Date of Issuance: March 5, 2013

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION **RESOLUTION E-4553**
February 28, 2013

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

Resolution E-4553. Southern California Edison Company ("SCE") requests approval of a power purchase agreement ("PPA") with Berry Petroleum Company ("Berry") for procurement of energy and capacity.

PROPOSED OUTCOME: This Resolution approves the Combined Heat and Power ("CHP") PPA between Southern California Edison and Berry Petroleum Company pursuant to the terms of the Qualifying Facility and Combined Heat and Power Program Settlement Agreement.

SAFETY CONSIDERATIONS: This CHP PPA is between Southern California Edison Company and Berry Petroleum Company. The Commission's jurisdiction extends only over SCE, not Berry. Based on the information before us, this PPA does not appear to result in any adverse safety impacts on the facilities or operations of SCE.

ESTIMATED COST: Capacity, energy, and variable cost components of the Berry CHP 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 2770-E Filed on August 31, 2012.

SUMMARY

Southern California Edison Company's ("SCE's") modified Combined Heat and Power Request For Offers Pro-Forma Power Purchase Agreement ("CHP PPA") with Berry Petroleum Company ("Berry" or "Seller") is the result of a successful bid, Short Listing, evaluation, and selection through the 2011 SCE CHP RFO process. This CHP PPA complies with the requirements of Decision ("D.") 10-12-035, in which the Commission adopted the Commission-approved Qualifying Facility and Combined Heat and Power Program Settlement

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Agreement ("Settlement") and the CHP Program Request For Offers process under it, and is approved.

On August 31, 2012, SCE filed Advice Letter ("AL") 2770-E requesting Commission approval of a CHP PPA with Berry for the period between July 1, 2014 to June 30, 2021. Berry owns an existing natural gas-fired simple, topping-cycle cogeneration facility ("Facility") in Newhall, California. The Facility has two 21.7 MW nameplate capacity gas turbines, referred to as Newhall I and Newhall II. The Facility supplies electricity and steam for enhanced oil recovery to Berry's oil fields in the Placerita Canyon area. The facility interconnects with the CAISO grid at the Pardee Substation. SCE executed an initial QF Standard Offer 2 ("SO2") Contract with Berry for Newhall I for 21.760 MW contract nameplate capacity on December 20, 1985. The term of the SO2 contract was extended pursuant to D.07-09-040 and expired on May 31, 2012. SCE executed a QF SO2 contract with Berry for Newhall II prior to beginning operation in 1990. After a brief period with Newhall II operating as a merchant generator, Berry and SCE executed a Reformed Standard Offer 1 ("RSO1") contract for Newhall II for 19.800 MW contract nameplate capacity on November 14, 2002. The term of the RSO1 was extended pursuant to D.07-09-040 and expired on May 31, 2012. Upon expiration of the two Letter Agreements extending the SO2 and RSO1 contracts, Berry executed a Transition PPA for the Facility (both Newhall I and Newhall II) under the CHP Program pursuant to D.10-12-035. Per Section 3.1.2 of the Settlement Term Sheet, the Transition PPA ends at the election of the Seller but no later than July 1, 2015. In this case, the Transition PPA will end on July 1, 2014, the start of the CHP PPA that is the subject of this Resolution.

Table 1. Contract Term Periods between Berry Petroleum Newhall and SCE

Unit (Contract ID)	Type	Start	Termination
Newhall I (2206)	SO2	3/24/1990	3/24/2009
	Letter Agreement	3/25/2009	5/31/2012
Newhall II (2207)	SO2	5/31/1990	5/31/2002
Newhall II (2224)	RSO1	1/23/2003	12/31/2004
	RSO1	12/31/2004	12/31/2009
	Letter Agreement	1/1/2010	5/31/2012
Newhall I & II (2805)	CHP Transition PPA	6/1/2012	7/1/2015
Newhall I & II	CHP PPA	7/1/2014	6/30/2021

AL 2770-E is the first of four Advice Letters submitted for Commission approval pursuant to Track One of the 2011 SCE CHP Request For Offers ("RFO") process. This 2011 CHP RFO is the first of three held in accordance with Section 5.1.4 of the Settlement Term Sheet.

SCE launched the 2011 CHP RFO on December 15, 2011 soliciting 630 MW. SCE posted to its website[1] Participant Instructions, an offer template, contract documents for CHP and Utility Prescheduled Facility ("UPF") offers, and other information. Participant Instructions referenced the pro forma contracts for the CHP and UPF offers, described eligibility and contract term requirements, materials for submission, and the evaluation criteria. Baseload CHP offers were encouraged to submit the CHP Pro Forma PPA attached as Exhibit 5 to the Settlement. UPFs were encouraged to submit four "UPF Documents."[2]

On February 16, 2012, SCE received Indicative Offers from the Offerors. SCE evaluated the Indicative Offers almost exclusively with a quantitative valuation of the net present value (NPV) of the contract cost or benefit. The net present value was normalized by the contract's contribution to the Settlement MW Target to yield a $NPV/MW metric. From the Indicative Offers SCE selected a Short List of offers that were qualified for further participation in the RFO. SCE notified bidders of the Short List on March 16, 2012. SCE then negotiated contractual terms with Short Listed Offerors and, if terms were agreed upon by both parties, the Offeror was permitted to submit a Final Offer. Final Offers, which were contractually binding if SCE selected the Final Offer, were submitted on May 29, 2012. SCE then evaluated the Final Offers considering quantitative factors, as it did with the Indicative Offers, and qualitative (non-price) factors. SCE continued to use the $NPV/MW metric and calculated the net NPV for all offers and combinations of offers. The first qualitative factor SCE evaluated was the contract's contribution to the Settlement GHG Emissions Reduction Target. SCE evaluated the Final Offers on additional qualitative factors.

