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Division of Public Utilities

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Memorandum

TO: Public Service Commission

FROM: Division of Public Utilities
Philip Powlick, Director,
Artie Powell, Energy Manager
Jamie Dalton, Utility Analyst
Charles Peterson, Technical Consultant

DATE: November 20, 2008

RE: Purchase Power Agreement between PacifiCorp, dba Rocky Mountain Power, and Tesoro Refining and Marketing Company, Docket No. 08-035-82.

ISSUE

On October 14, 2008, PacifiCorp (the Company) filed an Application for Approval of a Power Purchase Agreement (PPA) with Tesoro Refining and Marketing Company (Tesoro). The effective date of the agreement is January 1, 2009. This contract replaces a current contract that will expire on December 31, 2009. The Public Service Commission (Commission) issued an action request on October 15, 2008 to the Division of Public Utilities (Division) requesting a response by November 20, 2008. The following Recommendation and Analysis are intended to serve as the response to the aforementioned action request.

RECOMMENDATION (Approval)

The Division recommends that the Commission approve the PPA between PacifiCorp and Tesoro.

The Division recommends that PacifiCorp provide at least quarterly the hourly power purchased under this contract to the Division so that the Division may monitor the contract and be better prepared to make recommendations in the future. The Division further recommends that PacifiCorp re-examine its policy of available resources in avoided cost analyses in order to avoid in the future the issue that arose concerning the non-inclusion of the Chehalis plant as an available resource.

ANALYSIS

The PPA is dated October 8, 2008 between PacifiCorp and Tesoro. The agreement states that Tesoro "owns, operates, and maintains a natural gas-fired cogeneration facility for the generation of electric power located in Salt Lake City…."[1] The Nameplate Capacity Rating of the plant is 25.0 megawatts (MW). The Tesoro facility is operated as a qualifying facility (QF) as defined by 18 C.F.R Part 292.[2] Tesoro has previously provided its FERC self-certification to PacifiCorp prior to the implementation of the previous contract with PacifiCorp which expires on December 31, 2008. All interconnection requirements have been met and the Tesoro facility is fully integrated with the Company's system.

Tesoro estimates that the average net output of the facility will be about 190,000 megawatt-hours (MWh) annually to PacifiCorp.[3] Tesoro has the option, but not the obligation, to deliver approximately 25 MW per hour (the nameplate capacity) to PacifiCorp.[4] Pricing has been divided between "On-peak" hours are defined in the PPA as from 7:00 a.m. to 11:00 p.m. Monday through Saturday and "off-peak" hours are defined as all other times including holidays.[5] Tesoro has indicated that it tentatively plans for maintenance downtime of five days to occur in April and October.[6]

[1] PPA, page 1.
[2] Op. Cit. page 5, section 3.2.6
[3] Op. Cit. page 1
[4] Op Cit. section 4.2.
[5] Op. Cit. section 1.11 and 1.12.
[6] PPA, Exhibit D.

The Agreement before the Commission is expected to run for a term of 12 months: beginning January 1, 2009 and ending December 31, 2009. The current contract expires December 31, 2008. Like the existing contract, this contract contemplates that Tesoro will sell to PacifiCorp all of its electric generation and that Tesoro will generally maintain output at its nameplate capacity.[7]

Under the terms of the Commission order in Docket No. 03-035-14, non-firm QF resources are not entitled to a capacity payment. Therefore, this Agreement contains energy-only prices. As set forth in Section 5 of the contract, the on-peak price is $95.85 per megawatt hour (MWh) and the off-peak payment will be $42.34 per MWh. By comparison, the current contract prices are $59.50 and $27.88, respectively. To these MWh prices is added an adjustment for avoided line losses. The avoided line losses payment amounts to an additional 2.93 percent added to the price per MWh.

The prices for next year's contract are based upon PacifiCorp's June 2008 forecast price curves. In June 2008 energy prices were at historical highs with various pundits predicting that they would go higher. For this reason the prices in the proposed contract are significantly higher than those for the current year's contract. Energy prices have declined precipitously over the last couple of months. Since this is a one year contract it is likely that if the contract price were re-negotiated using current information, those prices would be much lower. Because Tesoro and PacifiCorp negotiate their contracts at about the same time each year the Division believes that it is unlikely that either party was trying to "game the system," or that either would have known the direction of energy prices at the time serious negotiations were underway. Therefore, using the standard of what was known or what could have reasonably been known at the time the parties were negotiating their contract, the Division recommends approval of the contract.

The general terms and conditions of the Agreement appear to be generic in nature and closely mirror those in prior similar contracts. The main differences appear to be the price to be paid for

[7] PPA, Sections 4.2 and 6.5.

delivered energy which is based on on-peak/off-peak hours without a seasonal adjustment, whereas some other contracts may have seasonal pricing without on/off peak daily pricing. The non-price related conditions within the Agreement appear to be generic and reasonable.

