BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In The Matter Of The Petition Of US Magnesium LLC For Determination of Long-Term Economic Development Rates and Conditions of Interruptible Service	)))))	Docket No. 03-035-19

REBUTTAL TESTIMONY

OF

BRUCE W. GRISWOLD

NOVEMBER 5, 2004

Q. Are you the same Bruce W. Griswold that filed direct and supplemental testimony in this case?

A. Yes I am.

Purpose of Testimony

Q. What is the purpose of your testimony?

A. I will address the base energy level and contract term recommendations made by the Division of Public Utilities ("DPU") and Committee of Consumer Services ("CCS") in their direct testimony. I will also address issues raised by US Magnesium ("US Mag) in its supplemental testimony, including interruption and cost issues. Finally, I will summarize the key points of PacifiCorp's proposed power supply agreement ("PSA") and operating reserve agreement and show the resulting net effective cost to US Mag.

Q. Please describe the base energy level and contract term recommendations of the DPU and CCS and provide the Company's position on those recommendations.

A. In my supplemental testimony, I used a base energy level of 533,000 MWh and a contract term of 10 years. In their direct testimony, the DPU and CCS recommended a base energy level of 615,000 MWh and a contract term of 5 years. The Company is willing to adopt both recommendations.

Q. What is the affect of those recommendations?

A. There were three price components proposed in my supplemental testimony. The first is the cost of service price provided by Mr. Taylor of $25.94 per MWh. That number remains the same for the starting cost of service price in 2005 regardless of

base energy usage or term. The second price component was the credit of $0.16 per MWh for physical interruption in July and August when temperatures are equal to or greater than 100F. Adjusting this to a base of 615,000 MWh and five years results in a revised credit of $0.14 per MWh. The third price component is the operating reserve of $1.38 per kW-month. This is also impacted by both energy usage level and term. This results in a revised operating reserve payment of $1.59 per kW-month over the term of 5 years or an energy credit of $2.64 per MWh based on 85 MW of operating reserves. In addition, the Company proposes a system integrity credit of $0.18 per kW-month for the term. This equals a $0.10 per MWh credit based on the 615,000 MWhs. This credit to US Mag allows the Company to physically interrupt US Mag in the event of an electrical system emergency. US Mag's current contract has this provision and we would bring that provision forward to the new agreement. When these changes and additions are combined together the revised net price proposed for US Mag is $23.06 per MWh, as shown in Exhibit UP&L_(BWG – 1R) tab "Price Calculation".

Q. If the Commission approved the Company's proposal, what would the price changes be over the contract term and what would the net effective price be?

A. I have summarized our estimates of the price changes and the effective price over the contract term in Exhibit UP&L_(BWG – 1R) on the tab "Net Effective Price Chart". These are estimates and obviously are dependent upon a number of factors, including the final adjustment to Schedule 9 in PacifiCorp's rate cases, the changes in market prices when US Mag buys through curtailment, and US Magnesium's projected usage over the term. The following are the adjustment components:

- Cost of Service of $25.94 per MWh is tied to changes in Schedule 9 price changes – For this analysis the average increases from the past 5 years for PacifiCorp's industrial customer class (Schedule 6 and 9 combined) were projected forward which resulted in an average price increase of 2.1 percent per year effective for years 2006 through 2009.
- Replacement power price is based on Palo Verde market prices – PacifiCorp's market price forecast dated September 28, 2004 for the Palo Verde market on-peak firm was used. The percent change in monthly price from the previous year was applied to the buy through cost for the current year for years 2006 through 2009. Exhibit UP&L_(BWG – 1R) tab "Market Price Forecast" contains the monthly price forecasts and percent changes.
- US Magnesium's usage level will affect their effective price because changes in capacity or energy will change the dollars resulting from the kW-month credit for reserves as well as the volume associated with the PSA. – For this analysis I assumed that the US Mag load would increase 10 percent per year starting in 2005 through 2007. The impact of the volume changes was applied to the prices in the following year.

My approach for evaluating price changes since 2002 was to utilize actual bills and usage for the current contract starting price of $21 per MWh in 2002, to include the replacement power to get to an effective per MWh cost for US Mag, and then to adjust the base to 615,000 MWh. I then started in 2005 with the proposed pricing I have described in my testimony above and made a series of

projections on the various prices to reflect changes over the term. I have not included the impact of the current or proposed QF contract on either volume or payment to US Mag in this analysis (the volumes will be impacted because US Mag will be selling a higher volume to PacifiCorp and conversely that incremental volume will be added back into their loads as it applies to the PSA.) Rather I have started from the 615,000 MWh base and applied the estimated increases to US Mag usage levels. The results show that the net effective price (PSA price minus credits plus replacement power) to US Mag increases at an average rate of 2.5% per year over the term of the proposed agreement. This is much less than Mr. Brown points to in his testimony. In fact, the increase to US Mag during the proposed agreement closely reflects the changes in Schedule 9 prices and therefore supports the proposal to adjust US Mag's prices based on Schedule 9 price changes.