SCE notified the Offerors of Selected Offers on June 21, 2012. SCE selected five qualified Final Offers from four counterparties, including Berry Petroleum's

[1] http://www.sce.com/EnergyProcurement/renewables/chp/rfo.htm

[2] The four UPF Documents include: EEI Master Power Purchase and Sale Agreement Cover Sheet; EEI Paragraph 10 to the Collateral Annex; Unit Contingent ("UC") Tolling Confirmation; and Resource Adequacy ("RA") Confirmation.

Newhall Facility. The five projects total 832 MW and 99,151 metric tons of GHG per the accounting rules of the Settlement.

Berry bid the two Newhall generating units as a single facility into the CHP RFO. In total, the two generating units have a Power Rating of 43.4 MW and will provide 39.2 MW Contract Capacity at baseload from a combination of Firm and As-Available Capacity. The Facility expects to produce 328 million kWh annually during the term of the CHP PPA.

Per Term Sheet Section 4.2.6, the form of the agreement is the CHP RFO Pro-Forma PPA, attached as Exhibit 5 to the Settlement Agreement. The Pro-Forma PPA was modified on a bilateral basis during negotiations in accordance with the modifications described in Section 4.2.7 of the Term Sheet to clarify pricing terms and to determine the party responsible for the GHG Compliance Costs. Energy and capacity prices are confidential at this time. In addition, GHG cost responsibility is confidential. An analysis of these terms is included in the Confidential Appendix A attached to this Resolution.

Berry and SCE executed the CHP PPA on July 2, 2012 without material modification, as described above. Pursuant to Section 4.10.1 of the Term Sheet, SCE utilized a Tier 2 filing to submit AL 2770-E for Existing CHP Facilities that execute the CHP RFO Pro-Forma PPA without material modification.

The IE concludes that the evaluation methodology and solicitation framework under Track 1 of the 2011 SCE CHP RFO were overall satisfactory and its implementation was fair. As noted above and within the Confidential Appendix A, SCE's evaluation and selection criteria demonstrated a primary preference for CHP contracts pursuant to "Least Cost Best Fit" principles. SCE prioritized projects with the least cost by choosing contracts with the highest net present value per their contribution to the Settlement MW Target. Contracts were deemed "best fit" according to their ability to fulfill the Settlement MW Target, which SCE considered a procurement "need." SCE considered contracts' GHG Debits or Credits as contributing to the GHG Emissions Reduction Target procurement "goal." The Independent Evaluator recognizes the difficulty in establishing a "highly prescriptive standard" for a RFO selection process given the interim and 2015 MW Targets, cost-effectiveness objectives, and 2020 GHG Emissions Reduction Targets. The IE notes that given these multiple objectives, "he did not know of a quantitative solution […] that would not create the real possibility of an unsatisfactory, unintuitive result." Due to this complexity, the IE opines that the RFO process "would be improved if the evaluation and selection framework provided somewhat crisper guidance for the selection process without significantly increasing the risk of unintended adverse consequences."[3]

The Commission recognizes the complexity of the CHP Program and in particular how its dual procurement objectives, namely securing a minimum amount of CHP capacity as well as achieving certain GHG Emission Reductions, make it difficult at best to reasonably assess the tradeoffs that may exist between competing projects. The goals of the Settlement are subject to varied compliance periods and multiple constraints, which may increase uncertainty in procurement decisions.

Section 4.2.5 of the Settlement Term Sheet lists the RFO Scope, Evaluation, and Selection Criteria. Section 4.2.5.4 and 4.2.5.5 require that the IOUs analyze the "market value" of the Offers and evaluate the energy "delivered to the grid" from Existing CHP Facilities. Section 4.2.5.6 requires that "CHP Offers be evaluated on all of the CHP Program goal characteristics including GHG Emissions." The Commission has not established a specific methodology for how different projects that participate under the Settlement should be assessed, nor has the Commission mandated that a particular weight be ascribed to contributions toward the Settlement's GHG Emission Reduction Target. We believe all parties involved and affected will benefit from our clarification of the RFO Evaluation and Selection process in this Resolution. Specifically, we believe the Settlement, for the purposes of achieving the Emissions Reduction Target, requires the GHG Debits and Credits for all offers to be "evaluated", i.e., calculated.

Going forward, the investor-owned utilities subject to D.10-12-035 shall evaluate the contributions all offers submitted into their RFOs would make toward the Settlement's GHG ERT. Again, the Commission does not prescribe a specific methodology for how different projects that participate under the Settlement should be assessed with respect to GHG, nor does the Commission prescribe a particular weight for a project's contributions toward the Settlement's GHG Emission Reduction Targets; the Commission here only clarifies that all offers submitted into Settlement RFOs shall be *evaluated* for their GHG Debits and Credits relative to the Settlement's GHG ERT.

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[3] Report of the Independent Evaluator Southern California Edison Company First Combined Heat and Power Request For Offers-Track 1 and Power Purchase Agreement with Berry Petroleum Company ("IE Report"), (August 2012), p. 38.

