Ordering Paragraph 10, orders SCE to require all CHP generators 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.

Energy Division staff reviewed the safety plan ordered by D.15-06-028 and requested supplemental information from SCE via a data request on

August 4, 2016. SCE submitted its response to the data request on August 18, 2016. An additional data request on safety was sent to SCE on September 30, 2016 and SCE responded to this data request on October 6, 2016. Energy Division reviewed the safety plan and the supplemental information included in the data requests and determined that additional information was needed. In a Supplement to its original advice letter, SCE filed an updated version of the Tesoro facility's safety plan on January 18, 2017, AL 3372-E-A. The updated safety plan is in compliance with D.15-06-028.

SCE filed the safety plan as a confidential document and it is currently included in Confidential Appendix B of this Resolution.

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 the 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 require Cost Allocation Mechanism (CAM) Group participation

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

Energy Division considered the analysis and recommendations of an Independent Evaluator (IE)

This PPA was evaluated by Merrimack Energy Group and the evaluation was completed February, 2016. Energy Division staff reviewed the IE's analysis and

found that the Proposed PPA is a cost effective means for SCE to reach its CHP Settlement targets.

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 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 in Wilmington, CA.

CalEnviroScreen⁵ 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.

Because the CHP facility at issue is a bottoming cycle unit that uses heat waste as fuel, its operation will reduce GHG emissions per the Settlement.

COMMENTS

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

When a previous version of this resolution was circulated, 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.

⁵ <http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-version-20>

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; 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.

Tesoro filed comments on March 9, 2017. In its comments, Tesoro discussed delays in processing AL 3372-E. Given these delays, Tesoro requested the inclusion of the following Ordering Paragraph in the Resolution.

“In light of the delay in processing this matter and the fact that this PPA addresses an existing facility already interconnected to the SCE grid, the parties will work in good faith to expedite the implementation/start date of delivery under the approved PPA as expeditiously as practicable, and in no event, shall the implementation/start date be delayed beyond Hour 1 of June 1, 2017.”⁶
SCE submitted reply comments on March 16, 2017. In its reply comments, SCE stated the PPA’s term start date is “(a) the later of January 1, 2017, or the first day of the calendar month following the 90th day after CPUC Approval; or (b) such earlier date as the Parties may agree.”⁷

We acknowledge that there have been delays in processing the Advice Letter, and acknowledge Tesoro’s concerns about further delays. However, there is always a risk of unforeseen events out of SCE’s or Tesoro’s control that may delay the start date of the PPA beyond June 1, 2017, and it is unreasonable to require that “in no event” shall the start date be delayed beyond June 1st. Therefore, we will add the following ordering paragraph:

⁶ Tesoro Comments regarding Resolution E-4800, page 4.

⁷ SCE Reply Comments regarding Resolution E-4800-E, page 1.

“The parties will work in good faith and make all commercially reasonable efforts to accommodate an earlier implementation/start date of delivery of June 1, 2017 under the approved PPA if feasible.”

SCE submitted comments on March 13, 2017 to correct a minor error on page four of the Draft Resolution regarding AL 3254-E, a proposed PPA with Coalinga Cogeneration Company. This PPA was terminated prior to the completion of Commission review. The Resolution was revised on page four to reflect SCE’s proposed modifications.

FINDINGS

1. Commission Decision 10-12-035 directed SCE to procure 1,402 MW of CHP capacity and established a 1.22 MMT GHG emissions reduction target.
2. On February 29, 2016, SCE filed Advice Letter 3372-E seeking Commission approval of a bilaterally negotiated combined heat and power purchase agreement with Tesoro Refining & Marketing Company LLC.
3. The total 34 MW nameplate value for the Tesoro facility may count toward SCE’s Settlement MW procurement target of 1,402 MW.
4. The Tesoro PPA will count toward SCE’s Settlement GHG emissions reduction target because the contract is a bottoming cycle facility and the contract was signed in the Second Program Period.
5. The original safety plan SCE submitted in Advice Letter 3372-A was insufficient.
6. On January 18, 2017, SCE filed Supplemental Advice Letter 3372-E-A, which included a revised Safety Plan, which meets the requirement of D.15-06-028.
7. This facility is not subject to the Emissions Performance Standard because proposed PPA is for a term less than five years.
8. SCE met with the Cost Allocation Methodology group on December 2, 2015 where SCE presented this proposed PPA.

9. Analysis shows this PPA is with a facility in a designated Disadvantaged Community in Wilmington, CA.

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 Company LLC is approved and to authorize recovery costs via the cost allocation mechanism as proposed in Advice Letter 3372-E is approved.
2. Advice Letter 3372-E-A, containing the revised Safety Plan, is approved.
3. The parties will work in good faith and make all commercially reasonable efforts to accommodate an earlier implementation/start date of delivery of June 1, 2017 under the approved PPA if feasible.

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 23, 2017; the following Commissioners voting favorably thereon:

/s/ TIMOTHY J. SULLIVAN

TIMOTHY J. SULLIVAN
Executive Director

MICHAEL PICKER
President

CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners

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]