Q. Please comment on Mr. Swenson's proposal to only allow curtailment in the June through September months when the temperature in Salt Lake City is greater than the historic monthly mean.

A. The difficulty in applying this logic is that the curtailment proposed for this agreement is designed to remove US Magnesium's load from system coincident peak and not Utah coincident peak. We have already reduced the current six (6) hour block to a four (4) hour block during the four summer months in going from the current contract to this proposed structure. Adding this component in as a curtailment trigger basically cuts the number of hours available in half for each month. This increases the probability that there will be a month when US Mag will not be available for

curtailment because of this trigger and their load will be included in the system coincidental peak. In that case, US Mag receives the full value of missing the system coincident peak when it in fact did not. On a simple level, the cost of US Mag missing the system coincident peak is approximately $800,000 per month. It is interesting that Mr. Swenson makes no mention of US Mag being assessed the cost for missing a curtailment during the hour of system coincident peak while seeking to reduce the hours of available curtailment to reduce his risk. We believe our proposal is much more reasonable in that it only forces physical curtailment during days forecast at or over 100F, which on average total five (5) days per year. This is a physical exposure of 20 hours per year concentrated in the two months of July and August.

Q. What about this type of temperature trigger in the two winter months?

A. In the winter months of December and January, it would be even more difficult to use this type of trigger to miss the system coincident peak for two reasons. First, the winter peak is normally driven by PacifiCorp's western system loads. There could be days when it is mild in Utah and colder in Oregon and other states served by PacifiCorp. Second, the curtailment hours have been split into two (2) hour blocks during the morning and evening. Reducing those by half, coupled with the first concern, would increase the probability that US Mag would not be available for curtailment during a winter system coincident peak.

Q. Please comment on the physical interruption exposure to US Mag.

A. The 100F temperature trigger in the PSA shows an average of five days per year of temperatures over 100F, therefore the physical exposure during those days is 20 hours of interruption to their business, normally concentrated in two months of July and August. US Mag has an existing 36 MW generating facility that it can use choose to serve its own load. Therefore its current exposure is 85 MW minus the 36MW or 49MW on average. However, Mr. Swenson has indicated that US Mag can physically cycle their magnesium cells. As a result, one-half of its load could be off at any time and through cycling the actual net physical exposure is 85 MW divided by 2, or 42.5 MW minus the 36 MW supplied by the generating facility, far closer to a net physical exposure of 7.5 MW. As sophisticated as US Mag is in their energy management practices, I believe they can find DSM opportunities in their plant to reduce the physical exposure to zero. In fact, Mr. Swenson has mentioned in technical conferences that they are considering the option of acquiring additional generators for the single purpose of hedging any physical curtailment by running them during the limited hours of physical interruption.

Q. Are there comments you wish to make regarding curtailment provisions?

A. Yes, in previous testimony both Mr. Taylor and I have described the mechanism for physical curtailment versus buy-through. We have previously testified that the buy-through provision requires the Company to continue to plan to serve the US Mag load and therefore it is included in the Company's firm load requirements and service obligations. This includes the cost of holding reserves for US Mag's load during the "curtailment period". US Mag, the DPU and the CCS in testimony and during

technical conferences have stated that the Company should not be planning for the load during curtailment hours even in buy-through conditions. The Company consents to that position and therefore will not be planning for serving US Mag's load during those hours of curtailment. Thus, during a curtailment hour when US Mag has chosen to buy-through and there are no resources, or a constraint occurs where the Company cannot import power to the Wasatch front, US Mag will not be served.

Conclusion

Q. Based on the work that has been completed to date, what price do you support for US Magnesium?

A. The proposed five (5) year power supply agreement would include a curtailment option with buy-through on certain curtailment hours. This results in a cost of service based price of $25.94 per MWh. The Company then applies a credit of $0.14 per MWh for the temperature-triggered physical curtailment provision in July and August and a $0.10 per MWh credit for system integrity. This results in a net price of $25.70 per MWh. The separate operating reserve agreement with a five (5) year term pays US Mag $1.59 per kW-month or $2.64 per MWh based on the test year usage of 615,000 MWhs.

The net price of the two agreements would be $23.06 per MWh.

Does this conclude your testimony?

A. Yes it does.