The selection of the Berry Offer, as a GHG neutral Existing CHP Facility without a change in operations, is unaffected by these concerns. The CHP Program identifies the continued operations of efficient CHP and the maintenance of their GHG reduction benefits as key policy objectives. Berry's Newhall Facility offered baseload power at reasonable costs in comparison to other potential contracts solicited through the RFO.

The CHP PPA will count toward the Settlement MW and GHG Targets as the RFO is an eligible procurement process per Section 4 of the Settlement Term Sheet. As an Existing CHP Facility,[4] the Berry Facility's "Contract Nameplate" capacity of 41.56 MW will count toward SCE's 1402 MW procurement Target at the end of the Initial Program Period. Since the facility will not change its operations, the procurement is considered neutral per the GHG Accounting rules of the Settlement.

A summary of the non-material modifications to the terms and conditions of the RFO Pro-Forma PPA included in the Berry CHP PPA and an analysis of benefits are included within the Confidential Appendix A of this Resolution.

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.

[4] Section 6.4.1 of the Term Sheet defines "Existing CHP Facilities" for purposes of determining GHG Emissions Reduction counting to be gas-fired Topping Cycle CHP Facilities that exported and delivered electric power to an IOU as listed by QF ID number in each IOU's July 2010 Semi-Annual Report – as "Contract Nameplate."

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 4.2.1, the Commission directs the three IOUs to conduct Requests For Offers exclusively for CHP resources ("CHP RFOs") as a means of achieving the MW Targets and GHG Emissions Reduction Targets. The Settlement Term Sheet establishes terms and conditions regarding eligibility, contract length, pricing, evaluation and selection and other terms and conditions of the RFOs.

Per Section 5.1.4, the IOUs will conduct three CHP RFOs during the Initial Program Period scheduled at regular intervals, with the first initiated no later than 90 days after the Settlement Effective Date, February 21, 2012. The three RFOs shall solicit CHP resources for an amount no less than the Net MW Target (the MW Target A, B, or C[5] not otherwise procured by the Section 4 procurement processes) for each IOU.

[5] Per Settlement Term Sheet Section 5.1.2, each IOU allocation of the total 3,000 MW Target is divided into interval MW Targets that correspond to the three RFOs: "A," "B," and "C." SCE's 1,402 MW Target is split into 630, 378, and 394 MW for these interval Targets, respectively.

SCE launched the 2011 CHP RFO for 630 MW on December 15, 2011. SCE decided to use a two track solicitation for the first RFO to manage the risk related to interconnection costs that would be borne by the IOUs and ratepayers. The First Track solicited Existing CHP Facilities, Utility Prescheduled Facilities ("UPFs"), and New or Repowered CHP Facilities with an existing interconnection and a CAISO Phase I Interconnection Study. If the Offeror had no such study completed the Offeror permitted SCE to terminate the contract if network upgrade costs based on a future study exceeded a certain amount. The Second Track was for New or Repowered CHP Facilities where the Offeror was unwilling to give SCE the termination right.

At the 2011 CHP RFO Offeror's Conference, SCE outlined "Keys to a Successful Offer" including a preference for competitively-priced offers, optionality by varying the offer's term length and providing curtailment provisions, a preference to execute Pro-Forma CHP or UPF Documents, and signs of project viability for new, expanded or repowered CHP including progress toward interconnection.

In response, Berry Petroleum submitted an offer consisting of Firm and As-Available Capacity from its Newhall Facility. Berry's offer was short listed by SCE. Berry later negotiated final offer terms with SCE. The resultant CHP PPA was immaterially modified from the RFO Pro-Forma PPA. On July 2, 2012 SCE executed the CHP PPA with Berry.

NOTICE

Notice of AL 2770-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 3.14 of General Order 96-B. AL 2770-E was served to the service list of R.12-03-014 regarding the Long Term Procurement Plans.

PROTESTS

Advice Letter 2770-E was not protested.

DISCUSSION

On August 31, 2012, SCE filed Advice Letter AL 2770-E which requests Commission approval of a CHP PPA with Berry Petroleum Company.

Specifically, SCE requests that the Commission:

1. Approve the CHP PPA in its entirety;
2. Find that the CHP PPA, and SCE's entry into the CHP PPA, are reasonable and prudent for all purposes, subject only to further review with respect to the reasonableness of SCE's administration of the CHP PPA;
3. Find that the 41.56 MW associated with the CHP PPA applies toward SCE's procurement target of 1,402 MW of CHP capacity in the Initial Program Period, as established by the QF/CHP Program;
4. Find that the CHP PPA is neutral toward the GHG Target as it is for an Existing CHP Facility without a change in operations; and
5. Authorize other and further relief as the Commission finds just and reasonable.

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

- Consistency with D.10-12-035, which approved the QF/CHP Program Settlement including:
    - Consistency with Definition of CHP Facility and Qualifying Cogeneration Facility
    - Consistency with CHP Requests For Offers ("RFOs")
    - Consistency with MW Counting Rules
    - Consistency with GHG Accounting Methodology
    - Consistency with Cost Recovery Requirements
- Need for Procurement
- Cost Reasonableness
- Public Safety
- Project Viability
- Consistency with the Emissions Performance Standard
- Consistency with D.02-08-071 and D.07-12-052, which respectively require Procurement Review Group ("PRG") and Cost Allocation Mechanism ("CAM") Group participation

In considering these factors, Energy Division also considers the analysis and recommendations of an Independent Evaluator as is required for the CHP RFOs per Section 4.2.5.7 of the Settlement Term Sheet.[6]

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

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

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.

