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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

**IN THE MATTER OF THE APPLICATION)
OF PACIFICORP DBA UTAH POWER &) CASE NO. PAC-E-01-16
LIGHT COMPANY FOR APPROVAL OF)
INTERIM PROVISIONS FOR THE SUPPLY)
OF ELECTRIC SERVICE TO MONSANTO) POST-HEARING BRIEF OF
COMPANY.) COMMISSION STAFF
)**

COMES NOW the Commission Staff by and through its attorney of record, Scott Woodbury, Deputy Attorney General and submits the following post-hearing brief in Case No. PAC-E-01-16 addressing the pricing model used by PacifiCorp to value Monsanto's interruptible load.

Following hearing in Case No. PAC-01-16, the Commission in writing extended its cross-examination of PacifiCorp's witness Mark Kline. The Commission did so in order to gain a better understanding of the Black-Scholes pricing model used by the Company to establish the valuation of the credit for Monsanto's interruptible load.

The concern that prompted further questioning from the Commission was why the Company's pricing model assigned less value to a contract offer of 1,000 hours of economic interruption than it did to 500 interruptible hours. Tr. pp. 840, 841. This result seemed to demonstrate that the additional 500 hours had negative value, a result that was counter-intuitive to the expectation that additional hours would provide additional value. At first Staff was told, by the Company, that the volatility in the forward prices caused this result. The Company

speculated that because the valuations of 500 hours and 1,000 hours of interruption were estimated at different points in time and because the forward prices used in the model are always changing, erratic valuation could occur. A number of Commission follow-up questions for Mr. Kline addressed the timing of the two analyses. From his responses it seems clear that forward price volatility does not explain the lower interruptible value.

Mr. Kline's initial analysis, using 1,000 hours of interruptibility, extended into the shoulder months. It was speculated that including these shoulder months rather than using only peak periods, contributed to the loss of interruptible value. The Commission required Mr. Kline to value the hours of interruptibility over different months to include only peak periods, in the summer and winter. Mr. Kline noted in his response that the model was based on the electric prices at Palo Verde and that "forward prices for power at Palo Verde during the shoulder months of April, May, June and October were generally higher than winter forward prices." Tr. p. 815. It thus appears that the Company's use of shoulder months was not the reason for the lower value.

Through another round of informal questions the Company explained to Staff that the apparent loss of interruptible value was the result of an error in the way the model adjusts net present value (NPV) of increased interruptibility. As Staff understands it, the Company used the model to calculate the NPV of a hypothetical product designed to deliver the services offered by Monsanto. The services included 95 MW of operating reserve for 300 hours per year, 67 MW of economic curtailment for 500 hours per year and a system integrity benefit. The Company then calculated the NPV of a hypothetical product that provided the same services with the exception that 1,000 hours rather than 500 hours of economic interruption was provided. PacifiCorp determined that the model overvalued operating reserves in the first run and adjusted the value of economic curtailment to make up for the error. Apparently, the same adjustment on a unit basis was made to the second model run that valued additional economic interruption. The result was that at some point additional hours of interruption had negative value with the adjustment. The Company's explanation was provided over the phone and Staff does not claim to have a complete accounting or thorough understanding of this issue. Additional information provided by the Company does not appear to fully explain the error correction or the model results. Moreover, it is unclear how lost revenue should be factored into the value of increased

interruptibility. Without additional time and investigation, Staff cannot confirm all input and logic flow of the model.

It is important to also note that in the Company's model the product used to value interruptibility is not actually available in the market. Tr. pp. 815, 816. Numerous assumptions were necessary to devise a product to replicate Monsanto's interruptible load.

While the model is deterministic (non-random), it is, nonetheless, dependent on a number of key assumptions including the selected market hubs for natural gas and electric power along with the forward price estimates of electric power and natural gas. Mr. Kline testified "given the same input variables, the model will produce the same result if run independently by different sources." Tr. p. 810. The key is "given the same input variables." In fact, numerous combinations of reasonable assumptions could be made producing a host of outputs.

One important thing that the Company's pricing model illustrates from the market pricing approach is that there is a diminishing return on increased economic interruptibility. This point was made by a number of witnesses. Interruption during the super peak hours would have the greatest value to the Company and additional hours of interruption would have less value. Staff concurs with this position and believes it is consistent with Staff's recommendation that there should be some floor for the minimum appropriate interruptible rate. The model also demonstrates that the amount of interruptibility is optimized at 300 hours of 95 MW operating reserve and 1,000 hours of 67 MW economic interruption.

While PacifiCorp's model has been found to include errors, it is Staff's opinion that the Company's pricing model does provide one method of evaluating the interruptible portion of the Monsanto contract. Based on the assumptions selected in this case (strike price \$16.31; date of market price 9/03; package of services provided) and additional information provided, we note that the Company's model ultimately produces a corrected net price to Monsanto of 2.6 to 2.7¢/kWh. (Compare Exh. 36, p.5 2.516¢/kWh.) Staff's more traditional analysis produces results that range from 2.3 to 2.7¢/kWh. Tr. at 729.

Staff believes that the issues of contract length and single contract seems to be resolved in that the Company has pretty much agreed to a single contract for five years. Although it is Staff's contention that the situs/system allocation issue can appropriately be deferred to the Multi-State Process case (Case No. PAC-E-02-3), Staff believes that it is

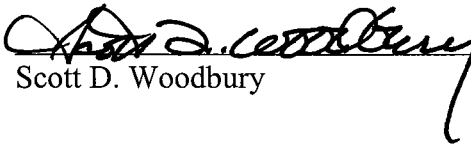
acceptable to use a cost of service analysis based on situs allocation in this case as the starting point to determine the appropriate Monsanto rate.

CONCLUSION

WHEREFORE, Staff recommends that the Commission not determine the value of Monsanto's interruptibility based solely on the modeled results presented by PacifiCorp. Rather, the net price paid by Monsanto should be established based upon a firm rate at cost of service discounted to reflect a more reasonable credit for interruptibility. Staff believes that both the record establishing a firm rate and the record establishing an interruptible credit support a net price in the range of 2.3 to 2.7 cents per kWh. Given the uncertainty in the modeling results presented by the Company, its estimate of appropriate net cost to Monsanto does no more than verify that the net cost range proposed by Staff is reasonable.

DATED this 15th day of October 2002.

RESPECTFULLY submitted,



Scott D. Woodbury

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 15TH DAY OF OCTOBER 2002, SERVED THE FOREGOING **POST-HEARING BRIEF OF COMMISSION STAFF**, IN CASE NO. PAC-E-01-16, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

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