Avoided Energy Costs

This PPA with Tesoro is represented to comply with the Commission's QF pricing methodology ordered in Docket No. 03-035-14. The Division has tested the contract pricing for compliance with the approved methodology by performing its own GRID run. The Division's GRID run was able to verify the contract pricing. Therefore, except for the Chehalis issue discussed below, the Division determined that based upon the conditions present at the time the PPA was negotiated, the avoided costs are reasonable. The spreadsheets showing the results of the Division's GRID run are available to the Commission upon request.

Lack of inclusion of Chehalis in the GRID run

The Company did not include the Chehalis power plant as a resource in the GRID runs to determine pricing for this PPA. At the time this contract was negotiated, the Company had entered into a contract to purchase the Chehalis plant and was receiving all of the output from the plant under a tolling agreement which was to expire in September 2008. On August 1, 2008 the Commission issued its Report and Order in Docket No. 08-035-35 approving the purchase of the Chehalis plant by PacifiCorp. This Commission approval was given approximately two weeks before the pricing for this Contract was set by the Company. The Chehalis purchase closed on September 16, 2008. Under Company policy, resources are only included in its avoided cost GRID runs when there is either a contract already in place cover the contract period in question, or it is already an owned facility; or, in the case of other QF contracts, the QF is already "in the queue," i.e. the QF has requested pricing and negotiations are set to begin. Since, in the Company's opinion, Chehalis did not yet fit the criteria for inclusion, it was excluded from the

GRID calculations even though there was a high expectation that the purchase would go through and Chehalis would be an owned property during the contract period.

Granted that the Chehalis situation is unusual for the Tesoro QF contract, nevertheless it appears to the Division to be a fault in the Company's logic this time to have excluded Chehalis as an available resource during this PPA's contract period. At worst, the Chehalis plant should have been considered to be similar to a QF that had asked for indicative pricing.

Based upon revised GRID runs for Tesoro, the effect of including Chehalis as an available resource increases the avoided cost by less than a penny. The Division does not consider this difference to be material. The principal reason that Chehalis makes so little difference apparently has to do with the fact that it is on the west side of PacifiCorp's system and there is a transmission constraint between the west side and the east side, the side Utah is in. However, it is conceivable that a similar situation could arise in which the omitted Chehalis-like resource was on the east side, in which case the effect of the omission might be material. The Division believes that the likelihood of Chehalis being part of the PacifiCorp system during the period of the proposed contract was sufficiently high that it should have been included in the stack of available resources for these avoided cost GRID runs. Therefore, the Division recommends that PacifiCorp re-examine its policy of available resources in avoided cost analyses in order to avoid in the future the issue that arose concerning the non-inclusion of the Chehalis plant as an available resource.

<u>The PPA's Avoided Transmission Losses</u>

In Docket No. 03-035-14, the issue of avoided transmission line loss adjustments for non-firm QF contracts was raised and discussed by several parties. In the end the Commission was not satisfied with any of the proposed solutions and declined to adopt guidelines for non-wind QFs.[8] In that Docket, the Division argued that avoided cost transmission line loss adjustments should not be given to QFs with non-firm or "must-take" contracts in applying the methods that were

[8] See Order dated April 19, 2006, pp. 13-15, Docket No. 03-035-14.

proposed. The Division indicated it would be open to consider giving QFs avoided transmission line loss adjustments if ratepayer neutrality could be assured.[9,10] The Division and Company proposals in that Docket were similar in that they involved comparing distances from the QF and a proxy plant to the load center (i.e. the Wasatch Front), the adjustment was to be calculated against the Company's FERC approved Open Access Transmission Tariff (OATT) percentage. The Commission appears to have left the issue open to be dealt with on a case-by-case basis.

This PPA provides for an avoided line loss adjustment which is made by increasing both the on-peak and off-peak avoided costs by 2.93 percent. The 2.93 percent figure is based upon the Company's current FERC OATT effective April 1, 2006, of 4.48 percent with two adjustments. Attached to its filing the Company has included, in the form of testimony, an "Explanation of a Proposed Avoided Line Loss Adjustment Settlement for the Calendar Year 2009 Kennecott and Tesoro QF Agreements" dated October 14, 2008 (Explanation). This Explanation describes in detail the adjustments made to arrive at the 2.93 percent figure. The first adjustment was made by using the GRID model to calculate the percentage of the total megawatt hours that the Tesoro QF had avoided that were outside the Utah North and South transmission bubbles. Then, the Company multiplied it by the PacifiCorp FERC OATT transmission level line loss rate 4.48 percent. The Tesoro QF avoided resources were outside the Utah North bubble 79.83% of the time, so the OATT rate of 4.48 percent was multiplied by 79.83 percent.[11]

The second adjustment was based upon the calculated differential between energy plus capacity prices and energy-only prices as explained in the Explanation attached to the Company's filing. This adjustment based upon energy plus capacity to energy-only prices is a change from the current year's Tesoro contract which did not have this additional adjustment. Essentially this adjustment was made by taking the ratio of non-firm to firm pricing per Utah Electric Schedule

[9] Direct Testimony on Rehearing of Andrea Coon, February 10, 2006, lines 99-101, Docket No. 03-035-14.
[10] PacifiCorp also recommended that no line loss adjustment be given non-firm QFs. The agreement to give Tesoro a line loss adjustment appears to be at variance with the Company's position. See Reconsideration Direct Testimony of Bruce W. Griswold, February 10, 2006, lines 86-91, Docket No. 03-035-14.
[11] Explanation, Attachment 2.