[6] 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."

Topping-cycle CHP Facilities must demonstrate that their useful thermal energy output is no less than 5 percent of the total annual energy output. Additionally, any topping-cycle CHP Facility installed on or after March 13, 1980, that is fueled by natural gas or oil must operate at an annual efficiency of at least 42.5 percent, or, if the useful thermal energy output is less than 15 percent of the total energy output of the facility, the efficiency must be no less than 45 percent.[7] Bottoming-cycle CHP Facilities installed on or after March 13, 1980, must meet an annual efficiency requirement of at least 45 percent.[8]

As stated in Section 1.02(a) of the CHP PPA, Berry is an Existing CHP Facility, which means that it: is a Qualifying Cogeneration Facility[9]; meets the definition of "cogeneration" under the Public Utilities Code Section 216.6; and satisfies the GHG Emissions Performance Standards set forth in Public Utilities Code Section 8341. The efficiency and emissions requirements of the Newhall Facility pursuant to these definitions are enumerated in Table 7 of Confidential Appendix A of this Resolution.

The Berry Facility (comprised of the Newhall I and Newhall II units with QFID 2206 and 2224 as listed in SCE's July 2010 QF Semi-Annual Status Report) meets the definition of a CHP Facility and Qualifying Cogeneration Facility, consistent with the eligibility requirements of the QF/CHP Settlement.

Consistency with Eligibility Requirements for CHP Requests for Offers ("CHP RFOs")

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

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

[8] 18 C.F.R. § 292.205(b).

[9] Exhibit A of the CHP RFO Pro Forma PPA defines "Qualifying Cogeneration Facility" as a generating facility that: (a) complies with 18 C.F.R. § 292.203 et seq. and (b) has filed with FERC either (i) an application for FERC certification pursuant to 18 C.F.R. § 202.207(b)(1) or (ii) a notice of self-certification pursuant to 18 C.F.R. § 292.207(a).

The CHP Facility must meet the State and Federal (PURPA) requirements[10] for cogeneration and the Emissions Performance Standard ("EPS"). A CHP Facility that has met the PURPA efficiency requirements as of September 20, 2007 and that converts to a Utility Prescheduled Facility is eligible to participate in the CHP RFOs whether it is a Qualifying Facility or Exempt Wholesale Generator.

The Berry Facility has a nameplate Power Rating of greater than 5 MW, meets the State and Federal requirements for cogeneration, and as discussed later in the Consistency with the Emissions Performance Standard section of this Resolution, is compliant with the EPS.

<u>Berry meets the eligibility requirements to bid into the SCE CHP RFO consistent with Section 4.2.2.1 of the Settlement Term Sheet.</u>

Consistency with Settlement MW Counting Rules

Per Settlement Term Sheet Section 5.2.3.1, Berry Petroleum's Newhall facility is an Existing CHP Facility. Berry's Newhall I and Newhall II are both gas-fired Topping Cycle CHP Facilities that exported and delivered electric power to SCE listed by QF ID 2206 and QF ID 2224 in SCE's July 2010 Qualifying Facilities Semi-Annual Status Report. The MWs counted for the CHP PPA executed with Berry will be the sum of the published Contract Nameplate values (21.760 + 19.800), in total 41.56 MW. This is appropriately reflected in the Advice Letter.

<u>The total 41.56 MW Contract Nameplate value for the Berry Facility will count toward SCE's MW procurement target.</u>

Consistency with Settlement Greenhouse Gas Accounting Methodology

As an efficient Existing CHP Facility, the execution of the Berry CHP PPA meets several Policy Objectives[11] of the CHP Program regarding the continued operation of existing CHPs and the maintenance of existing GHG emissions reduction benefits.

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[10] State definition of cogeneration per Public Utilities Code Section 216.6. Federal definition of cogeneration per 18 C.F.R. §292.205 implementing the Public Utility Regulatory Policies Act ("PURPA").

[11] As defined in Sections 1.2.1.3, 1.2.2.2, 1.2.2.7, and 1.2.6.1 of the Settlement Term Sheet.

The execution of the Berry CHP PPA meets the Policy Objectives of the CHP Program (approved by the Commission in Decision 10-12-035) by continuing the operation of an existing efficient CHP facility and maintaining GHG emissions reduction benefits.

Per Settlement Term Sheet Section 7.3.3.1, an Existing CHP Facility with no change in operations, regardless of contract status, is considered neutral for GHG accounting purposes. Berry will not change operations as a result of the CHP PPA with SCE. Therefore the PPA will not count toward the QF/CHP Settlement greenhouse gas ("GHG") Emissions Reduction Target. This is appropriately reflected in the Advice Letter.

The Berry Facility will not change operations and pursuant the Settlement will be counted as Neutral toward the QF/CHP Settlement greenhouse gas ("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 SCE AL 2645-E as of November 23, 2011, which authorized SCE 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:[12]

[12] SCE Advice Letter 2645-E. http://www.sce.com/NR/sc3/tm2/pdf/2645-E.pdf

- 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

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

SCE is authorized to recover costs in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 2645-E, consistent with the directives of the QF/CHP Settlement.

Need for Procurement

SCE's total MW procurement goal for the CHP Program is 1,402 MW, with 630 MW allocated to Target A. SCE's 2020 GHG Emissions Reduction Target is 2.15 MMT. As of the October 8, 2012 CHP Semi-Annual Report, SCE has executed contracts contributing 847 MW and 0.09 MT toward these goals.

Existing CHP Facilities in the July 2010 Semi-Annual Report

The CHP PPA contributes 41.56 MW and counts as neutral toward the GHG Emissions Reduction Targets ("ERT"), as it is an eligible Procurement Process listed in Section 4 of the Settlement Term Sheet. Berry Petroleum's Newhall I and Newhall II are Existing CHP Facilities respectively listed under QFID 2206 and QFID 2224, which sold to SCE as reported in SCE's Qualifying Facilities Semi-Annual Status Report from July 2010.

Per Settlement Term Sheet Sections 6.4.2.2 and 6.4.2.3, the Existing CHP Facilities that shut down during the Initial Program Period will have their previous two years of GHG emissions evaluated against the Double Benchmark. This evaluation will determine if the cessation of the Facility's operations will add to the three IOUs' total GHG ERT as a "shortfall" or subtract from it as a "surplus." The term of this CHP PPA begins on July 1, 2014 and ends after the Initial Program Period on June 30, 2021. Therefore, the GHG emissions neutrality associated with this Existing CHP Facility will not be calculated in the net of the GHG Debit or Credit to the IOUs' Emissions Reduction Target.

The execution of the Berry CHP PPA contributes 41.56 MW to SCE's need to procure additional CHP resources to meet the remaining MW Target. The term of the PPA helps ensure that the Existing CHP Facility will not cease operations during the Initial Program Period and therefore will not change the GHG Targets.

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

The Settlement Term Sheet provides reasons and assertions by which an IOU may make a showing to justify its inability to meet the MW Target and/or GHG Emissions Reduction Target. These reasons include:

Reason To Justify An Inability To Meet a CHP Program Target	**MW Target**	**GHG Emissions Reduction Target**
Lack of sufficient offers	Section 5.4	Section 5.4
CHP Facility is inefficient compared to the Double Benchmark	Section 5.4	Section 6.9.1
RFO Offer prices are in excess of levels from independent or publicly-available sources	Sections 5.4 & 5.4.1	Sections 5.4, 5.4.1, 6.9.2, & 6.9.2.1
Amount of GHG emissions reductions	Section 5.4	Section 5.4
A lack of need exists	-	Section 6.9.3
Portfolio fit	-	Section 5.4

Section 4.2.5 of the Settlement Term Sheet outlines the Scope, Evaluation, and Selection Criteria of the RFO. In particular Sections 4.2.5.4 – 4.2.5.6 of the Settlement Term Sheet define three criteria on which the IOUs must evaluate CHP Facilities participating in the RFO:

- Market value
- The energy that is being delivered to the grid from that CHP Facility
- [The extent to which the Facility contributes to] all of the CHP Program goal characteristics, including GHG emissions.

The Commission appreciates the challenges IOUs face in meeting the MW Targets and achieving GHG emissions reductions under the Settlement vis-à-vis the numerous options and pathways available under a utility's procurement function and other state and Commission procurement mandates and goals. While the Commission does not at this point mandate a particular methodology for evaluating CHP RFO offers or prescribe a particular weight be ascribed to a CHP project's contributions to the Settlement's GHG Emissions Reduction

Targets, we clarify that the IOUs must evaluate (calculate) the GHG Debits and Credits for all offers received that meet the minimum eligibility requirements. Failure to calculate this information for all offers would appear to confound future efforts that may be undertaken by the Commission to determine any potential adjustments to the GHG Emissions Reduction Target for the Second Program Period, pursuant to Section 6.6 of the Settlement Term Sheet. It may also unreasonably limit the scope of information that might be considered in assessing SCE's justification for failure to meet the GHG Emissions Reductions Target pursuant to section 6.9.3 of the Settlement.

Cost Reasonableness

To determine the robustness of an RFO the Commission may compare the MWs associated with CHP QFs that would be eligible to participate with the RFO, the total MWs received during the RFO, and the MWs an IOU needs to fulfill an interim (A, B, or C) MW Target. The IE approximates that 4,000 MW of CHP facilities could participate in the RFO and would be able to provide electricity to the IOUs and count toward the MW Targets. From this range of potential Offerors, those currently with agreements that end beyond the Transition Period may be less likely to participate. As described in the Confidential Appendix A, SCE received Indicative Offers from CHP facilities (excluding alternative offers from an individual facility) which total an amount several times greater than their MW Target A of 630 MW. Therefore, the number of Offerors that participated in the SCE CHP RFO provided a highly robust solicitation.

<u>The 2011 SCE CHP RFO received offers from a number of counterparties, providing a variety of projects and robust amount of capacity several times greater than SCE's MW Target A.</u>

SCE's evaluation methodology uses a two stage approach. The first stage evaluates Indicative Offers almost exclusively by the net present value of their costs and benefits and their contribution to the Settlement MW Target. Inputs to calculate \$NPV/MW include:

$$\frac{\$NPV}{MW} = \frac{(Benefits - Costs)\ discounted\ at\ rate = 10\%}{Settlement\ MW}, \text{ where:}$$

Benefits include:

- Capacity benefits based on monthly firm capacity offered according to CPUC Resource Adequacy accounting, pursuant to CPUC and CAISO rules for dispatchable and non-dispatchable facilities;

– Energy benefits based on the forecasted market and locational value of energy; Ancillary Service and Real-Time flexibility benefits for dispatchable facilities based on a production simulation of deliveries;
– Credit/Collateral values based on providing performance assurance per Term Sheet Section 4.2.8.