No. 37. This results in a further reduction of 18.2 percent. The rationale for this deduction is found in the Company's Explanation, lines 151 to 187.

Because Schedule No. 37 was developed for small QFs, the Division recommends that if this method is used in the future, that the capacity and energy prices be obtained from the same GRID analyses that lead to the avoided cost calculations in the first place so that there is a direct relationship between the QF and the pricing adjusts that are made.

The Division believes that PacifiCorp's approach has a reasonable basis. That is, the analysis is relatively easy to perform and to check by use of the GRID model. The FERC OATT will be reviewed and updated from time to time. For a one year QF contract such as Tesoro's, the Division believes that it would be unreasonable to expect the Company to go to the time and expense of performing a detailed line loss analysis.

The historical generation output data available to the Division indicates that Tesoro has recently operated in a similar fashion to a "firm" resource. That is, PacifiCorp can rely, to some degree, on Tesoro to provide a scheduled amount of power to the grid. PacifiCorp has represented that PacifiCorp's account representatives meet with Tesoro at least monthly and obtain Tesoro's plan of operations for the next month.

Chart 1 graphically depicts the hourly kilowatts (kw) produced by Tesoro for 2006 and 2008 through August.[12] Visually, Tesoro's output has been concentrated in the 22,000 to 24,000 kw range, with, in 2008, a secondary output level in the 15,000 to 17,000 kw range; in 2006 the secondary level was lower in the 10,000 to 12,000 range. Around these levels it is also clear that there are apparently random fluctuations, or "noise." Generally, the operating levels are roughly 22,000 kw, 15,000 kw, and 10,000 kw. The appearance of consistency in the data, combined with the understanding that Tesoro communicates its plans at least monthly to PacifiCorp, gives the Division some comfort that Tesoro could be considered to be "acting like" a firm resource in

[12] For 2007 and years prior to 2006, Tesoro sold the output on a "net" basis, that is PacifiCorp billings to Tesoro were net of Tesoro's output and the purchases Tesoro made from PacifiCorp. The data for Tesoro's output in isolation are only readily available for 2006 and 2008.

that PacifiCorp can plan for and rely on certain levels of output from Tesoro. The Purchase Power Agreement itself appears to contemplate that Tesoro will generally be operating at or near full capacity and selling its output to PacifiCorp.[13]

A question can be raised regarding applying the line loss adjustment to the off-peak hours. During some of the off-peak time it may be that PacifiCorp already has surplus power, and that the Company cannot back-down its base load generating plants, presumably the only ones operating at certain off-peak times. In such a scenario, Tesoro would simply add to the surplus and there would be little or no avoided line losses. The extent, if any, to which this type of scenario might apply, is not known; however this type of issue was previously brought up in testimony in Docket No. 03-035-14.[14] The use of the GRID model in this case may mitigate the effect of this issue somewhat, since during low-load hours, the costs of the resources backed off are presumably relatively low cost as well.

Based upon the foregoing, the Division believes the avoided line loss adjustment in this PPA has a reasonable basis. In general, however, the Division is unconvinced at this point that allowing an avoided transmission line loss adjustment to QFs providing non-firm power is generally appropriate. The Division recommends that PacifiCorp provide at least quarterly the hourly power purchased under this contract to the Division so that the Division may monitor the contract and be better prepared to make recommendations in the future.

While the Division believes that the method for calculating line losses in this matter is both reasonable and practical, absent definite Commission guidelines regarding the policy with respect to non-wind QFs with a non-firm PPA or the calculation of avoided transmission losses in QF contracts, various methods and assumptions may be employed by PacifiCorp and its counterparties as they negotiate their contracts. Since each QF contract will be unique in many ways, the Division does not view its position on line losses in this case to set any precedent.

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[13] PPA, Section 4, pp 5-6, and Section 6.5, p. 7.
[14] Rebuttal Testimony of Andrea Coon, September 8, 2005, Docket No. 03-035-14. The document was submitted without page or line numbers; however the issue is discussed on approximately page 4 and is the eleventh Q & A pair in the document.

CONCLUSION

The Division concludes that the terms of the Tesoro Power Purchase Agreement generally are generic and comply with the Commissions guidelines and order in Docket No. 03-035-14. Assuming avoided line loss adjustments are permissible in non-firm QF contracts, the Division concludes that there is a reasonable basis for the transmission line loss adjustment in this PPA. However, the Division does not necessarily endorse a line loss adjustment generally for non-firm QF contracts. The other contractual arrangements and facts in this matter, in particular the method for calculating the avoided energy costs, have been previously found to be just and reasonable and in the public interest. Therefore, the Division recommends that the Commission approve the Power Purchase Agreement between Tesoro and PacifiCorp.

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