Costs include:

+ Capacity charges; Variable O&M charges; Energy Payments; Other costs;
+ Seller and/or Buyer responsibility of GHG Compliance Cost per Term Sheet Sections 4.2.7.2 – 4.2.7.3;
+ Annual Transmission system upgrade costs for new, expanded, or repowered facilities based on a CAISO Phase I Interconnection Study;
+ Debt Equivalence indirect costs estimated to be incurred as a debt-like obligation by executing long-term PPAs.

To determine whether offer prices were excessive compared to alternatives, SCE developed long-term forecasts of RA capacity, natural gas, electricity, and GHG costs per Term Sheet Section 5.4.1.

The quantification of $NPV/MW is used in order to minimize cost while choosing projects that fulfill the MW Target, which SCE considered to be a procurement need. As required by Section 4.2.5.7 of the Settlement Term Sheet, SCE used this measure as an analysis of market value for the Offers. $NPV/MW was the primary metric used in determining the Short List. Once notifying the Short Listed Offerors of their status, SCE began negotiations with the counterparties.

Berry provided a highly-ranked offer with immaterial modifications to the Pro-Forma PPA as is allowed in Section 4.2.7 of the Settlement Term Sheet. Immaterial modifications to the CHP PPA included defining prices as required by Section 4.2.4.1 of the Settlement Term Sheet, and specifying the party responsible for GHG Compliance Costs per Section 4.2.7.2 of the Settlement Term Sheet. These modifications are outlined in Confidential Appendix A. Once both parties mutually agreed upon the terms of the negotiated PPA, Berry was permitted to submit a Final Offer that, if selected by SCE, was contractually-binding.

<u>The CHP PPA was immaterially modified from the CHP RFO Pro-Forma PPA to define the terms for GHG Compliance Costs. The terms for GHG Compliance Cost Responsibility are reasonable.</u>

The second stage of evaluation considered Final Offers based on quantitative and qualitative factors. Quantitative evaluation relied on the use of net present value. For Final Offers SCE calculated the $NPV/MW for each Offer, the net $NPV cost of individual Offers, and net $NPV cost for all combinations of Offers. Qualitative factors of a project included its:

+ GHG Debit or Credit based on the accounting rules per Term Sheet Section 7, using the Semi-Annual Reporting Template developed by CPUC Energy Division;
+ Project development progress and viability for new, expanded, or repowered facilities: Environmental and permitting status; Project development experience; Site control; Electrical interconnection status;
+ Women, Minority, and Disabled Veteran-Owned Business Enterprises("WMDVBE") Status;
+ Offeror concentration, dispatchability and curtailability;
+ Cost-effectiveness of GHG reductions.

The qualitative evaluation of a project's GHG Debit or Credit is used to determine how it will contribute to the 2020 GHG Emissions Reduction Target, which SCE considered to be a procurement goal. From these evaluations SCE selected a combination of projects that met their procurement objectives.

The Berry Newhall Facility was selected with four other facilities for the purposes of exceeding the Target A goal of 630 MW (particularly in consideration of the 1,402 MW Target at the end of the Initial Program Period), at least $/MW cost. Two of the five facilities whose contracts were executed pursuant to the 2011 SCE CHP RFO and are pending Commission disposition are calculated to contribute GHG Credits to the Emissions Reduction Target.

Berry was selected due to its high-ranking net present value compared to other Facilities that qualified for Final Selection. It contributes 41.56 MW toward the MW Target and, as an existing facility without a change in operations, is considered neutral per the GHG accounting rules. Per Section 4.2.12 of the Term Sheet, the IOUs will give preference to Pro-Forma Offers with no options (for specific credit and collateral, voluntary curtailment, and dispatchability terms) relative to non-Pro-Forma offers to the extent that Pro-Forma offers are competitive. The selection of Berry's Newhall Facility is a reasonable procurement resulting from SCE's CHP RFO.

Additional information about the terms of the PPA and analysis of the value of the PPA among other Offerors is included in the Confidential Appendix A.

Given the robust response to SCE's 2011 CHP RFO, and the relative cost effectiveness of the Berry offer as compared to other offers, Berry's procurement is of reasonable cost.

Public Safety

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

This CHP PPA is between Southern California Edison Company and Berry Petroleum Company. The Commission's jurisdiction extends only over SCE, not Berry. Based on the information before us, this PPA does not appear to result in any adverse safety impacts on the facilities or operations of SCE.

Project Viability

Berry Petroleum's Newhall Facility is an Existing Qualifying Cogeneration Facility as defined in the Settlement Term Sheet and CHP RFO Pro-Forma PPA. It has operated since the 1980s, providing steam to Berry's enhanced oil recovery operations in Placerita. Berry started Standard Offer 2 Contracts with SCE for the Newhall I and II units in 1990. The two facilities have been operating under extensions of the SO2 and RSO1 pursuant to D.07-09-040, respectively. In 2012, Berry executed a Transition PPA with SCE which combined the two units' capacity. As an existing QF, the project faces minimal project development risk.

Berry Petroleum's Newhall Facility is an Existing CHP Facility with a long operating history and therefore is a viable project.

Consistency with the Emissions Performance Standard

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

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

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

Under the CHP PPA, the Berry Newhall Facility will operate for seven years from July 1, 2014 until June 30, 2021. Therefore this procurement qualifies as a "long term financial commitment" per D.07-01-039. The two generating units are at the same location and use the same fuel and technology but are not operationally dependent on another. Therefore the annualized plant capacity factors for the two units are each compared against the 60% baseload threshold. The EPS applies to both generating units because their capacity factors exceed 60%. SCE has determined that the units are compliant with the EPS because the emissions factors for both units are less than 1,100 lbs. CO_2/MWh as enumerated in Table 7 of Confidential Appendix A.

The CHP PPA is subject to the EPS under D.07-01-039 because the term of the PPA is greater than five years. The EPS applies to both generating units, whose annualized plant capacity factors are greater than 60%. Based on data provided by SCE, each generating unit is EPS compliant with an emissions factor of less than 1,100 lbs. CO_2/MWh.

Consistent with D.02-08-071 and D.07-12-052, SCE's Procurement Review Group ("PRG") and Cost Allocation Mechanism ("CAM") Group were notified of the CHP PPA.

SCE's PRG consists of representatives from: the Division of Ratepayer Advocates, The Utility Reform Network, California Department of Water Resources-California Energy Resources Scheduling, Coalition of California Utility Employees, the Union of Concerned Scientists, the Independent Evaluator, and the Commission's Energy and Legal Divisions. SCE's CAM Group includes PRG participants as well as certain other non-wholesale market participants of bundled service, direct access, and community choice aggregator customers.

SCE consulted with the PRG on the launch of the 2011 CHP RFO on December 7, 2011 and invited PRG members to the Offeror's Conference held January 13, 2012. SCE consulted with its PRG and CAM groups regarding its evaluation, Short Listing, and selection processes during conference calls on

February 8, March 15, and May 23. On June 20, 2012, SCE presented its Final Selection of Offers to the PRG and CAM groups, which included the Berry CHP PPA.

<u>SCE has complied with the Commission's rules for involving the PRG and CAM groups.</u>

Independent Evaluator Review

SCE retained Barry Sheingold of New Energy Opportunities, a subcontractor to Merrimack Energy Group, Inc. as the Independent Evaluator ("IE") to oversee the negotiations and transactions pursuant to the CHP Program to evaluate overall merits for Commission approval of the Agreements. These agreements included the 2011 CHP Request For Offers and Transition PPAs. AL 2770-E included a public and confidential Independent Evaluator's report. In its report, the IE determined that:

i) SCE reasonably designed and fairly implemented its first CHP RFO pursuant to the Settlement Agreement.[13]
ii) SCE's evaluation framework and implementation of [the RFO] was fair and it provided for fair and consistent comparisons between different types of projects and different types of counterparties.
iii) SCE did not provide preferential treatment to any affiliate that participated in the RFO.
iv) SCE acted reasonably in selecting the five offers for contract award and execution.

The Independent Evaluator concludes that SCE appropriately selected Berry's qualifying offer and therefore recommends Commission approval of the Berry CHP PPA.[14] More information on the findings of the IE Report is included in Confidential Appendix A.

The Commission agrees with the independent evaluation which finds that the immaterially-modified pro-forma CHP Power Purchase Agreement between SCE and Berry Petroleum Company to be competitive among other offers in the RFO and of reasonable cost.

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[13] IE Report, (August 2012), p. 6.

[14] Id. at p. 38.

The Independent Evaluator concurs with SCE's decision to execute the CHP PPA with Berry and finds that the CHP PPA merits Commission approval.

COMMENTS

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

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on January 29, 2013. Comments on the draft were timely submitted on February 19, 2013 by Southern California Edison ("SCE").

SCE's comments requested minor corrections to clarify the description of the offer submission process, evaluation methodology, and to fix a typographical error in GHG ERT. SCE requested that Energy Division include the fact that the CAM Group received notice of the CHP PPA as is required by D.07-12-052. Energy Division incorporated these requests. In addition, Energy Division reworded the characterization of select assumptions used in the evaluation of offers in the Confidential Appendix A. These corrections do not affect the merit of this procurement.

SCE requested an amendment to the clarification of Section 4.2.5.6 of the Settlement Term Sheet included within the Summary and Discussion sections, and as Finding and Conclusion 10. This clarification directs the IOUs to evaluate the GHG Debits and Credits for "all" offers in the RFO. SCE suggests that they should only be required to evaluate the contributions of "eligible and conforming" offers because those that do not meet those thresholds would not provide useful information. As was detailed in the "Procurement Need to Meet the MW Target and GHG Emissions Reduction Target" section, the Commission required that the IOUs complete the evaluation "…For all offers received that meet the minimum eligibility requirements."[15] "Minimum eligibility requirements" intends to not only refer to those that scope which facilities may participate in the RFO per Section 4.2.2 of the Settlement Term Sheet but also to

[15] Draft Resolution E-4553 at p. 16.

an IOU's instructions used in the administration of the RFO. For example, these may include the timely and complete submission of offer information. This clarification does not impose an expectation that an evaluation of GHG be completed for non-conforming bids, and thus does not require amendment.

SCE asserted that the analysis of the potential changes to the GHG ERT in the "Existing CHP Facilities in the July 2010 Semi-Annual Report" section is not required. Furthermore SCE requested to add the fact that had Berry not executed an RFO PPA, the term of its Transition PPA would provide Berry "ample opportunities to complete a new contract with any IOU." While the remainder of Transition PPA would have allowed Berry to seek other contracting options, this is not the salient point of the analysis. The Commission analyzes the instant case of the CHP PPA with Berry Petroleum, a viable Existing CHP Facility. The CHP PPA ends after the Initial Program Period and therefore mitigates the risk of a shutdown prior to that time. The Commission sought to recognize that in recontracting an efficient CHP (Finding and Conclusion 5), SCE is potentially preventing Berry from counting as a "shortfall" when the GHG ERT is updated in 2015. The requested revision provides no benefit and is denied.

FINDINGS AND CONCLUSIONS

1. Southern California Edison Company ("SCE") filed Advice Letter ("AL") 2770-E on August 31, 2012, in which it requested Commission approval of a Combined Heat and Power Purchase Agreement ("CHP PPA") with Berry Petroleum Company ("Berry") that is based on the Combined Heat and Power Request For Offers ("CHP RFO) Pro-Forma Power Purchase Agreement approved by the Commission in Decision ("D.")10-12-035. AL 2770-E was not protested.
2. The Berry Facility (comprised of the Newhall I and Newhall II units with QF ID 2206 and 2224 as listed in SCE's July 2010 Semi-Annual Report) meets the definition of a CHP Facility and Qualifying Cogeneration Facility, consistent with the eligibility requirements of the QF/CHP Settlement.
3. Berry meets the eligibility requirements to bid into the SCE CHP RFO consistent with Section 4.2.2.1 of the Settlement Term Sheet.
4. The total 41.56 MW Contract Nameplate value for the Berry Facility will count toward SCE's MW procurement target.
5. The execution of the Berry CHP PPA meets the Policy Objectives of the CHP Program (approved by the Commission in D.10-12-035) by continuing the

operation of an existing efficient CHP facility and maintaining greenhouse gas ("GHG") emissions reduction benefits.

6. The Berry Facility will not change operations, and pursuant the Settlement, will be counted as Neutral toward the QF/CHP Settlement GHG Emissions Reduction Target.
7. Resource adequacy benefits are to be allocated according to the share of the net capacity costs paid by load-serving entities serving direct access and community choice aggregation customers as prescribed in Section 13.1.2.2 of the QF/CHP Settlement Term Sheet.
8. SCE is authorized to recover costs in accordance with Section 13.1.2.2 of the Settlement Term Sheet and AL 2645-E, consistent with the directives of the QF/CHP Settlement.
9. The execution of the Berry CHP PPA contributes 41.56 MW to SCE's need to procure additional CHP resources to meet the remaining MW Target. The term of the PPA helps ensure that the Existing CHP Facility will not cease operations during the Initial Program Period and therefore will not change the GHG Targets.
10. While the Commission does not at this point mandate a particular methodology for evaluating CHP RFO offers or prescribe a particular weight be ascribed to a CHP project's contributions to the Settlement's GHG Emissions Reduction Targets, the IOUs shall evaluate (calculate) the GHG Debits and Credits for all RFO bids received that meet the minimum eligibility requirements.
11. The 2011 SCE CHP RFO received offers from a number of counterparties, providing a variety of projects and robust amount of capacity several times greater than SCE's MW Target A.
12. The CHP PPA was immaterially modified from the CHP RFO Pro-Forma PPA to define the terms for GHG Compliance Costs. The terms for GHG Compliance Cost Responsibility are reasonable.
13. Given the robust response to SCE's 2011 CHP RFO, and the relative cost effectiveness of the Berry offer as compared to other offers, Berry's procurement is of reasonable cost.
14. Berry Petroleum's Newhall Facility is an Existing CHP Facility with a long operating history and therefore is a viable project.

15. The CHP PPA is subject to the Emissions Performance Standard ("EPS") under D.07-01-039 because the term of the PPA is greater than five years. The EPS applies to both generating units, whose annualized plant capacity factors are greater than 60%. Based on data provided by SCE, each generating unit is EPS compliant with an emissions factor of less than 1,100 lbs. CO_2/MWh.
16. SCE has complied with the Commission's rules for involving the Procurement Review Group and Cost Allocation Mechanism Group.
17. The Independent Evaluator concurs with SCE's decision to execute the CHP PPA with Berry and finds that the CHP PPA merits Commission approval.

THEREFORE IT IS ORDERED THAT:

1. The request of the Southern California Edison Company for the Commission to approve the CHP PPA in its entirety as requested in Advice Letter AL 2770-E is approved without modifications.
2. Southern California Edison Company is authorized to recover the costs associated with the CHP 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, and SCE's Advice Letter 2645-E.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on February 28, 2013; the following Commissioners voting favorably thereon:

/s/ _Paul Clanon__________
Paul Clanon
Executive Director

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

Confidential Appendix A

Summary of 2011 SCE CHP Request For Offers (Track 1)
and
Analysis of Request For Offers Pro-Forma CHP Power Purchase Agreement with Berry Petroleum Company

REDACTED